PUBLIC INVOLVEMENT IN ENVIRONMENTAL IMPACT ASSESSMENT: The Portuguese Case

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ABBREVIATIONS

APEA – Associação Portuguesa dos Engenheiros do Ambiente

CADA – Comissão para Acesso aos Documentos Administrativos

CBA – cost benefit analysis

CEC – Commission of the European Communities

CEQ – Council of the Environmental Quality (USA)

CEQA – California Environmental Quality Act

CNADS – Conselho Nacional do Ambiente e do Desenvolvimento Sustentável

CPRE – Council for the Protection of Rural England

DGA - Direcção Geral do Ambiente

DGQA – Direcção Geral da Qualidade do Ambiente

DRARN - Direcção Regional do Ambiente e Recursos Naturais

EC - European Community

EIA – environmental impact assessment

EIS – environmental impact statement

EU – European Union

FAO – Food and Agriculture Organisation (UN)

FEARO – Federal Environmental Assessment Review Office (Canada)

FOE – Friends of the Earth

FOIA – freedom of information act

FONSI – finding no significative impacts

GIS – geographical information system

GNP – gross national product

HA – health assessment

IAIA – International Association for Impact Assessment

ICN - Instituto de Conservação da Natureza

IIED – International Institute for Environment and Development

ILO – International Labour Organisation (UN)

IM - Instituto de Meteorologia

IMF – International Monetary Fund

INAG - Instituto Nacional da Água

IPPAR - Instituto Português do Património Arquitectónico e Arquoelógico

IPAMB - Instituto de Promoção Ambiental

IUCN – International Union for the Conservation of Nature and Natural Resources

LPA –Local Planning Authority

MA – Ministério do Ambiente

MARN - Ministério do Ambiente e Recursos Naturais

NEPA – national environmental policy act

NGO – Non Governmental Organisation

NIMBY – not in my backyard

NSMs – New Social Movements

NTS – non technical summary

OECD – Organisation for Economic Cooperation and Development

PNAPRI – plano nacional de prevenção de resíduos industriais

RA – risk assessment

RSNC – Royal Society for Nature Conservation

RSPB – Royal Society for the Protection of Birds

SEA – strategic environmental assessment

SIA – social impact assessment

SPECO – Sociedade Portuguesa de Ecologia

STRI – sistema integrado de resíduos industriais

TA – technology assessment

UN – United Nations

UNECE – United Nations Economic Commission for Europe

UNCED – United Nations Conference on Environment and Development

UNEP – United Nations Environment Programme

UNESCO – United Nations Educational, Scientific and Cultural Organisation

UNRISD – United Nations Research Institute for Social Development

WCED – World Commission on Environment and Development

WCS – World Conservation Strategy

WWF – World Wildlife Fund

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DECLARATION

I declare that the research contained in this thesis was solely carried out by me. It has not been previously submitted to this or any other Institution for the award of a degree or any other qualification.

ABSTRACT

Public involvement in environmental management has become an important component of decision making, which had been until the 1970's based almost entirely on "economic efficiency" and "science centred approach". EIA, the most widespread instrument asking for public involvement in environmental management has been reconceptualised to incorporate concepts of sustainable development for which EIA is well fitted provided it is a "holistic", "preventive" and "participative" instrument. However, depending on political, institutional and social contexts EIA processes, by opening decision making to the public sphere, still represent a great shift in traditional planning.

EIA was introduced in the Portuguese legal system in 1990 due to the Portuguese membership in the European Union and public participation became mandatory. The intriguing question on the basis of this investigation is how a society labelled as having a non-participative culture and where decision making has never been opened to public scrutiny behaves with such an instrument.

A broad picture of EIA public participation in the Portuguese society has been outlined, the approach taken stressing the importance of cultural contexts in getting insights to the understanding of the phenomenon. This broad picture has been enhanced by the use of an in-depth case study of the Portuguese reality in order to stress relevant features. An analytical model to guide the investigation has been constructed by putting together pieces of consensus on public participation effectiveness identifying key issues and key criteria.

This investigation indicates that despite the reactive approach taken to EIA and the weakness of the Portuguese EIA system, EIA has been contributing to a change in public perceptions as well as in attitudes of developers, consultants, government and institutions towards environmental management. It is increasingly felt that EIA got roots in Portuguese society being the instrument that asks more regularly and with more efficacy for public involvement. In pair with this, it is also recognised that EIA needs reformulations to make it a more effective, comprehensive and credible tool.

Public participation in the Portuguese EIA system presents several difficulties related to the social/cultural context and to the procedures used in its implementation. The former deals in a great part with the lack of traditions of participation in society, the strong weight of representative democracy and the low levels of environmental consciousness. The later deals with the late phase of public involvement, poor mechanisms used to disseminate information and promote a two-way communication and the use of a standard bureaucratic process.

Environmental problems arrived late to Portuguese society but have become increasingly relevant due to the development policies followed. Signs exist now that the traditional passive citizenship can give place to a more active one and that the lay public increasingly feel that they have a word to say in decisions affecting their quality of life. Some avenues have been explored in this investigation related to context and practice of public involvement in EIA and to the challenge posed by sustainable development to societies especially those considered of intermediate development.

THE INTRODUCTORY PART

1 INTRODUCTION

1.1 Background for the study

The roots for the acceptance of public involvement in environmental management can be found in the 1970's where disenchantment about development strategies had made itself apparent (Ortolano, 1984; Roberts 1995). Many people became concerned about the effects of development in their lives and in the environment generally.

Public involvement in environmental management tools became to be considered as a necessary supplement to development management decision making which had been based entirely on "economic efficiency" and the "science centred approach". This was firstly achieved in the 1970's with the National Environmental Policy Act (NEPA) in North America where public participation through the EIA system became pivotal for decision making. As stated by Read (1997:81) "A major purpose of EIA is that all environmental aspects of a project should be placed before the public and by implication involve the community in decision making".

With the emergent concepts of sustainable development in the 1980's, especially after the Brundtland Report (WCED, 1987), the Rio Declaration and Agenda 21 (UNCED 1992), public involvement in development management was seen as an indispensable condition for the achievement of the objectives (social, economics and ecological) of sustainability. Despite the pathway for sustainable development being very much dependent on political will and political change it is important to state that a broad consensus enabled by the conscious involvement of communities is necessary. This is much stressed in principles 10, 20 and 22 of the Rio Declaration and Agenda 21, which propose, in a very clear way, an evolution to a participative democracy where people, communities and organisations have an effective role. The reason is simple: it is not thought possible to achieve sustainability by government decree in a top down manner. "The catalyst for political change is our individual participation to influence decision making" as Reid (1995:177) claims adding that "sustainable development is not just the concern of governments. People are acknowledged to have a role too" (ibid:188).

EIA has spread all over the world since NEPA. It reflects now a great new reconceptualisation to better incorporate the concepts of sustainability, for which EIA is well fitted, provided it is a "holistic", "preventive" and "participatory" instrument. Despite the increasing acceptance of public involvement in environmental management, especially through EIA, current practices are varied, and outcomes are far from expectations. Depending on broad political, institutional and social/cultural contexts, EIA processes, by opening decision-making to the public, present an enormous shift in traditional planning models; effectively "an attack on the status quo" (Mitchell, 1997:118; Gibson 1993). Moreover, Western culture tends to stress scientific and technical analysis as the basis for decision making with little regard to social, cultural and environmental values. Santos (1995:12) puts it this way: "The new scientific rationality, being a global model, is also a totalitarian model inasmuch as it denies rationality to all forms of knowledge that not abide by its own epistemological principles and its own methodological rules."

However, there is an increasing awareness about the complexity of decision-making concerning environmental management. The uncertainty of environmental implications, the irreversibility of many effects, the lack of sufficient scientific knowledge, the interconnectedness of environmental issues and the permanent conflicts of interest have led to an increasing consensus about the importance of explicitly recognising value-laden opinions. As Beck (1992:156) argues: "Paradoxically science becomes more and more necessary, but at the same time, less and less sufficient for the socially binding definition of truth". These arguments have also enhanced EIA as an important instrument for sound planning and a fundamental tool for decision making, because both technical/scientific and social rationalities should be considered. According to Webler and Renn (1995:27) "the aim should not discount one rationale in favour of another, but find ways to benefit from both".

The problem seems to be how to achieve effective participation in order to get sound decisions when many public processes remain "tokenist" or mere ways to validate decisions already taken.

EIA was introduced in the Portuguese legal system in 1990 due to the Portuguese membership in the European Community in 1986. Public participation became then

mandatory being the main instrument asking regularly for direct public involvement in environmental management and decision making.

1.2 Rationale for research, scope and objectives

Existing literature in the Portuguese EIA system has indicated a minimalist approach to the mandatory requirement of public involvement and poor outcomes (Partidário 1992). However, efforts in the implementation of the process have been undertaken by the Administration and two different organisational procedures have been tried. Environmental problems have become increasingly relevant in Portugal since important changes in society have occurred and a number of developmental projects have been implemented. Many signs exist now that environmental public opinion has been having an increasing weight in the orientation and implementation of environmental politics (Lima et al. 1996) acting as a forum for civil society participation in public life but not even in organised or efficient forms.

It is the genesis of a participative process in environmental management that is the focus of this investigation. I had the opportunity, as working in EIA consultancy of following the implementation of the EU Directive on EIA. I chose the area of public involvement because I found it something new and relevant in the Portuguese society for the development of citizenship. Moreover, I had always been working on the side of technical/scientific rationalities and I found interesting to study the side of social rationalities, the side of the public. The intriguing question on the basis of this investigation is how a society labelled as having a non participative culture (due to several contextual reasons) and where decision making processes have never been opened to public scrutiny behaves with an instrument which asks for direct participation.

Despite the vast amount of literature on EIA and on public involvement in management and planning, not much investigation exists focused on the practice related to specific cultural contexts. There is a need for further research in public participation in EIA applied in practice as has been pointed out by several gurus on EIA (Wood et al. 1995; Glasson et al. 1994; Smith 1993; IAIA 1995, 1996). Concerning Portugal very few

publications exist on the subject and research work published is almost non existing[1]. Specifically in Portugal Partidário (1992:393) points out:

> It must be emphasised that it is necessary to find adequate participatory and conflict resolution methodologies and mechanisms for the Portuguese cultural community character to help overcome existing implementation difficulties at the institutional level

The main research question at the beginning of this investigation was very broad and put in a tentative and speculative way: What is happening in the process of public participation in the Portuguese EIA system? Sub-divided in the following:

- How do people with a specific culture labelled as non-participative behave with this instrument of environmental planning and management?
- Which are the main themes, categories and patterns in the participants' meaning structures? What are their interactions as well as the participants' structural significance?
- How does it work in the practice, what has been its effectiveness and what has been the interaction created in society by its functioning?

A preliminary analysis of data collected and the evolution of the conceptual framework led to narrowing or specifying better initial questions and research objectives, within the analytical framework designed and presented in chapter 7.

With this investigation, I intend to contribute towards a better understanding of public involvement in EIA focused on Portuguese society. The approach will stress the importance of specific cultural contexts in getting insights to its knowledge and improvement. Objectives are the following:

- To contribute towards a better understanding of public participation in EIA in the Portuguese society
- To identify main gaps of public participation related to the context and the process
- To contribute with some ideas to the improvement of the process

[1] During the development of this investigation public involvement in the Portuguese EIA system has been receiving more attention from researchers and some work has been done on the issue. Relevant in this area has been the study asked by IPAMB to the Observatory of Environment (Observa 1998), which is a statistical analysis of all the public participation processes in the period 1990-1997. It gives continuity to the work of Gil and Martins (1996) who analysed statistically the processes in the period 1990-1995. Other research work has been produced such as a Master thesis (Craveiro 1996) analysing the public of hearings through eleven case studies. Relationships between science and the public in decision making by Gonçalves (2000) using case studies of Portuguese reality is also an important contribution in this area.

1.3 Conceptual framework

The complexity and social nature of the phenomenon of public involvement and the fact that it could not be isolated from the broad context in which it takes place have directed me towards adopting an exploratory pathway best suited by a qualitative approach. Moreover, there is a great difficulty in selecting relevant variables with simple relationships of cause/effect without impoverishing the subject by fragmenting reality. In addition, there is a lack of enquiries and empirical work related to the issue in Portuguese society. A holistic view of the phenomenon is then proposed where context and behaviour work interactively.

These arguments brought to the consideration of an initial broad conceptual framework functioning as a map of the territory being investigated in the way Miles and Huberman (1994:20) put it: "As the explorer's knowledge of the terrain improves, the map becomes correspondingly more differentiated and integrated". From the beginning three different though complementary and interactive perspectives of approaching reality as expressed in fig 1.1 have been used.

1.3.1 Theoretical framework

EIA

This perspective states boundaries for this research since EIA is the focus of the study. A special attention is given to EIA aims, principles and objectives as well as to its legislative and historical context. It devotes considerable scope to the way public involvement is conceptualised in EIA theoretical approach as well as equated in its practice. Evolution of EIA, challenges and trends to better perform as a tool for sound environmental management seem increasingly important in the context of sustainability and have received great attention.

Cultural contexts

Public participation is undertaken in a set of legislative and organisational procedures that constitute the specificity of the EIA system but it is also undertaken in the main background context of social/cultural reality. The latter interacts with public participation and with the organisational process chosen. They interact with each other in such a form that it is difficult to separate them without emptying their respective

meanings. The second perspective deals with the importance of the context in which public involvement occurs meaning the social, political and cultural dimensions of societies affecting the very concept and implementation of processes (values and beliefs of societies, the institutional and organisational cultures and traditional backgrounds).

The fieldwork being developed in Portugal determined that a deeper understanding of Portuguese society was necessary in order to guide the analysis of data in its relationship to the existing reality. Hofstede's (1980) comparative study on dimensions of culture and other generic literature though important revealed some weaknesses to the intended objective. An in depth review was still lacking to help data interpretation allowing me to transform "observations into clues" (Perti 1995). I found in Santos (1991; 1993; 1994) a comprehensive framework to understand the Portuguese society through the theory of "semiperipheral countries". Santos arguing that Portuguese society presents both indicators of developed countries (rates of population growth, progressive legislation, patterns of consumerism) and developing countries (collective infrastructures, cultural policies, and industrial levels) has provided a new conceptual framework. It is a theoretical innovation to fill the gap that traditional analytical categories used on social sciences have created through the dichotomy of developed/developing countries, the first/third world.

Sustainable development/environmental theories at stake

This perspective presupposes concepts of sustainability in environmental management where citizenship and public participation are fundamental to accomplish the objectives of sustainable development. The rationale for public participation, philosophical and pragmatic principles underlying the concept, features and trends especially after Agenda 21 are important guidelines. Included in this perspective the two broad environmental theories at stake in this late modernity were also considered relevant: "risk society" by Ulrich Beck and ecological modernisation. Beck (1992) stresses the relevance of the ecological crisis in the shift from modernity of the industrial society to the emerging paradigm of risk society or reflexive modernity. The unparalleled destruction of nature and risks caused by industrialisation, once they are global (in space and time dimensions) is leading to an enormous shift on the very basis of modernity as far as social, science and politics are concerned. Modernity was concerned with the distribution of wealth and reflexive modernity concerns itself with distribution of risks

and harms. Beck points out that a process of "demystification of sciences", "demonopolization of sciences" is happening and at the same time a "scientization of protest" producing as Hannigan (1995:182) points out a "fresh variety of new-public oriented scientific experts who pioneer new fields of activity and application". Politically, decision-making has opened itself up to the process of collective action. Beck presents the concept of sub-politics to explain that decision-making has been displaced from its classical sets of the representative democracy to other non-political realms with new societal coalitions (scientific committees, media, new actors).

Ecological modernisation is based on the spirit of the Brundtland report (WCED 1987). Accepting the global crisis, ecological modernisation presents an optimistic view on the way societies can cope with it. It is a policy strategy based on a fundamental belief of progress and the problem solving capacity of new techniques and skills of social engineering (Hajer 1995). Development and economic growth must be faced as reconciling issues. Hajer (1995) stresses basic principles grounding ecological modernisation summed up as: from react and cure to prevention; introduction of principles such as the polluter pays principle, risk analysis, precautionary principle, tradable pollution rights; a new role for science in environmental policy making that becomes entangled in the centre of the process; promotion of low and non-waste technologies; change in the legislative discourse in environmental politics, where the burden of proof should be presented by the developer of an action; reconsideration of the existing participatory practices by opening-up policy-making processes.

Those three perspectives (EIA, cultural contexts and sustainable development) interact closely in this investigation and have worked not only as a blueprint for research but also as focal theory, framing relevant issues and helping to state research boundaries.

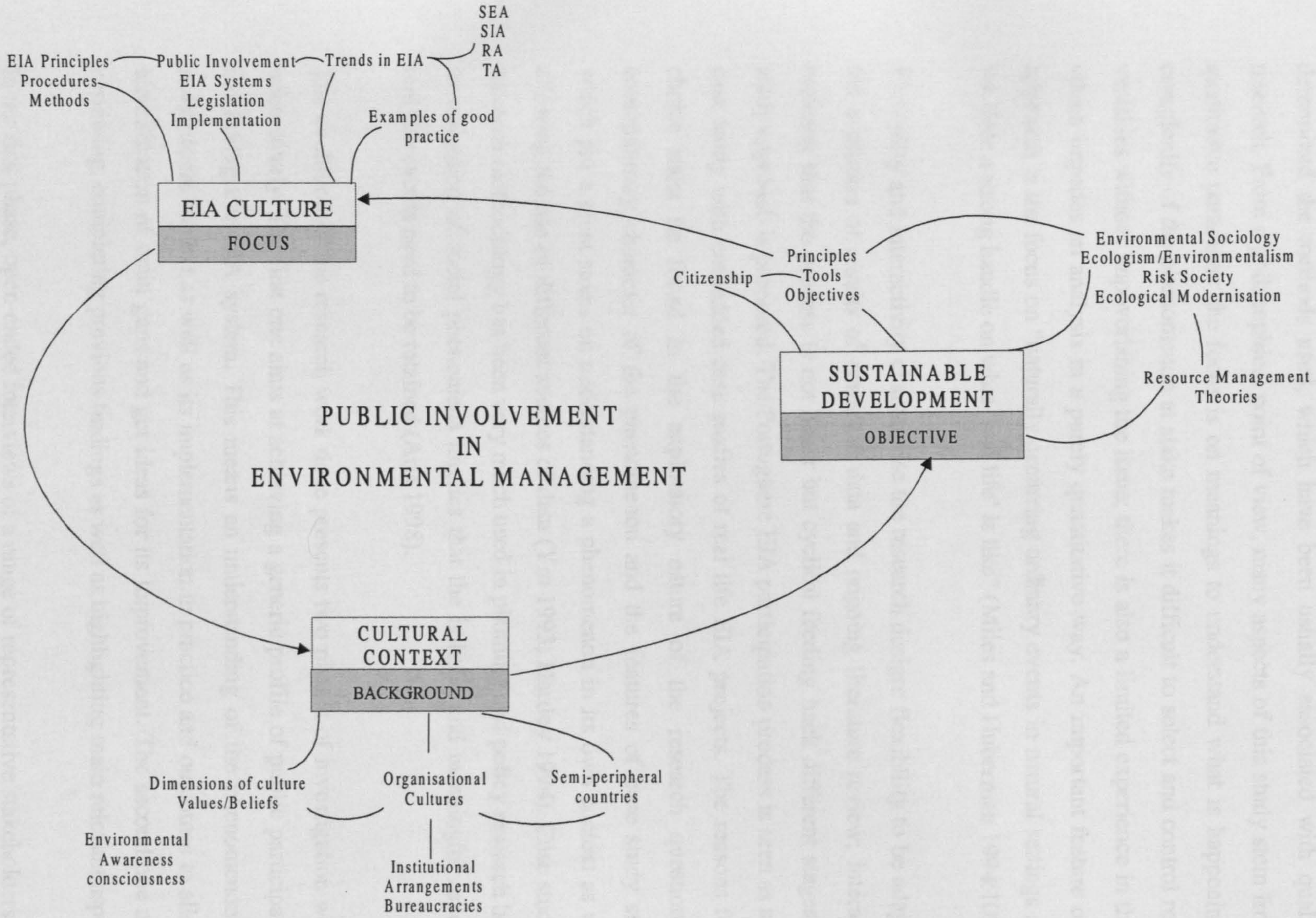

Fig. 1.1 Theoretical framework

1.3.2 Research methodology

The exploratory nature of the study and the type of research questions posed have determined the methods used, which have been usually associated with qualitative research. From a philosophical point of view, many aspects of this study stem from the qualitative paradigm: the focus is on meanings to understand what is happening; the complexity of the phenomenon at stake makes it difficult to select and control relevant variables without impoverishing the issue; there is also a limited experience in the area which impedes an analysis in a purely quantitative way. An important feature of such approach is the focus on "naturally occurring ordinary events in natural settings so that we have a strong handle on what 'real life' is like" (Miles and Huberman 1994:10).

Flexibility and interactivity characterise the research design: flexibility to be adapted to the evolution of results of empirical data and ongoing literature review; interactivity meaning that the process is not linear but cyclical feeding back different stages. Case study approach is proposed. The Portuguese EIA participation process is seen as a broad case study with embedded case studies of real life EIA projects. The reasons for this choice must be found in the exploratory nature of the research questions, the contemporary character of the phenomenon and the features of case study strategy which put a great stress on understanding a phenomenon in its own context as well as allowing the use of different sources of data (Yin 1993; Hartley 1994). Case study as a research methodology has been very much used in planning and policy research because investigation of social phenomena implies that the holistic and meaningful aspects of real-life events need to be retained (Arts 1998).

The evolution of the research work done presents two phases of investigation working interactively. The first one aims at achieving a generic profile of public participation in the Portuguese EIA system. This means an understanding of the phenomenon in its institutional context as well as its implementation in practice and outcomes to allow the identification of main gaps and get ideas for its improvement. The second one aims at reviewing, completing previous findings as well as highlighting main relevant aspects.

In the first phase, open-ended interviews of a range of representative stakeholders of the EIA process have been the main source of empirical data, triangulated with unobtrusive

measures such as analysis of documents on EIA processes, particularly the statistical analysis on public participation processes by Observa (1998). As Miles and Huberman (1994:266) point out "triangulation is supposed to support a finding by showing that independent measures of it agree with it, or, at least do not contradict it". This triangulation would include data source and data type (qualitative text, quantitative existing data) in order to pick triangulation sources that have different biases and strengths, complementing each other (Miles and Huberman 1994).

Embedded case studies have been foreseen for the second phase, representatives of the Portuguese reality. However, at the time the second phase was initiated a very polemical case moved Portuguese society -the project for treatment of hazardous waste in cement plants - the co-incineration case. Aspects of this case, its multifaceted characteristics, the way it involved the entire society have been considered revelatory, since they enhanced in a great way the social/ cultural context in which public participation takes place as well as the main fragility of the Portuguese EIA system and the interactions between decision makers and the public sphere. It was then considered that co-incineration treated as an in depth case study would work as a relevant case showing in more powerful ways the complicated problematic of public participation in the Portuguese reality. In the second phase qualitative interviews to main stakeholders of this particular process including representatives of the six places at stake in the project were the main source of empirical data. Analysis of documents produced during the process, particularly results of the public participation process were other relevant sources of data.

The complexity of the issue at stake, felt from the very beginning, have directed me to a search for a comprehensive conceptual guide. Based on theoretical constructions from large dispersed literature about public involvement in environmental management a framework for public participation effectiveness has been created by putting together pieces of consensus, identifying key areas and key themes explained in chapter 7, to guide collection and analysis of data.

The scope of this study is confined to public involvement in the Portuguese EIA system. However, it is expected that it could be of interest for other researchers in other countries and contexts similar or not to the Portuguese one.

1.4 Overview of the thesis

In order to better present the history of the investigation carried out the thesis is divided in five main parts. However, they have not worked during the investigation in a static way or in a rigid chronological order, yet they have worked interactively along the entire process. There has been a permanent dynamics between the empirical data and the theory each of them working in a continuous dialogue. The analysis of empirical data collected have asked many times for more theoretical constructs. Conversely, reflections based on the theory have determined the search for more empirical data. The analytical framework created, explained in chapter 7, presents the leverage point of theory and empirical work. The thesis is structured as follows:

Part I, the introductory part, is composed of this chapter and aims at giving a generic view of the thesis stressing the rationale and objectives of the investigation as well as an overview of the approach taken.

Part II, the theoretical part presents the map of the territory being investigated meaning the relevant theories correlated with the phenomenon of public involvement in environmental problematique along five chapters. This part begins in chapter 2 with an historical perspective of the evolution of environmental concerns since the late 1960's and theoretical attempts to explain the increasing relevance they have been getting in societies. Some milestones contributing to it are stressed such as main pieces of literature and reports and conclusions of the international community. Chapter 2 closes with an analysis of main theories at stake in late modernity concerning relationships between environment and society – ecological modernisation and "risk society" and the influence they present in shaping new paths of social intervention in public life. Chapter 3 deals with public involvement in environmental decision making and the rationale for public involvement incorporating philosophical, pedagogical and pragmatic principles underpinning the very concept of participation. Benefits of public involvement are addressed as well as main obstacles and inherent problems. Since EIA is the focus of this study, chapter 4 shifts the attention to public participation within the EIA context. The chapter describes EIA historical roots, discusses EIA main aims, principles and practices, evolving then to EIA trends for a more sustainable future. The approach taken considers public involvement as an intrinsic part of the EIA process within the context

of sustainable development. A special attention is given to the EU Directive on EIA and its provisions, since it is the main frame for the Portuguese EIA system.

EIA systems are intimately related to the social, political and cultural contexts in which they take place. That is the reason for addressing in chapter 5 this problematic enhancing the main issues of Portuguese reality working as the background for this investigation, since they have a decisive influence in EIA conceptualisation and practice. An attempt has been done to identify common features of Portuguese society within different theoretical frameworks related to cultural contexts. Part two closes with an analysis of the Portuguese EIA system in its normative and legislative aspects as well as its implementation in the practice.

Part III –the operationalisation part, introduces the analytical framework, which has been used to guide this investigation, constructed by putting together pieces of consensus of theory and examples of good practice on effectiveness of public participation in EIA. It also presents the way this analytical tool has been working in the interactive process used between the empirical part and existing theory in order to enlighten data and its interpretation.

Part IV, the empirical part, presents the empirical work carried out and contains three chapters. Chapter 8 explains in more detail the methodology used reasons underpinning the methodological choice and the procedures taken. Chapter 9 corresponding to the first phase of investigation, tries to build a broad picture addressing according to the analytical model the specificities of public participation in the Portuguese EIA system and focusing some considered relevant issues and gaps of the process. The second phase of investigation is addressed in chapter 10, and deals with an in-depth case study and aims at giving a more vivid picture focusing on relevant aspects, raised during the analysis and interpretation of the case study.

Finally, part V, the concluding one, addresses the main specificities of Portuguese EIA participation in the dynamic context of a society of intermediate development. Some avenues are explored related to the social context and the practice of public participation. An appraisal of the analytical model created is also done trying to put it in a broader context.

I The Introductory Part

Chapter 1 Introduction
- Background for the study
- Rationale for research scope and objectives
- Conceptual framework
- Overview of the thesis

II The Theoretical Part

Chapter 2 Environmental concerns
- On explanations for the rise of environmental concerns
- On the evolution of environmentalism
- Main theories at stake

Chapter 3 Public involvement in environmental decision making
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  - Pedagogical
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Chapter 6 Overview of participation in the Portuguese EIA system
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III The Operationalisation Part

Chapter 7 An analytic framework to approach public consultation and participation in EIA
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IV The Empirical Part – The Portuguese Case

Chapter 8 Research methodology

Chapter 9 A broad picture

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V The Concluding Part

Chapter 11 Summary

Chapter 12 Conclusions and recommendations

Fig 1.2 Structure of the thesis

PART II THEORETICAL PART

2 ENVIRONMENTAL CONCERNS – EVOLUTION AND TRENDS IN LATE MODERNITY

2.1 Introduction

Along the last decades environmental problems have been increasingly recognised, generating widespread preoccupations, occupying much attention from the public and the media and being included on the political agendas of governments and world organisations. Evidence of this rise of concern with environmental issues is present in our everyday life and abounds in literature. For instance, Garner (1996:65) relies on indicators such as the enormous increasing membership and income of environmental groups as well as on the rise of a much attentive public not member of any environmental group but expressing interest on issues raised by them. Table 2.1 presents the dramatic increase of main environmental associations in UK.

Table 2.1 Increases in the membership of the major environmental groups (1971-1989)
Adapted from Garner (1996) based on Mc Gormic (1991) and Grant (1989)

	1971	1980	1985	1989
Greenpeace		10 000	50 000	320 000
FOE	1 000	12 000	27 000	120 000
NWF	12 000	51 000	91 000	202 000
Ramblers	22 000	36 000	50 000	73 000
National Trust	----	950 000	1. 32m	1. 75m
CPRE	21 000	27 000	26 500	44. 500
RSNC	64 000	140 000	165 000	205 000
RSPB	98 000	321 000	390 000	433 000

Renn et al. (1995:2) point out main reasons for the concerns societies present on environmental problems:

> The dangers that problems pose to human health and safety are certainly among the most noticeable, but they are sometimes outweighed by the inequities and ethical and moral implications. Environmental problems and solutions can also demand difficult choices of society particularly balancing the public regulation of technology and land-use patterns against economic growth and change. Finally, there is a pervasive but unknown threat of regional or global ecological catastrophe that encourages some voices to call for more prudence.

No one questions these days, the existence of an ecological crisis and the enormous implications it represents for humanity. As O'Riordan (1995:17) points out "report after

report, book upon book, conference following conference all conclude that humans are in trouble and that the Earth is severely stressed"[2]. The 'unparalleled' degradation of global environmental conditions present social, economic and health threats to people and challenge power of institutions in this late modernity. Perhaps the most poignant interpretation of the ecological crisis is Beck's thesis on the end of the antithesis between nature and society, which had been on the basis of classical modernity. Now, so Beck argues, "nature is society and society is also nature"[3] (Beck 1992:81) adding that "environmental problems are not problems of our surroundings but in their origins and through their consequences- are thoroughly social problems, problems of people, their living conditions, their relation to the world and reality their social cultural and political situation"(ibid.).

This shift to a closer interdependence between society and nature is well expressed on the paradigm of sustainable development where environment and development are considered inextricably linked and in the assumption that the global crisis could only be alleviated by pursuing a path that integrates ecology, humanity and economy in a systematic way. If the concept of sustainable development has the consensus of main spheres of social life recipes to achieve it do not exist yet. O'Riordan (1995) states that it is still a mystery since no one can foresee how a sustainable society would look like in the future. Moreover, to complicate solutions to deal with environmental crisis of the unsustainable industrial growth, environmental issues are differently emphasised depending on different views and interests. On the one hand, climate change, ozone depletion, loss of biodiversity, whose consequences will be felt one or two generations away, are stressed as priorities by the Northern countries. On the other hand, the poor countries of the South put priorities on the creation of immediate conditions for survival such as food security, land stabilisation, energy availability and civil rights of minorities (O'Riordan 1995:18).

It would be better, then, to face sustainable development as a concept like justice or democracy (Reid 1995) an ideal to pursue through a process of knowledge and experience as well as concerted dialogue. This process however presupposes a strong

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[2] For some evidence on the seriousness of the global crisis see Reid (1995:3/23); O'Riordan (1995:16/18) where references to other important publications on the issue are presented.

[3] Also Santos (1994) in this line of reasoning refers that distinction between nature and society is now meaningless since nature is increasingly the second nature of society.

commitment to change especially the enlargement of decision making to all social actors in order to shape its future look. Since it is the central theme of this research, the involvement of citizenry in environmental decision making is object of a specific part.

For the purpose of this chapter, the rise and evolution of environmental concerns in modern societies will be reviewed, as well as the way those concerns have been conceptualised and dealt with. The chapter will then move on to strategies and trends outlined for the future. It will focus in more detail ecological modernisation as the main ecological theory at stake today as well as the theory of the "risk society" suggested by Ulrich Beck because it provides an encompassing framework to understand social, political and economic transformations of the late industrial society coping with the ecological crisis.

2.2 On explanations for the rise of environmental concerns

Explanations for the expansion of environmentalism are several and one of the favourite themes of environmental sociology. Among the most referred are the following:

- Environmental concern as a by-product of cultural and structural factors happening independently of the actual objective state of the environment - the post-materialism thesis and the new middle class thesis
- Environmental concern explained by the worsening of environmental problems - the reflection hypothesis
- Environmental concern emphasised by mediating influences of the environmental lobby, the media and the scientists - the social constructionist approach

2.2.1 The post-materialism thesis

One of the most famous works explaining the emergence of environmentalism is Ronald Inglehart's (1977) research on shift of values based on a large survey in Western countries. According to Inglehart there has been since the post-war a shift in value preferences from goals related to material values such as physical and economic security to goals related to nonmaterial values such as individual fulfilment, autonomy in decision making, improvement of quality of the physical environment and satisfaction of intellectual and aesthetic values.

Inglehart's thesis is rooted on three main assumptions as Hajer (1995:75) points out. First of all his interpretation is derived from Maslow's theory of hierarchy of needs, arguing that "once first order needs for security are ensured individuals become more and more concerned with higher order needs for self actualization" (cited in Scarbrough, 1995:125) and only after fulfilling material needs people aspire to post-material goals. Secondly is the assumption that things that are short supply – the diminishing marginal utility – present more value for people (scarcity hypothesis) and thirdly that the ordering of values in people's mind is carried out during the formative years of childhood and youth (socialisation hypothesis). Scarbrough (1995) states that both scarcity and socialisation hypothesis are not original. However, the combination of both by Inglehart gives birth to a "generational theory, which yields innovative propositions about value change in advanced industrial societies" (ibid. 124).

According to Inglehart's thesis environmentalism is supported by the post-materialist generation (baby-boom generation), which is different from the previous one that experienced severe economic concerns with two world wars and the Great Depression of 1930s. However, as stated by Inglehart (1977) cited in Hannigan (1995:25) "Significantly, post-materialism was not simply a life cycle phenomenon, fading out of existence when post-war generation settled down and stated families of their own, but a lasting value change". In the same line Scarbrough (1995:125) argues: "the replacement of old generation by younger generations results in a slow but steady shift in the cultural character of a society".

Post-materialism thesis has been much criticised on several grounds. One of the main criticisms is related to the hierarchy of needs, which the author himself, Maslow, has recognised to present some fragility (Garner 1996). The question is why the satisfaction of material needs leads to post-materialism rather than new material needs as Garner (1996:69) puts it. Hajer (1995:76) also recognises that "the fulfilment of basic needs does not automatically lead to higher order need fulfilment".

Based on the assumption of Maslow (1954) that "needs are pursued in a hierarchical order according to the extent to which they are necessary for survival", Garner (1996:89) argues that what one generation regards as essential will differ from another. He cites Martell presenting the example of cars and televisions regarded as luxuries

some generations ago and now so common that people who cannot afford them feel it as a deprivation. At the same time, he points out that this will certainly happens with computers very soon.

Another ground for criticism is the emphasis on childhood socialisation (Hajer 1995). She relies in Eckserley findings that education but especially higher educational experience is more relevant in its contribution to environmentalism (ibid:75).

Hannigan (1995), points out that recent research challenges Inglehart's theory by demonstrating that some Third World countries (India, Mexico, Uruguay) present more environmental concerns and are willing to pay higher prices and taxes to protect environment than more industrialised nations (Finland and Japan). Hannigan concludes that the emergence of a phenomenon such as environmentalism is too complex to be reduced just to a product of post-materialist shift in values (ibid:26). Reductionism is one of the main criticisms to post-materialism thesis, presented by the separation of psychological development of post-materialism values from actual socio-economic and indeed environmental development conditions (Hajer 1995; Garner 1996). In spite of considering the "parsimony" and "compelling simplicity" of post-materialism theory, Scarbrough (1995:157) points out its potency "in providing us with one of the few explicated accounts of value change in contemporary West European Societies".

2.2.2 The middle class thesis or the structural explanation

Associated with post- materialism thesis is the new middle class theory, which stresses the social location of those who adopt an environmentalist ethic (Hannigan 1995). This theory is essentially presented by Cotgrove and Duff (1981) who argue: "the rise of environmentalism as an important issue reflects the ideological disposition of a new social grouping, which has emerged in the Post War period" (cited in Garner 1996:69). Cotgrove and Duff claim that environmentalism and growth of environmental consciousness and concern are an expression of a new middle class fraction that dissent from traditional paradigms that emphasise pro-business values (ibid.). This fraction of the middle class is composed by non-productive service-sectors such as teachers, social workers, journalists, artists and doctors labelled as "social and cultural specialists". The claims on post-materialist values espoused by new middle classes are due according to

Cotgrove and Duff to their disposition of setting aside from the dominant values of the industrial society (ibid.). Garner (1996) points out that rather than deriving from need deprivation or class interests, this structural explanation suggests that changing values derive from ideals.

Criticisms also abound in this structural interpretation of the rising of environmentalism attributed to the appearance of a new middle class. The main criticism according to Garner (1996:70) is the difficulty in determining causality. According to him, even Cotgrove and Duff (1981) admit, "environmentalists try to choose occupations congruent with their...post-materialist values". Hannigan (1995) also states that it is not clear why this occupational segment would be more inclined to produce environmentalists with post-material values against other sectors of the middle classes. He points out that in one hand it is possible that one explanation lies in the nature of their involvement and interaction with clients, being first hand witnesses to state the "victimisation of the powerless by industrial progress". On the other hand, conversely, they could have entered deliberately those professions that present a creative or social welfare component because they manifested already value orientations. Hannigan concludes arguing that a combination of these two explanations could be operative in the new middle class thesis.[4]

Furthermore, criticisms to the structural theory are also common to Inglehart's post-materialist thesis. It is argued that those theories totally ignore the influence of the apparent degradation of environmental and ecological conditions as well as the influence of those actors who have played a key role in seeking to draw attention on the issue and in bringing the issue to the political agendas (Nas 1995; Garner 1996). According to this view, the salience of environmental concern is rooted in actual objective conditions rather than in a post-materialist orientation. People become more concerned because the extent of pollution has increased and not because their value orientations have shifted. Furthermore, one could argue that increasing pollution affects a growing number of people personally jeopardising their health and material conditions (Nas 1995:288).

[4] Garner (1996) points out that while there is some evidence that the composition of environmental groups relies on the social profile defined by Cotgrove and Duff there are also some groups such as The Council for the Protection of Rural England that present different social profile (middle and upper classes).

2.2.3 The reflection hypothesis

The refection hypothesis tends to establish a straightforward correlation between the perception of worsening environmental conditions and the rising of green concerns. According to this theory the salience of the Green movement should be attributed to the "rising urgency to defend existing needs whose conditions of fulfilment have deteriorated" (Offe 1987, cited in Nas 1995: 288).

Dunlap and Scarce (1990) found evidence after analysing twenty years of polling data that the majority of the Americans have been increasingly considering environmental deterioration as threatening both their personal health and the overall quality of the environment (Hannigan 1995:23). They argued that it was after the Second World War that environmental degradation in Western industrial societies occurred, reaching its maximum by the late 1960s. This coincides with the dramatic increase of environmental movements in the early 1970s and this being interpreted by Dunlap and Scarce as a reaction to what has been considered as a threat. Hannigan (1995) refers also in the same line of reasoning the research carried out by Jehlicka (1992) showing evidence that the green concern in West Europe varies directly according to the seriousness of the environmental situation. Jehlicka concluded that the environmental concern is more developed in more advanced industrial countries such as Germany, Belgium, The Netherlands, the Northern France and Switzerland (Hannigan 1995:23).

However, several criticisms to this reflection hypothesis can raise important arguments against its validity as the main interpretation for the new environmentalism. The most common refers that although degradation of environmental conditions exist and serious accidents happened there had been other important pollution events that had no consequences on environmental manifestations (Hannigan 1995; Nas 1995). Hannigan adds that while environmental quality has been steadily deteriorating for much of this century the public has ignored those developments for most of this period. Based on Albrecht and Mauss (1975) research he states that public concerns on air pollution in the USA in the late 1960s occur when the levels of pollutants declined in a broad sample of urban areas. Another important argument used by Hannigan (1995:24) respects the so called second generation environmental problems such as acid rain, ozone depletion and global warming, which are not perceptible to public senses but only

detected through highly sophisticated technological devices. It is then suggested that public awareness on environmental conditions is at least partially independent of reality. Other factors should be considered such as the extent of mass media coverage. He concludes that public perception on environmental crisis does not necessarily reflect the real problems but is influenced by experts, media and environmentalists' opinions Hannigan (1995).

What could be concluded as Nas (1995) points out is that arguments from post-materialist thesis (cultural and structural trends) as well as arguments from the reflection hypothesis are not mutually exclusive. This conclusion relies on a research from Rohrschneider (1988) that presents strong evidence that favourable attitudes towards environment spring not only from post-materialism or complains about the perception of environmental degradation but from both.

2.2.4 The social constructionist approach

Social constructionist approach is above all concerned with understanding and explaining how environmental problems get defined, articulated and acted upon social actors, leading to political action. The basic assumption underlying this approach is that environmental problems and risks are social constructed entities (Beck 1992; Hannigan 1995; Hajer 1995). This is opposite to the realist approach assuming that environment is "out there" or social reality exists as a concrete entity which is independent of individual perceptions (Welford 1997).

Social constructivism claims that we always act upon "our images of reality and are dependent on certain discourses to be able to express ourselves" (Hajer 1995:16). This view relies on the philosophical debate of Kantian and Lacanian positions stressing that we cannot know the world as it is (the noumenal world) but rather the 'phenomenal world' presented to us by our senses and mediated by experience (Pepper 1986:8). It is also based on this concept that Hajer (1995:10) argues: "reality is always particular, it is always dependent on subject specific framing or time and place specific discourses that guide our perceptions of what is the case". Applying this to the environment does not mean that nature out there is totally irrelevant or that serious ecological problems and risks are denied. What is denied is that they are independent realities (Hannigan 1995;

Hajer 1995)[5]. The social constructionist approach sees environmental problems and the solutions that are faced for them as the result of a dynamic social process of definition, negotiation and legitimation both in the public and private spheres (Hannigan 1995).

Why do global environmental problems such as acid rain, ozone depletion or global warming receive so much attention overcoming other more pressuring problems and how was the construction of those problems done in order to bring them to the public attention?. According to Hannigan (1995) it is possible to identify three main tasks in this process of construction of environmental problems: assembling claims, presenting and contesting them as presented in Table 2.2.

Table 2.2 Key tasks in constructing environmental problems
Source: (Hannigan 1995:42)

	Assembling	Task presenting	Contesting
Primary activities	• Discovering the problem • Naming the problem • Determining the basis of the claim • Establishing parameters	• Commanding attention • Legitimating the claim	• Invoking action • Mobilising support • Defending ownership
Central forum	• Science	• Mass media	• Politics
Predominant 'layer of proof'	• Scientific	• Moral	• Legal
Predominant scientific role(s)	• Trend spotter • Theory tester	• Communicator	• Applied policy analyst
Potential pitfalls	• Lack of clarity • Ambiguity • Conflicting scientific evidence	• Low visibility • Declining novelty	• Co-optation • Issue fatigue • Countervailing claims
Strategies for success	• Creating an experiential focus • Streamlining knowledge claims • Scientific division of labour	• Linkage to popular issues and causes • Use of dramatic verbal and visual imagery • Rhetorical tactics and strategies	• Networking • Developing technical expertise • Opening policy windows

Two broad arenas are also identified in which those constructions are produced: Science and media. Science has a primordial role. According to Hannigan it is very difficult to find environmental problems, which were not originated, in scientific research. Science uses "cognitive claims (convert experimental observations in hypothesis and theories into publicly factual knowledge) and interpretative claims, which are designed to establish the broader implications of the research findings for a non-specialist audience" Hannigan1995:77). As argued by Beck (1992:23), in the field of risks, key social and

[5] As Hajer (1995:17) puts it: "Any understanding of the state of the natural (or indeed the social) environment is based on representations, and always implies a set of assumptions and (implicit) social choices that are mediated through an ensemble of specific discursive practices".

political positions are performed by scientific professions and media. By the fact that those risks only exist on the scientific knowledge, they can be "changed, magnified, dramatised or minimised within knowledge and to that extent they are particularly open to social definition and construction" (ibid).

The role of science is increasingly relevant if we take into consideration global environmental problems. Understanding those problems is not anymore a matter of direct experience but a matter of high complexity since it involves high technological devices and complex methodologies (Hajer 1995). For this reason "it is a limited group of experts who define the key problems and who implicitly often conceptualise the solution to the problem they put forward" and this leads to the disempowerment of lay man and even other specialists of different areas (ibid).

The other important arena is the media since they are in charge of "moving environmental problems from conditions to issues to policy concerns" (Hannigan 1995:58). As it happens with science, without media it is impossible for an environmental problem to enter the area of public discourse or becoming part of the political process.

The social constructionist approach gains more impact today. Since nobody contest the existence of an ecological crisis the key questions are then more related to the interpretation of often contradictory claims and how to judge, compare, combine and act upon them.[6]

2.3 On the evolution of environmentalism

One of the criticisms to the theories justifying the rise of modern environmental movements (theories based on cultural and structural factors as well as the reflection hypothesis) is their inability to explain the diversity within environmentalism and its

[6] Another thesis attempting to explain the rise of environmental consciousness is labelled by Hannigan as the regulationist approach. The thesis argues that NSMs (New Social Movements) including environmentalism are above all a defensive reaction against the intrusion of the State in the everyday life of the citizens. Based on the perception that some risks are irreversible and uncontrolled (biotechnology, proliferation of new chemical and nuclear, deranged ecosystems) it is considered that governments are the henchmen of those who create those risks. This is due to political agreements and decisions taken behind the closed doors (out of the parliamentary institutions) with corporatist arrangements. According to Hannigan (1995:29) this thesis has the advantage of placing environmentalism in a wider historical and cultural context thus not giving any explanations about individual motivations to adopt a green view of the world.

changing nature throughout times (Hajer 1995). As Pepper (1986:13) states: "(...) with the environmental movement there is a host of ideologies and cross-currents".

Environmental movements suffered a great evolution since the early 1960s both in global and regional contexts. From the radicalism and sharp antagonism of its beginning to co-operation and coalitions in political and scientific arenas of the 1990s[7] a long way was done.

The first environmental movements can be traced back to the 19th century, encompassing groups concerned with the preservation of the countryside in England and the wildlife in North America. The British Commons, Open Spaces and Footpaths Preservation Society (1865) is referred as the first group by Lowe and Goyder (1983, cited in Pepper 1986). Those groups were mainly concerned with the protection of the environment and according to Garner (1996) they presented three distinct trends: nature conservation, amenity and concerns for animals. Garner points out that differences between nature conservation and amenity led sometimes to conflicts especially since areas with most ecological value could not be those presenting best recreational potential. The first environmental movements presented "a conservationist outlook and were largely defensive in character" (Nas 1995:275).

2.3.1 Environment as social protest

The rebirth of environmentalism is commonly located in the 1960s though "not as a unitary movement but sectionalised into a diversity of groups and ideologies" (Turner 1988:1). Turner also points out that environmentalism was confined to the industrialised countries of the North and was seen by developing countries of the South as unaffordable luxury since they were more concerned with basic necessities. The modern environmental movement presents several characteristics quite distinct from the early movements, which led sociologists to include it in the so-called New Social Movements (NSMs). Following Garner (1996:65) two main characteristics make the difference from the precedent environmental movements. First of all modern environmentalism was a mass movement stressing on mass activism and rejecting hierarchical organisational structures as well as old political divisions such as capital/labour. Second, this movement presented a broad range of issues involved in their campaigns, which

[7] Stressing this co-operation is recently the example of Greenpeace participation in the urban "clean" arrangement for the Olympic games of Sydney 2000.

emphasise the interdependence of environmental and social problems. As Nas (1995:275) puts it: "there has been a changing orientation from conservation to a critique of prevailing methods of production and patterns of consumption". Environmental movements were intertwined with peace and civil rights movements against atomic, neutron and hydrogen bombs recognising this as the major environmental threat (Pepper 1986)[8]. The development of ecology and the use of mass media played an important role in presenting the massive nature of threats to environment and those concerns entered mass consciousness.

Based on a social constructionist perspective, Hajer (1995) argues on the importance of emblems in the environmental discourse, since they allow people to understand the major problems of ecological crisis. According to him nuclear energy was the emblematic discourse of the mid 1970s until its announced death between 1978 and 1980s[9].

During the 1970s environmental movements were characterised by "breaking the discoursive order of lobbying and interest group politics" forming "an independent discourse coalition complete with alternative lifestyles and new structures of organization, embracing alternative communicative practices such as mass demonstrations and separate newspapers and radio stations" with actions "supported by slogans such as 'stop', 'ban' 'freeze', and "thought in terms of sharp antinomies such as 'yes-no', 'them-us', 'the desirable–the intolerable" (Hajer 1995:90/91).

Dominating the debate on environmentalism during the 1970s was the common accepted assumption that environmental protection and economic growth were inextricably linked though in an opposite way (Nas 1995). More economic growth would imply less environmental protection and vice versa. As Turner (1988:2) argues: "A central notion in the ecocentric worldview as expressed in the 1960s and 1970s was that environmental protection policies and the promotion of economic growth policies were incompatible".

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[8] He points out that this kind of coalition between ecology and anti-bombs groups is explained by the recognition "that arms race symbolise, promote, and is promoted by a whole set of philosophies and socio-economic structures which are inimical to the achievement of harmony between man and nature and between men and men" (ibid. 16).

[9] In USA, the key event for the decline of this emblem was the accident in Three Mile Island (USA) in 1978, leading to "a de facto moratorium on further construction of nuclear works and this took the wind out of the sails of the radical movement" (Hajer 1995:93).

An important milestone occurred in 1972, which for the first time succeeded in including the environmental problematique in the international political agenda (Hajer 1995; Reid 1995). It was the UN Conference on Environment held in Stockholm, called by the Swedish government in order to cope with destruction of northern forests and pollution of lakes by acid rain. Reid (1995:36) argues that the Stockholm Conference "was the first major attempt to involve the nations of the world, in a concerted, constructive response to environmental problems, which now clearly had an international dimension and to look beyond the immediate problems to deeper issues". Two more important results came about- an "Action Plan for the Human Environment"[10] and the establishment of UNEP. The latter played an important role in the preparation of the World Conservation Strategy published in 1980. Turner (1988:3) also refers the creation of national environmental protection agencies in the economies of the world.

The 1970s assisted to the first political measures to face the increasing mass pollution though mainly in national grounds. The most obvious sign of governments' concern was the creation of environmental ministries and the production of abundant sectoral legislation to cope with aspects of environmental quality, especially emission of polluting substances (Hajer 1995; Nas 1995). Hajer (1995:25) nicely characterises those institutional efforts: "this took the classic bureaucratic form of functional differentiation dividing reality in smaller sections drawing on the so-called 'compartmental division' dividing the environment into air, water, soil and -sometimes -sound" adding that this division was also extensive to legislation and organisational structures.

Pollution was still not regarded as a structural problem but rather seen as something that could be controlled using ad hoc or ex-post remedial measures such as the so-called end of pipe technologies such as chimneys, drains and water processing plants (Hajer 1995). It was the policy of attacking the effects though not the roots of the problems. Those sectoral solutions revealed to be in the next years inadequate to solve the complexity and interconnectedness of environmental problems. As Nas (1995:299) using a metaphor points out: "policies aiming at reducing specific forms of pollution are like cutting the heads of a hydra: solving one problem aggravate others".

[10] However, according to Reid only eight of its 109 recommendations dealt with the relationship between development and environment.

Despite the environmental movement in the 1970s being largely represented by mass activism against trends of industrial growth in modern societies other less spectacular side is argued by Hajer (1995) as having a determinant influence in future environmental trends. He refers the less reported work inside some main environmental organisations named the "secondary policy making institutions". Those were the OECD, IUCN and UNEP working in a new vocabulary for environmental policy making. From 1979 onwards there was according to him, a convergence of these two worlds around the policy discourse with radicalist environmental movement shifting in a new direction. This review cannot go without referring some landmarks of the environmental discourse considered the roots of modern environmentalism. It means three publications in the early 1970s[11], which provoked a large debate among both the scientific community and the general public. Together "they created a widespread credibility for the claim that the environmental crisis was serious and needed to be addressed" (Hajer 1995:79). Those publications were:

Limits to Growth, a report for the Club of Rome (1972) by the Meadow's team of the Massachusetts Institute of Technology

Blueprint for Survival (1972) by the Meadow's team published in The Ecologist

Small is Beautiful (1973) by Fritz Schumacker

Limits to Growth, the famous report for the Club of Rome, presented the catastrophic version of a future world if economic growth persists with the same rhythm and philosophy. A highly sophisticated computerised model was used to forecasts in five interconnected areas: industrialisation, population growth, widespread malnutrition, depletion of non-renewable resources and ecological damage. According to this model if the trend continues without change "the limits to growth on this planet will be reached sometimes within the next hundreds years" (Meadow et al. cited in Reid 1995:31). Even using "the most optimistic estimates of the benefit of technology continued growth would lead to breakdown" (ibid.). The alternative was to create a balance between ecology and economics that would allow changing present trends through a "stabilised world model" (Meadow et al. cited in Pepper 1986).

[11] Important environmental milestones were also *The Silent Spring* by Rachel Carson (1962) and *The Tragedy of Commons* by Garret Hardin (1968) that brought concepts of ecology into the public domain.

The report for the Club of Rome attracted much attention and polemics. Reid (1995:31) presents some reasons for such interest: "widespread scepticism about the ability of economic growth to deliver promised material riches; public despair at social changes that seemed to detract from the quality of life and growing public uncertainty about the effectiveness of political solutions". According to Hajer (1995) the main reason for such interest to *Limits to Growth*, besides the ideological climate of the early 1970s, was the ethos of the report. The Club of Rome was composed by prominent persons from business policy making and science "with an aura of respectability and knowledge" (Hajer 1995:80) and *Limits to Growth* revealed to be "the successful use of discourse as power" (ibid:82). Moreover the cybernetic discourse used in an epoch where it was in vogue seemed an opportunity to extend the possibilities of a rational and scientifically based form of decision making to governmental circles coping with more and more complex issues (ibid:81).

Despite the great criticisms that *Limits to Growth* received in several areas from science to politics, especially the "unrealistic world model" designed, the environmental problematique was, for the first time, presented as a global crisis and became a key reference in environmental debate (Hajer 1995). In an explicit way environment and development were seen as interlinked issues. To avoid an ecocatastrophe "not only the zero population growth was necessary but also the zero economic growth should be averted" (Pepper 1986:22). Reid (1995) states that if *Limits to Growth* could be criticised in particular points, the basic assumption of the report had to be right, especially that the increasing consumption of resources could not continue indefinitely in a finite world and that pollution would be the key factor in bringing about eventual collapse.[12]According to Hajer (1995:83) *Limits to Growth* "became the catalyst of a coalition that started from the recognition of the serious nature of environmental conflict but which sought to remedy the environment predicament through a further integration on organized management".

Blueprint for Survival, published in The Ecologist preceded *Limits to Growth* and was also a product of the Meadow's team. Unlike *Limits to Growth*, which was addressed to the world of business and government elites, it was a bottom-up approach that became a

[12] Actually the Meadow's team published in 1992 a revised report of Limits to Growth, named *Beyond the Limits* and "their conclusions have varied only slightly" (Reid 1995:35).

key reference for the radical environmental public, stressing the role of grassroots organisations (Hajer 1995). Even unlike *Limits to Growth* the objective of *Blueprint for Survival* was the presentation of a large set of pragmatic principles and strategies to face the global crisis and the announced collapse of the finite world and to achieve economic and ecological stability. *Blueprint for Survival* set out a large range of proposals to convert the flow economy into a stock economy such as: resource recycling, energy conservation, low impact technologies, biotic rights, new ways of calculate the GNP, resource self-sufficiency, environmentally sound agricultural practices (Reid 1995; Hajer 1995). Many of those proposals would be further incorporated as the basis for ecological modernisation as Hajer reminds. O'Riordan (1988:19) states: "much of that text was rubbished by commentators at the time but the majority of its analysis and prescriptions has subsequently appeared in various official reports not least that of World Commission on Environment and Development, usually known as the Brundtland report (1987), of which more later".

Based on a criticism to the industrialised society, its mode of production and relationships capital/labour, *Blueprint* proposed a decentralised society in self sufficient and communal units (Hajer 1995) and in which, quality of life would be more important than material possessions (Reid 1995). Education and other means should be used in order to create a society involving harmony between man and nature, and between people, and the compensation for the necessary deterioration in material standards would be the enhancement of quality of life (Pepper 1986:24). Main differences between *Limits to Growth* and *Blueprint for Survival* are according to Hajer (1995:85) that the former argues for a further integration and hierarchisation because global problems require global solutions and the latter argues for decentralisation, self-sufficiency and self-government.

Presenting also a bottom-up approach, *Small is Beautiful* from Fritz Schumacker was essentially a critique addressed to Western industrialised society. Schumacker's thesis was based on more abstract ideas questioning the deficiencies of currently held philosophies to deal with nature (Pepper 1986) especially the emphasis on neo liberal economies. Schumacker considers that people should be put first conversely to ideas of development in Western society that put first factors of production. "Development does nor start with goods; it starts with people and their education, organization and

discipline; without these three, all resources remain latent, untapped, potential" (Schumacker 1973 cited in Reid 1995:69/70). Schumacker claims for the need for a changed value system questioning the Western definition of progress and calls for a re-evaluation of humanist values in Christianity and Eastern religions (Hajer 1995). He argued above all against the discourse of growth and called for technological development to go back to "the real needs of man" (ibid. 86). Schumacker's conception of development meaning more than economic growth was relevant in the future reports of UN as policy instruments and in the definition of sustainable development by WCED.

Like *Blueprint for Survival*, *Small Is Beautiful* "became the catalyst of a coalition that sought to link the ecological crisis to a much broader social critique" (Hajer 1995:86). These approaches challenged the legitimacy of traditional forms with which governments tried to regulate environmental conflicts (ibid:87).

2.3.2 Environment as a management issue

With the decrease of the nuclear issue a great shift in the environmental movement occurred. The 1980s saw an environmental movement "less radical, more practical and much policy oriented" (Hajer 1995:93). The environmental debate characterised in the 1970s by the dichotomy economic growth versus environmental protection turned the focus in the 1980s to "nature first economy first" (Nas 1994:299) and set up the basis for what has been called the ecological modernisation. As Nas (ibid) puts it: "Instead of having to deliver the unpopular message that consumption levels have to be reduced if the oncoming catastrophe is to be avoided, ecological modernization seems to offer governments a way out of the growth versus environmental protection dilemma".

Some of the main changes on the environmental movements of the 1980s are well expressed in Hajer (1995). Among others he refers the changing discourse of alternative societies to focus on practical alternatives within societies; a new role for technology with a new type of knowledge springing up focusing on a different sorts of expertise named "the discourse of solutions" in a opposite way to the 1970's criticisms to technology; Mass activism of the 1970s was not anymore envisioned as the sole basis for political support. The intention of environmental movements of the 1980s was not only maximising its campaign funds by enlarging formal membership but aimed at

getting a wider social support. The media presence was considered relevant as well as political pressure groups and lobbying (ibid:94). Summing up the main transformations of the environmental movements of the 1980s, Hajer (1995:94) states: "environmental movement took up the role of the counter-expert, illuminating alternative solutions to what were increasingly seen again as environmental problems (thus bracketing deeper institutional causes). The problem makers of the 1970s had become the problem solvers of the 1980s".

Hajer (1995:94/96) presents four reasons for this great shift in the environmental strategy of the 1980s. The first is related to the economic recession of the late 1970s that put environmental problems in a secondary place when compared to inflation and mass unemployment. It was necessary to find new ways of reconciling economic restructuring with environmental care in order to gain social credibility. The radical political discourse trying to blame old practices in capitalistic societies was marginalised.

Secondly, changes in the environmental movement itself favoured the strategic model over identity orientation. The practice of mass demonstrations and the radical confrontational style were considered now dead-ends, which could constrain the advancement of environmental movement as a social power.

Thirdly, the new generation of environmental problems emerged such as ozone depletion and acid rain promising the enlargement of the social influence of environmental movement. Exploiting these emblematic issues would increase public understanding of environmental problems and would serve as good examples of the threats to global world due to industrial practices.

Fourthly, the purpose of creation of an alternative discourse by academia and expert organisations in order to find solutions to overcome environmental problems. This was considered relevant to change the focus of environmental policies that should not only be done on the streets but increasingly in policy-making institutions and think tanks. This tendency was originated with *Limits to Growth*, in the 1970s, and was increased with the work of experts in conferences and organisations like OECD, UNEP and UNECE, which revealed a commitment to the design of new policy instruments.

The 1980s also produced some landmarks, which became relevant to the trends of global environmental policies of the next times. It must be however stated that these landmarks owe much to the seminal works of the 1970s especially to *Limits to Growth*; *Blueprint for Survival* and *Small is Beautiful*. The main publications of the 1980s were:

World Conservation Strategy (WCS) from IUCN (1980)

Brundtland Report - Our Common Future (WCED 1987) leading to ***Agenda 21*** (1992)

World Conservation Strategy

With the financial support of UNEP and the comments from FAO and UNESCO (Reid 1995) the World Conservation Strategy, presents as its main aim the integration of conservation and development in order to get a balanced ground for survival and well being of people. As Selman (1996:5) points out "WCS was a watershed in challenging the idea that conservation and development were intrinsically opposed or even that they could be separated". The pragmatic objective of WCS was "to stimulate a more focused approach to the management of living resources and to provide policy guidance on how this could be carried out" (WCS cited in Reid 1995:38). It was the first official document in which the expression sustainable development was used though already in the air since the Stockholm Conference (Reid 1995) or as O'Riordan (1988:35) reminds sustainable utilisation was familiar to IUCN circles since the concept of eco-development in the mid 1970s.

Sustainable development in the *World Conservation Strategy* is based on the concept that "conservation and development are mutually dependent rather than antithetically opposed". So, WCS gives high priority to conservation defined as "the management of human use of the biosphere so that it may be yield to the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations" (WCS cited in Reid 1995:39).

According to O'Riordan (1988:39) WCS presents a turning point in environmentalism by infusing ecological principles into development, which would help to bridge the gap between anti-growth adepts and "development-at-all-costs" advocates. Among other issues WCS stresses the need for precaution and the use of anticipatory policies "which may have high costs but which are most effective than remedy solutions" (cited in Reid 1995:40). Scientific rigour implementation into land-use planning and project management were proposed in order to get sustainable utilisation (O'Riordan 1988:36).

WCS reflects according to Reid two basic strands of the environmental debate of the 1960s and 1970s: the utilitarian view and the moral view. The utilitarian is expressed in the WCS by a practical and utilitarian interest in the economic potential of ecosystems and claims for the application of scientific knowledge to their management. The ethical view because WCS incorporates concepts of respect for the intrinsic value of the biosphere and addresses the argument that humanity has a special responsibility to affect the course of evolution, stating that it is " morally obliged to our descendants and to other creatures to act prudently" (WCS cited in Reid 1995:41). WCS presents several strategies to sustainable utilisation of resources, a checklist of priority requirements and national and international actions and calls for an international strategy in order to readdress inequities and to achieve a more dynamic and stable world economy (Reid 1995).

Despite being considered a landmark by the publicity given to sustainable development or according to O'Riordan (1988:35) by "placing the concept of sustainable utilisation on the international agenda" WCS suffered some criticisms. It was felt by development agencies both from the North and South as imposing limits to development (Reid 1995). It was accused of lack of attention and consideration of social and political obstacles to integrated development. The Strategy failed to discuss the politic and economic changes, which would be necessary for the implementation of sustainable development objectives, ignoring the rights of local people and presenting the view that conservation is above ideologies (Reid 1995). It was according to Selman (1996:6) "a scientific rather than a sociological analysis and it gave little recognition to the inequalities associated with trade, wealth and gender". O'Riordan (1995:36) stresses the lack of integration of the emerging theory of "basic needs" which was "much more people oriented than land-directed with emphasis on removing the causes of poverty and enabling self-help through co-operative endeavour to flourish in a myriad of co-ordinated ways".

Those main criticisms especially on social and political areas were further addressed in the second report of IUCN "Caring for the Earth" (1992) and in the Brundtland report (1987) "which set sustainable development principles within a more balanced human and scientific context" (Selman 1996:6) and allow a more widespread endorsement on sustainable development by developing countries (Selman 1996; O'Riordan 1988).

The Brundtland Report

Scientific evidence accumulated on deterioration of environmental conditions and life in biosphere as well as the increasing awareness of problems produced by patterns of development since the Second World War have called for urgent action. The Brundtland report –*Our Common Future* was an answer of the late 1980s, an appeal to change trends of development:

> "The time has come to break out of past patterns. Attempts to maintain a social and ecological stability through old approaches to development and environmental protection will increase instability (...) we are unanimous in our conclusions that the security, well-being and the very survival of the planet depend on such changes now"(WCED 1987:22/3).

The Brundtland report is a very encompassing synthesis of other precedent UN reports on the relationship between environment and development including the debates North/South of the Brandt reports. It became the focus of environmental debate of the 1980s and functioned as the basis for trends in environmental policies of the 1990s (Hajer 1995).

Though sustainable development was not anymore a new concept it became the key issue of the Brundtland report, proposed for future development and to be operationalised in policy making strategies and instruments at national and international levels. The main argument of sustainability is to stress "the need to view environmental protection and continuing economic growth (in terms of growth or per capita real incomes over time) as mutually compatible and not conflicting objectives" (Turner 1988:5). It is necessary, therefore that growth be regulated by ecological criteria and equity (Reid 1995) and requires a search for "bioeconomic equilibria" (Turner 1988, citing Clark 1976). To link environmental issues to economic concerns is the objective of sustainable development breaking the dichotomy environment/development that has constituted the key assumption of the environmental discourse of the 1970s and an obstacle to the dialogue North/South. Fig 2.1 presents a view of sustainable development in a systems approach.

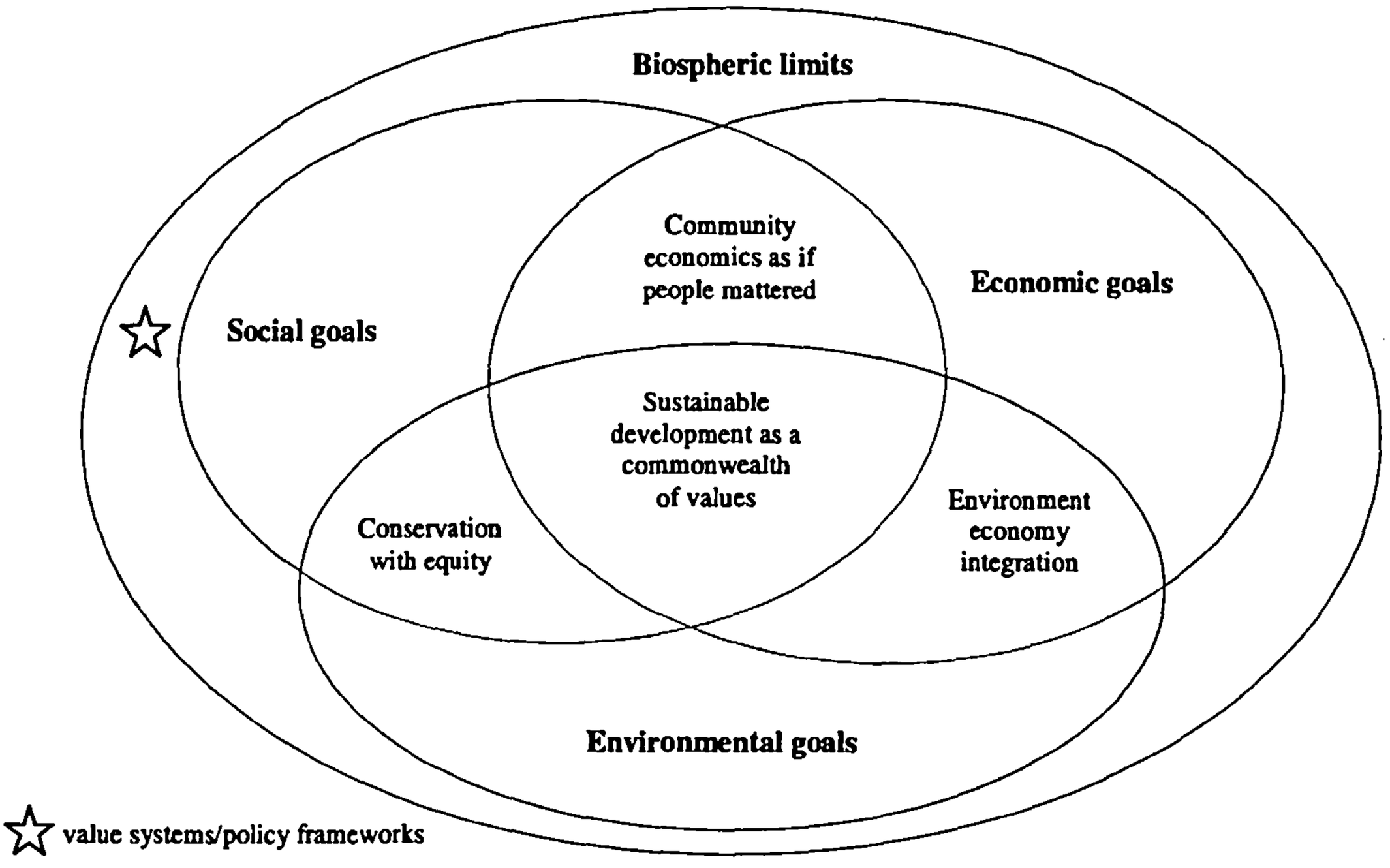

Fig 2.1 A systems perspective on sustainable development
Source: Adapted from Sadler (1988) and Sadler and Verheem (1996:34)

The task of the World Commission on Environment and Development (WCED) was to promote the concept of sustainable development through long term environmental strategies and to design a global agenda for change. The latter should achieve three objectives as quoted by Reid (1995:55):

> To re-examine the critical environment and development issues and to formulate realist proposals for dealing with them; to propose new forms of international co-operation on these issues that will influence policies and events in the direction of needed changes; and to raise the levels of understanding and commitment to action of individuals, voluntary organizations, business, institutes and governments.

Relying on the pattern of development of the last decades, the Brundtland report argues that great problems have been generated in people's life with poverty and vulnerability, as well as on environmental global conditions and both are interlinked. Environmental degradation lead to economic ruin, and poverty was considered the main cause and effect of global environmental problems. It concludes on the need for a development path,"one that sustained human progress not just in few places for few years, but for the entire planet into a distant future" (WCED ibid:4). The concept of sustainable development proposed was "to meet the needs of the present without compromising the ability of future generations to meet their own needs" (WCED ibid:8). Sustainable

development was not anymore just a concern with environment but fore and foremost implies concepts of justice and democracy (Selman1996:11). Three main principles stem from this definition. According to Selman (ibid) they are: Intergenerational equity or futurity implying that "one generation should hand on the earth to the next generation in at least as good a condition as it inherited it" (ibid); Intragenerational principle requiring the principle of social justice enhanced in the Brundtland report by giving priority to the world's poor to whom an "overriding priority should be given"; and transfrontier responsibility implying that sustainable development cannot be achieved at the expenses of deterioration of environmental conditions elsewhere (ibid). Mitchell (1997:27) reminds two underlying concepts that are in his point of view less stressed. Those are needs, especially needs of poor people and limitations created by technology and social organisation regarding the capacity of the environment to satisfy both present and future needs. The Brundtland report puts human needs in the first place stating after defining human needs that they depend partly on achieving "full growth potential" and "ensuring equitable opportunities for all". Moreover "The satisfaction of human needs as aspirations is so obviously an objective of productive activity that it may appear redundant to assert its central role in the concept of sustainable development" (WCED 1987:55).

Some criticisms to the ecocentric view of the WCS in establishing limits to growth were taken into consideration in the Brundtland report. It is stated that limits are not "the absolute ecological limits of the global environmentalists" but it is recognised that limits are imposed by the state of technology and social organisation on the environment's ability to meet present and future needs. Ecological sustainability relies also on the capacity of development policies attention to access to resources and distribution of costs and benefits (Reid 1995). There is a new faith in science and technology which progress is foreseen as a potential to enhance the carrying capacity of resource base. The report (ibid:65) presents a list of global goals for national and international action on development:

- A political system that secures effective citizen participation in decision making
- An economic system that is able to generate surplus and technical knowledge on a self-reliant and sustained basis
- A social system that provides for solutions for the tensions arising from disharmonious development

- A production system that respects the obligation to preserve the ecological basis for development
- A technological system that can search for new solutions
- An international system that fosters sustainable patterns of trade and finance
- An administrative system that is flexible and has the capacity for self correction

A great stress is put on the role of non governmental groups to achieve sustainable development such as people's rights of participation in decision making and "decentralisation of decision making to give local people and small producers a say in policies for allocating resources" (Reid 1995:62). An emphasis is also put on co-operation and dialogue both at national and international levels.

The Brundtland report has received criticisms especially from the radical critics accusing the report to be "a rhetorical ploy which conceals a strategy for sustainable development rather than addressing the causes of the ecological crisis" (Hajer 1995:12). Other criticisms were on the side of its vagueness. O'Riordan (1995:21) considers sustainable development a phrase that remains "a mystery in application" because no one can state "what a sustainable society would look like in terms of political democracy, social structure, norms, economic activity, settlement, geography, transport, agriculture, energy use and international relations".

In spite of this the concept of sustainable development was consensually embraced. The Brundtland report proved to be a catalyst for change (Hajer 1995). The environmental case was presented in such a way that it could encompass institutions like World Bank and IMF which had been in opposite camps in the 1970s (Reid 1995; Hajer 1995). Following the Brundtland report many Western countries published comprehensive documents outlining national environmental policies. According to Hajer (1995:9) some of them started from the recognition that the state of environment calls for an integrated approach and outline a national strategy of bureaucratic regulatory management of environmental problems within the context of sustainable development. In addition, in the international agencies sustainable development is the main objective. As Reid (1995:xiv) puts it "the IMF and the Organisation for Economic Development talk of sustainable economic growth; the World Bank is committed to sustainable development and equitable development and the EU, since Maastricht, has explored the notion of

sustainable economic and social development" and many local authorities have adopted criteria of sustainability as recommended in Agenda 21.

Since the UNCED, held in Rio 1992, sustainable development gained still more attention. According to Reid, the concept involves environmental activists, local government officials and community groups, development agencies and grass roots organisations, planners and commercial developers, industrialists and environmental agencies, established bureaucracies and ad hoc networks, as well as a host of academics representing a wide range of fields from atmospheric science to political economy and gender studies.

The success of the concept is according to Reid (1995:xiv citing Levet) that sustainable development appeals "to values that have been traditionally regarded as fundamental". Others see the concept as a big umbrella that can encompass different interests; it is also argued that the success of the concept relies on the fact that no one can defend unsustainable development (ibid).

2.4 Main environmental theories at stake

2.4.1 Ecological modernisation

The ways people relate to environment have been categorised in some analytical frameworks. One taxonomy much common in literature on environmentalism refers to the belief systems held from different positions, which range from ecocentrism to technocentrism[13]. They represent the two extremes of a scale with radical modes of thought and action. Key words in the ecocentric vocabulary are "talking about limits, self-reliance, self-sufficiency, small scale production, low impact technology, recycling, zero growth population and zero growth economic growth" (Pepper 1986:28). On the other extreme there is a "belief in the ability and efficiency of management in solving problems by the use of objective analysis (...) faith in the idea of progress, material advancement, superiority of high over lower technology, ability to advanced capitalism to maintain itself" and "complete reliance on market forces" (ibid:29). Technocentrism stems from neo-liberalism, the freeing of economies to adopt an ecological framework and ecocentrism represents "the radicalism of collectivism, the greening of the soul

[13] Pepper (1986) presents two more taxonomies for the analysis of environmentalism corresponding to different levels of abstraction. One is based on social theory explanations-functionalist/pluralist, marxist, and the other on philosophical positions on man/nature relationship –determinism and free will.

from the asphyxiation of capitalism state or privately run, with its subtle control over the hearts and minds of citizens as consumers and householders" (O'Riordan 1995:14).
In the middle of these radicalisms, there are soft levels of technocentrism and ecocentrism. O'Riordan and Turner (1983, cited in Turner 1988:1) distinguish four levels in this environmental taxonomy:

- Cornucopian technocentrism – an exploitative position supportive of a growth ethic expressed in material value terms (e.g. Gross National Product); it is taken as axiomatic that the market mechanism in conjunction with technological innovation will ensure infinite substitution possibilities to mitigate long-run real resource scarcity.
- Accommodating technocentrism – a conservationist position, which rejects the axiom of infinite substitution and instead supports a sustainable growth policy guided by resource management rules.
- Communalist ecocentrism – a preservationist position, which emphasises the need for prior macroenvironmental constraints on economic growth and favours a decentralised, socio-economic system.
- Deep ecology- ecocentrism – an extreme preservationist position, dominated by the intuitive acceptance of the notion of intrinsic (as opposed to instrumental) value in nature and rights for non-human species.

These positions have crossed the environmental debate since its rebirth to present times. In the 1960s and the 1970s, ecocentric views dominated the environmental discourse arguing that economic growth was incompatible with environmental protection, claiming for zero growth policies rooted in deep ecology principles and manifesting discredit in technology and science. The 1980s presented a shift on this radical view and new approaches took place through the appearance of concepts such as sustainable development trying to bridge the gap between economic growth and environmental protection.

Turner (1988:5) argues on this re-orientation of environmentalism within the taxonomy presented above: "the argument appears to be that there exists some common ground, where a fruitful and political partnership of ideas, values and policies –from across the spectrum of environmentalist groups might develop". He adds "a coalition of 'accommodating technocentrism' and 'communalist ecocentrism' seems possible".

O'Riordan (1995) states a new version of world views in the environmental debate running from Dry greenness, rooted in scientism and technocentrism and the Deep

greenness, rooted in deep ecology with an intermediate degree –the Shallow greenness. This level of greenness seems to fit the junction of 'accommodating technocentrism' and 'communalist ecocentrism'. O'Riordan (1995:13) defines this level as:

> Shallow greenness splits technocentrist and ecocentrist philosophies but takes its cue from designing with nature. It favours ecologically biased management and evaluative tools such as extended cost-benefit analysis and comprehensive policy integrated environmental appraisal. It is becoming the flagship of sustainable development and is to be found amongst various places in the Fifth Environmental Action Plan of the EC (...)

Concluding that: "This view opens up the pathways to ecological economics, ecologically based ethics and eco-auditing of industrial activity," O'Riordan (ibid:14).

Since the 1980s ecological[14] modernisation became the path followed by Western societies to conceptualise environmental problems and present solutions and strategies to cope with them. Weale (1992, cited in Nas 1995:299), states: "Increasingly political parties and governments turned to ecological modernisation". Hajer (1995:25) defines ecological modernisation as "the discourse that recognises the structural character of the environmental problematique but none the less assumes that existing political, economic and social institutions can internalize the care for environment".

Ecological modernisation evolves around some main concepts. First is the assumption that environmental protection and economic growth are not incompatible in principle and environmental protection can even enhance economic growth (Garner 1996; Hajer 1995). This concept is presented in the Brundtland report and is now internalised in many national environmental programmes especially after Agenda 21, and in international organisations principles such as UN, OECD and EU. The Maastricht Treaty (1993) in its article 2 also expresses the idea: "harmonious and balanced development of economic activities and sustainable and non inflationary growth, respecting the environment" (cited in O'Riordan 1995:350). Ecological modernisation intends to promote the reconciliation of economic and environmental objectives, a central idea of sustainable development. Sustainable growth is a masterpiece of this concept. According to Pearce (1993, cited in Garner 1996:33) sustainable growth means "making sure that substitute resources are made available as non-renewable resources become physically scarce and ensuring that environmental impacts of using those

[14] Ecological modernisation was first introduced by the German political scientists Joseph Huber and Martin Janick though the theory of ecological modernisation is attributed to Spargareen and Moll.

resources are kept within the Earth's capacity to assimilate those impacts". Another important concept of ecological modernisation is the idea that political, economic and social institutions can internalise environmental protection through the use of concepts and new instruments that allow calculating environmental degradation (Hajer 1995). Those instruments contribute to frame environmental problems; calculate environmental degradation and combining cost benefit analysis with elements from ecology like the CNA rule (Constant Natural Assets). This leads Hajer to state "environmental problematique becomes a management problem", portrayed as a positive-sum-game and asking for the participation of the entire society. In O'Riordan's view: "We are basically global citizens ready to share the maintenance of the Planet Earth" (O'Riordan 1995:359). A more managerial approach to deal with environment seems to get advantage and consensus over a confrontational one that faces environment as a political issue (Nas 1995). She adds this "implies stressing reforms rather than aiming at fundamental change". Following Hajer (1995:26/28) there are six different though interrelated areas where shifts to ecological modernisation can be observed.

Environmental policy making abandons the strategy of "react and cure" to "anticipate and prevent". The 1970s sectoral policies proved to be inadequate to deal with the interconnectedness of environmental issues. An integrated approach to pollution abatement is now foreseen with co-ordination among administrative structures. Important mechanisms and principles appear to reinforce this strategy in the practice such as the polluter pays principle, cost-benefit analysis, risk analysis, the precautionary principle, activities debate on resource taxes and emmission taxes. These instruments "are supposed to allow individual firms to integrate environmental concerns in the overall calculation of costs and risks" (ibid:27). Industry began to work with environmental scientists across themes such as cost benefit analysis, EIA, risk management, life-cycle assessment (O'Riordan 1995:10).

A new role for science emerges in environmental policy making. Science "increasingly becomes entangled in the process of decision making" (Hajer 1995:27). The development and credibility ecology have gained led to adoption of emerging concepts such as "critical load" and "multiple stress". There has also been a shift in the epistemological basis of science favouring holism instead of traditional reductionism. Recognising that nowadays a formative debate exists between NGO's, industry,

government and academia O'Riordan (1995:11) concludes: "the net result is an extension of science into the world of politics, commerce and social change" [15]

There has been a shift from the idea that environmental protection increases costs to the idea that pollution prevention pays at a micro-economic level. The idea is that costs of pollution are very high in damaging economy. As Garner (1996:34) points out "allowing factories to pollute indiscriminately will still produce costs since the factories' pollution will damage the economic position of others too". Anticipatory solutions should substitute end-of-pipe solutions. This means "to seek a better balance between stopping pollution before it happens and cleaning up later" (Hannigan 1995). On the policy side low and non-waste technologies (clean production) were advocated as well as the idea of multi-value auditing. This concept suggests that success is not any more measured in terms of money but also takes into account energy and resource usage (Hajer 1995:28).

At the macro economic level, Hajer argues that there has been a shift from nature as free good to nature as resource. A great stress is put on the need to conserve and manage scarce natural resources and substitution of non-renewables by stimulating ecological pricing, recycling and technological innovation. A great faith exists in technological advances to aid the construction of sustainable development. Also an emphasis is foreseen in the establishment of environmental regulations so that the externalities are internalised as a cost born by factory owners (Garner 1996:34).

Environmental policy adopts the concept of "shift in the burden of proof". Developers are now responsible to present proofs that developments to undertake are environmentally sound. According to O'Riordan (1995) this is a controversial aspect because signifies power shift. The objective is to stress the responsibility of developers in the construction of more sustainable growth.

The last shift to ecological modernisation is according to Hajer the reconsideration of the existing participatory practices. Decision makers recognise the role of new actors in the policy scene and try to put an end to the traditional antagonism between the State

[15] For the new role and trends in environmental science, its character of interdisciplinarity and multidisciplinarity see O'Riordan (1995).

and the environmental movement. NGO's are privileged in this process. There has been active funding of NGO's and regular consultation with them. Instruments of consultation and participation as well as mediation and conflict resolution begin to become instruments commonly used in the environmental conflict. Ecological modernisation has become a powerful force involving the environmental movement, government, State and expert organisations.

It has been recognised that ecological modernisation represents a viable theoretical framework "which can be utilised both as a device to persuade governments to act and as a mean to judge how sustainable their response is" (Garner 1996:34). Ecological modernisation suggests that the recognition of the ecological crisis actually constitutes a challenge to business, open up new markets and create new demands. Following Hajer (1995:37): "It is a policy strategy based on a belief of progress and the problem solving capacity of modern techniques and skills of social engineering".

2.4.2 Risk society or reflexive modernity

Risk society is a social theory interpreting the ecological crisis and the transformations and trends in Western societies to cope with it, being considered one of the most influential works of social analysis of the late modernity (Lash and Wynne 1992:1)[16].

Beck argues that nowadays we are all eye witnesses of a break in the modernity of classical industrial society shifting into a new modernity (though still part of industrial society)[17]. This transformation is due to the "unparalleled" environmental degradation of industrial/technological development and the risks produced. The ecological crisis, so Beck states, might become "the stepping stone of a new and superior sort of modernity". This new form is "risk society" or "reflexive modernity".

In the 19th century, traditional strong beliefs in religion were demystified by science and now demystification occurs on traditional scientific and technological thinking. As Hannigan (1995:182) puts it: "Beck contrasts the rigid 'scientific rationality', which is

[16] Lash and Wynne compare risk society in terms of impact across disciplines and in the lay public to Habermas' Transformation of Public Sphere (1989). They classify Beck's work as "a meteoric impact on institutional social science" and a "leading role in the recasting of public debates in German ecological politics".

[17] According to Beck it still is an industrial society because it is mainly industry in conjunction with science that is involved in the creation of risks.

rooted in a belief in progress with a new 'social rationality' which is rooted in a critique of progress".

Beck argues that modernity was concerned with the distribution of wealth and domination over nature and now reflexive modernity is concerned with the distribution of risks and mastery of external threats and dangers. According to Beck, "the place of eliminating scarcity is taken by eliminating risk". He points out that "the gain in power from techno-economic process is being increasingly overshadowed by the production of risks" (ibid:13). Risks within modernity already existed but they were perceived as 'latent side effects' of progress. Now they took a completely different character. Risks have no spatial boundaries as they cross national borders, neither time boundaries as they can affect generations not yet born. Moreover, global environmental problems such as global warming, ozone depletion or acid rain cannot be regulated in an incremental way (Hajer 1995:36). In addition it is also impossible to attribute responsibilities for the hazards of this risk society as well as it becomes impossible to compensate those affected by risks "as their calculability becomes problematized" (Lash and Wynne 1992:2). Calculation of risks as it has been established by science and legal institutions collapses (Beck 1992:22). Risks now, according to Beck present "a tendency to globalization which spans production and reproduction as much as national borders and in this sense brings into being supra-national and non-class specific global hazards with a new type of social and political dynamism"(ibid:13).

In the risk society, Beck argues that "the type, pattern and media for the distribution of risks differ systematically from those of the distribution of wealth" and "risks adhere to class pattern inversely as wealth accumulate at the top and risks at the bottom (ibid:35). In some central dimensions of risks, it is still possible to see risks accumulating on the side of the poor. However with the exponential growth of risks a new formula is set up according to Beck: "poverty is hierarchic, smog is democratic"(ibid:36). Risk societies are different from class societies because conflicts in risk societies are not "class conflicts". To justify this Beck uses the concept of the boomerang effect meaning that risks of pollution and hazards, sooner or later will also come back to its perpetrators. The example is given with transfer of polluted industries to the Third World with large scale pesticides but they return in the form of cheaper foodstuffs like fruit, cacao seeds or tea leaves. As Beck states "the extreme international inequalities and the

interconnection of the world markets move the poor neighbourhoods in the peripheral countries to the doorsteps of the rich industrialised countries" (ibid:44). This boomerang effect also applies indirectly through ecological devaluation and expropriation. He gives the example of destruction of forests that makes the economic value of land or forest property shrink or toxic accidents that turn "housing estates into toxic waste states" or "farmland into wasteland" (ibid:38).

Ecological crisis attacks the very social basis of central institutions of modern societies such as science, legal systems, representative political institutions and the market economy (Hajer 1995:36) interpreting the risk society. This suggests according to him, that not only modern institutions were unable to deal with ecological crisis but also that "the practices on the basis of which environmental politics has so far been made have to be fundamentally rethought" (Hajer 1995:36).

Renn et al. relying on Beck's risk society, argue that there has been a shift of the predominant social conflict in this century. They recognise that the first organising principle in the early 20th century was the distribution of wealth and in the 1960s this changed to the distribution of power in politics and economics. However in this late modernity the major conflict, they argue with Beck, is the "distribution and tolerability of risks for social groups, regions and future generations" (Renn et al. 1995:3). This shift of focus on social organisation implies new forms of collective decision making and conflict resolution (ibid:3).

Particularly important for the theme of this research is Beck's perspective on how risks are constructed, internalised and judged and how ecological crisis has been affecting social, political and techno/scientific structures leading to "reflexive modernisation". In this late modernity, so Beck argues, the monopoly of scientific rationality is broken. A "demonopolisation of science" and a "scientisation of protest" occur. The critique of science occurs in the very realm of science. As Beck (ibid:158) points out:

> It arises instead as a consequence of the triumph and differentiation of scientific validity claims, it is a product of the reflexivity of techno-scientific development under the conditions of the risk society...science begins to extend the methodological power of its scepticism to its own foundations and practical results.

On the other hand with reflexive modernisation, public risk consciousness and risk conflicts will lead to forms of scientisation of the protest against science (ibid:161). Pressured by the public sphere scientists are more and more obliged to open results and conclusions to the public and "display before the whole public their awkwardness, all their limitations and their birth defects all of which have long been well known internally" (ibid:161). Forms of 'alternative' and 'advocacy science' promoted by the public sphere appear and according to Hannigan (1995:181) produce "a fresh variety of new public oriented scientific experts who pioneer new fields of activity and applications". At the same time that science experiences a lack of credibility in the public sphere, new fields for science are open since the public criticism becomes a motor for its expansion (Beck 1992). He reminds the threefold role of science in reflexive modernity. On the one hand science is on the basis of risk problems by the industrial utilisation of scientific results, on the other hand science provides the means to detect problems as well as science provides the "prerequisites for overcoming the threats for which it is responsible" (ibid:161).

On the role of science in reflexive modernisation, Beck (1992:156) argues "paradoxically science becomes more and more necessary but at the same time less and less sufficient for the socially binding definition of truth". Unlike the period of classical industrial society where belief in science and progress was uncontroversial, an increasing mistrust in techno-scientific realm goes in pair with a great dependence on it. This means that reflexive modernisation invades the social sphere and this leads to greater individualisation. Structures of industrial society are criticised and become loosened. Free from the rigid scientific rationality that had invaded all fields of social sphere with great interference in private life it is expected that individual break free and more and more choose lifestyles, subcultures, social ties and identities (Hannigan 1995). However and paradoxically, as Beck argues, this freedom from the dictatorship of scientific rationality is menaced by global risks that resist any individual action or treatment.

As far as environmental politics are concerned Beck introduces the concept of reflexive politicisation, which also means a shift in the traditional structures of politics. The project of industrial society based on the dichotomy of the 'citoyen' (with political rights in the representative democracy) and the 'burgeois' (pursuing private interests on

techno-economic areas, considered non-politics) is collapsing. These two contrary processes of organising social change in industrial society are now being interpenetrated, so Beck argues, with the globalisation of the industrial society. This implies according to him that "the potential for structuring society migrates from the political systems into sub-political systems of scientific technological and economic modernization" (ibid:186).

There has been a disempowering of the traditional political system though its democratic constitution remains. This disempowering is reflected by the migration of politics from the official arenas of parliament, governments, and political administration to realms of what Beck names 'sub-politics'. As Hajer (1995:96) argues, "sub-politics refers to the structural displacement of important political decisions to other, formally non-political, realms". The latter means scientific councils or "concealed worlds of laboratory" or media and citizens movements whose action would imply, according to Hajer, a redefinition of political issues that then become the input of the political process. Beck contrasts the situation of welfare state politics that permit to maintain a relative autonomy against techno-economic systems and the situation in this late modernity where "political institutions become the administrators of a development they neither have planned nor are able to structure but must, nevertheless justify" (ibid:186).

Beck concludes that the notion of centring a hierarchical decision making power at the top of political system is becoming "a memory of the semi-formal democratic past" (ibid:193). Conversely, in reflexive modernisation "both the formulation of the program and the decision making process as well as the enforcement of those decisions must be understood as a process of collective action and this means ever in the best case, collective learning and collective creation" (ibid:191). Hannigan (1995:181) states that the monopolies on political action are set aside and this opens up political decision making to the process of collective action.

On the future of risk society, Beck asserts that it is not defined and both threats and opportunities are still open. He set up three major scenarios for its evolution. The first one "back to industrial society" presupposes the revival of faith in progress representing a continuity of the principles of the 19th century transposed to the 21st century; "the

same as ever, only bigger, faster and more" (Beck:224/225). It is based on the assumption that risks do not represent a new threat and "they were and are self-made challenges of tomorrow; they mobilize new scientific and technological creative forces, and in that way they represent rungs on the ladder of progress"(ibid:225). It is a tendency that denies the enormous evolution in the modernity and the discontinuity that happened. According to Beck, this tendency will aggravate the discrepancy already felt now between those who produce the risks –technology and business- but are not responsible for something they cause, and politics that being responsible cannot have control on them.

Table 2.3 Some features of the "risk society"

	MODERNISATION	REFLEXIVE MODERNISATION
SOCIAL STRUCTURE	Classes Structural order of taylorist workplace National problems Regulation	Individualisation Flexible structures Supra-national problems/ Global problems Deregulation/reregulation
SOCIAL CONCERNS	Distribution of wealth Technical progress/social progress	Distribution of risks Critique on progress
SCIENCE	Monopoly of sciences Reductionist scientific ontology and epistemology	Demonopolisation of scientific knowledge Demystification of sciences Scientisation of protest
DOMINANT RATIONALITY	Scientific/technical rationality	Scientific/technical and social rationality Reflexive learning process, negotiation between different epistemologies and sub-cultural forms amongst different discourses
POLITICS	Sets of classical representative democracy (parliaments, parties, governments etc) Dichotomy citoyen and bourgeois	Sub-politics New sets for decision making New political culture: citizens' initiatives groups and social movements Decisions on science and business charged with political content Politics migrate from the official into a grey area of corporatism
ENVIRONMENT	Dichotomy society/nature Nature is free good Domination of nature	"Nature is society and society is nature" Managing environment Master threats and dangers

This formula increases destabilisation, so Beck argues, with the potential of risks to change into social risk situation with explosive power. Lack of credibility of the political system can grow aggravating the gap between the "the social structure and politics or the political parties and the electorate" (ibid:228). Beck questions the possibilities of rejection of the system of democratic rules and through the rising of a coalition insecurity/radicalism the opening up of a dangerous field calling for a "strong-hand" and "hunger for more order " that Beck argues could "revive the spectres of the past".

The second trend is "democratization of techno-economic development". This tendency relies on the assumption that auxiliary and alternative governments of techno-economic sub-politics -science and research- could be brought under parliamentary responsibility (ibid:229). Beck states that in this form, adequate legal regulations and political institutions should be created along the patterns of welfare policy laws and institutions. However, Beck foresees dangers in this approach such as scientific authoritarianism and excessive bureaucracy (ibid:230).

The last trend "differential politics" relies on two main assumptions. The first one is the idea that the centre of politics has irreversibly changed to the realm of sub-politics. The second is that "business, science and the like can no longer act as if they were not doing what they are doing that is changing conditions of social life and hence making policy by their own means" (ibid:233). Those principles open a new path for the creation of conditions leading to a developed democracy. It would be necessary according to Beck, to create legal protections for exerting influence of sub-politics relying on the creation of independent courts, independent and strong media, which Beck considers the two pillars in the system of sub-politics controls. A supplementary step will be required – self-criticism: "The possibilities of self control that are held by all possessors of monopolies must be supplemented by opportunities for self-criticism". This has been done until now with great difficulty but now should be institutionally protected. So Beck proposes alternative evaluations, alternative professional practice, discussions with organisations and professions of the consequences of their own developments and repressed scepticism (ibid 234).

2.5 Conclusions

Ecological modernisation designed in the 1980s became accepted in the 1990s, performing the "most credible way of talking green" by institutions, governments and environmental agencies. Hajer (1995:267) points out that the 1990s are likely to become the decade that will determine the historical character of ecological modernisation as a political project.

Many questions however remain unanswered since ecological modernisation does not address the basic social and political constraints to its implementation (Hajer 1995) nor the problems of the less developed countries of the Third World, focused as it is on the

'ecologisation' of Western societies (Hannigan 1995). Recognising that ecological modernisation is essentially a modernist and technocratic approach to environmental problems Hannigan quoting Gould et al. (1993), reminds that "sustainability, the guiding principle of ecological modernisation is as much a political-economic dimension as an ecological one: what can be sustained is only what political and social forces in a particular historical alignment define as acceptable". Therefore, it is not possible to maintain social contradictions out of the contemporary environmental debate. How can ecological modernisation fits in the risk society framework is the main question Hajer puts especially the core issue of the transference of the centre of decision making to sub-politics and the increasing role techno/scientific knowledge has gained though, at the same time with more and more discredit in the public sphere. It is also consensual that traditional institutions had not been able to deal with the ecological crisis.

Hajer points out a promising pathway through reflexive ecological modernisation. In the reflexive modernity this would mean that ecological modernisation should not be confined to instrumental rationality but rather promoting the debate on norms and values. Expressing this point she argues:

> In this model ecological modernisation, automatically ceases to be a primary techno administrative affair in which the objective reality of expert discourse determines what is out of place and where solutions are selected that respect the implicit social order of expert discourse. Alternatively, ecological modernisation fosters a public domain where social realities and social preferences are to be respected and which conventions and practices should be changed. (Hajer 1995:280).

This is in fact the necessary dialogue between social and techno/scientific rationalities that Beck so nicely characterises as: scientific rationality without social rationality remains empty, but social rationality without scientific rationality remains blind (Beck 1992:30). This is not an easy and peaceful way since competing rationalities in environmental issues and risks have been for long time in opposite fields with great supremacy of the scientific one. Moreover, institutions of modern society have not proved to be able to guarantee adequate management of environmental problems and risks. Reflexive ecological modernisation would require according to Hajer "the institutionalisation of forms of public debate that could illuminate hidden assumptions and implicit commitments and would, last but not the least generate and proliferate

insights into what I have called the ecological dilemma" (Hajer 1995:283). The idea is promoting debate in what sort of development society really wants.

This is in the same line of Beck's third scenario for the future of risk society and Habermas concept that the rational way to make collective decisions is through fair and competent discourse (cited in Renn et al. 1995:xviii). Similar arguments of opening up the political through new forms of collective decision making and conflict resolution are presented in Renn et al. (1995). Dietz (1995:xix) argues that problems of environment and technology are the toughest challenge facing democracy because:

> (...) environmental and technological issues are in the intersection of science and politics, involve subtle and uncertain risks, large time and spatial scales and a myriad of conflicting interests and values. It is precisely in this area that traditional democratic process seems to falter. The resulting policies are often inequitable and poor aligned with science.

Public involvement in decision making is not something new (increasingly proposed since the 1970s) though still remaining in the majority of cases a frustrating exercise and a tokenist institutional arrangement. This is due in a great part to the late phase in which consultation occurs as proposed in the institutional existing mechanisms. For the purpose of this work the macro level of this review on environmentalism and trends to the future will shift to analyse in more detail public participation on environmental issues, benefits and constraints it brings to decision making and how the consensual accepted trends of sustainable development and ecological modernisation see it.

3 PUBLIC INVOLVEMENT IN ENVIRONMENTAL DECISION MAKING

3.1 The emergence of public participation in environmental decision making

3.1.1 The social historical context

It is difficult to state with any accuracy when the rise in demand for public involvement in decision making occurred, beyond the traditional right of voting which characterises the representative democracy. Roberts (1995:221) points out: "The current practice of public involvement is in many ways the by-product of a cross-fertilisation of populist ideas, the information revolution and widespread disenchantment with a society where neither industry nor elected officials appear to act in the public interest".

It is commonly traced back to the early 1970s the fundamental shift of the traditional modernisation paradigm leading to the search of new alternatives on policy-making decisions (Oakley et al. 1991). Danake cited in Palerm (1999:230) points out that before the 1960s and 1970s public participation was considered "the tranquil choice made by apathetic masses between competing elites". Several political and social/cultural conditions contributed to demands of a more participative democracy. Roberts (1995) relying on Creighton's review (1984) points out some changing features of industrialised countries with major relevance to the opposition of traditional decision making. On the one hand, he states that there had been after the world wars and the Great Depression an increase of centralisation and bureaucracy reflected in an enormous weight of government's influence in people lives. This growth in governments' power and bureaucracy "has resulted in the delegation of increasing amounts of decision making to appointed officials who have no direct responsibility toward communication with the public" (Hampton 1987, in Roberts 1995:222). On the other hand, there had been a rapid increase of mass education and the rise of a new critical population who had access to information through the media. It is not to despise the enormous development occurring in the media in the 1950s and 1960s through the radio, television and cinema. In this scenario, a disenchantment with government's action rapidly occurred in face of the kind of policy development at stake, bringing about an apparent environmental degradation, poverty, corruption and technological environmental risks never faced before. The consequence was an erosion of power, which according to Roberts (ibid) "was further enhanced by the rise of the consumer

and environmental movements which held agencies and corporations accountable for the consumer and expressed the pitfalls of technological development driven solely by economic considerations". A public conscience was emerging that seems to lack to governments and industry (Roberts 1995) and get expression through the New Social Movements (NSMs).

The emergence of NSMs in which the environmental movement has been included, performed a great role in demanding for more public involvement in political decision making. According to Webler and Renn (1995) this demand for more direct participation belongs to the self-identity of these movements. Santos (1994:225/226) characterising the NSMs, states that they fought for emancipation, which was political, rather than personal, social and cultural. The protagonists of the NSMs were not any more social classes but social groups depending on collective interests sometimes very localised but at least potentially universal (ibid). Santos also states that these movements occurred in the civil society, maintaining a calculated distance to the State, political parties and trade unions. New methods of political articulation were proposed far from those of representative democracy and more akin to participative democracy, such as boycotts, demonstrations, non-violent protest, and blocking construction of environmental controversial facilities (Webler and Renn 1995). Santos (1994) stresses that the novelty of NSMs was not in refusing politics but on the contrary in the enlargement of politics beyond the liberal distinction State and civil society.

This is on the line of "reflexive modernisation" that Beck (1992) asserts as characteristic of late industrial societies and the rise of NSMs is seen as a logical consequence of demystification of science and technology and scientisation of protest occurring in face of environmental degradation and global risks, which were previously excluded from the political debate. According to Beck, decision making has become opened up to the public sphere and debate through sub-politics.

The seeds for the emergence and expansion of NSMs can be found in a great part on student's 1968 movement. Webler and Renn (1995) refer the importance of this movement in Europe as preparing the way for more public participation even if the objectives of the named "cultural revolution" were not entirely shared by the population. Santos (1994) refers three main claims on students' revolution: opposition to productivity and consumerism towards non-productivity and post-materialism

ideology; identification of the daily multiple oppressions in the level both of production (alienated work) and reproduction (educational authoritarianism; bureaucratic dependence, bourgeois family values), and declaration that the working class hegemony in social emancipation was finished enlarging its basis to new social sectors. In spite of the failure of student's movement in accomplishing their objectives, many of its principles and aims have been retrieved by the NSMs. Becker (1997) argues that the 1968 student's movement triggered a process of social change that has changed dramatically the developed countries and also affected the relationship between them and developing countries. The US had already experienced this wake of cultural protest in 1965 through the civil rights movements, which interact with students' movement and were broadly expressed later in protests against the Vietnam War (ibid).

Due to the specificity of environmental problems, their correlations with developmental policies and the role of science and technology, the emergence of environmentalism in its several tendencies completely changed the public scene triggering a movement for public participation. Environmental movements became powerful forces in Western countries (Webler and Renn 1995).

As Becker reminds in the early 1960s, Western countries were in the middle of an economic boom, with large-scale innovation projects and programs. Decision making on large-scale projects was essentially based on criteria of economic efficiency and feasibility. A public perception was then increasing that those projects especially motorways, water projects, power plants contributed a lot to degradation of environment, destruction of landscapes and social negative impacts and those consequences had never been taken into consideration in decision making. Oakley et al. (1991:1) argue that in its concern to build and construct "development had become capital centred as opposed to people centred and had marginalized people". The social climate of criticism of the late 1960s and 1970s, the rise of environmentalism forced governments to consider environmental consequences as well as impacts on people's lives. Governments found it necessary to adopt a different approach to policy decision making and showed "signs of acceding to the demands for public involvement" (Roberts 1995:22) and a significant change in the governments' objectives for public participation came about (Webler and Renn 1995).

3.1.2 Main policy instruments asking for public involvement in environmental decision making

At the same time that the environmental and social debate, were running fast, political decision making, especially in the environmental area, was slowly being adapted to increasing demands for public participation. Formal avenues were beginning to be opened up by the adoption of new procedures. In 1968, the Town and Country Planning Act enacted a formal requirement to undertake public participation in the planning process in England and Wales, though only at the level of local government. In 1969, the National Environmental Policy Act (NEPA) was published in the US, by the pressure of the environmental movement. It was perhaps the first and the most relevant piece of legislation trying to involve citizens in environmental decision making through EIA. The objective of NEPA was to minimise the negative consequences for environment of proposed development. NEPA was the most institutionalised way of asking for public participation and with the Freedom of Information Act in 1974 (FOIA) they drove and shaped public participation today (Webler and Renn 1995). EIA procedures were spread all over the world with public participation being considered an intrinsic part of the process though corresponding to very different degrees of public involvement.

With the concept of sustainable development, public participation has become internalised as an indispensable condition to achieve sustainable goals. In the global requirements for sustainable development, *Our Common Future* points out in the first place "a political system that secures effective citizen participation in decision making" (WCED 1987:65). Since sustainable development implies difficult choices from societies engaged it is necessary "a widespread support and involvement of an informed public and non-governmental organisations, the scientific community and industry. Their rights, roles and participation on development planning, decision making and project implementation should be expanded" (WCED 1987:21). As Reid (1995:62) points out the Brundtland report "gives much more emphasis than its predecessors to people's organisations, people's rights of participation in decision making and decentralisation in decision making to give local people and small producers more say in politics for allocating resources".

Following the Brundtland report, the Rio Declaration (UNCED 1992) states in its principles important concepts of public participation, presented in Box 3.1. With Agenda 21, the Action Plan for sustainable development for the 21st century, community participation is considered crucial for the achievement of proposed objectives. Agenda 21 in its chapters 23-32 stresses the importance of participation and the role different actors have to play including women, children, youth and indigenous communities. Agenda 21 considers that effective planning is the one that "evolves gradually through a participatory process that allows different social groups to debate the gains and losses in reconciling development and environment" (Reid 1995:188). The report calls for the development of a full partnership between the public, scientific and technological community (Street 1997:143).

National strategies for sustainable development are considered more effective if they are bottom-up approaches, involving communities and organisations conversely to top down models. The International Union for the Conservation of Nature and Natural Resources (IUCN) as well as The International Institute for Environment and Development (IIED) state that it is relevant for the success of national sustainable development strategies participation "which means the full involvement at every stage of the process of all the groups likely to be affected" (Reid 1995:207, citing IUCN/IIED report). Arguing that participation is not only consultation the same report states that participation requires a dialogue "in which each party provides information and receives and considers the information of others" (ibid:207).

Box 3.1 UNCED principles on public participation (UNCED 1992), Rio Declaration

Principle 10 - Environmental issues are best handled with the participation of all concerned citizens at a relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision making processes. States shall facilitate and encourage public awareness and participation by making information widely available.

Principle 20 - Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Principle 22 - Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Several international institutions and organisations such as the World Bank and OECD following this trend also advise public involvement in major projects, which they are funding within the EIA process. EIA, facing the new concepts of sustainable development has been reconceptualised in order to better work as a tool for sustainability, and public consultation is enforced as intrinsic to EIA. In this sense, one of the main trends in EIA has been its enlargement from sectoral level EIAs of projects to a more strategic level of plans, programmes and policies (SEA).

Also several international agencies such as FAO, the ILO, the UNCED and UNRISD have incorporated participation in their development practice (Oakley et al 1991).

Another important document on the issue of participation is the Aahrus Convention signed by 36 countries and by the EU. It is according to Palerm (1999) "a major step in the development of participative environmental decision making". The convention is not only addressed to projects listed in its Annex I but also enlarged to policies, plans and programmes related to environment. The Aahrus Convention states in its article 3: "the public shall have access to information, have the possibility to participate in decision making and have access to justice in environmental matters without discrimination as to citizenship, nationality and domicile".

Webler and Renn (1995) assessing the state of the art of public participation noted that it has blossomed in certain domains especially related to the environment in both sides of the Atlantic. There has been an international sharing of experiences and methods on public participation that they name a cross-fertilisation. The character of public participation in the US has been more directed to immediate problem solving though in Europe due to much clout of NSMs has been more in the area of national policy formation. On the one hand, so they argue, Europe has begun to introduce dispute resolution mechanisms such as mediation, bargaining, citizens' juries and negotiated rulemaking most akin to the adversarial character of the American regulatory process. On the other hand, Europe has exported some innovative experiences to empower people in decision making such as citizens' panels and study circles. Table 3.1 based on a literature review tries to synthesise some of the main pieces of national and international legislation and recommendations asking for public involvement in environmental decision making.

Table 3.1 Public participation in environmental decision making policy documents

Town and Country Planning Act	1968	Public involvement in planning procedures in England and Wales
NEPA National Environmental Policy Act	1969	Establishes the EIA process to be used as an important contribution for decision making. Public participation is intrinsic to EIA and takes place both in the scoping phase and in the review phase.
CEQ Council on Environmental Quality	1978	Regulations for implementing NEPA (40 CFR) Parts 1500-1508 about risk communication (convey technical and specialised information in a way that is comprehensible and usable for lay public. 40 CFR 1506.6. requires agencies to make diligent efforts to involve the public in preparing and implementing NEPA procedures.
WCS World Conservation Strategy	1980	Recognises the importance of public participation in environmental decision making
EC Directive on EIA (85/337/EEC)	1985	Requires member states to give an opportunity for people "to express their opinion before the project is initiated as well as for the authorities likely to be concerned by the project to be given an opportunity to express their opinion on the request for development consent"
Our Common Future (WCED)	1987	Recognises that public participation is an essential element in sustainable development and should therefore be integrated in the EIA process
World Bank	1991 1993	Provisions for public participation in its Operational Directive 4.01 on Environmental Assessment implemented requirements for consultation and participation at various stages of the assessment process. In the Environmental Assessment source book, update entitled Public involvement in EA: requirements, opportunities and issues, setting requirements for public consultation.
UNECE United Nations Economic Commission for Europe	1991	In recommendations to ECE governments, emphasises the importance of public participation in the EIA process
UNCED United Nation Conference on Environment and Development	1992	Encourages public participation emphasising the importance of public participation in Principles 10, 20 and 22 of the Rio Declaration
Agenda 21	1992	Chapters 23-32 strongly advise public participation through a partnership for sustainable development including individuals and their communities and scientific and technological community
OECD Organisation for Economic Co-operation and Development	1992	In its guidelines on aid and environment recommend that public participation should be a feature of their projects
IUCN/IIED International Union for the Conservation of Nature and natural Resources and International Institute for Environment and Development	1993/ 1994	Defines successful strategy for sustainability as "participatory and cyclical process of planning and action to achieve economic, ecological and social objectives in a balanced and integrated manner""
EU Amendment Directive 97/11/EC	1997	Reasserts EC Directive on EIA 85/337/EEC
Aarhus Convention United Nations Economic Commission for Europe	1998	Convention on access to information and public participation and access to justice. Guidelines on public participation in environmental decision making. Aarhus was signed by 36 countries and the European Community

3.2 Rationale for public participation

In the broad existing literature referring the objectives, goals and reasons for public involvement in environmental management tools, three great underlying principles

could be pointed out: philosophical or idealistic principles, educational or pedagogical principles and pragmatic principles.

3.2.1 Philosophical pedagogical and pragmatic principles

Philosophical principles

Philosophical principles are linked to the very concept of democracy and citizenry and its evolution throughout times.

Webler and Renn (1995) present an encompassing review on theories of participation from initial concepts to recent trends. According to them at a macro level, there are two competing interpretations of democracy, which are based on the large debate on public involvement. Those theories are the liberal democratic theory based on ideas of Pareto, Michels and Shumpeter and the participatory or direct democracy based on ideas of Rousseau and Stuart Mill.

The former theory presents an elitist view of democracy claiming that "political elites compete for votes similarly to how entrepreneurs compete for customers" (ibid:21) and the public just has the right of choosing by vote these political elites that will develop main decisions. The latter theory presents an egalitarian view based on "the normative claim that each citizen be able to co-determine political decisions that affect his or her livelihood" (ibid:21). In the democratic theory public involvement is seen as fundamental to accomplish the two basic principles of democracy stated as popular sovereignty and political equality. Webler and Renn based on Rousseau's principles state that "it is generally accepted that democracy is the outcome of an agreement among people who establish sovereignty based upon their popular and mutual consent" and still citing Rousseau "citizens must engage in political affairs to keep the state alive for only through interaction can the general will emerge from the plurality of particular wills" (ibid). The other argument on the basis of the democratic theory –political equality is, according to Webler and Renn both stressed by Stuart Mill and Rousseau and expressed as "a belief that citizen's moral and intellectual growth occurs through their involvement in political affairs" and "people learn democracy by becoming engaged in its workings. The result of the learning experience is an awakening to the realization that the public and private interests are linked" (ibid: 22).

Those theories on the basis of ethical and normative arguments for public participation encompass several tendencies and combinations ranging from more pluralistic views in which political elites ask for participation of some key interest groups in order to obtain legitimisation of decisions to neo-corporatist views in which negotiation takes place behind closed doors, with key actors (Webler and Renn (1995:21, citing O'Riordan and Wynne 1987).

Webler and Renn argue that recent literature in public involvement stresses both the values of popular sovereignty and political equality, the concepts on the basis of democratic theory. The former concept is represented by the idea that "public participation must fulfil the demands and needs of citizenry in the context of public criticisms to the power of the State and large organised interests (ibid:22). Public participation then "is seen as an enhancement of democracy". As far as political equality is concerned Webler and Renn state based on a broad review of recent literature that it is widely accepted that "public participation should level the playing field" so having an equal chance to influence decisions and "participation should give citizens a voice in decisions that affect them so that they can protect their individual interests"(ibid: 22). It is also stated the importance of participation in the personal development of individuals. Contemporary political thinkers (Backrach 1967 and Pateman 1970) redefined public participation as an instrument necessary for a democratic system, which facilitates the development of individual capabilities and a sense of social responsibility (Palerm 1999). Webler and Renn citing Backrach state "The ability of democracy to function is measured by the soundness of the decision reached in the light of the needs of the community and by the scope of public participation in reaching them"(ibid:21).

Related to participation and its philosophical principles is then the very concept of citizenry. Citizenry throughout the centuries has been a process of continuous enlargement of rights obtained by social movements or using the expression of van Steebergers (cited in Selman 1996) "the history of citizenship has been one of increasing inclusion". According to the Marshalian theory, citizenship began with civil rights (freedom, free thinking, practice of religion and association and the rights of property and contract) supported by the modern law, moved on to political rights respecting the citizens' participation in the exercise of political power (both through vote, the right for strike, labour negotiation, intervention on the nation destiny), to social rights (the rights to life style and to the social patrimony of society) (Barbelet 1989:18).

Turner's (1986) theory on citizenship claims that it is also possible to describe the historical development of citizenship in terms of consequences of the successive social movements and not only according to the marshalian theory of its element's composition. Turner states the existence of four waves in the development of modern citizenship: the first one leading to the end of property in the definition of a citizen; the second one leading to the end of sex differences; the third one redefining the importance of age and familiar ties in citizenship and the last one enlarging citizenship to the attribution of rights to the nature and environment. Barbelet (1989:157) though criticising the above classification states that it has had the advantage of being a summary of historical changes, even *a posteriori*.

The enlargement of rights to the nature, labelled by Turner (1986) the fourth wave, has been the centre of a large debate promoted by ecocentric theories and bioethics, already focused on this study and has been since the rise of environmentalism increasingly accepted by western society. The philosophical concepts underlying sustainability propose new inclusion of rights. Besides the stress on overriding social justice, based on the principle of intragenerational equity, stating according to Selman (1996) that all citizens have equal right to benefit from the use of resources both within and between countries, sustainability promotes the principle of rights of the future generations, the principle of intergenerational equity. This principle is quite well illustrated by a proverb chosen by WCS, (section1.5) "we have not inherited the earth from our parents, we have borrowed it from our children". Moreover, the principle of transfrontier responsibility enlarges the rights of those affected by negative development actions done in other localities, and enhances global citizenry, which implies rights and responsibilities to all humanity (Selman 1996).

Philosophical principles on the basis of public participation, in this context, are based on the belief accepted in democratic societies that people have the right to be informed, consulted, involved as well as to express their own views about issues that personally could interest or affect them (Sewell and Coppock 1977). It is increasingly undisputed that democratic values are better achieved through public participation bridging the gap between representative and participatory democracy (Hyman and Stiftel 1988:45). Assessing the institutional aspects of representative democracy they give four reasons for this:

1) The legislative process is imperfect as a means of determining the values of the public in a democracy because officials are elected on the basis of "a package of issues" so that voters are unable to register their preferences on each policy issue. Furthermore, elections may be won through the approval of a scant majority of the people who actually vote. 2) Legislatures themselves are affected by interest group pressures at least as much as the administrative agencies, because these groups provide financial support, easily accessible information and grassroots organization of vocal individuals. 3) There is substantial evidence that administration of legislative directives can not be divorced from policy making. 4) An increase role for any branch of government can reduce the spirit of democracy.

Given these reasons, "the better alternative is to encourage greater or more representative public participation through programs aimed at opening up political conflicts to broader segments of society" (Hyman and Stiftel quoting Arnstein 1969; Verba 1967; Wengert 1971). Another relevant point is the dominant role of techno-scientific power in decision making, a core issue to Beck's risk society and central to Habermas theories. As Webler (1995:42/43) argues "Habermas is concerned that the scientization of politics (increasing reliance on technological/scientific forms of rationality) has led to mere token public involvement, consequently jeopardising society. The solution according to Habermas would be the "re-policization of the public sphere".

Some key concepts of sustainable development such as empowerment of local people, self-reliance and social justice stress the philosophical rationale for public involvement in a participatory approach. A way to achieve this is according to Mitchell (1997:155) "to move away from traditional forms of environmental resource management which are dominated by professional experts in the government and private sector towards approaches which combine the experience knowledge and understanding of various groups and people".

To this concept of people having a direct word to say through a participative way in development politics another one relevant to this issue is added- the concept of environmental responsiveness extended to the lay citizen. As Arvill (1983:374) argues:

> These are large issues but healthy people should be responsible for maintaining a healthy environment. If we delegate that responsibility without check or balance, without active care, then we diminish ourselves. This is a specific justification for voluntary bodies. To be involved is one of our most important choices.

One of the main objectives in associating people to decision making process is also to responsibilise individual, social groups or organisations directly or indirectly affected by the decisions taken, legitimising the role of the process of public participation. This responsiveness is twofold meaning responsiveness of the participants and responsiveness of political and administrative bodies in charge of decisions.

Educational or Pedagogical Principles

Pedagogical principles are related to the iterative process of public participation exercises, allowing a continuous form of education not only in environmental issues but also in the entire political process in which decisions are taken. Canter et al. (1988:vii) argue on this issue:

> One of the consequences of broadening of the concept of environmental participation is the opportunity it provides to understand some of the mechanisms that are implicit in all participation procedures. The central mechanism is communication. Not only is participation a means by which users can inform environmental decision makers of their own actions and aspirations. It is also a means whereby participants themselves can gain a richer understanding of the environmental shaping processes that are significant to them.

Public participation programs are considered "a challenge to the citizen to continue his education especially about human ecology and environmental processes" (Arvill 1983) but they are also responsible for a better awareness of the problems. This increased awareness "can lead to changes in public opinions or media attention and may stimulate political activity" (Hyman and Stiftel 1988:46). The iterative relationship established through each process with the appearance of different logic for different interveners gives a chance to a more comprehensive and broad acknowledgement.

At least public participation might contribute to a better informed and conscious citizen as well as better informed decision makers about problems raised from different points of view. It could also lead to a more transparent decision making processes and help to increase the confidence of the public, this being according to Clark (1994) its most important aspect. It must be considered "both as an end and a means" (Beresford and Croft 1993).

Webler (1995:72) presents important arguments to reinforce the pedagogical role of public participation as an educational experience. If the immediate goal, so Webler argues, is the construction of an image of self at both the personal and the community

level, by the reflection on the questions raised by a developmental proposal, citizens place themselves within a larger definition of self that expresses itself in the generalised will. "Participation is a way to socially construct an holistic picture of reality, depicting personal and shared relations to inner nature, outer nature and society" (ibid:72). Summing up Timothy O'Riordan (1977:170/171) points out: "Participation, when it is most effective, is educational, therapeutic and consciousness-raising".

Pragmatic Principles

This kind of reasons are essentially related to the incapacity of decisions or plans to identify correctly public preferences (Clark 1994b; Hyman and Stitfel 1988; Renn et al 1995), leading to dissatisfaction and problems with the implementation of actions. Ozawa and Susskind quoted by Hyman and Stitfel (1988:52/53) argue:

> The values of experts may not be representative of those held by the overall population. In addition, experts frequently disagree over transcientific issues. These issues are couched in scientific language but are unsolvable through science alone because of uncertainties in causal relationships, analytical criteria, future conditions or determinations of impact acceptability.

Moreover, Hyman and Stiftel (1988:53) add: "experts should not be able to impose their personal views of what level of environmental risks society should accept or what society's aesthetic preferences should be". Selman (1996) argues in the same line: "scientific evidence on the environment is highly contested and much of the fundamental evidence that we need is intractable to measure reliability". Respecting this point of view public participation in environmental management tools is seen as a way to:

Define problems more effectively. The fact that the public is a direct source of obtaining information enables a better knowledge of the local problems, the weight that the public give to impacts as well as a better understanding of community patterns of behaviour with regard to proposed changes. The identification of existing emergent values of communities affected allows a better identification of problems, necessities and aspirations of those affected (Partidário 1992). As Glasson et al. (1994:145) argue:

> Public participation can be used positively to convey information about a development, clear up misunderstandings, allow a better understanding of relevant issues and how they will be dealt with and identify and deal with areas of controversy while a project is still in its early planning phase.

Access to knowledge. Public participation is seen as a privileged instrument to get access to local knowledge on social, cultural conditions and constraints or as stated by Hyman and Stiftel (1988:42): "obtaining information on the values people place in environmental resources and amenities and combining that subjective information with scientific facts".

Choice of alternatives. One of the main objectives of the process of participation is the identification of alternative solutions or the choice of alternatives to an action, plan or project (Partidário 1992; Chito e Caixinhas 1993; Selman 1996). Local community, residents and interested groups are in a good position, as they know their community better to identify alternative solutions that will be socially accepted (Selman 1996).

Checking the accuracy of predictions. This is especially important in the case of social impacts of an action. As stated by Murray (1996:621): "Impacts on people can only be adequately assessed with reference to the people that are to experience those impacts. Similarly only those people impacted can make an adequate judgement as to the significance of the impact" adding "mitigation and compensatory measures are designed to benefit people, but can only be successful if they are perceived as benefits".

Solving conflicts. If adequately implemented (fairly, opened and timely) public participation can prevent conflicts that often occur with the implementation of new development projects (Glasson et al. 1994; Renn et al. 1995; Hyman and Stiftel 1988; Smith 1993). Public participation when it occurs early "also prevents an escalation of frustration and anger, thus helping to avoid the possibility of more forceful participation" (Glasson et al. 1994:145). Development projects are usually not free of controversy as they have different and sectoral interests sometimes difficult to conciliate. Involving people from the beginning could facilitate the process in several ways as stated by Glasson et al. (ibid) "the process of considering and responding to the unique contributions of local people or special interest groups may suggest measures the developer could take to avoid local opposition and environmental problems". It may contribute to the resolution of controversial or opposite local interests felt by different groups and between these and the specific environmental administration's interpretation of the public interest through the discussion of negative and positive aspects, negotiations, conflict resolution and mediation. Glasson et al. argue: " public modification made early in the planning process, before plans have been fully

developed are easier and cheaper to accommodate than those made later". To finish with, public participation "could create a sense of ownership for the plan or solution which facilitates implementation" (Mitchell 1997:156). This co-responsibility among different actors involved is essential for the effective success of a project, plan or policy.

3.2.2 Controversial issues of public participation in environmental tools

Considered not a simple issue, Wood et al. (1995) refer: "public participation is not a clean neat process, but rather is seldom free of controversy, ambiguities and problems to overcome". Some controversial issues are usually referred when we face public participation related to its both conceptual nature and effective practice.

Conceptual nature

Involvement of citizenry at large and representativeness of participants

The former is seen by O´Riordan (1977:169) as "the single most pressing difficulty facing participation", based on the results and outcomes of the standard techniques used for people involvement (hearings, task forces, review panels, etc.). O´Riordan suggests that they do not appear to be suitable to people concerned with local issues and day-to-day living. The problem seems to be addressing a link between local issues and concerns for wider and long-term community concerns and welfare. If they were addressed "there is hope that the broader civic issues and regional questions will become of more relevance and interest to all citizens" (O´Riordan 1977:170). This raises also the question of passive citizenship and increased individualistic society, where roots have been lost. Selman (1996), argues that the "disintegration of local communities is a feature of contemporary western society, connected with "detradicionalisation" and "individualisation". Roberts (1995:213), presents another view of this question defending that: "Having once been allowed in to participate in decision making, it is difficult to stand on the sidelines the next time. If the public is not invited to participate, people will demand it".

Representativeness is one of the main arguments raised against people involvement. It is actually an important issue to cope with, as always present in the literature concerning participation. On a great measure, the strength of participation depends on the quality and quantity of participants (Chito and Caixinhas 1993). Beresford and Croft (1993:18/19) point out: "it poses some real problems ...but it can also serve as a

convenient excuse for continuing to exclude people" adding "In the past representation mainly meant speaking on someone else's behalf without too many questions being asked about your right to do so". This is also linked to a broad spectrum of questions as the role and preponderance of activist groups, marginalisation of the public affected, lobbying and to the conditions in which participation takes place. This theme will be handled further when "the Who issues" of participation will be addressed.

Public seen as enemy by developers and authorities in charge of the process

Historically the public is largely seen as the enemy by the developer of actions as well as by environmental planners and managers (Mac Nab 1997; Selman 1996). Attitudes of "NIMBYism", lack of adequate information and traditional secrecy of many projects, must be seen on the basis of this perception. As Glasson et al. (1994:144) argue public involvement is historically associated to "extremism, confrontation, delays and blocked development" as the most visible forms of public participation. Lack of transparency in many processes, using participation as a way of legitimising decisions already taken have not provided the best environment for trust and belief in the use of participatory processes.

Glasson et al. (ibid) concludes, "many developers never see the positive side of public participation because they do not give it a chance". As Selman (1996:77) points out: "The very essence of environment issues, however, is that they are 'wicked problems' in which equally legitimate interests will always be in conflict and which can only be resolved (if it all) through an explicit process of bargaining between affected people". This attitude has been gaining adepts and some corporations and developers begin to accept and internalise the benefits of public involvement. Roberts (1995:243) claims: "In the private sector, whether the reasons of strategic success, reduced implementation costs or developing a positive corporate image, public involvement has an expanding role in the future of corporate decisions".

Professional managers and technicians feel threatened by participatory approaches

Many professional managers and technical officials still go on thinking that the public should trust them, based on the concept of professional management (McMullin and Nielsen (1991), quoted in Mitchell (1997). This is related to how empowerment is perceived. Beresford and Croft (1993:50/51) argue: "it is not a zero-sum: so that if I have more, then you must have less. It's also a mistake to think we automatically

empower others by disempowering ourselves. Instead empowerment is concerned with changing the nature of the relationship between participants".

The core question is that there is an increasing complexity in environmental and resource management. This complexity needs to get support in different sources of knowledge and understanding of problems, from the scientific to value laden areas (Mitchell, 1997; Hyman and Stiftel 1988; Smith 1994). Defending this point of view, Mitchell (1997:156) states: "With growing complexity, interdependence and uncertainty of issues and the rapid rate at which conditions change, drawing upon many people and groups should help to achieve a balanced perspective relative to an issue".

Referring resource managers, McMullin and Nielsen, quoted by Mitchell (1997:170) defend: "as stewards of publicly owned resources, resource managers have no more right to make these value-based decisions than any member of the public", hence defending that "when ecological conditions dictate that only one course of action is reasonable, resource managers should assert their authority".

Concerning environmental impact assessment, Hyman and Stiftel (1988:52), referring the polar views, expert/scientific opinions versus subjective perceptions point out that "scientific approaches are needed to collect and analize factual data, while subjective methods of understanding values are important for adhering to democratic principles and facilitating pragmatic implementation of plans".

Public not sufficiently informed to participate

This paternalistic point of view has a strong counter argument used to justify the importance of public participation in acquiring local, specific knowledge or "access to information and understanding that fall outside the scientific realm" (Mitchell 1997:156). Moreover and talking specifically about environmental impact assessment, public consultation and participation, is addressed not only to the public in general but also to organisations, environmental associations and statutory bodies. As Wood (1995) states, "various consultees will have valuable contributions to make at the different stages on the EIA process".

Citizen participation may promote conflict rather than solve it and it is time consuming

Actually, it is perhaps easier to defend the opposite argument meaning that many projects, plans and policies that have not taken into consideration public interests and views, became blocked or have suffered problems and delays. Examples of this abound everywhere particularly when the perception of risk is involved. Development projects always have different stakeholders, defending different and sectoral opinions and a consensus is difficult to achieve. However, though no accurate research data exist, there is a common idea that the benefits of consultation and participation in avoiding conflicts are greater than disadvantages.

Participation if timely developed, could rather avoid conflicts or identify possible areas of problems between the needs of the developer and those of various sectors of the public. This should ideally lead to solutions to these conflicts and to agreement on future courses of action, which reflect the joint objectives of all parties (Glasson et al. 1994). Mitchell (1997) sees the clue to this problem in "having reasonable goals for citizen participation programs and employing adequate techniques to achieve them. It is not consensus the objective managers should seek but rather informed consent".

The argument of participation being time consuming is real, depending very much on the way the process is organised, the existing background of participation. However, this issue needs to be put in a wider context, as Beresford and Croft (1993:38) argue: "what's the point of making decisions quickly if they are the wrong ones?"

Some opinions are that the expend of time needed during the initial phases of a participatory program will be returned later by avoiding or diminishing conflict (Mitchell 1997; Smith 1993; Glasson et al. 1994).

Difficulties between representative and participatory democracy

Participatory democracy is a controversial issue felt sometimes as a threat by politicians elected by vote, seeing non representative participation as a challenge to their authority in the same way as some professionals see public participation (O'Riordan 1977).

Public involvement through consultation and participation in decision making processes has its roots on basic reasons of equity and fairness. Moreover, it has been defended as a way to solve many weaknesses of representative democracy, some of them already stated. However operating without limits, participative democracy must be a wide field

of conflict of interests among national, regional and even local goals and the interests of small groups (Roberts, 1995). The dilemma is according to O'Riordan (1976:165) "how far to move from an imperfect but familiar arrangement of representative democracy to the uncharted waters of participatory democracy" (see also Sewell and Coppock 1977).

The key point seems to be establishing from the beginning the degree of participation acceptable, the rules and processes to achieve it and a different vision focused on the benefits for all parties. Mayo and Craig (1993) point out in this respect the importance of developing strategies that link local projects and movements to wider strategies and movements for change.

Practical Nature

From a broad existing literature an attempt was done to summarise the obstacles in practice to an effective public participation (Wood 1995; Glasson et al. 1994; Renn et al. 1995; Clark 1994; Weston 1997; Smith 1993; Pinho 1994, 1995; Oakley et al. 1991; Nagel et al. 1996).

Due to Institutional Arrangements

Public participation non-existing in legislation or discretionary legislation

Discrepancy between legislation and practice

Lack of guidance about public participation both for conducting and analysing participation processes

Lack of transparency and exempt in the carrying out of the processes

Decisions already taken before participation takes place

Absence of feed-back on results about decisions

Lack of appeal on decisions

Lack of real commitment to the participation process

Lack of trained staff, technical and financial resources

Lack of integration with other planning and decision making activities

Due to the Process

Minimalist approach

Methodologies, processes and mechanisms for public consultation not efficient (badly adapted to the specific cultural context, to the stage of planning and to the characteristics of the project)

Poor publicity of the processes, bad dissemination of information, information not sufficient or inaccurate

Only one flow of communication

Persistence of divergences and misunderstandings. Polarised views that create delays and impediments to the projects
Lack of monitoring

Due to the Context
Lack of a participative culture
Lack of a broad environmental policy
Lack of investment in public environmental education
Centralisation of the political system "that lays less emphasis upon local mechanisms for administration and decision making" (Oakley et al. 1991)

3.2.3 Defining terms

It is common in the literature the use of expressions such as public consultation, public participation and public involvement interchangeably. This fact depends in a large part on the context where those terms are used as well as on the purpose at stake. According to Roberts (1995), this interchangeable use of different terms stems from the rise in influence of public involvement in recent times though different meanings are in rigour allotted to each of those expressions.

Public involvement is the broader term encompassing public consultation and public participation and refers according to Roberts (ibid:224) "to the process of involving people in the decision making process of an organisation". This involvement can be done through both consultation and participation. The distinction between public participation and public consultation is dependent on the degree of influence in the decision making process. The goal of public consultation is a better decision making by the organisation consulting the public through education, information sharing and negotiation with no many opportunities for involvement. The goal of public participation is more active bringing the public into decision making.

On the levels of involvement in decision making it needs mention the eight rungs on a ladder of citizenship participation by Arnstein (1969) cited in many works on this theme. According to Arnstein they range from non-participation (manipulation and therapy) through tokenism (informing, consulting, placation) to citizen power (partnership, delegated power, citizen control).

In literature that is more recent public consultation has been integrated in public involvement and in public participation. For instance, stating that public involvement

and public participation are used interchangeably, in their work, Renn et al. (1995:2) define public participation as "forms of exchange that are organised for the purpose of facilitating communications between government, citizens, stakeholders and interest groups and business regarding a specific decision or problem". Connor (1999) states however that this definition does not include the concept of finding a solution. He defines public involvement as "a systematic way to identify and understand your different publics, provide them with relevant and understandable information and work with them to resolve their concerns about your proposed projects, programmes and policy" (Connor 1999 27:1/5).

The focus of this investigation is public involvement in EIA. In the terminology of EIA culture, the expression used for public involvement is public consultation and participation, which is symptom of the different degrees of involvement in EIA systems.

3.3 Conclusions

Public involvement in decision making has been since the early 1970's slowly incorporated in major policies and principles for environmental management, in government's strategies as well as in the corporate sector. This has been motivated in a great part by pressures in society especially performed by the environmental movement but also by reasons of necessity. The latter relates to the internalisation by governments and decision makers of the increasing complexity, uncertainty and conflict of decisions involving environmental and resource management questions. It has been also recognised especially in the 1980's that in the context of sustainable development as a major path to pursue, new policies and strategies could only been successful if they have public support, otherwise they are condemned to failure.

All these trends in new strategies for more participative decision making have been accompanied by an increasingly informed public due to the enormous development of information technologies as well as the development of complex nets of public organisations at regional, national and international level[18].

[18] As Roberts (1995:242, relying on Montgomerie) argues: "specialised interest groups are more agile, more easily mobilised, and frequently possess technical information which is superior to that of decision makers".

On the basis of the rationale for public participation, one can find broadly, philosophical, pedagogical and pragmatic principles, which have been dramatically evolving with the acceptance of the concepts of sustainability such as environmental citizenship, stewardship and partnership. Citizenship encompasses today rights to a health environment and to equal share of resources but also the sense of stewardship of the resources of the planet. The co-responsiveness on decisions affecting the environment and the well being of societies claim for the development of public awareness and consciousness on environmental problems. Public participation is also increasingly considered indispensable for better planning and environmental management by allowing local knowledge and expectancies through public inputs to be incorporated in the process. Relevant is also the consensual feeling that in all projects and environmental decisions the question of values is a core question and cannot be solved by techno-science alone. It is also confirmed by the practice that if large projects involve the public from the beginning they have a far great chance of succeeding creating a sense of co-responsiveness of communities involved.

Public involvement is not however without problems and complexities. Some obstacles are related to the very conceptual nature of participation as well as to its implementation in the practice. Main problems with public participation are summed up by Renn et al (1995) as therapy, insufficient knowledge, distrust and conflicting rationalities. Therapy means participation when main decisions are already taken; insufficient knowledge refers to the lack of inclusion of publics' views and concerns; distrust relates to lack of confidence in institutions and decision makers; conflicting rationalities focus on the difficult articulation of techno-scientific rationalities of the experts with social rationalities of the affected public.

Impact assessment is one of the main techniques for reconciling both rationalities. Public participation is intrinsic to EIA and it is regulated by norms and procedures stated in the jurisdictional systems. In the next section an overview will be done on public consultation and participation in EIA in its legislative and procedural aspects stressing the evolution of EIA in the path of sustainable development as well as the way public involvement has accompanied this trend.

4 EIA AND PUBLIC CONSULTATION AND PARTICIPATION: A BRIEF REVIEW

4.1 EIA birth and development

4.1.1 Origins

EIA begun in the US through the National Environmental Policy Act (NEPA) and was introduced in practice in the 1st January 1970. The social climate of that time, focused earlier in this study, was determinant to EIA appearance and so was the particular context of the American society. As a result of the two World Wars, Europe and East Asia presented a ruined economy with large infrastructures damaged. The situation in the US was very different since the enormous increase of economic and technological development especially in electronics, chemistry and atomic energy were rapidly adapted to the peace period (Caldwell 1998). A boom of large projects especially dams, motorways and nuclear power plants occurred with large negative consequences to the environment. The assessment of these projects, when made, was based on technical and economic feasibility being the Cost Benefit Analysis (CBA) the most used method.

The "utopian vision" that science based technology would allow rational human management was becoming much criticised by society. The increasing relevance of environmental awareness in the late 1960's versus the unprecedented degradation of environmental resources and the risks posed to health, forced the US government to adopt a new policy to development, substantiated in NEPA. As Ortolano (1984:139) has argued: "The fundamental aim of NEPA was to force all agencies of the federal government to integrate environmental concerns into their planning and decision making". NEPA consisted of three parts as Ortolano (ibid:140) reminds:

- Declaration of national environmental policy
  Broad policy statement - section 101 (A)
  Responsibilities of the federal government - section 101 (B)
- Action forcing provisions
  All agencies of the federal government shall utilize an interdisciplinary approach to planning - section 102 (2) (A)
  Develop procedures to give environmental factors 'appropriate consideration' in decision making - section 102 (2) (B)
  Prepare environmental impact statements - section 102 (2) (C)
- Creation of the Council of the Environmental Quality

> Appraise federal agency performance in implementing NEPA, conduct research and advise and prepare the annual report on environmental quality

Within action forcing provisions the section 102 (2) (C) was considered the most crucial (Smith 1993; Arts 1998; Caldwell 1998), since it provided for a thorough statement of the likely environmental impacts for actions that could affect the quality of the human environment. All the agencies of the federal government were required:

> To include in every recommendation a report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on:
>
> (1) the environmental impact of the proposed action
>
> (2) any adverse environmental effects which cannot be avoided should the proposal be implemented
>
> (3) alternatives to the proposed action
>
> (4) the relationship between local short term uses of man's environment and the maintenance and enhancement of long term productivity
>
> (5) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented (section 102 (2) (C) NEPA)

NEPA has caused an enormous change in environmental policy especially in land use planning and decision making, which under the requirements was opened up to public scrutiny as far as major development proposals were concerned. Under NEPA, EIA filled a vacuum in the American administrative structure since land use planning system was very rudimentary (Wathern 1992; Arts 1998)[19]. After NEPA came to force, the so-called "little NEPAs" appeared referred to the laws for different States of the US. The California Environmental Quality Act (CEQA) deserves mention because it is considered one of the most advanced EIA systems in the world (Wood 1995; Glasson et al. 1994; Ortolano and Shepherd 1995). Applied to private and State developments CEQA presents a broad scope beyond projects and developing since 1989 requirements for ex post evaluation (Glasson et al. 1994). California produces more EISs annually than EISs in the USA as a whole (Wood 1995).

Environmental activists saw NEPA an ally in avoiding environmental harm and "the early proactive role of the courts greatly strengthened the power of environmental

[19] Since the enactment of NEPA, a great number of EIS had been issued. Glasson et al. (1994:26) states: "of well over 15000 EIA's which have influenced countless decisions representing a powerful base of environmental information"; Hyman and Stiftel (1988) state that by the late 1985 federal agencies have issued almost 23500 EIS.

movements and caused many projects to be stopped or substantially amended" (Glasson et al. 1994:28).

Guidelines to interpret NEPA were produced by CEQ in 1970, 1971, and 1973 (Glasson et al. 1994). However, they caused several problems due to its discretionary character to be put in practice by federal agencies and led to great disparities in the quality of EIA processes and especially EIA reports. As Hyman and Stiftel (1988:19) remind "it took over the courts the task of sharpening the substantive requirements with the force of law to establish uniform standards for preparing EIS". To resolve this situation in 1978 CEQ regulations were issued in the statutory law, substituting the judicial review (Cadwell 1998) and substantially ameliorating the EIA process making it "more useful for decision makers and the public, reduce paperwork and delay, and emphasise real environmental issues and alternatives" (Glasson et al. 1994:29).

4.1.2 Expansion

NEPA influenced legislation in more than eighty countries (Caldwell 1998) and EIA as its main provision has spread throughout the world. The reasons for this widespread adoption were basically the same that forced its birth in the US - the lack of integration of environmental concepts in decision making (Ortolano 1984), increasing awareness of environmental resource degradation, enhanced by the Stockholm Conference and relevant publications[20] as well as the perceived need to reform administrative decision making (Arts 1998). The potential of EIA was understood and the American EIA became a model for other EIA systems though adapted to fit different social and political contexts. According to Petts and Eduljee (1994:35) this acceptance reflects not only the need to integrate environmental considerations into decision making but also the "inherent simplicity and flexibility of the approach" proposed in EIA.

Nevertheless, a special attention and caution was given to aspects related to litigation "in which the American courts had been so active in forcing EIS requirements and increasing the ability of citizens to affect agency decisions" (Ortolano 1984:151). In this aspect American experience was avoided (Wood 1995; Glasson et al. 1994) by

[20] Determinant in the rise of public awareness on environment were *Silent Spring* (Carson 1962); *The Tragedy of Commons* (Hardin, 1968) followed by *Limits to Growth* and *Blueprint for Survival* (Meadow's team 1972) and *Small Is Beautiful* (Schumacker 1973) (see chapter 2).

structuring EIA systems in a way "to preserve the discretionary powers of government authorities" (Glasson et al. 1994). According to Ortolano (1984:151) "Many countries wanted to avoid giving such power to the courts and allowing citizens to observe the internal decision processes of administrative agencies".

Different EIA systems since up the 1970s were established beginning with more industrialised countries such as Canada in 1973, Australia in 1974, West Germany 1974, New Zealand in 1974, France in 1976, The Netherlands in 1979, Japan in 1981 (Wathern 1992; Glasson et al. 1974; Wood 1995). In 1985 the European Community enacted a Directive on mandatory EIA to Member States. EIA has been also extended to Eastern countries such as Poland, Hungary, the Czech Republic and the Baltic countries, becoming increasingly considered a component of planning systems (Wathern 1992; Arts 1998). Also many developing countries adopted EIA procedures, realising the EIA potential to introduce some form of environmental planning and planning control which was absent in their legislation (Wathern 1992). The EIA World Letter, 1983, quoted by Hyman and Stiftel (1988:9) states: "By 1980 over fifty developed and developing countries had instituted requirements for environmental impact statements, and 102 less developed countries now have government protection". Several international organisations and institutions have recommended or adopted EIA. Among them, the OECD in 1974 and 1979 recommended EIA to Member States and in 1985 for development aid projects (Wathern 1992:4). The World Bank in 1989 decided that the borrower countries should adopt EIA and guidelines were issued in 1990. UNEP recommended EIA to member states and in 1980 provided guidance on the assessment of development proposals (Wood 1995). The World Health Organisation also recommended EIA in order to assess adverse effects on human health due to environmental change (Wathern 1992).

EIA is nowadays required in more than half the countries of the world (Ortolano and Shepherd 1995). It is estimated according to Sadler (1996:25) that more than 100 countries have EIA national systems in place. This geographical expansion of EIA has also been accompanied by the expansion of its scope. Wathern (1992:4) argues "in recent years the breath of EIA has expanded perhaps even more rapidly than its rate of geographical spread". The concept of NEPA's impact assessment evolved to different fields and disciplines related to planning and resource management. It is the case of

Social Impact Assessment (SIA), Strategic Environmental Assessment (SEA), Risk Assessment (RA), Environmental Health Impact Analysis (EHIA), Policy Analysis (PA), Gender Impact Assessment (GIA), Cumulative Effect Assessment (CEA), Technology Assessment (TA), Psychological Impact Assessment (PIA), Climate Impact Assessment (CIA), Economic and Fiscal Impact Assessment (EFIA); According to Arts (1998:27) "Almost every letter of the alphabet has been combined with the letters IA for denoting some form of specific impact assessment".

Environment since the 1990s has been increasingly considered in a broad sense (Ortolano and Shepherd 1995; Glasson et al. 1994) from components of physical environment to economic, social and cultural dimensions of the environment. Although this concept of a broad environment leads to the inclusion of all non-monetary impacts of elements in EIA, many EIA systems still stick to a narrow view not considering social impacts in their legislation (Ortolano and Shepherd 1995). In 1979, Munn recognising that different approaches exist to the components of an EIA claimed that impacts on ecosystems were intimately related through complex feedback mechanisms to social impacts and any project involving environmental changes should study the association of biosphere impacts and the social ones. Also Sadler (1996) states that an EIA process is understood to include all the relevant factors such as risk, social, economic, cultural and health factors. UNEP (1996:70) considers: "Despite a lack of internationally consistent practice, it is possible to identify a majority 'position' which is that integrated assessment, potentially covering a wide range of impacts, are need and that EIA's are the best available mechanism for implementing them".

To finish this brief review of the history of EIA, Wood's (1995:xiv) words seem very appropriate:

> Born in the USA it was initially ignored then (in turn) caused great disturbance and antagonism, began to change people's lives for the better, settled down and learned from experience, become respectable and eventually, was extensively imitated all over the world.

4.2 Overview of main definitions, principles and procedures in EIA

4.2.1 Definitions and principles

A very extensive literature on EIA has been published since NEPA being in itself a main proof of EIA universal acceptance and dynamics throughout times, to better fit the new challenges on the difficult relationship environment/development. EIA literature has evolved in two principal ways: as an exchange of experience of good practice due to the appropriation of NEPA model from different social/political contexts of other countries and as a reconceptualisation of EIA, especially since sustainable development has become the main accepted framework for environmental problems and development proposals. Definitions of EIA are in a large number, some stressing EIA aims and objectives, others stressing EIA as a process, still others stressing EIA procedures. Box 4.1 presents a compilation of some relevant definitions and concepts of EIA. Very much cited in the literature is Munn's (1979:1) encompassing definition of EIA:

> (EIA) is an activity designed to identify and predict the impact on the biogeophysical environment and on man's health and well being of legislative proposals, policies, programs, projects and operational procedures and to interpret and communicate information about the impacts.

Some literature enhances the relevant dimensions of EIA. Arts (1998) in his review of EIA conceptual definitions concluded that three elements were central to the concept: the process, the product and the procedure. *Process* refers to the act of assessing environmental impacts. *Product* refers to the Environmental Impact Statement (EIS) central to EIA and containing the description and evaluation of the environmental effects. *Procedure* refers to the way the process of assessing impacts must take place defined by legal regulations and procedures. He decided to use the word instrument to include these three elements.

Van Der Vorst et al. (1999:4/5) consider that EIA is characterised by four main dimensions: *Procedural*, since EIA establishes a systematic procedure for incorporating environmental decisions into decision making. *Informational* since the procedures created by EIA enable the information about the environment to be provided to the decision making authority and the public in a clear and defined way: *Preventive*, since it should happen at the earliest opportunity in the decision making process and before a

consent decision is made. *Interactive*, since the information it provides feedbacks into the EIA process and the design process of the activity concerned.

Box 4.1 Some relevant definitions of EIA

In essence EIA is a process, a systematic process that examines the environmental consequences of development actions, in advance. The emphasis compared with many other mechanisms for environmental protection is on prevention. (Glasson et al. 1994:3)

EIA is a process for resource management and environmental planning that provides for the achievement of the goal of sustainability (Smith 1993:1)

The purpose of Environmental Assessment is to provide decision makers with guidance for making informed trade offs among conflicting aspects of environmental quality and between environmental quality and other societal objectives (Hyman and Stiftel 1988:5)

A systematic process of evaluating and documenting information on the potentials, capacities and functions of the natural systems and resources in order to facilitate sustainable development planning and decision making in general and to anticipate and manage the adverse effects and consequences of proposed undertakings in particular (Sadler 1996:13)

EIA is a systematic and integrative process first developed in the US as a result of NEPA of 1969, for considering possible impacts prior to decision being taken on whether or not a proposal should be given approval to proceed (Wood 1995:1)

An instrument for planning and decision making, oriented to the provision and evaluation of information about the environmental effects of development proposals and decisions with the aim to improve planning and decision making (Arts 1998:19)

(EIA) is essentially a technique for drawing together, in a systematic way, expert qualitative assessment of a project's environmental effects, and presenting the results in a way in which enables the importance of the predicted effects, and the scope for modifying or mitigating them, to be properly evaluated by a relevant decision making body before a decision is given (UK Department of Environment 1988 §8, cited in Wood 1995)

Some authors claim that there is no universal definition of the purpose and nature of EIA since it has evolved in order to develop environmental concerns, policy assessment, techniques and practice. Petts and Eduljee (1994:36) state that EIA should be "a dynamic process always evolving to be adapted in purpose and application to the needs of the time".

Also enhanced in literature is a retrospective view of EIA, considering its normative (purposes) versus the practice (common use). Ortolano and Shepherd (1995) have argued that two main alternative paradigms have been elected in the use of EIA. One, dominating is the technocratic paradigm, which sees EIA as a "planning tool", an element of the "rational model" for planning and decision making and is especially held by scientists and engineers conducting EIA's. In the other one, EIA is seen in its broad

"political context" and its main aim is to improve the quality of decision making. Criticisms to the former abound in literature stating that the logic of the rational model is unrealistic because decision making is also influenced by non-scientific factors (see Mitchel 1997; Smith 1993; Sadler1996). As Sadler argues a series of trade-offs among economic, environmental, social and other criteria are involved in decisions and the challenge is exactly that "striking a balance among these factors lies at the heart of integrated decision making for sustainable development" (Sadler 1996:16). Moreover as Ortolano and Shepherd (1995) point out requirements to conduct EIAs can have repercussions in project proponents, attitudes of agencies and decision makers. This is related to the concept that EIA should be both a science and an art, first stressed by Kennedy 1988; (see also Wood 1995; Wathern 1992). He stated that EIA is a science since its relevance in considering the technical aspects of the assessment such as identification of impacts and predictions; EIA is also an art when one considers the meaning effects that EIA have in decision making such as the management of information.

Given the growth of uncertainty and turbulent environments in which decisions are taken, a more integrative approach to planning and decision making has been advised by many authors. Although, still is a technocratic approach to planning that dominates and "that carries science well beyond the bounds of its ability to advance the wisdom of public decisions" (McAllister1980, cited in Smith 1993:76). It is in this sense that Smith (1993), proposes the redefinition of EIA from project implementation and methodological focus towards a wider view integral to a planning process and "the role of planning be thought of in broad terms as a process of value-based choice rather than a method per se" (Smith 1993:76). This is in the line of Holling (1978) arguing that to face uncertainty an adaptive environmental assessment is need in which the EIA process continues long after the proposed action been implemented. In this view EIA is an essential component of a long-term environmental assessment strategy (Munn 1979:56).

4.2.2 Procedures and methods

In spite of the dynamic character of EIA to be adapted to new challenges in resource management, its fundamental principles as initially conceptualised in NEPA remain basically the same while procedures in practice differ a lot. It is almost consensual in

literature that an EIA process integrates some basic steps working therefore in a cyclical manner. These steps or phases are broadly stated as: Definition of alternatives, screening, scoping, EIA report, review, public consultation and participation, decision making and EIA follow up.

Definition of alternatives is according to Wood (1995:102) the first step in the EIA process and must be done "at the design stage before any commitment to any particular action has been made".

Screening means the assessment of the need of an EIA and is determined both by regulations or positive lists (the case of Annex I of the UE Directive) or by a case-by-case approach, such as a preliminary assessment of the action compared with a set of criteria, such as thresholds, size of project and sensitivity to environment (the case of NEPA).

Scoping states the terms of reference for the EIS meaning the objectives of the study, parameters, boundaries of the assessment and timelines. By defining the key issues to be assessed, scoping provides relevant information about an action (Petts and Eduljee 1994) and is considered "the foundation for effective EIA" (Sadler 1996:113).

EIA report comprising:

- *A description of the project* or the action (objectives, rationale) as well as the explanation of its characteristics (stages of development, location, projects) (Glasson et al. 1994)
- *A description of the environmental baseline* as a reference point in its several components (biogeophysical and social) as well as a description of the likely future state of the environment without the implementation of the action, though taking into account predictable changes from human activities and natural events (Glasson et al. 1994)
- *Identification of impacts* addressing relevant impacts both negative and positive
- *Prediction of impacts* provides the assessment of the magnitude of the impacts on the environment caused by the proposed action through a comparison with the non-existence of the action

- *Evaluation of impacts* provides the assessment of the importance and significance of the impacts in the context of the decision making process. It is considered the most difficult aspect of EIA (Ortolano and Shepherd 1995)
- *Mitigation measures* provides measures to avoid, reduce, remedy and compensate for any significant and adverse impact (Glasson et al. 1994)

Public participation and consultation "refers to a group of methods and procedures designed to consult, involve, inform and empower lay citizens and interested groups regarding environmental issues" with the objective of "influence a decision, plan or policy (...)" (Smith 1993:66).

Review of the EIA report provides the "appraisal of the quality of the EIS as a contribution to the decision making process" (Glasson et al. 1994) in aspects such as relevance, completeness and objectivity (Munn 1979:11). Since usually EISs are done by the proponent it is important an independent review to give confidence and impartiality to the study (Clark 1994a).

Decision making aims at getting an informed decision by the competent authority to whether an action should proceed or not proceed, based on the results of EIA report and review as well as the results of public consultation and participation.

EIA follow up, according to Arts (1998:73) presents "a backward looking" and "concerns the appraisal of a policy, plan or project which has been or is currently being implemented. EIA follow-up comprises monitoring, auditing and EIA ex post evaluation.

- *Monitoring* refers the recording of collection of data in order to verify if the predicted impacts have occurred, if mitigation measures have been implemented in practice as well as other recommendations of the EIS.
- *Auditing* follows monitoring and "implies an objective and independent assessment of whether implementation is according with the expectations and standards" (Petts and Eduljee 1994)
- *Evaluation* "refers to the generic process of gathering, structuring, analysing and appraising information; it incorporates monitoring and auditing" (Arts 1998:76)

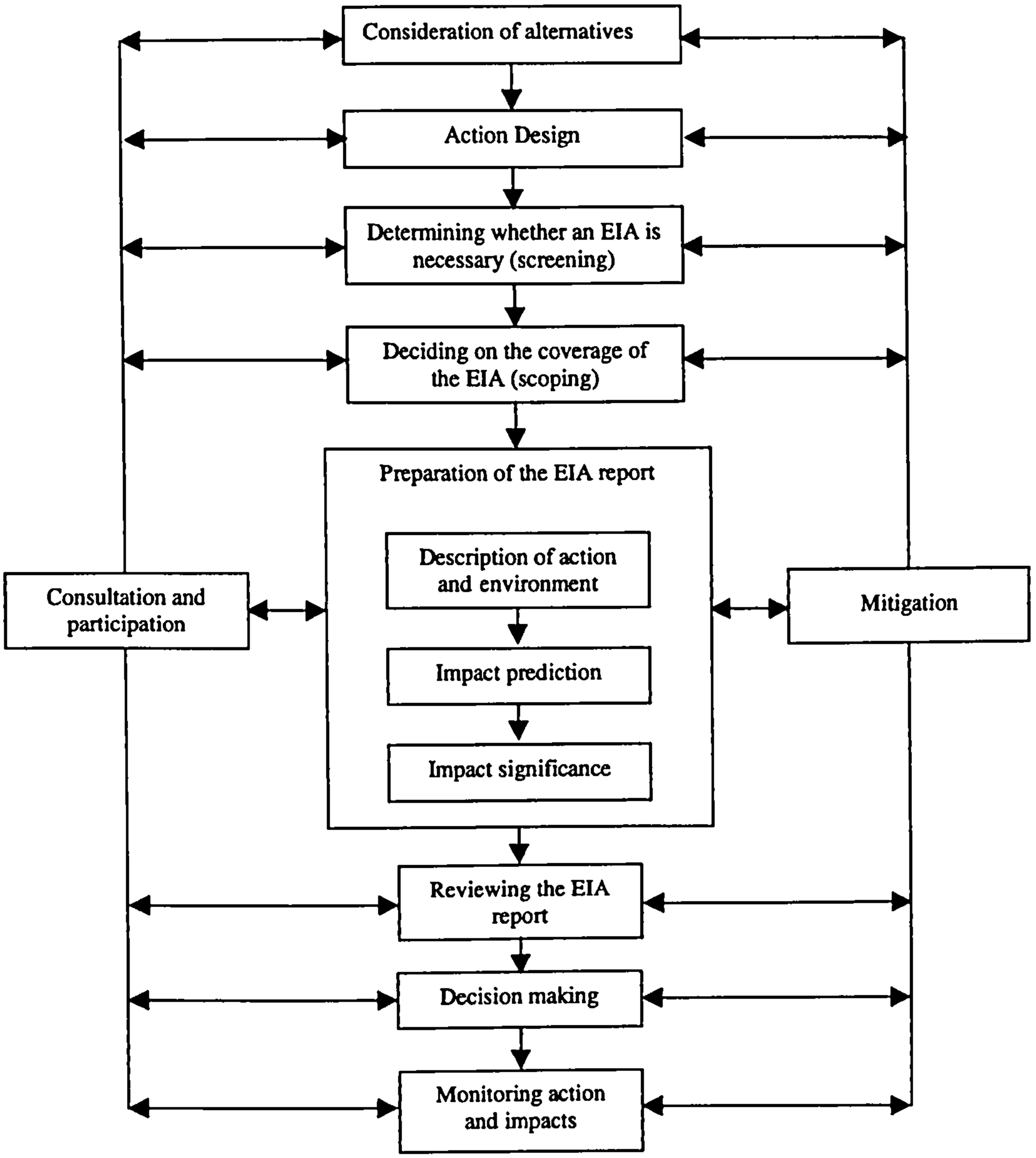

Fig 4.1 The Environmental Impact Assessment process
Source (Wood 1995)

Although an effective EIA should have the phases presented above (Fig 4.1) many EIA systems did not incorporate all of them yet. NEPA did not provide at the beginning for EIA follow-up, which is now considered indispensable for the effectiveness of EIA and one way of facing the uncertainty of predictions as well as "a vital step in the EIA learning process" (Glasson et al. 1994). The European Directive does not make consideration of alternatives, scoping and EIA follow-up mandatory though some Member States apply it in the practice. The assessment of the EIA practice after 25 years of NEPA implementation, stresses the importance of the scoping phase, and EIA follow-up as indispensable steps in achieving EIA effectiveness (Sadler 1996). Methods to be used in EIA for identifying, assessing, describing and evaluating impacts have

been thoroughly reviewed (see Ortolano 1984; Hyman and Stiftel 1988; Bisset 1988; UNEP 1996)[21].

Two main distinctions should be made: the forecasting or prediction of impacts and the evaluation of impacts. Forecasting of impacts needs that an accurate description of the baseline environmental conditions has been done at the outset to give an accurate picture of the potential impacts of an action. This could be done through written texts, diagrams, flowcharts, maps and sketches (Wood 1995). Forecasting of impacts includes its identification (using checklists, matrices, networks, GIS, McHarg overlay approach computer expert systems), and the assessment of its magnitude. Prediction should identify direct and indirect impacts, its duration, its geographical extent as well as its sense as positive or beneficial and negative or adverse. It is an objective exercise dealing with facts and usually relies in expert opinions (Ortolano 1984). Different methods could be used in the prediction of impacts such as physical models, architectural models, computer simulation, field and laboratory models and statistical models (Glasson et al. 1994; Wood 1995; UNEP 1996).

Evaluation of impacts means the assessment of its significance for decision making. Besides environmental factors, political, social and cultural facts intervene. As Ortolano (1984) puts it "evaluation is the process of putting relative values on different impacts and establishing a preference ordering among alternative plans". Evaluation deals with values and its interpretation and with the application of judgement (Glasson et al. 1994; Hyman and Stiftel 1988; Petts and Edulgee 1994).

Different methods also exist for the evaluation of impacts[22]. Two broad families of methods are pointed out by Hyman and Stiftel (1988): one relying in quantitative expression of environmental values, to allow a logical or mathematical manipulation and display through numerical tables (for instance Cost Benefit Analysis) and another one using more qualitative measures and graphic displays (multicriteria analysis, decision analysis, goals achievement). Little agreement exists among experts about

[21] Morris and Therivel (1995) present an encompassing review of methods by specific areas ranging from socio-economic impacts to noise, water, soils, landscape, archaeological, cultural assets and ecology in its different aspects as well as interaction among impacts.

[22] A study carried out with 140 EIAs in North American and The Netherlands found out 150 distinct methods of evaluating impacts (Glasson et al. 1994:116 based on VROM, 1984).

which method is the best (Ortolano 1994) though quantitative methods have been criticised for internalising value judgements (Wood 1995). The Adaptive Environmental Assessment and Management approach uses both of these enhancing the use of panels expert and workshop activities (Petts and Edulgeee 1994).

Standards are usually considered in evaluation as for instance in noise levels, air and water parameters of quality. An approach getting increasing acceptance is the use of sustainability criteria such as preservation of genetic diversity, welfare of future generations (UNEP 1996). Agreement exists that in the evaluation of impacts, significance should be assessed trough community values and preferences taking into account "the social and cultural aspects of local value systems" (UNEP 1996). Since it is accepted that in democratic societies people likely to be affected by decisions have a word to say, evaluation of impacts deals with consultation for determining how individuals and groups value public actions (Wood 1995; Ortolano 1994; UNEP 1996; Hyman and Stiftel 1988). Another consensual idea when evaluating impacts is that facts should be separated from values and that it is important to state the basis on which value judgements are stated. Box 4.2 presents a list of sustainability criteria that could be used on definition of significance.

Box 4.2 Sustainability criteria
Source: Fleming and Daniell (1995) in UNEP 1996:342

- Maintenance of habitat and ecosystems
- Preservation of native plant species
- Preservation of native animal species
- Preservation of areas of landscape/amenity value
- Preservation of areas of cultural value
- Reclamation and reuse of wastewater
- Wastewater disposal within assimilative capacity
- Ground water extraction within sustainable yield
- Improvement in surface water quality
- Improvement in ground water quality
- Productive use of fertile soils
- Prevention of erosion
- Application of clean technology
- Waste recycling or use
- Material utilisation allowing recycling and reuse
- Increased use of metal substitutes
- Compatibility with existing operations or services
- Local infrastructure compatibility
- Minimisation of greenhouse gas emissions
- Airborne disposal within assimilative capacity
- Use of renewable energy sources
- Energy efficiency
- Public acceptability
- Involvement of the community
- Improved recreational opportunities
- Improved access to public open spaces
- Full cost recovery for good or service
- Annual equivalent cost-benefit ratio
- Cost borne by consumers
- Equitable cost-benefit distribution
- Increase in employment opportunities
- Unit cost for good or service
- Capital cost funding capability

Fig 4.2 presents the EIA process as suggested by good practice according to Petts and Eduljee (1994). It was chosen because it clearly shows the iterative and cyclical character of EIA were the different phases or steps described above relate each other far from a linear or defined in time way. According to them this process includes two

relevant components working across the main stages: One is the consideration of the need to mitigate the impacts by changes to the proposal. The other is consultation both formal and informal with the interested parties. These components permit "at any time for the assessor to revise previous judgements, measurements and decisions" (ibid :49) This cyclical and iterative character has been enhanced in much literature rejecting the technocratic view of the rational model. Results of different steps of EIA should feedback and interact with other phases. For instance, results of the scoping phase (including consultation) can provide changes in the project design or rejection or consideration of new alternatives. In accordance to Petts and Eduljee (1994) idea of EIA, Wood (1995:5) states that mitigation should take place at each stage of the process. Munn (1979:16) points out that in the decision making process "a proposed action may either be withdrawn, or be modified and feedback again into the EIA process".

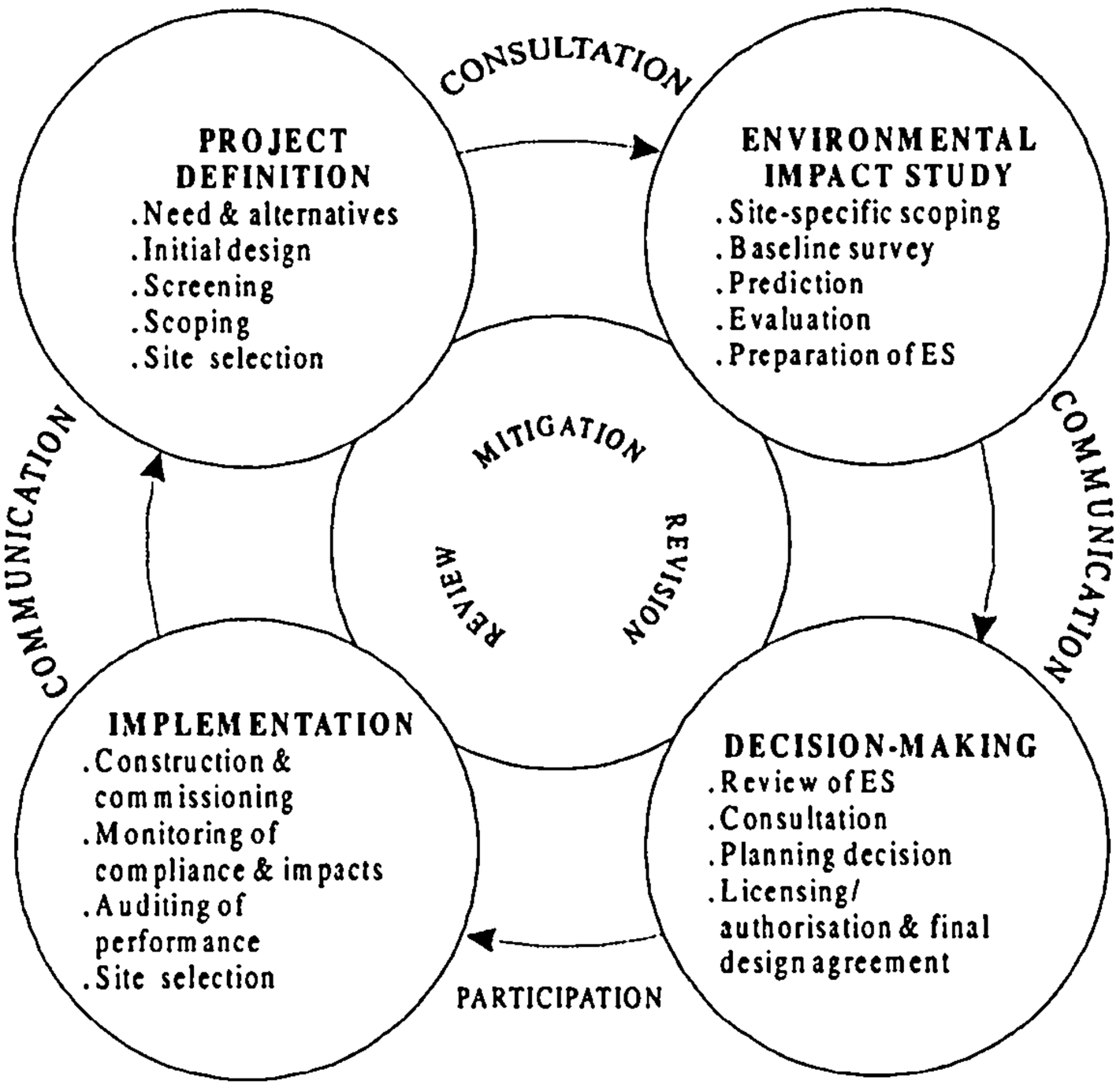

Fig 4.2 The EIA process – a dynamic view
Source: Petts and Edulgee (1994:49)

If the interactive character of EIA is crucial for better planning and decision making, its preventive nature is paramount since prevention is inherent to EIA philosophy. EIA has been created as a proactive instrument to avoid environmental degradation rather than an instrument to remedy damages. EIA purpose of systematic assessment of the likely impacts of an action is only acceptable before any decision is taken. EIA does not make

decisions, but provide for decision makers the relevant information to help more sound decision making.

Whether or not the preventive character of EIA in order to help more sound decisions has been fully achieved is a matter of polemics. This is due to the fact that in many jurisdictions EIA has been more an add-on to a project than an intrinsic part of the planning system. To prevent this it is becoming more and more accepted that EIA should be used in the preliminary phases of design in a more proactive way than a reactive one (Brown 1998; Wood 1995; Clark 1994).

The EIA process deals with information permanently. The ultimate goal of EIA is to deliver relevant information into the decision making process. Mitchell (1997:163) has argued that information has two components, 'information in' and 'information out'. The latter means dissemination of information from the proponent, from the EIS, from the review process. The former deals with the comments from the public process of consultation to get inputs to the process, through the public perspectives, aims and local knowledge related to the specific action at stake. During the EIA process this is achieved in a series of iterative steps exchanging points of view, combining scientific opinions with value laden opinions. Information is central to the EIA process in one hand displayed to public scrutiny, on the other hand collecting opinions through formal and informal consultation processes, whose results should be integrated in the decision process. UNEP (1996) states about this aspect "communication is critical to EIA project management because EIA is a drama with many actors playing different roles".

4.3 Public consultation and participation in EIA

4.3.1 The original NEPA process

The opening up of decision making on development proposals to the public scrutiny was one of the greatest innovations of the EIA process. This has contributed to different attitudes from the administration, institutions and decision makers towards more transparency and more rational and equitable decisions. It was also crucial the understanding and the acceptance that the challenges posed by environmental and resource management problems could not be solved only by science and technology. Value laden opinions have an equal important role to play if we accept the principle that in democracy people has the right to have a say in issues concerning their lives.

Public consultation and participation has been considered "the driving force in the evolution of EIA in USA" (Wood 1995:230) or as stated by Sadler (1996:26) "Public involvement has been a driving force as well as a hallmark of process development". NEPA principles internalised from the beginning public involvement in the environmental policy proposed. Section 102 (2) (C) of NEPA requires that an agency prepare an EIS to obtain comments from relevant federal agencies (with jurisdiction by law or expertise in environmental domains) and comments from the general public. In CEQ regulations it is stated that agencies must:

- Make diligent efforts to involve the public in preparing and implementing their NEPA procedures
- Provide public notice of NEPA- related hearings, public meetings and the availability of environmental documents so as to inform those persons or agencies who may be interested or affected (Section 1506:6 quoted in Wood 1995: 230/231).

Provisions exist within NEPA for agency consultation and public involvement in almost stages of the EIA process such as screening, publication of notice of intent, scoping, preparation and comment upon the draft EIS, preparation and comment on the final EIS, on the record of decision and on monitoring results following implementation (Wood 1995). Fig 4.3 shows the involvement of agencies and the public in the review phase.

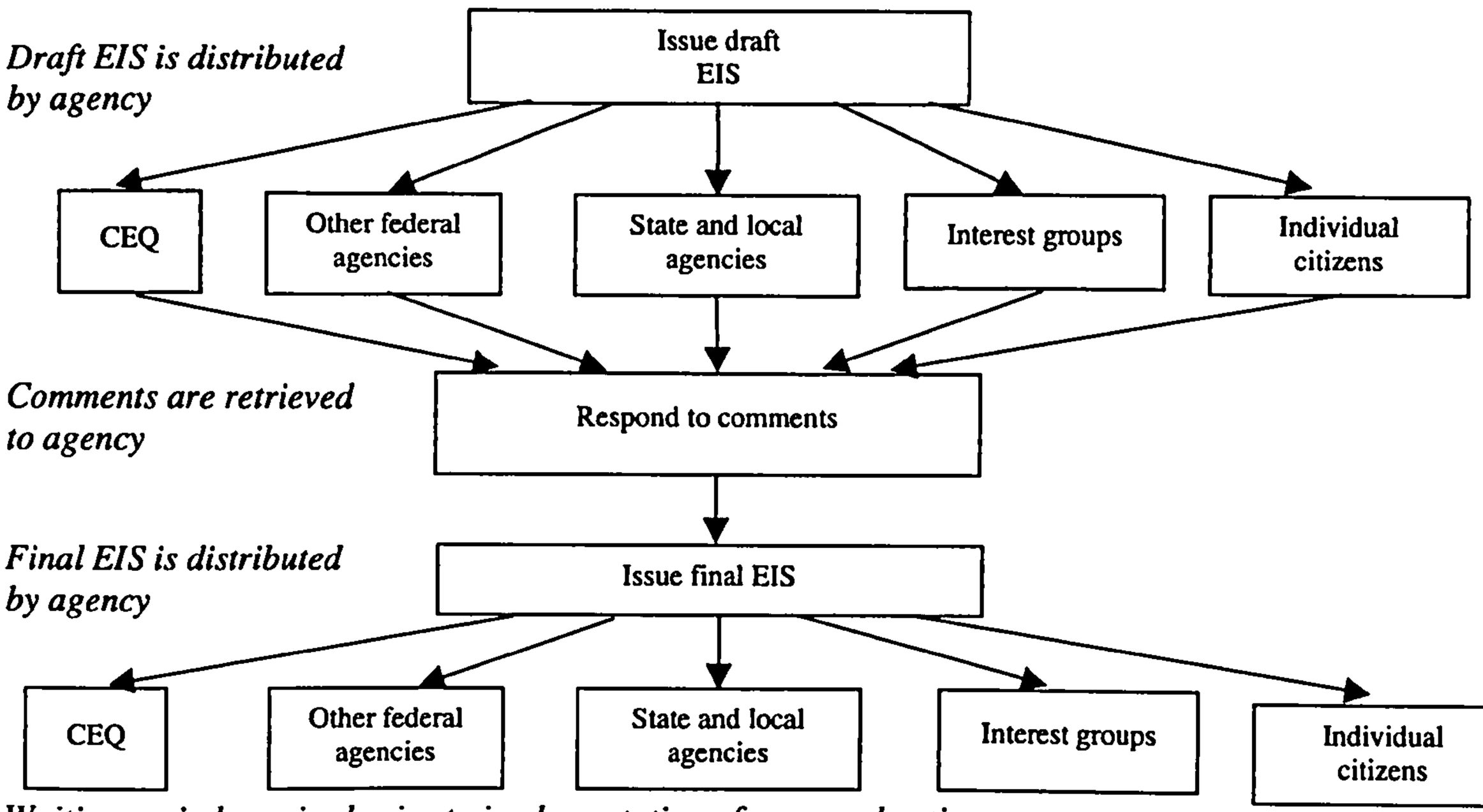

Fig 4.3 Public involvement in NEPA in the review phase
Source (Ortolano 1984, adapting R. K. Jain and others)

According to comments received from the draft EIS, which could be criticisms to methodologies used, relevant impacts omitted in the draft, lack of adequate alternatives or mitigation measures, not only the agency should respond to all of them but also integrate them in the final EIS. Sometimes "the agency might even substantially modify its proposal or abandon it entirely" (Ortolano 1994:146). The action proposed in the final EIS cannot be implemented without a period in which the interested parties have had a chance to check how their comments have been incorporated in the final EIS (ibid.). Ortolano (ibid:145/146) concludes that "this review process provides opportunities for a full scrutiny and critique of the issuing agency's environmental analysis methods and its rationale for selecting a proposed action".

Opportunities still exist in the final phase to oppose the action through political pressure and recourse to the courts. As Wood (1995:23) points out "There are opportunities for recourse to the courts at various stages of the EIA process and interest groups, private citizens, state and local agencies and business have taken advantage of these by filing thousands of lawsuits at great expense".

4.3.2 Public involvement in other EIA systems

In spite of the great enlargement of EIA to other jurisdictions and the great disparity of legislative and procedural EIA systems, the basic principles underlying EIA remain the same. Public involvement in decision making processes is one of these basic principles considered integral to any EIA system translated in the famous Wood's (1995:225) sentence "EIA is not EIA without public participation".

Lee (1989:129/130) has argued that two contrasting view points exist on the role of public consultation and participation in EIA. One is reductionist and envisages public consultation occurring in a strict phase, usually in the review one, defined in time and acting as an audit to the EIS. The second viewpoint puts the role of public involvement in a broader frame – "the political context" also referred by Ortolano and Shepherd (1995) in which decisions are taken. As stated by Lee the premises of the latter approach are: "a) a considerable measure of group interaction is an unavoidable feature of the decision making context in which the EIA process operates and, b) it is better from the standpoint of the developer and the other groups involved to make constructive use of this situation rather than to minimise the extent of the interaction taking place". This latter point of view receives much support in literature and faces public

consultation and participation with positive contributions at almost all the stages of the EIA process in a formal or informal basis. The former viewpoint although important as a means of securing the quality control of the EIS, and contributing to the quality of decision making, is reactive, usually confrontational, reducing the usefulness of public involvement. The latter is pro-active, emphasising a co-operative approach and helping consensus building (Lee 1989). He concludes that current trends in EIA practice are to encourage early consultation either on an informal and formal basis, in order to reap its benefits.

Public consultation and participation could be applied with many benefits in almost all the stages of the EIA process (Wood 1995; Glasson et al. 1994; Sadler 1996). In the practice public involvement varies a lot in EIA systems. Buckley (1998:41) states that the majority of the EIA programs provide for public information and for a public response, "though active consultation is relatively uncommon and participation very rare". In the majority of EIA systems, public consultation works as a strict phase in the review stage, after the EIA report has been submitted. Public consultation at the scoping phase is becoming increasingly used in many systems or at best advised in many others, though not mandatory. According to Wood (1995) in a review of seven more mature EIA systems a full participative system exists, which includes participation in several stages of the EIA process in the USA, California and The Netherlands. However, he also states that the practice reveals weaknesses as far as the USA and California systems are concerned. Ortolano and Shepherd (1995) present a pessimistic view, stating that in the US system opportunities for public involvement in the last decade have been "shortcircuited". This is because EIS for projects can be avoided in many cases by the use of mitigated FONSI (Finding No Significative Impacts). The NEPA system states that only projects likely to have relevant negative impacts should have an EIS, otherwise FONSI are delivered. Using this process, federal agencies by proposing mitigation measures to projects with relevant negative impacts avoid public involvement. In fact mitigated FONSI need only to notify interested parties by listing its FONSI in the Federal Register, a government document not read by most citizens (ibid:20)[23].

[23] To justify this Ortolano and Shepherd state that in recent years the number of EIAs has fallen to less than 500 per year and conversely the number of mitigated FONSIs has increased dramatically. They rely on CEQ surveys and Blang (1993) that indicates that well over 40000 EIAs are prepared each year and that agencies consistently involve the public in fewer than half of their EA preparations.

Full public involvement in the EIA programs, in spite of increasingly advised and use in early stages such as scoping, presents another problem- the late phase of the involvement. This is a problem also common to EIA, meaning its poor integration in earlier phases of planning where alternatives are still open and main changes in design are still easy and feasible. The involvement in a late phase of project design, make proponents not receptive to ideas that require modifications and key decisions related to project size and location have already been stated (Ortolano and Shepherd 1995:20).

Wood (1995) states that public consultation is most strongly embedded in the EIA system of The Netherlands. Canada EIA system is often presented as a model of public involvement in the practice.

4.4 EIA in the European context

4.4.1 EIA legislation in the European Union policy

European Union concerns with environmental issues have been increasing over the years changing political agendas of some Member States and pressures from environmental activism. Progressively, EU policy on the environment has shaped, in a determinant way, the policy of member states. As Pridham (1994) puts it: "The EU has become a real pressure for environmental policy change both in principle and in practice"

According to Garner (1996, relying on Hildebrand 1992) four periods can be established in EU environmental action:

1957-1972 where a minimal involvement happened;

1973-1985 characterised by greater involvement through the appearance of the First Environmental Action Programme. This programme stated the principle that the EU had authority to act in environmental issues and relevant legislation was set up (120 directives, 27 decisions and 14 regulations). Two principles were the basis of this legislation: "the polluter should pay" and "prevention is better than cure" (Arts 1998);

1986-1992 This period is marked by the establishment of the EU legislation to cope with environmental matters through the Single European Act (SEA of 1986), which was an amendment of the Treaty of Rome;

After 1992 This period is marked with uncertainty according to Garner since the latest Action Programme clashes with the concept of subsidiarity established in the Maastritch

Treaty in 1992. Considering, that much uncertainty exists in recent EU policy, Yearley et al. (1994:1) argue: "one oasis of comparative certainty is that institutions of the EU will play a growing role in influencing environmental quality in the member states and in countries which aspire to membership". They give the main reasons for this growing leadership of EU policy on environment as the public support for environmental improvement; the recent commitment from EU policy to sustainable development; and the consensual transboundary characteristics and implications of environmental problems.

Reasons for the introduction of common legislation on EIA were mainly concerns with prevention and mitigation of environmental damages. The Commission of the European Communities (CEC) in 1979 in *The State of Environment* concluded: "too much economic activity has taken place in the wrong place using environmentally unsuitable technologies" (Wood, 1995:32). The introduction of EIA was considered relevant as a planning and management tool with prevention as the basic tenet.

Another important reason for the introduction of EIA regulation was the need felt for normalisation of policies among Member States to prevent the unfair advantages of development proposals that would be allowed in some states and not in others. This is nicely expressed as "to ensure that distortion and competition and misallocation of resources within the EU was avoided by harmonising controls" (Wood, 1995:33, citing CEC objectives for the Directive). There was also the confirmation that environmental problems no longer have geographic and legislative boundaries (Yearley et al. 1994; Glasson et al. 1994). Summing up the guidelines of EU policy, Morris and Therivel (1995:2) state:

a) prevention action is better than remedial measures
b) environmental damage should be rectified at the source
c) the polluter should pay the costs of measures taken to protect the environment
d) environmental policies should form a component of other EU policies

Within the Third EU Programme running from 1982-1986 preventative approaches to environmental protection were set up related to pollution control and to the introduction of EIA as a legislative measure (Yearley et al. 1994). After ten years of investigation and negotiation by a Research Commission and the production at least of twenty drafts (Wathern 1992) the Directive 85/335/EEC on EIA was approved and became operational on July 1988 (Glasson et al. 1994, Wood 1995).

The importance of EIA was further enhanced on the EC's Fifth Action Programme – *Towards Sustainability*. A need was felt to expand the scope of EIA within the macro-planning process to all relevant policies, plans and programmes (Glasson et al. 1994). According to CEC (1992) this "would not only enhance the protection of the environment and encourage optimisation of resource management but would also help to reduce disparities in the international and inter-regional competition for new development projects which at present arise from disparities in assessment practices in the member states"

In spite of the Directive on EIA being considered by some a "very weak compromise" (Wathern 1992) or as expressed by Arts (1998) "clearly a compromise, the common denominator, which sets only a minimum package of measures acceptable to all member states", Glasson et al. (1994) consider that it was a great challenge to produce a set of requirements that combine flexibility to be adapted to different institutional arrangements and enough uniformity to prevent troubles of different interpretations.

EIA legislation has also been considered "the first intrusion into the planning domain of member states and, has major repercussions on member state decision making and practice" (Wood, 1995). This stress on planning was seen as an important step of putting principles of prevention into practice (Glasson et al. 1994).

The implementation of EU legislation on EIA was however, slow and problematic, although the Directive was passed in 1988, in 1993 was not yet fully completed (Arts, 1998). The main reasons for this were:

- the wide range of interest groups involved,
- lack of public support for increasing the scope of town planning and environmental protection procedure and
- the unwillingness of member states to adapt their widely different planning systems and environmental protection legislation to those of other countries (Glasson et al. 1994:40).

Major discrepancies exist in the implementation of the EIA European Directive due to the broad scope and discretionary character of Directives. There are countries that go far beyond the law (e.g. The Netherlands) and others that have minimalist EIA systems (Arts 1998; Glasson et al. 1994; Wood 1995). An overview of the main differences in the application of the EIA Directive is presented by Glasson et al. (1994) in a

comparison of different phases in the EIA process such as screening, scoping, review consultation and decision making. More specifically, there are effective and comprehensive EIA systems in The Netherlands and Belgium and considerably weaker systems in Portugal, Italy and Luxembourg (Glasson et al. 1994). As far as public consultation and participation is concerned the same pattern occurs with countries with more effective approaches to public involvement and others where consultation is only a formal mechanism raised later in the planning process (Wood, 1995).

Talking about more encompassing environmental policies, Yearley et al. (1994) state that environmental EU policy on decision making though growing in importance "has developed in such a way that it allows for an unusually high degree of discretion on the part of member states".

4.4.2 Content of the Directives on EIA

The Directive 85/335/EEC on EIA is a flexible framework incorporating the basic principles of EIA to be adapted by Member States and included in their own legislation through regulations and defined legal procedures. The key features of the Directive on EIA are expressed by Glasson et al. (1994:39) as the following:

1. Planning permission for projects was to be granted only after an adequate EIA had been completed
2. LPAs and developers were to co-operate in providing information on the environmental impacts of proposed developments.
3. Statutory bodies responsible for environmental issues and other Member States in the case of transfrontier effects, were to be consulted
4. The public was to be informed and allowed to comment on issues related to project development

The Directive encompasses 14 articles plus 3 Annexes. Reviewing the main phases of EIA in the Directive:

Screening - is provided in Annex I through a list for mandatory projects and in Annex II through a discretionary list to be adapted by Member States according to criteria or thresholds to be defined.

Scoping - is not provided in any requirements

Definition of alternatives - is not required specifically although in Annex I it is stated that the information displayed should contain "where appropriate, an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects".

The EIA report - according to the Directive (Art.5) is responsibility of the proponent. The information (Art.5 §2) should include:

- A description of the project comprising information on the site, design and size of the project
- A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects
- The data required to identify and assess the main effects, which the project is likely to have on the environment
- A non-technical summary of the information mentioned

Annex III provides for more detailed guidelines on the information required.

Review – no specific mechanisms are stated as far as the EIS formal review is carried out by the competent authority. As stated by Petts and Eduljee (1994:38) "No specific procedural requirements to determine the quality of an EIA" exist.

Public consultation and participation – in its Art. 6, the Directive provides requirements for public involvement in EIA though leading to Member States the arrangements for consultation (§1). In §2 it is stated that Member States should ensure that:

- Any request for development consent and any information gathered pursuant to Art.5 (information required) are made available to the public.
- The public concerned is given the opportunity to express an opinion before the project is initiated.

Art.6 §3 states:

> The detailed arrangements for such information and consultation shall be determined by the Member States, which may in particular, depending on the particular characteristics of the projects or sizes concerned:
> •Determine the public concerned
> •Specify the places where the information can be consulted

- Specify the way in which the public may be informed, for example by bill-posting within a certain radius, publications in local newspapers, organisation of exhibitions with plans, drawing, tables, graphs, models
- Determine the manner in which the public is to be consulted, for example by written submissions, by public enquiry
- Fix appropriate time limits for the various stages of the procedure in order to ensure that a decision is taken within a reasonable period.

Consultation is also enlarged: "authorities likely to be concerned by the project by reason of their specific environmental responsibilities are given opportunity to express their opinion on the request for development consent" as stated in §1 of the Art.6. Consultation is just foreseen in the review phase and is limited to opinions on the EIA report. The definition of the public to be consulted, the means for notifying the public and reviewing assessments as well as the form of the consultation have been left open to the government of Member States (Wathern 1992:204).

Decision making – it is only stated that information from the EIS and the process of consultation must be taken into consideration in the development consent procedure (Art.8) and in Art.9 it is required that decision taken by the competent authority should be available to the public. In this respect Art.9 specifically states that the public should be informed of:

- The content of the decision and any conditions attached thereto
- The reasons and consideration on which the decision is based where the Member States' legislation provides.

Once again the detailed arrangements for such information are competence of the Member States.

EIA follow-up – no provisions exist on the text of the EIA Directive for monitoring and auditing. However, as Wood (1995:40) points out, Art.11 provides for EIA system monitoring through exchange of information between Member States.

Other relevant articles refer to: Art.7 transfrontier impacts and the need to Member State proponent for made available information to other Member States likely to be affected and this information "shall serve as a basis for any consultations necessary". Art.1 §4 states that the Directive does not cover the projects serving national defence purposes. Art.13 states the right of Member States to lay down stricter rules regarding scope and procedure when assessing environmental effects.

According to Wood (1995:41) "Directive is binding in that it specifies ends which must be achieved while leaving Member States the choice of means". This discretionary character of the Directive led to different types of implementation as far as EIA procedures are concerned. Compared to NEPA, the Directive presents as main differences: Screening done through lists of projects; lack of a clearly defined scoping phase; fewer requirements as far as public consultation and participation is concerned; EIAs prepared by both public agencies and private developers (Glasson et al. 1994)

In 1993, CEC presented a study on the implementation of the Directive in Member States. Conclusions point out that much had been improved since the Directive enactment, thus "EIA practice still left much to be desired" (Arts 1998:32). Especially improvement should be done concerning a better treatment of alternatives, stronger screening, scoping, better international consultation, auditing and monitoring.

An amendment to the 1985 Directive was carried out through the Directive 97/11/EC. However, the new Directive approved by Member States did not incorporate many of those issues considered relevant as for example EIA follow up or the extent of EIA to a more strategic level (SEA) (CEC 1997, cited in Arts). The main amendments just include a review of screening (lists of projects to be subject to EIA), voluntary scoping and international consultation of projects with transboundary impacts.

The enlargement of EIA to a strategic level was foreseen in the EU policy in late 1980s. The EC's Fourth Action programme on the Environment of 1987, stated that EIA should be extended to cover policies, plans and programmes. So was the Fifth Action Programme of 1992 seeing SEA relevant to the pursuit of sustainable development path (Glasson et al. 1994). Consultations on the issue with Member States began in 1991 and a draft review was issued for comments in 1992. However, the response from Member States "has reportedly been chilly and the November 1992 proposal was rejected just one month latter" (Glasson et al. 1994:305). The discussion was re-opened in 1995 and is being reviewed again by Member States (Therivel and Partidário 1996).

4.5 From NEPA to sustainable development

4.5.1 Benefits and shortcomings of EIA – a review

Thirty years have elapsed since EIA was introduced by the enactment of NEPA. EIA has become institutionalised in many jurisdictions world wide as a tool for planning and environmental management as well as an important process for sound decision making. EIA has changed and evolved to be adapted to new challenges of a changing world. As Sadler (1996:v) argues "the world in which EA operates today is very different from the one in which the process was introduced. No doubt the world in which EA will operate 25 years from now will be as different again".

Despite the systematic use of EIA, the evaluation of EIA performance still is in its infancy (Sadler 1998; Arts 1998). Ex-post evaluation of EIA effectiveness has been carried out by some experts, governmental institutions and organisations in order to improve EIA performance and to contribute to the definition of new trends[24].

It is undisputed that EIA has brought many benefits to environmental management and different positive attitudes in society at large. This is the main explanation for EIA great expansion and success.

Ortolano and Shepherd (1995) assessing the evolution of EIA present some of the positive points in favour of EIA such as influencing projects, provoking an administrative change and provoking effects on project proponents. As far as projects are concerned benefits range from discouraging proponents on projects with damaging effects; withdrawal of unsound projects; reformulation of plans, legitimation of sound goals. Hence, the main positive outcomes have been the introduction of mitigation measures with the obligation of minimising adverse effects. Nevertheless, there is little evidence that mitigation measures set up in EIA have been thoroughly implemented in practice because there is a common lack of EIA follow-up in the majority of EIA systems.

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[24] Sadler (1998:31/34) provides a thorough review on different types of EIA evaluation carried out including: major reviews on auditing and reporting EIA systems such as CEQ annual reports in the US and The Netherlands and at the State level in Western Australia; follow-up studies such as the appraisal of the Commission of the European Communities (1993); reviews of EIS quality as the case of Canadian panels; a multi-country international study of EIA effectiveness carried out with IAIA support on EIA effectiveness (Sadler 1996; IAIA's 96 Conference Proceedings (Partidário 1996). It also deserves mention Wood's 1995 comparative review of 7 most mature EIA systems as well as EIA in developing countries.

Regarding administrative change, Ortolano and Shepherd refer to the reform EIA has brought to public decision making through public scrutiny. They remind however, that this does not imply full participative processes. Still concerning the administration they refer the enhancement of co-ordination among agencies and influence of administrative processes as well as the enhancement of the influence of environmental protection agencies. As far as effects on project proponents and EIA programs in organisations are concerned, and despite the non existence of many systematic studies on the influence of EIA, they refer: "organisation theory suggests that if an EIA program were to threaten the autonomy or survival of a project proponent, it would cause an organisational response" (Ortolano and Shepherd 1995:11). This reaction varies from a change in the way of doing business to restructuring the planning process, to the elevation of environmental activities within the organisation. They state on this aspect: "while many project proponents have been marginally affected, others have changed fundamentally, for instance hiring environmental specialists in order to accomplish EIA standards and in response to pressure for environmentally sound projects" (ibid:26).

Conclusions on the results of a questionnaire to IAIA member countries (Sadler 1996:III), under the international study of the effectiveness of EIA are the following:

- EIA is moderately or very successful on identifying appropriate mitigation measures and in providing clear information to decision makers on the potential consequences of proposals
- Current practice is unsuccessful or only marginally successful in making verifiable predictions in specifying the significance of residual impacts and in providing advice to decision makers
- EIA is a learning process providing important benefits beyond informing decision makers, such as the promotion of greater awareness of environmental and social concerns, upgrading of professional capabilities and promoting public involving in decision making.

There is in recent literature a feeling that EIA still is far from achieving the objectives for which it was proposed in NEPA and a broad field for improvement is necessary to adapt EIA to new challenges. This is well illustrated by comments from Ortolano and Shepherd (1995:3): (EIA) "have had far less influence than their original supporters had hoped they would" or "The EA process is recognised by many leading administrators and practitioners as falling short of realising its full potential as a mechanism for informed decision making in support of sustainable development (Sadler 1998:3).

In the same way they have presented the main benefits of EIA Ortolano and Shepherd present in the review done the main problems still persisting in EIA according to them since 1970s and that are considered of two different types. One type is systemic and fundamental dealing with project conduction of EIA as a one-time exercise, late in the planning process, when proponents have already designed a solution and this implies that EIA will not affect fundamental decisions and cannot ensure environmentally sound projects. The other type is according to them problematic but less fundamental since more amenable to solution. They refer to the scope of EIA mostly applied to projects and necessary to be extended at a strategic level; the need to develop, improve and implement risk assessment, cumulative impact analysis, social impact studies; more meaningful and timely public involvement, post-monitoring, EIA follow-up. Sadler (1998:31) presents EIA shortcomings as five major problem areas:

- Attitudinal - proponents and development agencies resist or circumvent EA or apply it as a pro-formal or narrowly technical exercise
- Structural - EIA is not sufficiently integrated with decision making, notably at the project preparation phase or with other supporting policy, planning and regulatory processes
- Institutional - the scope of EIA is too narrowly defined or applied, such that social, health factors and cumulative effects are inadequately covered
- Procedural - there is inadequate guidance and inconsistent enforcement of the EA process leading to "user" complaints about fairness, timeliness and efficiency
- Technical - the quality of EISs, the accuracy of impact predictions, and the suitability of mitigation measures are often highly variable, even in relatively mature, advanced EIA systems.

4.5.2 Challenges and trends of EIA to sustainable development

Since its conception with NEPA, EIA has proved to be a flexible and dynamic process evolving according to new realities and needs. The evolution of EIA has been reviewed (for example, in Garner and O'Riordan 1982; Sadler 1996). Basically there has been an enlargement of EIA scope from biophysical factors to include social factors and so to approach the environment as a broader concept through SIA (Social Impact Assessment), HA (Health Assessment), RA (Risk Assessment) in the 1980's. At the same time the strict scientific quantitative instruments of analysis were enlarged to include more qualitative ones integrating value judgements (Van Der Vorst et al. 1999). In late 1980s EIA suffers a redirection towards integration with policy planning and regulatory frameworks as well as an enhancement of EIA follow-up (Sadler 1996).

Since the mid 1990s, EIA has been re-shaped to become an effective approach to sustainable development (Sadler in UNEP 1996).

Sustainable development became in the 1990s an overarching goal and frame of reference for resource management and so for EIA. It is recognised that EIA is a "key mechanism to translate the principles and criteria for sustainable development into practical strategies and action " (Clark 1994a:100). This is also proposed in the Rio Declaration and Agenda 21, as well as the need of EIA to evolve to incorporate sustainability principles. Clark has argued that EIA project in its microcosm illustrates the rethinking and restructuring of the environment and development decision making process that must take place in order to achieve sustainable development. Characteristics of EIA such as "coping with uncertainty and risk, dealing with conflicts in interest and preference, co-ordinating scientific analysis and public inputs and weighing facts and values in organising information for decision making" (Clark 1994a:100) proved to be adapted to sustainability principles.

Challenges and trends in EIA to cope with sustainable development as the long-term objective have been taken place in recent times. Three main areas should be pointed out: the enlargement of EIA principles and procedures to a more strategic level; better integration of EIA in the planning and resource management process and reinforcement of public involvement in decision making.

EIA at a strategic level

Sustainable development asks for a strategic view of problems addressing long term objectives and not only immediate solutions. It has been recognised that individual EIA project presents several deficiencies related to the narrow scope in which it operates, being more a reactive instrument than the pro-active one needed. EIA at a project level cannot assess cumulative and synergistic impacts of different sectoral actions. As Munn (1979:10/11) states "it is possible indeed likely that impacts of an array of proposals could be found individually acceptable although their effects when taken together would not". Moreover the question of need is badly addressed in EIA of projects since "many options have often been foreclosed by the time an EIA is carried out for an individual proposed development" (Van Der Vorst et al. 1999:23). Only at a strategic level could the question of need be addressed. As pointed out by Glasson et al. (1994) "in many cases a project will already be planned quite specifically with irreversible decisions

taken by the time EIA is prepared". The prior questions of whether, where and what type of development have already been taken and usually without environmental analysis (Sadler and Verheem 1996:31). Also time and financial constraints that usually exist at a project level often impede the required quality of analysis based on accurate baseline data (Glasson et al. 1994). All these failures of EIA project have led to its expansion to policy, plans and programmes and Strategic Impact Assessment (SEA) emerged as a relevant instrument to address the proactive character that EIA should play in sustainable development. Arguing on the need felt in practice for the enlargement of EIA, Sheate 1994 (in Van Der Vorst et al. 1999) states that in the absence of SEA: "EIA has often been stretched to take on a wider and wider scope so that individual EIAs of projects often end-up examining issues which are more properly the concern of SEA at program, plan or even policy level". EIA can be successfully integrated in SEA in a tiered or vertically way and this can reduce the time and effort involved in EIA preparation as well as increasing EIA effectiveness (Sadler and Verheem 1996; Wood 1995). Fig 4.4 presents an approach of EIA and SEA in the context of sustainability.

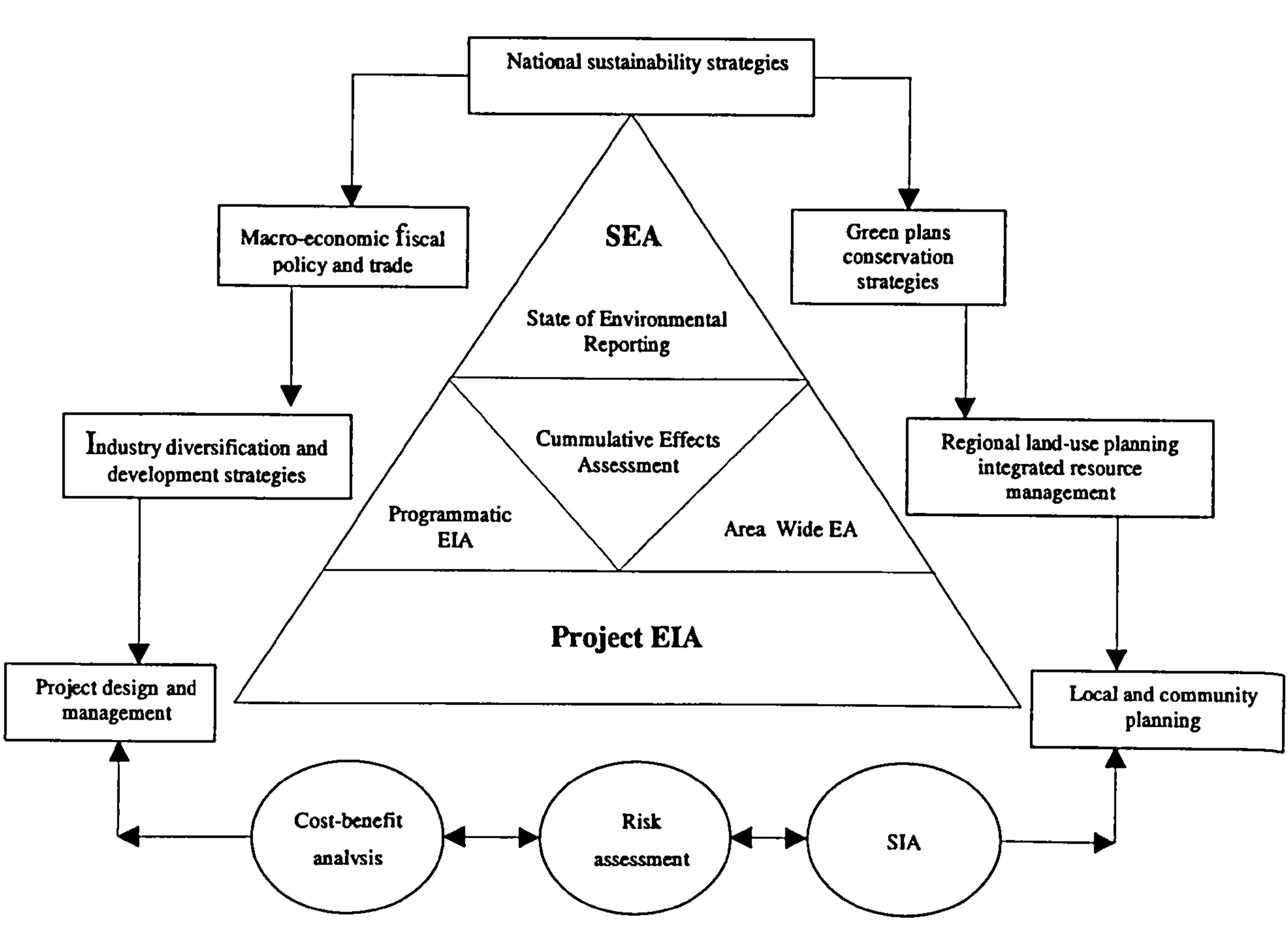

Fig 4.4 Integrated approach to environmental assessment policy and project linkages
Source: Sadler (1994) and Sadler and Verheem (1996:49)

The rationale for SEA is presented by Sadler (1996:26) as threefold: Strengthening project level EIA; Addressing cumulative impacts and large scale effects and incorporating sustainability considerations into the "inner circles" of decision making. Despite difficulties encountered in the implementation in practice of SEA its acceptance is becoming consensual and many jurisdictions already provide for SEA and many others adopt SEA in ad hoc forms[25]. Summing up the benefits of SEA, Glasson et al. (1994:30) state:

> By being carried out in the decision making process and encompassing all of the projects of a certain type or in a certain area, SEA can ensure that alternatives are adequately assessed, cumulative impacts are considered, the public is fully consulted and discussions concerning individual projects are made in a pro-active manner than reactive manner.

Better integration of EIA in planning and resource management

EIA has often worked as an appendage to the project development since it is carried out distinctly and independently from the design phase. As Brown (1998) argues this 'parallel model' impedes a flow of communication between environmental concerns and the design process. Weaknesses provoked by this disconnection of EIA and planning lead to environmental information becoming available too late in the planning process and consequently it could not work to promote sound management. Considering this issue a systemic and fundamental problem of EIA Ortolano and Shepherd (1995) argue that this is due in a great part to the attitude of proponents still giving more importance to economic performance measures than to environmental concerns. They argue that control mechanisms (judicial control, procedural control, evaluative control, direct public and agency control) can help to solve this problem though only partially. Two main relevant conditions are according to them indispensable since EIA is seen as a tool to foster sustainable development. Those conditions are: "An ambiguous conceptual definition of sustainable development and a translation of that definition into operationally meaningful criteria for decision making" and "the existence of a governmental body (or process) that ensures that criteria for defining sustainable development are used as a basis for decision making"(Ortolano and Shepherd 1995:17)

The incorporation of criteria for sustainability from the outset in planning and resource management would provide for a more straight connection of design process and

[25] For a review of SEA implementation in different EIA systems see Therivel and Partidário (1996) and Sadler and Verheem (1996).

EIA/SEA. Smith (1993:11) as nicely expresses this: "Sustainable resource management requires an approach to decision making that is integrative, adaptive and interactive". Although recognised as a difficult task to achieve meaningful decision making criteria for sustainability several countries have been trying its implementation in the practice.[26]

Reinforcement of public involvement

Sustainable development as defined in the Brundtland report or in the World Commission on Environment and Development (WCED) gives a broad perspective for development that articulates in a balanced way economic, social and environmental issues. As Smith (1993) points out "Human desires are balanced by the necessity to pressure environmental integrity while pressures for economic growth are balanced by requirements for social equity". Resource management and planning are at the core of sustainability. Mitchell (1997:284) uses the metaphor of Alice in the Wonderland "if you do not know where you want to go any road will get you there" to illustrate the need for a perspective on desirable futures. He also reminds the task of planners and resource managers in providing to develop this vision. The task is very difficult since environmental and resource management problems are polemical issues that give visibility to conflict of interests and different values, aims and expectancies.

It is increasingly advised the abandonment of the technocratic paradigm that sees EIA as just a tool used by science in the decision making process ignoring social and cultural dimensions (Street 1997). It is conversely enhanced the role of EIA and SEA as approaches to get more sound decisions for sustainable development. Emphasis is put on the integrative, interactive and participative character of EIA and SEA. More sustainable decisions would be better obtained by an interaction of the best scientific knowledge to date with citizens' values and expectations through fair interest representation. Moreover, it is increasingly recognised by scientists, politicians and public administrators that understanding community values can means success or failure for projects and programs (Firth 1998). Rio Declaration and Agenda 21 ask for decision making to be more inclusive, involving all communities, citizens and all those that have a stake in decisions (Van Der Vorst et al. 1999; Selman 1996; Mitchell 1997). The iteration of decision processes with those affected by decisions is relevant in order to

[26] Nearly hundred countries have prepared national sustainable development strategies or more accurately environmental policy and action plans (Carew-Reid et al. in Sadler 1996).

their involvement in a re-shape of the future that take into consideration their needs, aims but also that could profit from local knowledge and experience.

The reinforcement of public participation and consultation at a more strategic level seems to be an important step. Public involvement operating at a strict EIA project level leads often to conflicts that cannot be solved provoking problems many times unsolved or leading public to a more distant position discrediting the system. Very often questions addressed by the public are related to more strategic and normative issues already defined and where decisions have already been taken. This is particularly true with projects related with site location of roads, dams or dramatically felt with projects of hazard facilities involving any kind of risk. Sadler and Verheem (1996) argue: "in principle it is widely accepted that public involvement can and should be an integral part of the SEA process". However, the open ended nature of policy making asks for some degree of flexibility. The benefits of public consultation and participation at a strategic level are pointed out as procedural integrity, providing relevant information and input to policy development (Sadler and Verheem 1996)

4.6 Conclusions

In this part of the study a brief review of EIA origins, evolution, principles, procedures and methods has been carried out with a stress on public involvement. Main shortcomings of EIA implementation have been stated as well as trends in the EIA dynamics to adapt to new challenges of societies. A review of the EU environmental policy in which EIA performs an important role and the content of the Directive on mandatory EIA to Member States have been issued in order to promote a better understanding of the Portuguese EIA system.

Two milestones can be pointed out in the history of EIA. The first is NEPA by enacting its beginning and widely influencing environmental policy in other countries. The second is the Rio Declaration on Environment and Development (UNCED 1992) giving a universal recognition of EIA as a tool to sustainable development. In the principle 17 of Rio Declaration it is stated: "EIA as a national instrument shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority".

During almost 30 years EIA has proved to be an indispensable process for more sound environmental management. This is due to its inherent philosophy, which stresses prevention, holism (a broad approach to environment) iteration and participation. This is also due to EIA flexible and dynamic character to be adapted, not only to different social and political contexts but also to different needs of the times.

Different methodologies have been put into practice in the use of EIA proving nevertheless that no one is universally accepted as the best, since each project and its specific context are main variables to take into account in such a choice. EIA philosophy is however the same as Sadler (1996) has noted: "the spirit and purpose of EIA in NEPA has stood the test of time".

Problems with EIA implementation are recognised and the subject of much literature. They are especially linked to attitudes of the users, to procedures in the existing institutional arrangements and to the technical quality of the studies. Systemic and fundamental problems (Ortolano and Shepherd 1995) persist and deal with how the conceptual nature of EIA is internalised from an integral component of planning and resource management process to an appendage to projects, a one-time exercise that could not affect fundamental decisions.

Public involvement is inherent to EIA. The rationale presented in chapter 3 (philosophical, pedagogical and pragmatic principles) is part of the very essence of EIA since its conceptualisation as an environmental management tool and process. Obstacles and problems identified in chapter 3 are also present in EIA implementation in the practice.

Sustainable development has becoming an overarching goal and framework for EIA recent evolution. In this respect EIA has been strengthening its role by expanding to a strategic level the only one that could adequately address sustainable development objectives. In the same line the integrative character of EIA has been enhanced to work in a consistent network with other instruments of planning and decision making applied in full integration with the design process and sustainable criteria.

The reinforcement of the participative character of EIA is another important trend in the sustainability framework. The Rio Declaration and Agenda 21 do not provide for a

blueprint for sustainable development. Conversely they explicitly state that it is up to each country to build their own programs with objectives expressed and strategies to be put into practice. The vision of the desirable future must be constructed by the entire society and here again the role of EIA as a participative instrument for resource management is enhanced. More inclusive decision making is advocated in Agenda 21 and Rio Declaration in order to "integrate community values and concerns along with scientific and technical information in decision making" as FEARO 1992 (cited in UNEP 1996) points out. The enlargement of public involvement to a more strategic level and the reinforcement of public participation and consultation at the project level are part of this crucial need. EIA principles and procedures have shaken the foundations of traditional administrative decision making process by opening the process to public scrutiny. The way public involvement is implemented in practice has roots in values of societies and organisations.

Not many systematic studies have addressed the role that social cultural contexts play in the EIA adopted framework. However, literature is full of comments on this respect. In the next part these issues will be tackled by a more detailed analysis of the Portuguese EIA system and the political social/cultural context in which it takes place.

5 THE CULTURAL CONTEXT OF PORTUGUESE EIA SYSTEM

5.1 The importance of context in EIA adoption and implementation

5.1.1 The interaction of political and social/cultural context with EIA

EIA has proved to be a flexible instrument for environmental decision making, this being according to Petts and Edulgee (1994) one of the factors leading to its wide success. Different political and social contexts have adapted EIA in different ways depending on respective cultures. Different countries have different priorities based on different cultural heritage[27]. EIA is a particularly sensitive instrument of environmental policy affected by cultural background and societal forms of organisation. Some aspects could be pointed out in order to illustrate this such as the political commitment to EIA, public participation more or less valued in society, environmental values in societies, attitudes to science and technology and behavioural attitudes.

Political commitment

Political commitment is considered a crucial issue to determine EIA effectiveness (Smith 1993; Caldwell 1998). EIA main objective is sound environmental and resource management and this implies a stress on environmental protection. If no political will exist in this issue "EIA will be a pro-forma exercise of little practical utility" (Caldwell 1998:13) adding that getting full benefits from EIA needs an internalisation of the process and its findings within the structures of the review agency.

Some countries have adopted EIA voluntarily as a need utterly felt to better integrate environmental concerns into planning and decision making process. Conversely, some others were compelled by international agreements to adopt EIA. In the first case is for example the Dutch EIA system, which came into force in 1986. However, as early as 1974 an official interest on EIA began in The Netherlands (Arts 1998). An EIA Bill was presented to Parliament in 1981, and " during five years an interim EIA policy has operated, which allowed for conducting further research and gaining experience" (Arts 1998:36). Examples of the latter seems to be the Portuguese EIA system since Portugal was obliged by the European Union to internalise the Directive on EIA in its legislation. Yearley et al (1994) have suggested in their study of peripheral countries of

[27] A real example of this is the way EIA has been internalised in European Union in spite of the same framework, the Directive on EIA.

EU that the prime motivation to raise environmental standards and accomplishment of EU Directives in these countries has been to be considered good Europeans, avoid censure and qualify for funds.

Environmental values

Societies value differently environment and acceptable or unacceptable risk situations. From a social constructionist perspective environmental risks and problems are "social constructed entities" not denying however, "the independent causal powers of nature" Hannigan (1995). He concludes that there is not always a direct correspondence between problems and the rank ordering given to them by social actors. The same view is expressed by Pepper (1986) based on Lovejoy (1974), Jeans (1974) and others, arguing that the way man act to environment differ based on attitudes, beliefs, observation techniques and past experience, meaning - the cultural filter[28]. The study of this cultural filter is then considered important in order to obtain options and actions taken by people towards environment since human beings perceive nature through it.

Hofstede (1980) also argues that environmental degradation, though being a great concern its evaluation varies from society to society. He borrows Douglas (1970) comments: "every society has its ideas about things that pollute and argues about measures against it in terms of time, money, God and nature". Hofstede stresses that the clue is that "essential choices are not rational" (Hofstede 1980:297) and the main non-rational value issue that opposes economists and environmentalists is the dimension of culture he has labelled as masculinity versus femininity. Differences in this dimension have to do with what lay citizens and politicians in a society consider top priority issues- environment or economic growth, which are in permanent conflict. According to Hofstede a society with high score in the femininity dimension puts higher priority in environmental protection and a society with high score in masculinity puts higher priority on economic growth. Although, he states events may shift priorities "but the value conflict will always be present (ibid:297). Countries like Sweden and The Netherlands take a more "environmental position" and more masculine ones like Germany or Belgium put priority on economic growth. Japan, the Asian country, which scores higher in masculinity has huge pollution problems while China in its

[28] Cultural filter is defined by Lovejoy as "implicit or incompletely explicit assumptions or more or less unconscious mental habits, operating in the thoughts of an individual or a generation (Lovejoy cited in Pepper (1986:6).

development attaches greater priority to pollution control (Hofstede 1980:298, citing Tsurumi 1977).

As far as EIA is concerned, it is considered that EIA is most effective in countries with a strong environmental culture. As Caldwell (1998, see also Smith 1993) has pointed out "EIA will be most effective where environmental values 1) are implicit and consensual in the national culture and 2) are explicit in public law and policy". Arts (1998) giving reasons for the high degree of considered effectiveness of the Dutch EIA system (see also chapter 6) has argued that environmental values are embodied in culture and a system of land-use planning exists coherently. It is also suggested that EIA implementation is less critical in countries, which have an efficient land use planning taking care of environment as a government responsibility (Melo 1998).

Caldwell (1998) reminds the paradox of NEPA in the US society. He states that for many people, public environmental quality is a legitimate objective provided it does not cost too much. The question is how much and what kind of costs since there are Americans that value environment and Americans to whom environment has little relevance to their thoughts and beliefs. Caldwell (1998:12) argues that some factors are working against the values declared in NEPA and they are the following:

> 1) the intense individualism felt by many Americans a residue of the pioneer spirit; 2) biblically ordained domination theory (all living things were created for man's exclusive use); 3) deep-seated, emotional commitment to absolute private property rights in land and natural resources; 4) a commercial economy in which virtually all value is measured in monetary terms and 5) a political system in which political favours, such as subsidies, are exchanged for personal financial support from vested interests.

He concludes stating that NEPA represents the good intentions of the nation but when assessing EIA effectiveness it is necessary to look to the working forces against it.

Ecological modernisation and sustainable development have been trying to abolish the binomial antagonism environment- economic growth, and demonstrate that economic growth should go hand in hand with environmental protection. However, if this concept has been gaining consensus in theory it is expected that the way societies will pursuit the path to sustainable development will be different and the different core values on environmental perceptions will have an important role to play.

Public involvement more or less valued

As Hadden (1995:247) argues public participation does not take place in a vacuum conversely is embedded in a cultural and political context that affects both its form and its likelihood of success. Political culture more or less open will value public participation differently (Mostert 1996). Ortolano and Shepherd (1995) have pointed out the existing relationship between political system and public involvement suggesting that less open and democratic societies will not encourage or value public participation. They use a quotation from McDonald (1994:31/32) to illustrate this: "political situations such as single party governments may strongly discourage any public opposition to development projects making those who have concerns regarding a proposal afraid of the reprisals that may result from speaking out". There are societies were people are neither used nor encouraged to participate in decision making. It was already focused in Chapter 3 the importance given by countries to NEPA system of litigation and attempts done in other EIA systems to strongly avoid so open decision processes, through the adoption of legal precautions in law. O'Riordan (1983) points out in this aspect that it is not surprising that EIA has not been embraced so heartily in Europe as it was in the US. He refers that the administrative process in the US "is geared to the likes of EIA because it is open, adversary, allows great opportunities for legal intervention and encourages participation by various kinds of citizen's environmental action groups" (O'Riordan 1983:151). He concluded that in most European countries (Sweden is considered a possible exception) "most government departments do not have to account publicly for the manner in which a policy is prepared or a particular decision taken" (ibid). Ortolano and Shepherd (1995) refer the case of France, a country with strong democratic traditions and highly informed citizenry though EIA implementation was not translated into increased participation in government decision making. This is due to the fact that decision process, is dominated by technical specialists and civil servants and has not been heavily influenced by public participation (Ortolano and Shepherd 1995, quoting Sanchez 1993).

It is also referred that public involvement in decision making is more effective in countries where public opinion is active and organised such in the North of Europe (Melo 1998). Webler and Renn (1995) state that public involvement in political decision making (beyond the conventional modes of voting and party involvement) have been less pronounced in most European countries until very recently, with the

exception of Switzerland which uses referendum and citizen initiatives very often. They also state that centralised countries mostly in South Europe "reserve most political power to the national government, but leave room for individual action under the patronage of local representative in the central government. The countries with strong federal traditions rely heavily on procedural rules when allowing citizens to take part in political decisions" concluding that "direct democracy is embedded in a complex framework of bureaucratic rules and regulations that ensure predictability of outcomes even on the expense of loosing time" (ibid 1995:18).

Attitudes to science

In societies with a strong belief in science decision making becomes more technocratic and less democratic, since norms, values and interests of experts or those who hire them have too much influence (Mostert 1996). Also McDonald (1994) states that countries valuing science expertise have a reluctance from experts to respect the information from lay citizens and value the subjective nature of some of their concerns, which are difficult to reconcile with the dominant technical and scientific focus of an EIA.

Western societies have valued the power of science and technology in shaping decision making. In last decades new areas of regulation such as environmental risks have intensified the power of experts in informing and legitimating decisions (Gonçalves 2000). In this frame, experts often consider public opinions irrational and irrelevant. This is well illustrated in the area of risk where a great difference persists between the "perceived risk" of lay citizens and the "actual risk" of scientific expertise. However, in the context of late modernity and particularly in the risk society there has been an erosion of power has a consequence of risks posed by new technologies and controversies in the own scientific community. The idea that science purpose is to tell the truth to the power (Jasanoff 1993:23) has been increasingly contested especially on issues related to environment characterised by complexity, uncertainty and conflicts.

EIA has been a promising area where interaction of scientific facts and values of citizenship occurs permanently as inherent to the essence of EIA. However, the use of EIA has often been dominated by the technocratic paradigm (Ortolano and Shepherd 1995, Smith 1993). The production of an EIS is emphasised as the means to provide decision makers the information considered necessary to decide on future development. As Smith (1993:43) puts it: "rather than acting to broaden the basis of environmental

planning the EIS often served a reductionist role limiting decision making to those factors that are easily measured, understood or defended, particularly in adversarial situations". Mostert also refers the ethical standards in culture that can influence EIA. According to him EIA will be conducted differently in a country where most people agree "integrity is more important than success" than in a country where most people agree "you only hurt your interests if you behave more correctly than everybody else" (Mostert 1996:209)

A relevant factor intervening in EIA and public participation is the level of environmental awareness in a society. It is argued that the higher the level of environmental consciousness the more effective EIA will be. On the other hand it should also be recognised that participatory processes are dynamic and can contribute to increase environmental consciousness being this, an important objective of those processes. However, the mechanisms used to promote this are determinant. The public can often value immediate objectives and short term interests rather than long term solutions, which are essential for sustainable development. Moreover, public involvement can worsen environmental damages as argued by Renn et al. (1995:28) "if the emotion or fashion of the moment is permitted to dictate a decision that flies in the firm contrary scientific evidence or professional judgement". It is the structure of the participatory program using the best scientific knowledge as well as fair procedures that can avoid such situations, by developing more responsibility for long term thinking (Renn et al. 1997).

5.2 Models used for approaching the Portuguese context

5.2.1 Introduction

The analysis of public participation in the Portuguese EIA system implies an approach to the broader context in which it takes place meaning social/political culture. This study does not intend to make any accurate study of the specific Portuguese context. It would be an impossible task. As far as the Portuguese context is concerned it just aims at defining a broad frame of national systemic factors based on existing literature in order to enlighten and help the interpretation of the empirical work done. As Weale pointed out cross-national difference "is deeply rooted in policy styles and organisational structures comprising a mix of institutional and ideological factors and as such is likely to be difficult to change" (Weale 1991 in Pridham 1994:81). In the

large existing bibliography related to cultural contexts three approaches to the subject seemed to fit the purpose of this study. One is Hofstede's framework in *Culture's Consequences* defining dimensions of culture and its interrelationships. Another one is the application by Yearley et al. (1994) of the Douglas model of cultural diversity to Southern countries in order to assess EU environmental policy implementation. The third is Santos' framework of countries of intermediate development applied to the Portuguese society. An attempt has been done to find and present common points in all these theories.

5.2.2 Hofstede's framework and the Portuguese context

Hofstede's *Culture's Consequences* is one of the most encompassing studies ever made on cross-cultural comparison and where Portugal is included. Culture is defined by Hofstede as "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede 1980:215) and includes a system of values and values are the building blocks of culture (ibid).

Hofstede formulated four main dimensions of culture to characterise and compare societies[29]. For each dimension, he defined societal norms, which is meant to be a value system shared by a majority of the middle class in a society. Societal norms work in a society as mechanisms that deal with stability in cultural patterns across many generations. Institutions, family, politics, education systems and organisations constitute society. These institutions present ways of functioning that reinforce societal norms creating what Hofstede call a "self regulating, quasi-equilibrium system". The origins of societal norms could be seen in the correlations with seven ecological indicators[30] but also and in a great measure in historical facts. An analysis of political systems, religious life and philosophical and ideological thinking in a cross-cultural context show differences which are interpreted by Hofstede as consequences of societal norms generating a looping system which support them. The four dimensions considered are the following:

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[29] The definition of dimensions of culture was based on a broad literature survey and a broad empirical research using questionnaires carried out in 40 countries around the world using 116000 responses.

[30] Geographical, demographic and economic indicators (ecological factors) were chosen as particularly meaningful in this respect: wealth, economic growth, geographical latitude, population size, population density and Hermes organisation size.

Power distance is the extent to which the less powerful members of organisations and institutions accept and expect that power be distributed unequally. Power distance deals with inequality in society occurring in different areas such as wealth, power, laws, and societal status and is supported by social environment and determined by national cultures. The greater the power inequality, the greater the wealth inequality. According to Hofstede wealth goes together with the growth of middle strata, which can form a bridge between the powerful and the powerless. A Power Distance Index (PDI) was defined to measure the score of this dimension across countries.

Uncertainty avoidance deals with the way a society copes with uncertainty about the future. Different ways of coping with uncertainty, according to Hofstede, belong to the domains of technology, laws and religion. Uncertainty Avoidance Index measures the norm of intolerance of ambiguity, which is independent of the norms of dependence on authority (related to Power distance) in the level of national cultures. The norm for intolerance of ambiguity is related with tendencies toward rigidity and dogmatism, traditionalism, superstition, racism and ethnocentrism. From Almonda and Verba's (1963) public opinion study, Hofstede argued that the measure of "citizen competence" is highly correlated with uncertainty avoidance. In lower Uncertainty Avoidance Index (UAI), citizens feel more competent than in higher UAI countries where there is a dependence on the authorities and a strong belief in expert knowledge.

Individualism "describes the relationship between the individual and the collectivity, which prevails in a given society" (Hofstede 1980:213). Societies range from the individualist side where everyone is "expected to look after him/herself and his immediate family, "to societies in which people are integrated into strong cohesive groups" which protect them in change of loyalty (ibid). The individualist society tends to be universalist (the standards for the way a person should be treated are the same for everybody). The colectivist society tend to be particularist which means that these standards depend on the group or category to which persons belong, based on Parson's theory "universalism versus particularism". Individualist values tend to be more middle class values. Press freedom is an outcome of a more individualist, universalist value system with a stronger approval of individual initiative. Individualism is correlated with GNP per se since: "there are more press freedom in wealthier countries: more newspapers, more interest groups that want their opinions to be known" (Hofstede 1980:235).

Masculinity refers to the distribution of roles between sexes and the ways societies cope with this. The dominant sex role pattern in the vast majority of both traditional and modern societies is male assertiveness and female nurturance (ibid:272). MAS is the Masculinity Index that measures the masculine and feminine types of national culture. In high MAS cultures, achievement is defined more in terms of recognition and of wealth-ego-accomplishment. Conversely in low MAS cultures it is defined in terms of the quality of human contacts and of the living environment- social accomplishment. There is more belief in group decisions in low MAS cultures and in individual decisions in high MAS cultures.

These dimensions do not work alone. Their interaction is crucial in the characterisation of societies. Power Distance and Uncertainty Avoidance act in organisations structures, organisations functioning and also organisations theories in a country[31]. Uncertainty Avoidance and Masculinity determine the pattern of motivation in a society. Power Distance and Masculinity refer to authority relations and role patterns in family. Individualism and Masculinity characterise people's work goals, what they want from a job. These interactions permitted Hofstede to make clusters of countries with similar index profiles in the interaction of two dimensions each other.

Portugal scores are high Power Distance, very high Uncertainty Avoidance (the highest of Latin countries after Greece) low Individualism (the lowest of European countries) and low Masculinity (the lowest of Latin European countries). In the interaction of Power Distance and Uncertainty Avoidance, Portugal belongs to the cluster of Latin countries, which is diametrically opposed to Nordic, Anglo-Saxonic countries. In the interaction Uncertainty Avoidance and Masculinity, Portugal is in the low right quadrant with a strong Uncertainty Avoidance but feminine patterns of values, which situate it in the lowest cluster near Yugoslavia and Chile and close to France and Spain. Focusing on the process of EIA and public involvement what could be the contribution of Hofstede in these dimensions of culture? The process of public involvement has many actors from political institutions such as competent authorities in charge of EIA process, local authorities, civic organisations, environmental NGOs, and individual people. Different aspects are present: on the one hand the institutional context -structure

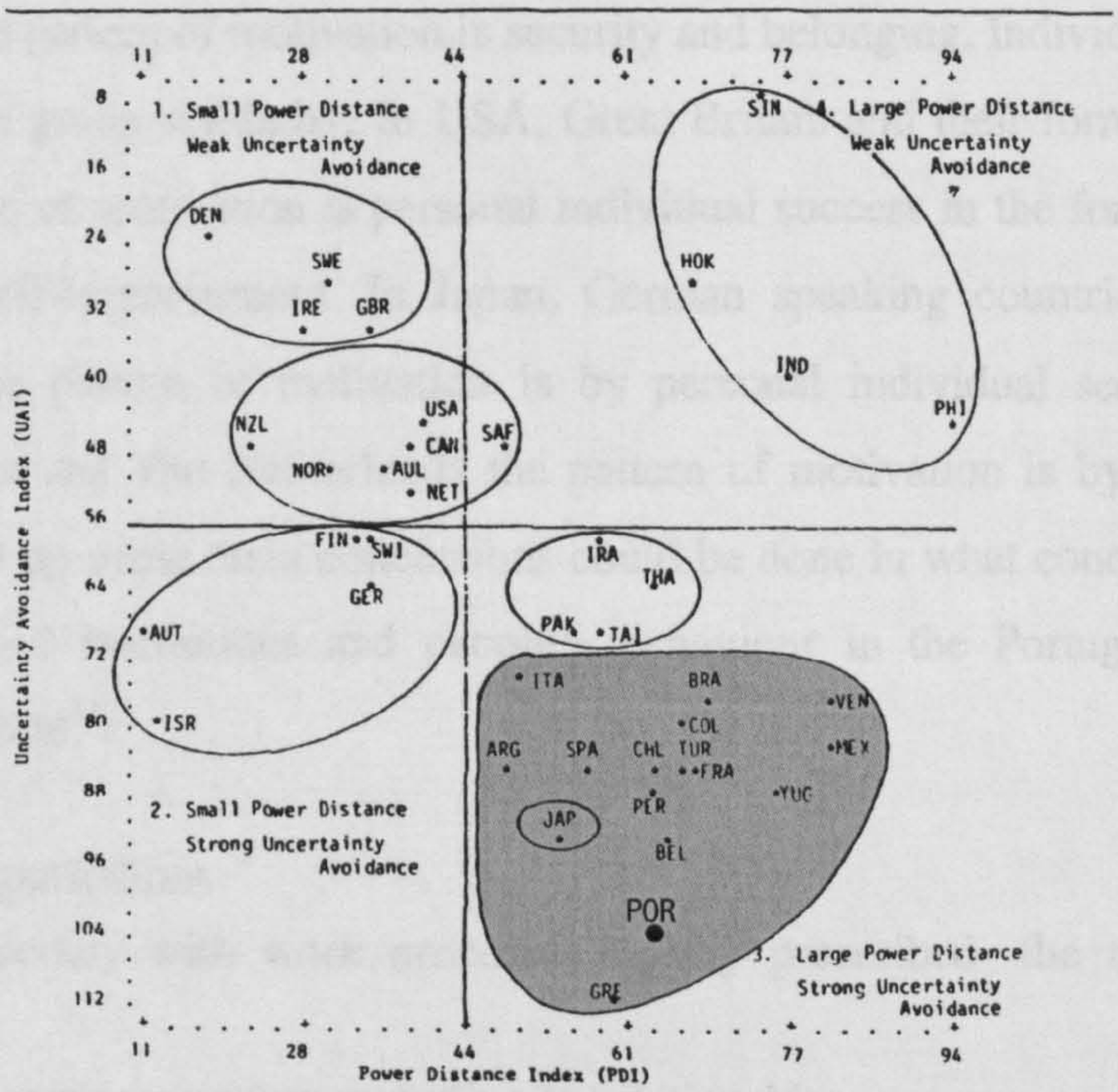
[31] This conclusion is based on Aston studies dimensions "concentration of authority" and "structuring of activities", the former related with Power Distance and the latter to Uncertainty Avoidance.

and the type of organisation to be used in such a process carried out by authorities in charge of the consultancy and on the other hand the way people behave (public expectancies and public involvement). There is an aspect concerning more structures and institutions and another one concerning values stand by people themselves as individual members and the articulation of both.

Applying the interaction Power Distance and Uncertainty Avoidance to a cross cultural analysis (fig 5.1) different clusters of countries with different preferred organisational types could be defined. The assessment has led to 4 basic clusters. Latin countries and Japan present the "full bureaucracy" in which relationships between people and work processes are rigidly prescribed. The model of organisation is the pyramid. Anglo, Nordic countries and the Netherlands present the model of "village market" which means the implicit structured organisation in which neither work processes nor relations among people are rigidly prescribed.[32]

PDI and UAI also reflect planning and control processes in organisations. In this subject Hofstede concluded that: stronger UAI norm supports a need for more detail in planning and more short term feedback and a tendency to leave planning to specialists. Strategic planning has difficulties in implementation. Larger PDI norm supports political than strategic thinking and personal planning control rather than impersonal systems. Conversely, smaller PDI norm leads to feasibility control systems based on trust in subordinates, such trust missing in large PDI. An interesting point is about "industrial democracy" this including participative management and joint consultation. According to Hofstede, these forms mean redistributing of decision making power so they will find strong resistance in high PDI countries as they are in themselves ways of reducing PDI. In countries with high PDI and high UAI they become a contradiction explained through the resistance, that elites and even "under dogs" will present. It could be achieved in Hofstede point of view by a political leadership using legislative tools but imposing participation, which will become a paradox. The way to function is by "limiting participation to certain spheres of life and maintaining tight control in others".

[32] Southeast and Asian countries present the model of the "family". The organisation is the "personnel bureaucracy" in which, relationships among people are hierarchical but the workflow is not codified to the same extent. The German speaking countries and Israel present "the work flow bureaucracy" in which, work processes are rigidly prescribed but less the relationships among people. The implicit model is an "well oiled machine".



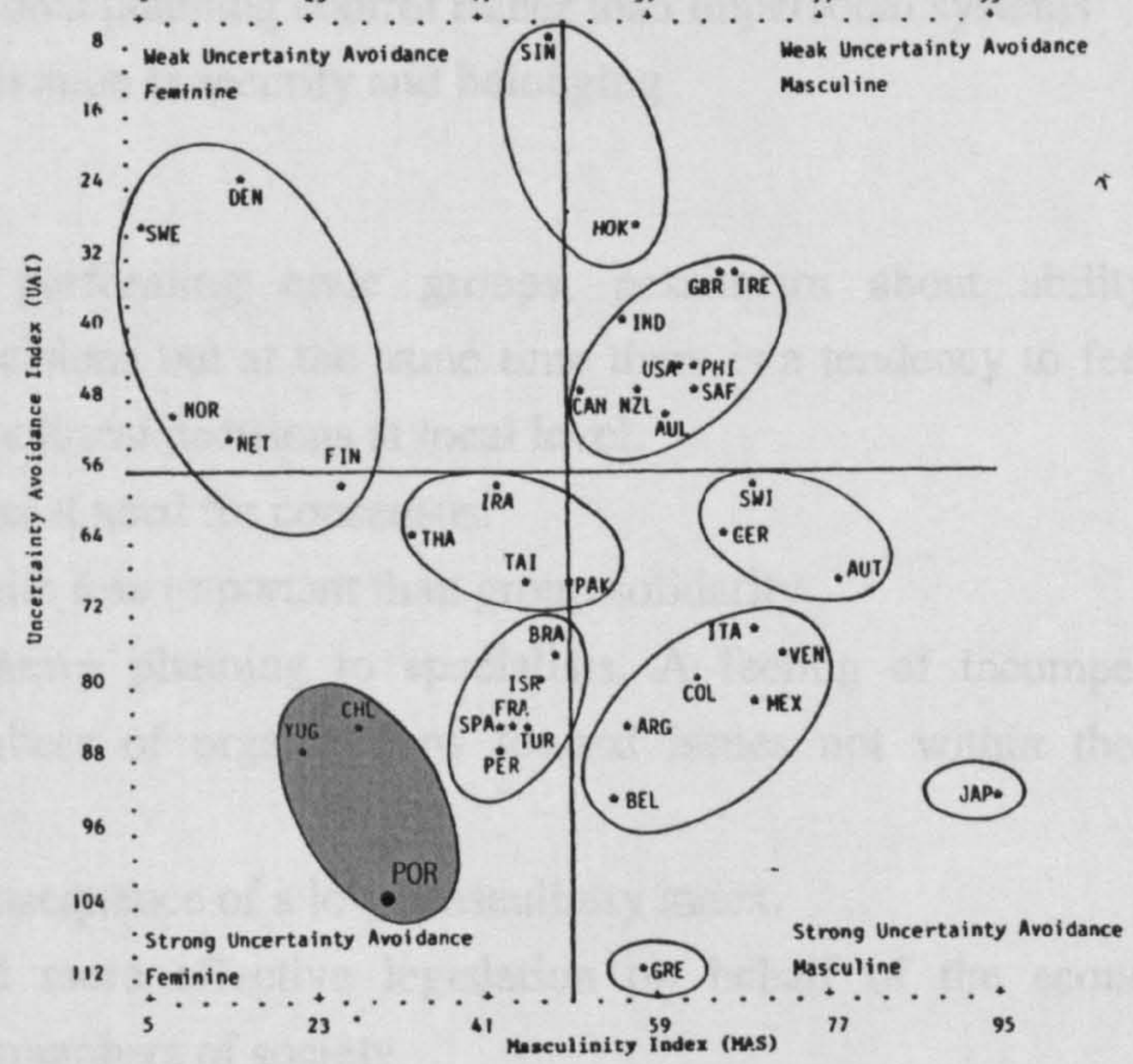


Fig. 5.1 Positions of the 40 countries in the interaction of dimensions
Source: Hofstede 1980

The interaction of UAI and MAS indicates the pattern of motivation in a society, as the norms of these two dimensions affect what will motivate people in different cultures. Using again clusters of countries performing similar, Hofstede defined different types

of motivation (Fig. 5.1): In France, Spain, Portugal, Yugoslavia, Chile, other Latin, and Asian countries the pattern of motivation is security and belonging. Individual wealth is less important than group solidarity. In USA, Great Britain and their former dominion colonies the pattern of motivation is personal individual success in the form of wealth, recognition and self-improvement. In Japan, German speaking countries and some Latin countries the pattern of motivation is by personal individual security. North European countries and The Netherlands the pattern of motivation is by success and belonging. To sum up some main conclusions could be done in what concerns the type of organisations and institutions and people's behaviour in the Portuguese context according to Hofstede[33]:

Institutions and organisations

- A full bureaucracy with work processes rigidly prescribed- the model of the pyramid.
- Policies and practices varying according to relationships.
- Strong resistance in participative management. Strategic planning with difficulties in implementation. Need for more detail in planning and more short term feedback. Personal planning control rather than impersonal systems
- Pattern of motivation is security and belonging

People's behaviour

- Difficulty in performing civic groups, pessimism about ability to control politicians' decisions but at the same time there is a tendency to feel less able to participate in political decisions at local level.
- People feel a great need for consensus.
- Individual wealth less important than group solidarity
- Tendency to leave planning to specialists. A feeling of incompetence among ordinary members of organisations toward issues not within their immediate activity range.

In addition, as a consequence of a low Masculinity index.

- Sympathy and more effective legislation on behalf of the economically and socially weak members of society

[33] It is important to note that scores obtained on cultural dimensions are averages for all respondents in a specific country. This does not mean that everyone in that country has all the characteristics attributed to that culture, many individual variations exist. The performance on indexes of culture describes according to Hofstede the common values of the central core of the culture, which result from common forms of socialisation through education and life experiences. As stated by Open University (1995:26) "Although these factors do not make everybody the same a country's nationals do share a culture character which is more clearly visible to foreigners than to themselves".

- More public sympathy and more effective legislation of environmental conservation and maintaining quality of life

Main criticisms to Hofstede's work come from the "convergence theory" which forecasts more similar societies where ideologies have less importance. According to the "convergence theory", the great technological modernisation, a powerful force in evolution of societies and globalisation, will produce homogeneous societies worldwide. Hofstede recognises that societies change due to forces of nature and forces of man and products of scientific discovery (e.g. mass media) represent the major factor of culture change. However, he argues, different societies cope with technological modernisation in different ways which could lead to the enlargement of differences between them depending on the stress put on "similarity" or in "change". "Different dimensions of culture in different countries may follow different trends, although some trends will be felt worlwide" (Hofstede 1980:342). In an attempt to define trends of culture change, Hofstede concludes that it is expected an increase of individualism and decrease of power distance norms as long as wealth increases. An increase of anxiety and stress, a component of uncertainty avoidance is also expected as well as an increase of masculinity.

Another criticism to Hofstede's work is that all the respondents of the questionnaires were working for IBM Corporation and only service and sale employees were considered. This leads to the question of how representative of national cultures these employees are, since IBM is an American company and criteria for selecting employees must be according to somewhat American values (Open University, 1995:26). It is also stated that conclusions on the performance of the dimensions between national cultures are quite perceptible in opposed countries values but not in similar countries values. Conclusions are better suited to distinguish between opposite ends of the same scale (ibid). A main restriction to Hofstede work is the date of the questionnaires from 1967 to 1973 on which he based his work. Though accepting the large resilience of culture when talking of core values, Portuguese society has suffered an enormous change since the 1960's consolidated with the 1974 revolution, which led to the end of dictatorship and the colonial empire. Great changes occurred in a very short period of time and according to Barreto (1995), they were easily absorbed by citizens and the society itself. Portuguese society demonstrated a surprising flexibility and capacity of

adaptation as Barreto (1995:843) recognises stating: "in 20 or 30 years Portugal has done what has taken 50 or 60 years in other European countries". Some authors consider, however that under formal and apparent institutional modifications there is a prevalence of the same lines of continuity where others insist in highlighting the depth of ruptures done in several domains of country life. Barreto (1995:855) concludes that the Portuguese people have increasingly the problems and expectations of European countries but do not have its industrial and scientific capacity nor its productivity or capital availability and even less its organisational and managerial capacity.

5.2.3 The "periphery" and the "core" in the European Union

In Europe, the implementation of environmental policies by Southern countries especially since the recent commitment of EU to the path of sustainable development has been considered of intellectual and practical interest (Yearley et al. 1994). Some reasons for this are according to them the following: on the one hand, there have been enormous pressures for their economic development financed by EU. On the other hand these countries still have large areas of environmental value maintained by default, which render them ecologically significant. Moreover, the environmental standards established by the EU can be seen as inappropriate or difficult to implement by development agencies in the periphery (ibid).

The concept of periphery used was based on an iterative approach on both socio economic and geographical grounds as well as on the Douglas (1970b; 1987) model of cultural diversity[34]. The Douglas model relies on the premise that different institutionalised ways of thinking and acting are generated by different forms of social organisation (Yearley et al. 1994:12 citing Douglas). These different forms can be described as:

- Where social organisation is dominated by corporate groups, cultural perspectives will tend to vary along a continuum between the hierarchical and the egalitarian, depending on the degree of constraint or independence experienced by individuals in their own actions.
- Where social organisation is dominated by ego-centred networks, cultural perspectives will tend to vary between the entrepreneurial and the fatalistic, again depending on the degree of independence experienced by individuals.

[34] A comparative case study approach was used to refine the interpretations of peripherality (Yearley et al 1994:12)

The first form applies to countries of "the core" of the EU "those which exercise the most influence over Union policy are characterised by corporate forms of social organisation both in their commercial sectors and in their environmental lobbies" (ib:13). The second form applies to "the periphery" of the EU "countries characterized by a network structure, with political systems traditionally dominated by patronage and clientelism" (Yearley et al. 1994:13). The choice of this model is justified by the fact that "environmental policies aim at equalizing environmental standards throughout the Union and operate through mechanisms, which require a degree of central control" (ibid). It was considered fruitful to analyse within this model if problems generating an implementation deficit could be explained by different political cultures (Yearley et al. 1994).

Weaknesses of periphery

Pridham (1994) analysed the contribution of EU environmental policy pressures to the development of national policies in Southern countries within the framework of periphery defined above. The study included data from Spain, Italy, Greece and just some references to Portugal. The conclusions of this study present several causes and difficulties in the implementation of the EU environmental policy from cultural background to political and administrative features. A summary of the main conclusions follows[35].

Cultural and social background

Environmental problems were evident later in the periphery mainly because of the slow rate of industrialisation in these countries. As a consequence these countries arrived late to the environmental debate compared to the Northern countries that faced an earlier and intense process of industrialisation. In part related to this fact environmental awareness and consciousness are lowest in peripheral countries where environmental associations are still at a low level of activity, although increasing in number. In Southern countries labelled 'recently modernised cultures' attitudes of consumerism prevail, forming a powerful obstacle to environmental values (Pridham 1994:81). "Environmental protection is often viewed as having a particular sharp trade-off against

[35] However, Pridham states that important differences among these countries should also be stated as far as environmental administration, length of EU membership, implementation deficit, socio-economic development, environmental awareness and regional differences are concerned.

economic development and employment creation" (Yearley et al 1994). Some groups see EU environmental measures as impeding the development of the periphery.

Policy structures, infrastructures style and pattern

There is a general difficulty in introducing new environmental policy and administration into bureaucracies because this implies enormous and radical restructures, which will clash with established interests. Pridham (1994:85) states: "These problems can be in part neutralised by effective co-ordination at both horizontal (inter-ministerial) and vertical (centre-periphery) levels, but it is here that Southern European countries are notably deficient". He adds that bureaucratic lethargy and ministerial rivalry are powerful obstacles as well as "the weaknesses of efficiency values and professional competence (as distinct from the cliental practices)"(ibid).

Implementation of the new politics of pollution is hampered by the reputation of ineffectiveness and corruption, administrative lethargy and defective policy co-ordination (Pridham, 1994:81). Decision making is characterised by incrementalist model than rationalist styles, "where changes occur slowly and are usually of a minimum degree" (ibid.). Planning and monitoring mechanisms, environmental information and efficiency of data collection, which are essential to environmental policy are usually very weak in Southern countries and distinctly behind those of Northern European countries. Costs of implementation of environmental Directives are also important, as Southern European countries tend to be the poorer in Europe.

Pridham (1994:90) concluded that Southern countries do not always deserve the label of the worst in Europe as far as implementation of environmental policies are concerned: "however, they stand somewhat apart with their limited professionalism and infrastructural facilities and to some extent in their traditional concern to the economic imperative".

5.2.4 Santos's theory of countries of intermediate development

Boaventura Sousa Santos (1991; 1993; 1994) presents a relevant and comprehensive framework to the analysis of Portuguese society. The importance of Santos's theory is not only related to the novelty and actuality of the analysis done (the last 30 years of Portuguese society) but also because it has applied empirical work using specific patterns and models conceived for it.

Santos has argued that Portuguese society presented a form of resistance to sociological analysis which was so much misunderstood as Portuguese society was one of the less known European societies, so it must be particularly opened to social scientific work. Based on this apparent contradiction Santos concluded that the usual disposable analytical frameworks commonly used to access social analysis were not adapted to the Portuguese social reality. He argued that sociological theories were constructed upon the dichotomy of two worlds: the first world meaning the central developed countries and the third world meaning a large number of countries almost colonised, peripheral and under developed. The Portuguese reality has escaped this dichotomy because it is a society of intermediate development and this will need a profound reconstruction of existing concepts and theories[36].

Santos based his framework on the theory of world systems by Wallerstein (1974), especially the concept of semiperipherality considered fundamental to capture the character of intermediate development, as well as theories of regulation by Aglietta (1976) to construct a theoretical frame identifying Portuguese society both in its intermediate character and in its function as mediator of peripheral societies. Societies of intermediate development present both indicators of developed countries such as rates of population growth, progressive legislation, patterns of consumerism; and indicators of developing countries such as lack of collective infrastructures, lack of cultural policies and low industrial levels (Santos 1994:53). Using this framework some characteristics of Portugal as intermediate society can be pointed out as:

- Centralisation of the state with great distance between representatives and represented
- Clientelism and bureaucracy
- Parallel State with a great discrepancy between "law in the books and the law in the practice"
- Heterogeneous society in social, political, economic and cultural terms
- Coexistence of capitalist and traditional ways of production
- High proportion of population with an economical link to agriculture
- Weak Welfare State and a strong "Welfare society", which tries to compensate for deficiencies of the State

[36] Without new concepts and tools the opacity and resistance to social investigation will continue, biasing results, and outcomes would be that Portuguese society shows what it is not and hides what it really is (Santos 1994:53).

- Weak and non autonomous civil society when compared to developed countries, due to the absence of organised representations of specific social interests
- Citizenship not considered as a priority
- Small cultural elite remote from the general public

Centralisation of the State, clientelism and bureaucracy

Portuguese society is characterised by the heavy centralisation of the State[37] and by a great heterogeneity of the structural spaces, which constitute society leading to a weak and non autonomous society.

Santos presents a solid explanation about the centralisation of the State and the characteristics of the Portuguese civil society within the theory of semiperiphery. Concerning the role of the State in Portuguese society, Santos (1991) points out its importance in social regulation though played with great inefficiency and a vast distance between representatives and represented. He argues that in intermediate societies the State tends to be externally weak and internally strong. Santos explains that the strength of the State is based less on the capacity to govern by consensus (legitimation) as in central democratic societies but more based on the capacity to mobilise different types and degrees of social coercion (authoritarianism). However, this centralisation of the State is undertaken with enormous inefficiency due, in a great part to factors such as: no exact boundaries exist between the State and the civil society, the official and the non official, the formal and the informal, public and private, these factors being the basis of the modern State. A rigid bureaucracy exists although it works with extreme rigour, distance and formalism to the common citizen whereas it can be very flexible, informal and even intimate with known groups (Santos 1991; 1994). The prevalence of populism and clientelism phenomena, which interpenetrate and subvert the logic of the State, is labelled by Santos as the privatisation of the State, meaning government resources at the service of some groups to get particular interests. In democratic periods this phenomenon transforms the parties specially those, which make up the government, putting them in a privileged position within mechanisms of social mobility. This also explains according to Santos (1994:62) the distance between

[37] Barreto (1996) also presents a detailed analysis of the centralisation of the State in the Portuguese society as a result of geographical, historical, economical, ideological and cultural factors. Barreto points out that with the 1974 revolution and the new approved Constitution there is now an enormous contradiction between programmes, laws, rules and policies claiming for decentralisation though the practice is showing even more centralised tendencies.

representatives and represented and characterises the relationships between the cultural elite and popular classes. The cultural elite has always functioned in Portugal in "closed circuit" between the common people and the political power. They have never faced a "bourgeoisie" or a strong middle class calling them to reality and confrontation of ideas argues Santos (1994:50) adding that this has led to their marginalisation and irresponsibility of social reality.

Civil society and citizenship

According to Santos (1994) Portuguese society is weak and non autonomous when compared with central European countries because it is not organised like the hegemonic models of the central countries. Santos (1994:63) states that Portuguese society does not have a tradition of formal and centralised organisation and does not have autonomy of well defined social interests (worker interests, owners interests, people interests). This implies that Portuguese society is not able to generate strong social patterns in a permanent dialogue among themselves and with the State this being the main characteristic of developed societies, especially after the World War II.

The autonomy of the civil society in central countries is, according to Santos, due to the fact that the space of production has shaped the space of citizenship as well as the domestic space since industrialisation has always preceded parliamentarism as a dominant political regime. The opposite has happened in semiperipheral countries, like Portugal, where the space of citizenship has preceded the space of production. Parliamentarism even being restrictive preceded industrialisation and has always been autonomous from the space of production. Reinforcing this, the market rules have never obtained in Portugal the hegemony of those in central countries (Santos 1994). Interlinked to this there is another factor considered by Santos as relevant to explain the weakness of Portuguese civil society: the internal heterogeneity of the society, which could be stated in the heterogeneity of the productive activities, in its disarticulation, in a weak complement between sectors, in the coexistence of a capitalistic way of production with traditional production techniques. More than 1/3 of the Portuguese families still have an economic link to agriculture[38], thus demonstrating the incidence of situations of double class belonging and contradictory class situations. In addition, the principle of community is very heterogeneous. Portuguese society has never had a

[38] However Portugal has been suffering a drastic reduction in the primary sector from 40% to 10% in less than thirty years (Barreto 1995:851).

well defined shape between social classes – bourgeoisie and workers- and this could also be stated through the deficit of interests of worker's organisations and owners (Santos 1994). However, Santos (1993; 1994) argues that we have a strong civil society if one takes into account the familiar structures and solidarity webs constructed on the basis of parents relationships and neighbourhood. When analysed in this context Portuguese civil society is much stronger than civil societies of the central countries. Santos labelled this the "Welfare society" which tries in some ways compensate the deficiencies of the Welfare State. The inefficiency of the Portuguese State has developed in Portugal, in the last decades this "Welfare society" trying to make compatible democratic consolidation and capitalism reinforcement leading once again to the performing of the "Welfare society" in an attempt to play the role the State performs in central developed countries (Estanque 1993).

5.2.5 Convergence of theories

It can be stated that the three approaches chosen present many similarities and seem to compose a common broad frame, which can contribute to a better understanding of the context in which public participation in EIA takes place. For the purpose of EIA and public participation it seems important to converge on the political/institutional culture as well as citizens' values, societal forms of organisation and interactions of both. As far as political administrative structure is concerned a common factor in all the frameworks analysed is the stress on the centralisation of power in the State with hierarchical relationships with the civil society (distance between representatives and represented). It is also stressed the existence of a system of patronage and clientelism opposed to more corporate forms of social organisation. The State domains and prevails in Portuguese society presenting however a high degree of inefficiency, with clientelism many times subverting its logic since policies and practices vary according to specific relations (particularism or collectivism opposed to universalism or individualism). A bureaucratic model of social organisation presenting the form of a pyramid leads to lethargy and inefficiency. The full rigidity of rules and bureaucracy applied to common citizens varies however to flexibility to known groups and this lead to a high distrust in the State. Uncertainty Avoidance is according to Hofstede a prevalent factor of Portuguese society revealing the level of intolerance in dealing with uncertain and ambiguous situations, this corresponding in the practice to abundant rules

and legislation. This is stressed by Santos though stating that there is a great discrepancy between the existing laws, sometimes very progressive, and its implementation in the practice. The State compromises itself with a certain pattern of legality and regulation though not to its application in the practice (Santos 1991; 1994).

Civil society less autonomous and weak is related to non-organised patterns of representatives for specific social interests which is also linked to the authoritarianism of the State. Hofstede (1980:174) states "powerlessness of the individual against the system" in high power distance and "citizen pessimism about ability to control politician's decisions (ibid:177) or "ordinary citizens are incompetent versus the authorities" (ibid:184). "Quality of life and environment" and "conservation of the environment seen as more important than economic growth" are factors according to Hofstede (1980:269) that express more feminine values. Santos (1994) argues that Portugal presents a higher rate of population living in rural areas and the Portuguese worker is a semi proletarian pluriactive, working at the same time in agriculture and industry. This relationship to a small agriculture could explain according to him the idea expressed by the sociologist Dias that Portuguese people has a "profound sense of the nature". However, environmental consciousness is low in Portuguese society and trade/offs economic development/environmental protection could work on the side of the former, aggravated by the weak welfare State. As far as environmental planning and management are concerned it is recognised that it has always been a problem in Southern countries where environmental values have been maintained by inertia (Yearley et al. 1994). According to Hofstede, Latin countries reveal lack of strategic planning, need for short term feedback and stress on details. Decision making is more on the incrementalist side than rational one and changes occur slowly and are at a minimum degree.

5.3 The Portuguese context of participation in EIA

5.3.1 Introduction

The Portuguese lived for about half a century (1926-1974) under a strong repressive dictatorship, isolated from the flow of ideas in other Western countries. Portugal remained quite away from the problems and concerns of other Western countries. A very incipient industrialisation, a stress on rural values and traditional agriculture, an

intensive control of the public opinion and a cultural obscurantism were some of the characteristics of the Portuguese society fostered before 1974. The 1974 April revolution leading to a democratic political system brought with it fundamental changes. The main change was freedom expressed internally through free opinion and free press and externally through acceptance into the international community.

The construction of democracy and the integration into the European Union have been the main post-revolutionary changes in Portuguese society. These transformations have been accompanied by:

- deruralisation, with desertification of the interior of the country;
- urbanisation, with strong development pressure in cities of the coastal area; and
- emancipation, with a rapid expansion of the educational system, and with effects in the social-professional re-composition of population typified by women's access to the work force, and universal access to mass communication.
- Development of a Welfare State system

As many other concerns affecting Western developed countries, environmental questions are relatively recent in Portugal. As Lima et al. (1996) have argued only in the late 1980s one can observe a political and institutional concern on the articulation between society and environment.

No one could say that the fifty years of dictatorship had preserved intentionally environment. Apart of some examples showing the opposite[39] the preservation was obtained by inertia. However environmental problems increased exponentially after the revolution but particularly after the 1980s. This was due to the intense development in the name of "economic growth" to which abundant EU funding has contributed. This development was achieved without planning or concerns with environmental conditions provoking a great disruption. Conventional modes of promoting wealth were applied such as motorways, dams and power plants (Yearley et al. 1994).

On the other side the integration in the EU have forced the existence of environmental policies through a legislative and institutional common frame. Actually, the history of Portuguese legislation on environment was late and its application was never efficient facing political instability, lack of co-ordination between overlapping constituencies a strong bureaucracy and facing resistance in practice.

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[39] A common example given is the great change occurring in the south of the country with the introduction of extensive monoculture of cereals contributing to degradation of soils and landscapes.

The visibility of environmental problems in the last decades, the increasing attention given to environmental degradation by the media, the advances of environmental sciences, the political and institutional legislation in the EU mandatory frame, could be pointed out as some of the main factors contributing to the raise of environmental concerns and awareness in Portuguese society (Observa, 1997). As pointed out by Observa (1997) the environmental sector of government policies has become a relatively pioneer ground in terms of enlarging public debate, experimentation and social acknowledge of participative democracy practices and citizenship development.

5.3.2 Environmental values, consciousness and responsiveness

Existing data

There are no much research data respecting specifically environmental Portuguese values and attitudes, though several works exist about broad social and cultural values where environmental values are incorporated. Some international inquiries have approached Portuguese environmental values among those of other countries, as the European Inquiry (1990) and the European Union - Eurobarometers, applied in two comparative inquiries about environmental attitudes in 1986 and 1992. The Gallup inquiry (1992) - *The Health of the Planet Survey,* considering 24 countries around the world, presents one of the most comprehensive approaches to environmental values, concerns and attitudes. This inquiry was analysed in reference to Portuguese specific case by Lima et al. (1996) within the Program of the Environmental Luso-American Forum for the Luso-American Foundation for Development[40].

A broad environmental research program has also been carried out in Portugal since 1997, by Observa in order to determine the configuration of social representations, attitudes, opinions and expectancies to the environment (Observa, 1997)[41]. Results and analysis done by the sociologists in charge of both these two inquiries and other theoretical references are used here in order to obtain an approach to the specific Portuguese cultural view and expectancies in environmental questions.

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[40] It was applied in Portugal to 1000 people and included several types of questions related to perceptions and concerns with environmental problems, attitudes as well as actions to the achievement of environmental protection and forms of militancy in environmental associations (Lima et al. 1996).

[41] This program has been set up by sociologists from an investigation department of ISCTE (Instituto Superior das Ciências de Trabalho e Empresas). Part of it, an inquiry about Portuguese environmental attitudes has been presented recently (February 1998). The targeted population was Portuguese over 15 years and was applied to 2450 people.

Portuguese concerns and representations on environment

One of the first conclusions obtained in both inquiries is the significant weight Portuguese participants put in environmental concerns and questions (Fig 5.2). However, concerns about environment are greater when Portuguese think about the world environment, less important when they think about the country and even less important when they think at a local level (Fig 5.3). Lima et al. (1996) concluded that Portuguese consciousness in environment is essentially raised by other's problems with a clear contribution of the media, especially TV, which emphasises environmental tragedies and catastrophes. There is a tendency to unresponsiveness thus enhancing their role as victims of global problems and not assuming their actions as contributing to environmental degradation (Lima et al. 1996). The inquiries also reveal a very pessimistic attitude of environmental conditions towards the future both at a national and world level (Fig 5.4). Referring to their country the Portuguese put environmental problems in the fifth place, after the cost of living, deficient health care, food and housing and crime and violence. However, in terms of the future (next 25 years) environmental problems rise to the second place following crime and violence (Gallup inquiry). According to Hofstede (1980) a relevant aspect of Portuguese culture is the high index of uncertainty avoidance meaning high anxiety to unknown situations. The existing discrepancy between Portuguese progressive and abundant laws and its effective implementation associated to the inefficiency of the State increase uncertainty and project this situation in a worldview.

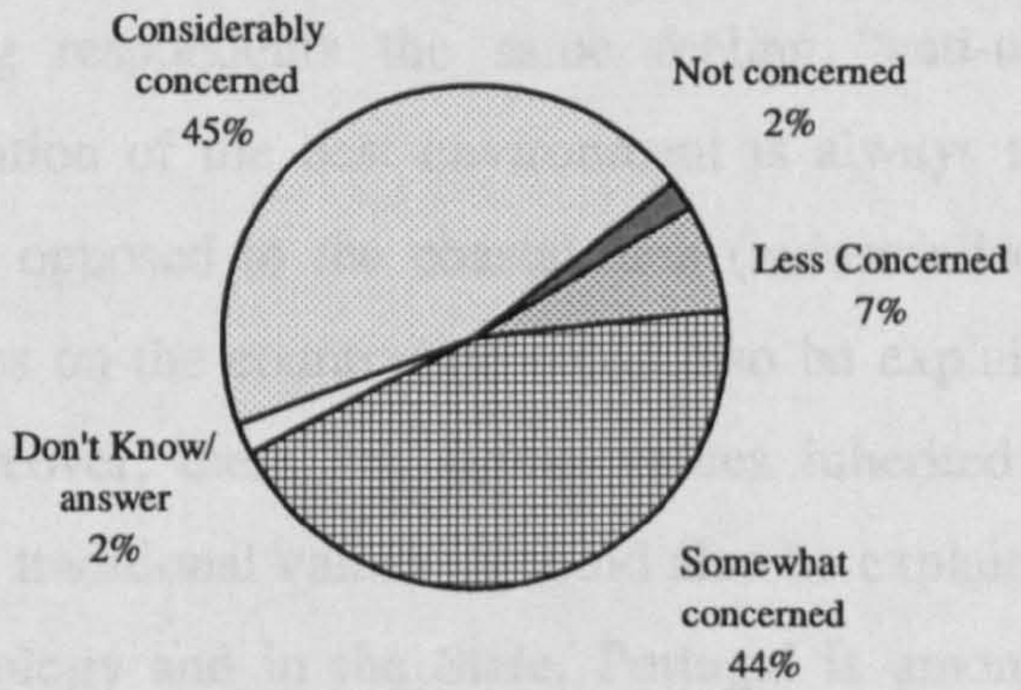

Fig. 5.2 Concerns about environmental problems
Source: Lima et al. (1996) Gallup inquiry

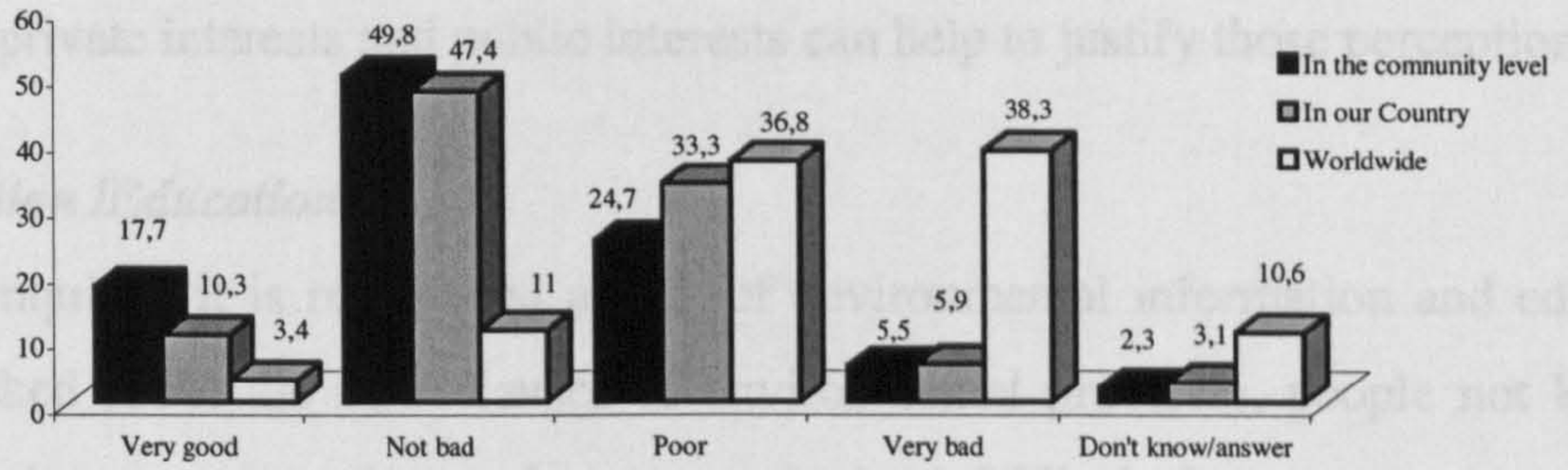

Fig 5.3 How would you classify the "quality of the environment"
Source: Lima *et al* (1996) Gallup inquiry

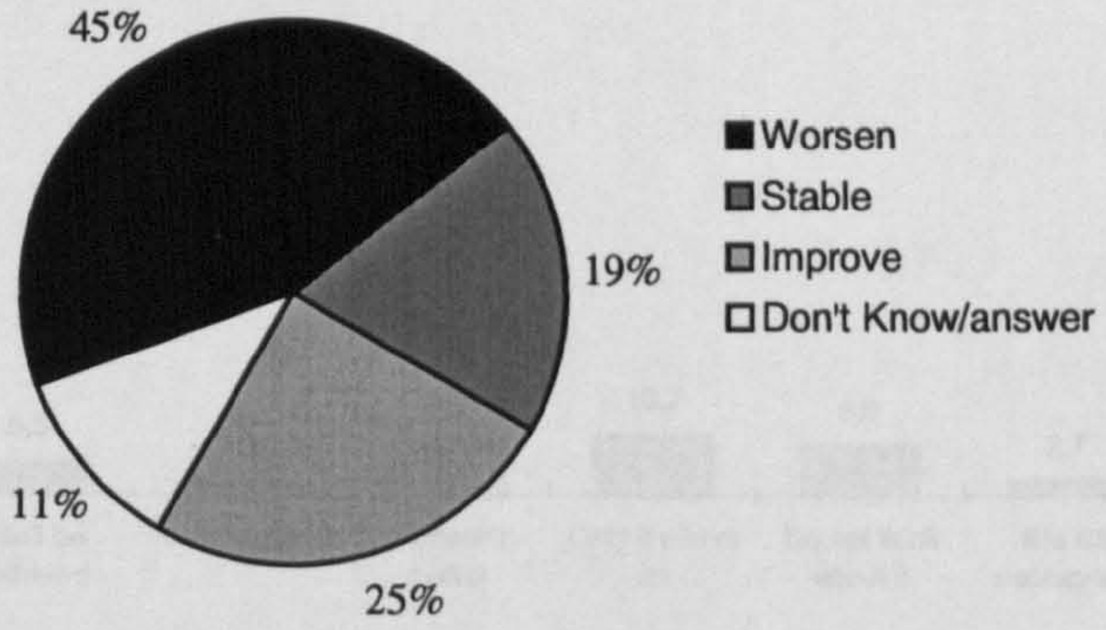

Fig 5.4 How do you think environmental situation in Portugal will develop over the next 10/15 years?
Source:Observa (1998)

Sociologists in charge of the analysis of data argue that nevertheless, there is a large heterogeneity of environmental representations and expectancies among the respondents depending very much on their age, education, social status and rural or urban living. They conclude that there is not a homogeneous and coherent content on these representations (Lima et al. 1996:224).

There is however among respondents the same feeling "anti-urban" and "anti-industrial" once the definition of the best environment is always the interior of the country (rural and desert) opposed to the coastal area (industrialised and urbanised) (Observa 1997). This stress on the countryside could also be explained by the strong relationship to land. Moreover, there are strong values inherited by the times of dictatorship stressing rural traditional values. It could also be explained by disbelief in both environmental technology and in the State. Portugal is among other European countries believing less in technological capacities, placing itself at the end of "technological modernisation". The cause of that is related to the lack of investment in this area (Lima et al. 1996). A general feeling of lack of confidence in the performance

of the State and its administration in solving problems as well as in its role of mediation between private interests and public interests can help to justify those perceptions.

Information /Education

In both inquiries it is recognised a lack of environmental information and education. When asked about the main causes of environmental problems, people not knowing what to do to protect the environment obtained 92%, before waste management, government performance, development of trade and industry and degradation of resources. On the reasons why people do not do more to protect the environment, lack of information is the most significative answer (Fig 5.5).

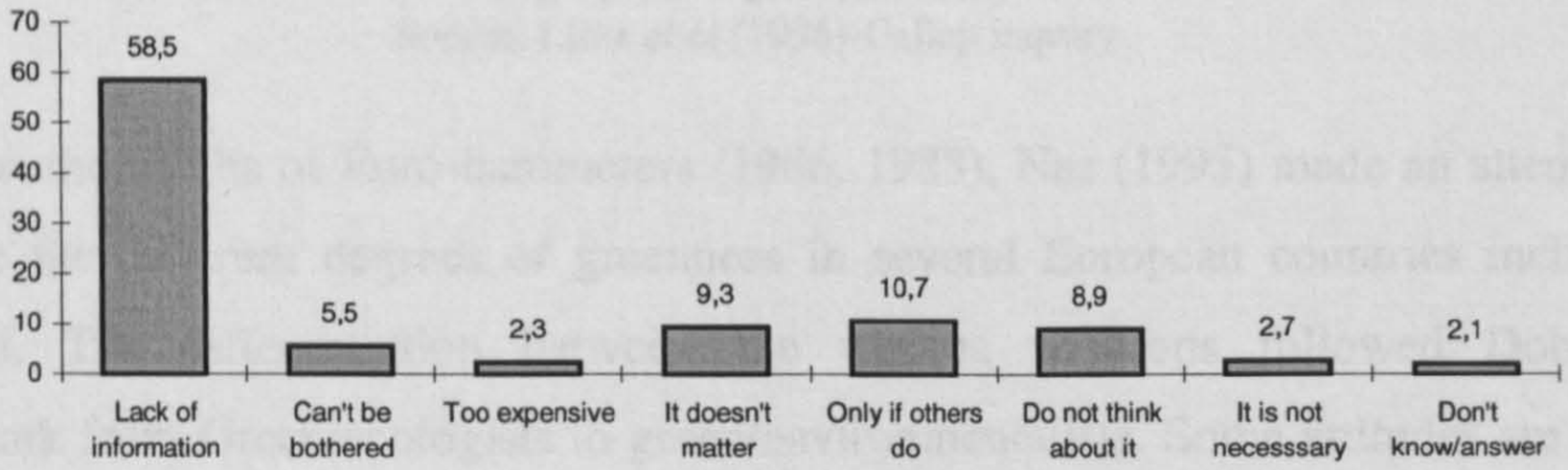

Fig 5.5 Reasons that explain why people do not do more for environmental protection
Source; Lima et al.(1996)-Gallup inquiry

According to Lima et al (1996) this lack of Portuguese environmental information as well as lack of a civil organised culture is very negative leading to face environmental problems as distant problems and to unresponsiveness. However, Observa (1997) concluded that people are very open to more environmental information exemplifying with the success of the recent campaign for recycling wastes, very publicised in the media. This consciousness about lack of environmental information/education is also projected on others. When asked about what to do to help developing countries Portuguese first answer is "information to educate people about environmental protection" (98%) (Lima et al. 1996).

Practices

Another relevant conclusion of both the Gallup and Observa inquiries is the discrepancy between the high level of the Portuguese environmental concerns and the attitudes taken in the practice to solve environmental problems. As Lima et al. (1996) have pointed out the positive predisposition of Portuguese respondents showed in

supporting policies and benefits for better environmental conditions do not have correspondence in the practice as they do not have any ecological militancy (Fig.5.6), neither participate in actions related to the exercise of citizens' rights.

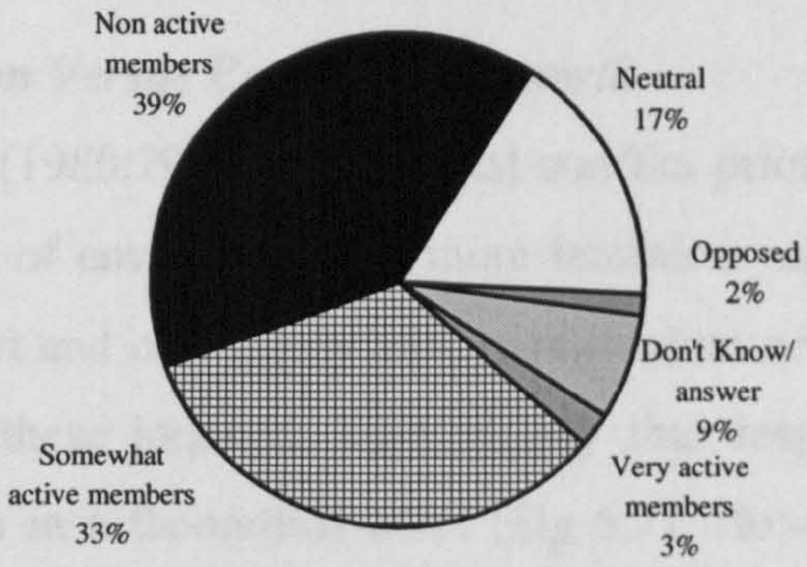

Fig 5.6 Ecological militancy
Source; Lima *et al* (1996)-Gallup inquiry

Based on the results of Euro-barometers (1986, 1988), Nas (1995) made an attempt to measure the different degrees of greenness in several European countries including Portugal. The differentiation between the various positions followed Dobson's framework from Green/ecologists to green/environmentalists. Some attitudes are more on the side of greens/environmentalists such as "extinction of animals and plants" considered a more conservationist concern opposed to others such as "loss of environmental resources" which is considered closer to Green/ecologist ideas of the finitude of the world. However as Nas (1995) states concern is just a minimum condition to greenness; action is the other important condition for the Green/ecological side who disbelieve technology as the solution for environmental problems, thus emphasising the importance of the shift of mentality. Two scales were created by Nas: one for environmental concerns and another for actions toward the environment. In a rank of four degrees from grey to Green, Portugal was included in the second position - the Contemplative-just after the greys. Contemplative are described as "those who show above average concern but are not more active than the average activity level for their country (the minimal condition for greenness)" (Nas 1995:287).

Pureza (1996) analysing environmental conflicts in Portuguese courts argues that there is a strong pre-industrial component of environmental conflicts as illegal fishing and hunting, forest fire crimes, extraction of materials in quarries, smell, smoke and noise emissions all of them with a strong rural component. Pureza (1996) concludes that environmental litigation in Portuguese justice presents a pre-modern, individualist and

reactive tendency, still far from the effective incorporation of an awareness characteristic of post-modern, post-individualist societies, in spite of the existing progressive legislation.

Environmental Protection Versus Economical Growth

As referred by Hofstede (1980:297) two potential conflict priority issues are economic growth and conservation of environment. A more feminine value position will defend protection of environment and conversely a more masculine one will defend economic growth. The results of these inquiries state clearly that respondents would choose environmental protection in a theoretical level (Fig 5.7). However different positions are taken when the choice is between environmental protection and unemployment (Fig 5.8). Portugal has maintained low levels of unemployment in comparison to other European countries especially the neighbour Spain. Nevertheless the spectrum of unemployment is present and according to Lima et al. (1996) it means dishonour, familiar dependence, poverty and absolute lost of prestige. The situation of a "semiperipheral country" presented by Santos (1993, 1994) where a strong Welfare State does not exist and conversely there is a "Welfare society" trying to fill its deficiencies helps in explaining this attitude.

Related to this it is important to refer some conclusions obtained by Pureza (1996) in his research work about environmental litigation in Portuguese courts, using five case studies in different parts of the country[42]. Pureza (1996:114) concluded that the internalisation of environmental rights and its public assertiveness are strongly conditioned by the situation of economical dependence of the active population. He found that the working links and the consequent economic dependence (the great part in terms of personal or familiar subsistence) of the majority of the active population in relation to the industrial plants causing the great environmental local problems determines: the primacy of "fidelity" over "denounce"; the primacy of the value "stability of employment" over values of "quality of life" and the "protection of rights of future generations"; the primacy of "security of a technical consciousness" over a "civic consciousness".

[42] The criteria to this choice was: places with intensive potential environmental conflict capable of triggering judicial processes; places where the weight of pollutant industries was very high and at the same time places with intensive urbanisation.

Pureza (1996:114) concluded that there is then a clear primacy of a "productive and modern sensitivity" of the workers over "post-materialist or post-modern sensitivity related to environmental quality". Even the younger population who present higher levels of education and less employment dependence proved to have the same attitude of not showing high propensity to polarise environmental conflicts. The problem as argued by Lima et al. (1996) remains in knowing until what point unemployment might constitute or not a great blockage to the development of an ecological sensitivity. They argue that it will be in this field that the difficult articulation between the increasing bad environmental conditions and the euphoria of the recent consumerism will be in confrontation (Lima et al. 1996).

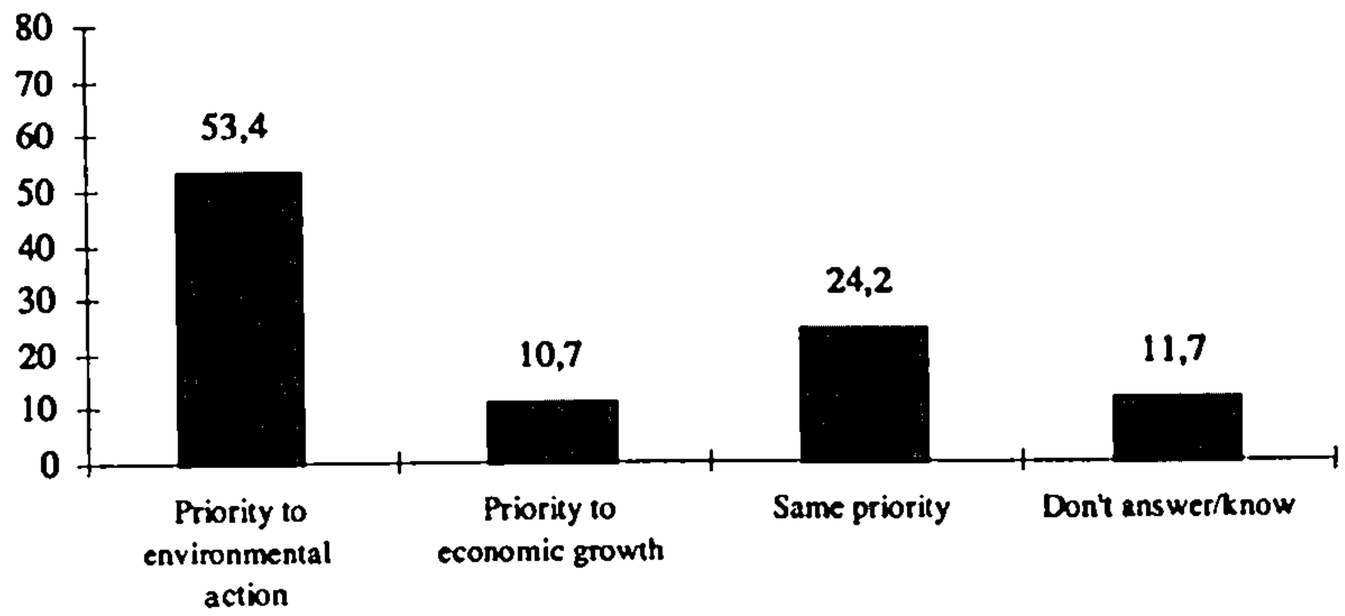

Fig 5.7 Which of these positions about environment versus economy do you agree more
Source Lima et al. (1996)-Gallup inquiry

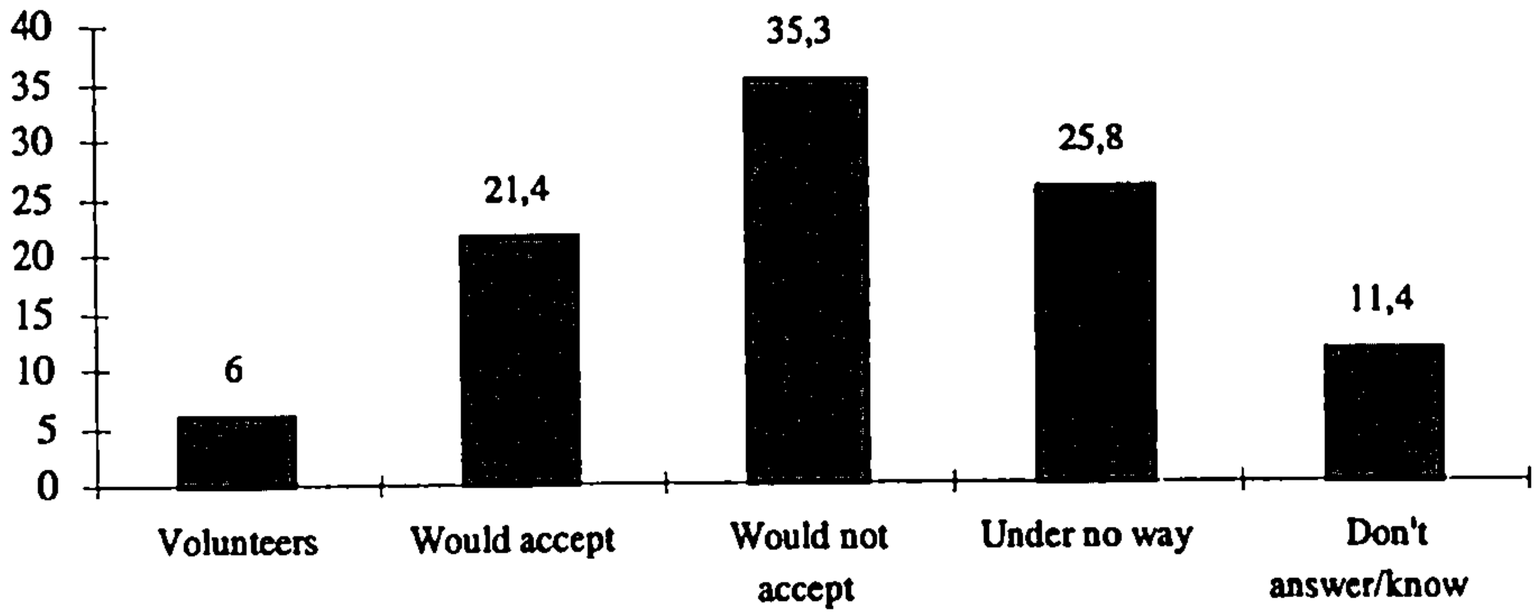

Fig 5.8 Would you be willing to accept more unemployment if this were to increase environmental quality?
Source: Lima et al. (1996)- Gallup inquiry

The Role of the State

These inquiries reveal that respondents consider the political power as an accomplice of economic power against citizens (Lima et al. 1996). The authoritarianism of the State as

well as its "privatisation" goes in pair with its inefficiency and clientelism, which is a characteristic of semiperipheral countries according to Santos (1994). There is a feeling of impotence from citizens to the political power inasmuch that the civil society does not present traditions of civic organisation.

It is however interesting to notice that despite the enormous lack of trust in the State and its Administration (even on the environmental information made available) the Portuguese respondents go on thinking that it belongs to the State the main role in the defence of environmental conditions, putting themselves in a distant attitude to their own responsibilities (Lima et al. 1996).

The mistrust in a State capable of defending the public interest leads to an important prominence of media and especially television to whom citizens appeal in individualistic attitudes. Television assumes the almost exclusive role of defender of citizenship with all the inconvenience this could have as reducing the impact of civic organisations and partially in their relationships with economic and political power (Schmidt 1996, Benavente et al. 1997).

5.3.3 Some aspects of the Portuguese citizenship

Relevant to EIA and public participation is the way citizenship works in both awareness of rights and existing practices for effective implementation as well as its interaction with the State and its institutions. The weaknesses of Portuguese civil society and the non participative culture have been pointed out in literature (Santos 1993; 1994; 1997; Barreto 1996; Lima et al. 1996). Authoritarianism of the State, lack of social organised interests, clientelist practices, lack of traditions of democratic culture have been pointed out as some of the reasons for this situation. Santos (1997) has argued that there still is a great deficit in the internalisation of citizenship rights, prevailing a culture of distance to citizens rights and a culture that does not place citizenship among main priorities in any public domain. A culture of participation has never existed or has been valued by the State. Even when legislation obliges to consult the public, the administration tries to ignore it (Benavente et al. 1997).

If citizenship rights are not internalised by the State and its Administration there is also a passive attitude from citizens, lacking organisations and institutions in society capable of becoming catalysts for civic intervention and dialogue with authorities. Many times clientelist practices prevail leading to more individualist initiatives than organised forms of participation.

A study about Portuguese citizenship, knowledge and practices has been carried out by Benavente et al. (1997)[43] which has helped in corroborating through empirical work relevant conclusions on the weaknesses of civil society, its causes and consequences. Some signs of change have also been noted. Conclusions of this work seem particular relevant to understand the social context of participation.

About citizenship rights respondents presented awareness of its existence in legislation. Social rights were specially valued, this reflecting the weaknesses of the Welfare State. Less value attributed to political rights is explained by Benavente et al. (1997) by its definite character assumed in practice. However, rights linked to a more participative democracy like referendum, petitions and other mechanisms were not valued as well as the named rights of fourth generation such as environmental rights, consumer rights.

Relevant is the discrepancy between the perception respondents have on existing rights in legislation and its effective implementation in the practice. From a list of 18 rights defined by UNCED almost all the rights have been recognised by respondents as existing in legislation though a great disparity is pointed out by respondents on its effective implementation, independently of age, education and social strata (Benavente et al 1997).

[43] The study was carried out in several phases between 1993-1995. Four main areas of concerns were tackled: 1) degree of awareness and sensitiveness of citizenship; 2) representations of civil rights exercise and what is most valued; 3) perceptions about the functioning of public institutions, the image of the State and mechanisms of access to justice; 4) the degree of knowledge about rights considered in legislation and capacity to react to its violation. Inquiries to students of universities and high school teachers in a first phase were completed with inquiries to populations of the two major cities-Lisbon and Oporto, and still completed with open interviews.

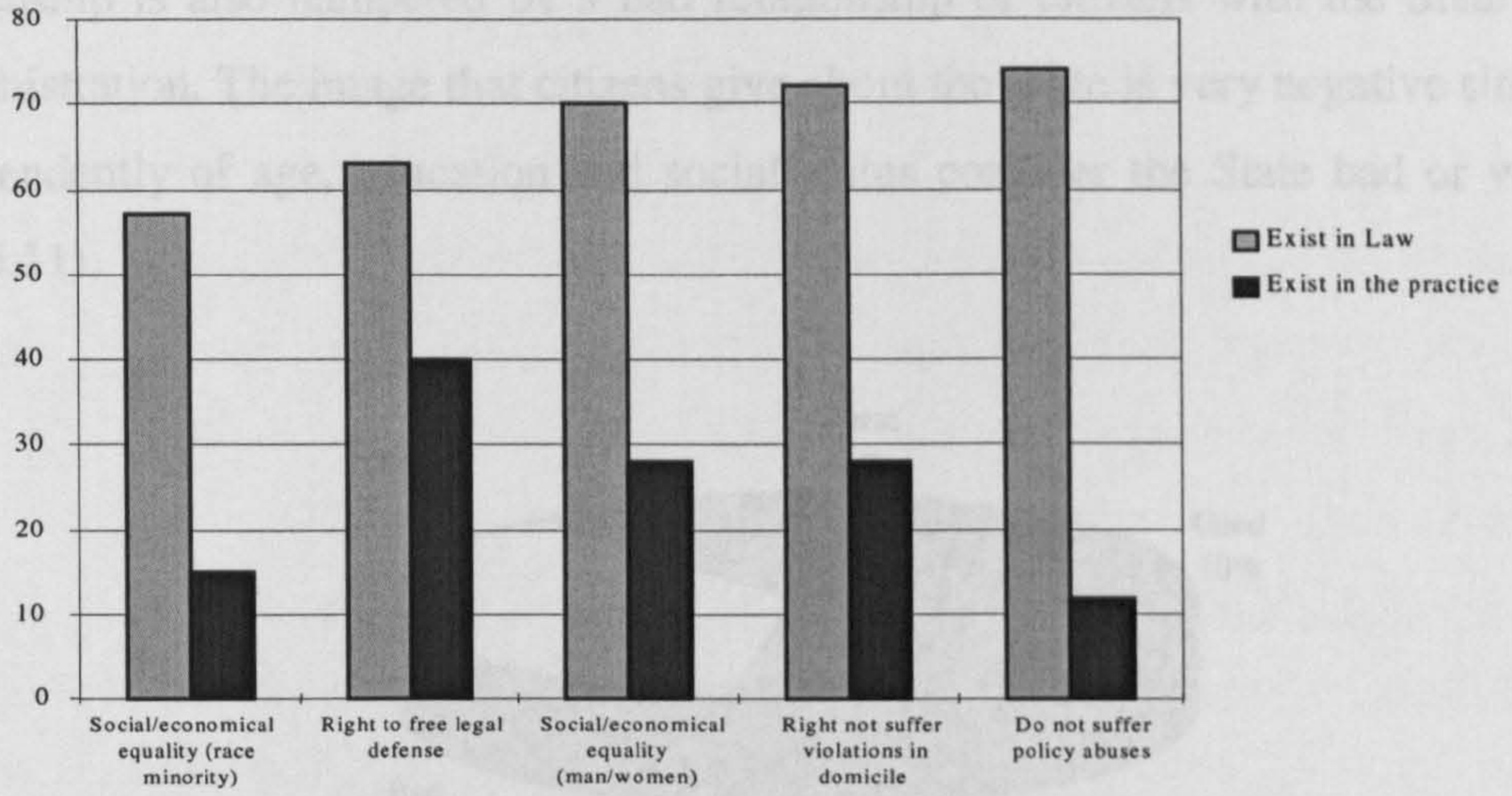

Fig 5.9 Relationship between the rights in the law and the rights in the practice (%)
Source: Benavente et al. (1997:88)

With especially negative correlations with public participation is the cliental system that this enquiry reveals to persist in Portuguese society. When asked about "what is the most important thing in the relationship of a citizen to a public institution the first answer was the rightness of the cause (35%). However, 33% of the respondents considered that the most important thing is to know someone on the Administration (Fig 5.10). As pointed out by Benavente et al. (1997:95) the former answer indicates a reinforcement of individual responsibility, respect and confidence in the rules and functioning of institutions; the latter stresses the maintenance of self-individualism in solving problems and the importance of webs of clientelism. An aspect of concern on this issue is the fact that younger respondents chose the last response meaning their socialisation in these practices (Benavente et al. 1997).

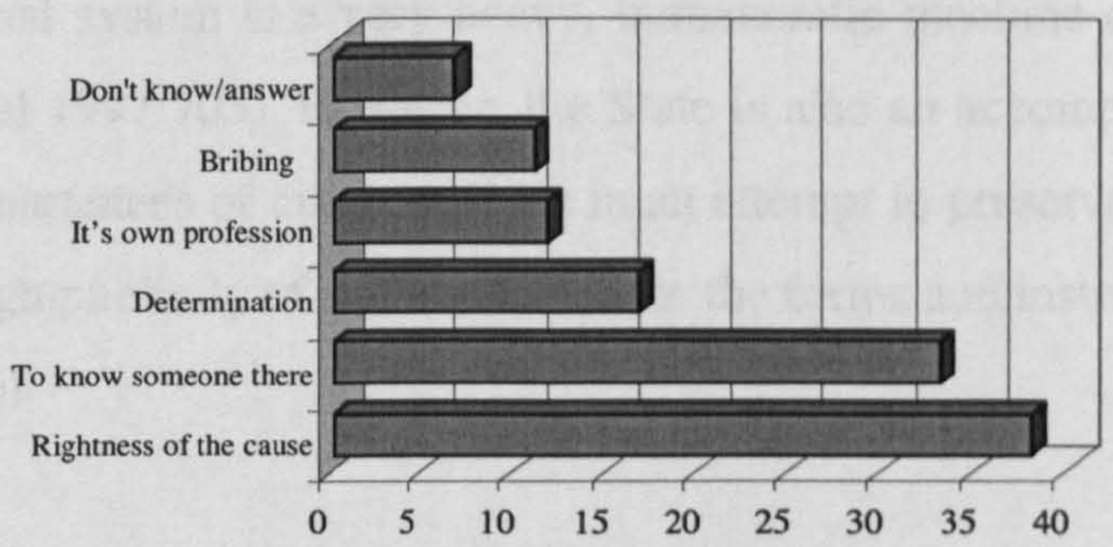

Fig 5.10 What is the most important thing in the relationship of a citizen with public administration
Source: Benavente et al. 1997:96)

Citizenship is also hampered by a bad relationship of citizens with the State and its Administration. The image that citizens give about the State is very negative since 62% independently of age, education and social status consider the State bad or very bad (Fig 5.11).

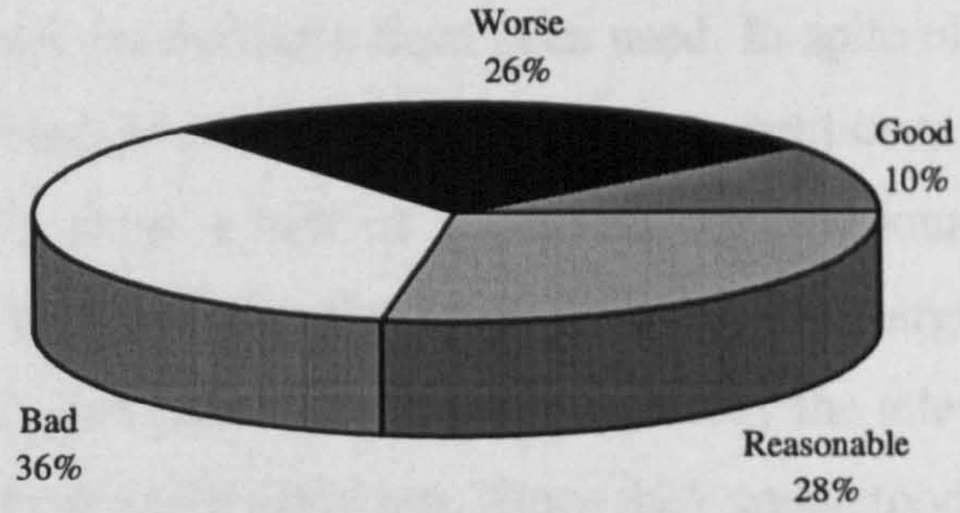

Fig 5.11 The image of the State
Source: Benavente et al (1997:97)

These results show that authoritarianism and inefficiency of the State dominate the perceptions of citizens who never see the State as an ally. According to Benavente et al. (1997) bureaucracy is in its maximum, making difficult to get access to simple information. In the same line of reasoning, Barreto (1996:244) points out that there are no signs that modernisation of public Administration have influenced the relationships between the Administration and the public, adding that "in many areas even the most modernised ones, secrecy persist, studies and evaluations are never made public not to talk about delays in answering citizens' requests of information".

Passivity of citizenship is also related to lack of knowledge on public issues but above all to the effort required to ensure their rights in the practice, since the Administration and jurisdictional system is a very heavy, bureaucratic machine difficult to overcome (Benavente et al 1997:105). However, the State is also an accomplice in the ignorance of rights and guarantees of citizens, since in an attempt to preserve itself the State does not make enough publicity of rights nor creates the forms and instruments to materialise them (ibid: 106).

On the other hand the level of participation in associations or any organised movements is very low. In this study about 85% of people responding to the inquiries do not

participate in any associations or civic movements. Those data are also according to the level of ecological militancy in the Gallup inquiries, presented in the early point. [44]

The study reveals on the other hand that there is an increasing awareness of citizenship rights and a latent desire to fight for them although neither organised nor efficient forms in using democratic mechanisms have been used. In spite of this there has been very little use of mechanisms such as referendum, petitions, what according to Benavente et al. (1997) show a lack of habit and organisational capacity but also disbelief reinforced by negative examples of the practice. They argue that citizens have found in last times the importance of the media, especially the television as a means to express concerns, injustices and frustrations. Since they understood that the State listen to media they have been using media as the main channel to their complaints. Conversely media explore these situations has a mean to guarantee audiences. Shmidt (1996:17) states on this aspect "instead of turning to the Administration in which they have no faith, or the courts which are known for their slowness or other democratic mechanisms, which they found complicate and ineffective, they prefer to turn to the media to denounce environmental problems affecting them". As recognised by Benavente et al. (1997) and Shmidt (1996) there are many weaknesses in this form of expressing citizenship, relying on the fragility and arbitrariness of the media.

5.3.4 The legislative context and institutional context

Two main legislative instruments, the Portuguese Constitution of 1976 and the Environmental Bill of 1987, express environmental Portuguese law. In the Portuguese Constitution environment is especially referred in its Articles 9, 52 and 66. Art. 9 states that one of the basic tasks of the State is to promote the well being and quality of life of people and real equality among the Portuguese (...)". Art. 52 gives everybody personally or through environmental associations the right to "popular actions in the form of the law". Art. 66 states that everybody has the right to a healthy human and environmental ecologically balanced and also the duty to protect it.

[44] Benavente et al. (1997) also state that these levels of participation are according to regular European inquiries that put Portuguese people in the last degree of participation in associations and the last place in the interest by national and international politics.

The text of the Constitution encompasses subjective and individual rights, individual and group duties and obligations of the State, enshrined in law in the named rights of the third generation (Pureza 1996:40). There is a sharing responsibility between all the members of society none being excluded from rights and duties in the preservation of the quality of life thus being achieved through a set of preventive and planning instruments (ibid).

After the approval of the Portuguese Constitution, several attempts were done to prepare and implement an environmental policy though without success mainly due to government political instability. Different specific environmental legislation was set up as well as government measures but revealed lack of co-ordination and being ineffective in the practice (Partidário 1992:258). It was only in 1987, that the real instrument allowing the implementation of the principles of the 1976 Constitution was created –the Environmental Bill, which represented the foundation for a sound environmental policy. Basic environmental principles were defined and conditions for the integration of the environment and planning were established (Partidário 1992). For the first time it is explicit in this law the obligations and duties of each member of the Portuguese society, respecting the protection and the conservation of the environment (Partidário 1992, citing Pitta 1988).

The Environmental Bill in its Art.5, nº 29 gives an encompassing definition of environment as a set of physical, chemical and biological systems and their interrelationships to economic, cultural and social factors with direct and indirect effect on living beings and quality of life. Eight basic principles are stated, which are required for structuring environmental policy: prevention, balance, participation, unity of action and management, international co-operation, the most adequate level of action; recuperation and responsibility.

According to Pureza (1996:39/44) the Environmental Bill enshrines the three basic pillars of a post-modern environmental law: information, participation and judicial action. The right of information is expressed in Art.4 as a generic objective of environmental policy stating the establishment of continuous flow of information between the administration in charge of it and citizens concerned, as well as the incentive to its publicity through the media (Pureza 1996). In order to achieve this objective the Environmental Bill created a new environmental agency, IPAMB

(Instituto de Promoção Ambiental). IPAMB is also the responsible entity for the management of public participation within EIA, as well as the one, which gives support to environmental associations. The Environmental Bill states that different social groups should intervene in the formulation and execution of environmental and planning policy of the national territory, through competent authorities of central, regional and local administration and through other collective persons of public right or persons and private entities (Lopes and Gaspar 1997). The Code of Administrative Practice, giving to the citizens the right to be informed by the Administration whenever they ask, also rules the right of information. There is an especial law about the access of citizens to administrative documents, the law nº 65/93. The law provides for the free access to documents with few exceptions (secrecy of justice and safety of the State). Each department of the State and the central, regional and local administration as well as public associations need to have a responsible entity to provide for the accomplishment of the law. A special commission (CADA-Comissão para Acesso aos Documentos Administrativos) was created to survey the application of the law, composed by an independent public entity.

The right of participation is also enshrined in the Code of Administrative Procedures by the obligation from the public administration to provide for citizen's and environmental associations participation in the decision making process. The law nº 83/95 rules the right to procedural participation and popular action. The law imposes on Public Administration the duty of consultation of the interested citizens and entities potentially affected by decision making in the phase of instruction of procedures.

A broad set of specific legislation ensures citizens' rights of participation and representative entities of civil society in processes of decision making. According to Lopes and Gaspar (1998) mandatory procedures asking for public consultation about environment and land-use planning are the following:

- Classification of protected national areas –a public inquiry held by ICN (Instituto de Conservação da Natureza) is mandatory by the Decree Law 19/93 and the Decree Law 213/97
- Land-use planning of national parks, natural reserves and natural parks –a public inquiry held by ICN is mandatory
- Land-use plans of dams –a public inquiry held by INAG (Instituto Nacional da Água) is mandatory by the Decree Law 502/71; Regulatory Decree 2/88; Regulatory Decree 37/91 and 33/92; Portaria 333/92; Decree Law 151/95; Law 5/96

- Regional land-use plans –public meetings are mandatory in each of the affected counties by the Decree Law 176-A788; Decree Law 367/90; Decree Law 249/94 and Decree Law 303/95
- Municipal land-use plans – a public inquiry is mandatory held by respective municipalities, Decree Law 69/90; Decree Law 211/92 and Decree Law 155/97
- Coastal land-use plans –public inquiry is mandatory by INAG or Environmental Regional Agencies, Decree Law 309/93; Decree Law 218/94; Decree Law 5/96; Decree Law 113/97
- License of use of water supplies for a period superior to 10 years is also subjected to public inquiry by the Environmental Regional Authority, Decree Law 46/94.

There is also the right of petition enshrined in nº 1 of Art. 52 and regulated by Law 43/90 and Law 5/93. The right of petition is an instrument of democratic political participation stating the possibility for all citizens, individually or collectively to present petitions, claims, representations and complaints about their rights, the law and the public interest (Lopes and Gaspar 1998). The exercise of this right obliges the entity responsible to receive and examine petitions and claims as well as to communicate decisions taken.

The right to judicial action is ruled by the law nº 83/95. Enshrined in the Constitution of 1976 in its Art. 52, gives to citizens and environmental associations the right to judicial action in case of infraction of public health, environment and quality of life and patrimony degradation. Individual citizens as well as environmental NGO's and local municipalities affected can make judicial procedures.

The Law nº 10/87 defining rights of participation and intervention in order to promote the right to a human healthy and ecologically balanced environment rule environmental associations. The law gives to them the right of consultation and the right of promotion of all the administrative means to protect environment as well as the right of prevention and control (Pureza 1996). The law gives to environmental NGO's the right of participation and intervention in the definition of environmental policy and environmental legislative framework as well as the right of consultation and information about plans, projects and studies from the central, regional and local Administration (Lopes and Gaspar 1998). NGO's must be represented in public Administration bodies and must integrate The Social and Economic Council, the IPAMB Direction Council and the INAG council. By the Law nº 10/87, they have the

right to ask information and data about the state of the environment and make the results public. According to Pureza (1996) environmental associations have been created as mechanisms of direct democracy as pressure mechanisms over the legislation and the administration as well as watchers of the execution of the law.

Pureza (1996:164) concluded in his work about environmental litigation in Portugal that environmental legislation has fundamentally an anticipatory character once it is a body of normative and procedural frames that go far beyond the society which created them and that are challenging its consolidation through social actors who consistently can make them effective.

The law in the practice

The right to information

In spite of legislation providing the access to information on administrative documentation ruled in the Environmental Bill and the Code of Administrative Practice, secrecy still is a common attitude of public Administration. Schmidt (1996:17) states: "Environmental information is the victim of a real 'desertification' process because there are no organised databases, making it impossible to supply reliable information". Sometimes information exists but is not easily available. There is not an attitude of openness in displaying public information "In the tradition of repression of free expression left over from dictatorial regime, public employees maintain excessive secrecy" (ibid).

Right to participation

In spite of legislation and institutionalised rights of citizens and representative institutions and environmental associations, in spite of specific laws for consultation and participation, indicators present very low levels of participation from the citizens in environmental planning. There are no surveys done about the number and quality of processes in land-use planning. There is a consensual idea that it is in EIA that public participation presents highest levels of involvement and this is attributed to some main factors. EIA has specific procedures stated in law asking for public consultation. EIA has a specific document made for public information. Moreover, the visibility of EIA projects and immediate objectives has a more direct impact on the public affected.

The right to judicial action

Analysing the environmental litigation in Portugal, Pureza (1996) come to important conclusions: Judicial right in Portugal is very insipient compared with the broad and progressive framework in which it exists. Many reasons can explain this. First of all there is a over rated of economic and social rights by population compared to post materialist rights related to environment, explained by the intermediate development of Portuguese society. Environmental litigation is almost composed of small conflicts. There is a preference in society by informal mechanisms of solving problems rather than using the courts and the public power in Portugal presents a high level of efficacy in approaching conflicts by informal means. There is a big gap between rights, which give value to information and participation and the effective rights in the practice facing the secrecy and opacity of the administrative machine, which is also due to a fragile environmental movement (Pureza 1996).

5.4 Conclusions

EIA is a particularly sensitive area of environmental policy affected by cultural background and societal forms of organisation. Several contextual conditions have been identified in literature as intervening in EIA conception and implementation such as: political commitment; political culture more or less open to public scrutiny; degree of environmental awareness and consciousness; importance given to economic growth in policies for development; attitudes to science and technology; ethical standards and behavioural attitudes. Different cultures have applied EIA differently in jurisdiction and in practice. EIA is considered more effective in contexts where environmental culture is more developed as far as environmental awareness and consciousness are concerned and where decision making values openness and public participation. Public participation is also more consistent where decision making is less technocratic and more democratic, where civil society is organised in strong groups of interest that can constitute partners in environmental policies.

The fieldwork of this study determined that an analysis of the Portuguese context of participation should be carried out since it is the broad frame where interactions of EIA and public participation occur. Hofstede (1980) and particularly Santos's framework present a very broad perspective of Portuguese society. Yearley et al (1994) framework

related to the application of EU environmental policy in "peripheral" countries of Europe is also relevant since focused on environmental issues. Many of the features identified in the former such as great centralisation, cliental practices and lethargic bureaucracy are enhanced when dealing with environmental issues. This is due to the fact that environmental policies need a strong co-ordination of sectoral areas implying an efficient administration, which is far from existing. The three approaches chosen present many similarities and seem to compose a common frame contributing to a better understanding of the context in which participation takes place. Relevant also are the empirical enquiries of Lima et al. (1996), Observa (1997), Benavente et al. (1997) as well as Pureza (1996) research on environmental litigation. They reinforce the frame of semi-peripheral societies.

Authoritarianism of the State, lack of organised social interests, cliental practices, lack of traditions of democratic culture have been pointed out as reasons for weaknesses of the Portuguese civil society. There still is a deficit of internalisation of citizenship rights, prevailing a culture of distance to citizens that does not place citizenship among main priorities in any public domain. A culture of participation has never existed or has been valued by the State.

If citizenship rights are not internalised by the State and Administration there is a passive attitude from citizens, lacking organisations and institutions in society capable of becoming catalysts for civic intervention and dialogue with authorities. Often, cliental practices prevail leading to more individualistic initiatives than organised forms of participation. Citizens especially value social rights, which reflects weaknesses of the Welfare State. Rights linked to participative forms of democracy like referendum, petitions have not been valued as well as the rights of the third generation such as environmental rights or the rights of consumers. A bad relation of citizens with the State also hampers citizenship. The image of the State is very negative, based on perception of its authoritarianism and inefficiency. Secrecy persists in society and it is the State itself that often does not publicise its own legislation as far as citizenship rights are concerned. Passivity of citizenship is also related to lack of knowledge on public issues but especially to the effort required in practice to ensure effective rights. Administration and the judicial system are very heavy, bureaucratic, with difficult access to the citizens.

On the other side the level of participation in associations and organisations is very low in Portuguese society. The level of ecological militancy is one of the lowest in Europe. The portrait of environmental representations of the Portuguese society reveals great concerns with environmental problems (especially at a global level) but also a great lack of responsiveness in their solution. This is due, above all, to the lack of information and awareness recognised in society where economic development has been a great priority in last times. Environmental illiteracy is presented in all levels of society and this deficiency affects administrative institutions, parliament, political parties and local authorities (Schmidt 1996). Environmental representations however, are not homogeneous depending on age, education and social strata.

On the other hand, there is an increasing awareness of citizenship rights and a desire to fight for them although neither organised nor efficient forms of democratic mechanisms have been used (Benavente et al. 1997). Also signs exist on the receptivity to environmental information/education. Media are very used by citizens as a main channel to their complaints also explored by mass media to increase audiences and this can reduce the impact of civic organisations. The next chapter will deal with the normative existing frame for EIA in Portugal.

6 THE PORTUGUESE EIA SYSTEM AND PUBLIC CONSULTATION AND PARTICIPATION

6.1 The normative of the Portuguese EIA system

6.1.1 Origins and regulations

The Portuguese EIA system was legally formalised by the enactment of the Decree Law 186/90, 6th of July and the Regulatory Decree 38/90 of 27th of November. These pieces of legislation transpose to the Portuguese law the Directive 85/337/EEC.

Portugal joined the European Community in 1986, one year after the enactment of the EC Directive on EIA mandatory to all the Member States. The transposition of the EC Directive into the Portuguese law was a slow and confused process dominated by lethargic bureaucracy and lack of political commitment to the benefits of EIA.[45]

The first consistent Portuguese legislation on environment was the Portuguese Environmental Bill, Law 11/87 which has performed an important role in environmental policy and has also represented the legal internal basis for further development of EIA. According to this law the EIA process is assumed as an environmental management instrument co-ordinating environmental policy and land-use planning (Partidário 1994). It is explicit in its Art.31 that plans, projects and actions likely to affect the environment and the quality of life of the citizens must have an environmental impact assessment and its approval is an essential condition for the licensing authority to allow or refuse those actions. After the publication of this law a working party composed by representatives of the Minister of Environment and the Minister of Public Works was formed to deal with EIA regulations though encountering many problems related to lack of support, orientation and co-ordination from the government (Melo 1995). Several drafts were issued on the subject but the process never was straightforward and finalised. Meanwhile some EIA processes related to public projects appeared. In the absence of specific regulation, ad hoc commissions just with consultative functions were nominated to follow these processes.

[45] However, since the early 1980s some ad hoc EIA studies had been carried out especially related to dams (Lindoso and Torrão in 1981 and Crestuma and Foz Coa in 1982 (Observa 1998).

Melo (1995) points out two main factors that triggered the final enactment of legislation on EIA. The first one was the suspension by the European Community of funds attributed to an important motorway in the South of the country (Via do Infante), due to the non accomplishment to the EC Directive by the Portuguese government; the second was the appearance in the Parliament of two EIA proposals by the Communist and the Socialist parties. A strong pressure was put in the government and in February 1990, a law on EIA was approved by the Parliament and promulgated on the 6th of June- the Decree Law 186/90, two years after the deadline given by the European Community to Member States to internalise the Directive. However, according to Melo (1995), the Portuguese law approved did not take into consideration many of the previous comments and suggestions done in drafts issued by the working group. Three months later, the Regulatory Decree 38/90 completed Portuguese legislation on EIA. The result of this problematic process was considered a minimalist law with a great degree of discretion, since it is a transcription almost to the letter of the EC Directive (Partidário 1992; Pinho 1994b; Melo 1995; Observa 1998). One can argue on the complexity of the jurisdictional framework to quickly adapt the EC Directive to specific national contexts as it has occurred in several member states[46]. However, the literal reproduction of the EC Directive into the Portuguese normative suggests according to Observa (1998) a certain reluctance from political and administrative bodies in adopting a law with perceived important consequences not only in the environmental policy but also in the social and economic ones.

Legislation on EIA is generic and indicative (Pinho 1994b) and uses the normative of EC Directive to legislate by the minimum required (Melo 1995). Some aspects are absent in legislation such as the competent authority for EIA; procedures for the EIA review; procedures for public consultation processes; regulation of projects of Annex III that should be submitted to EIA. Internal procedures from the competent authority –the Ministry of Environment have been issued in order to allow its operationalisation.

Main gaps and deficiencies of Portuguese regulations on EIA have been pointed out (Partidário 1994; Pinho 1994b; Observa 1998; Melo 1995) as the following:

- Lack of articulation between EIA regulations and the Environmental Bill of 1987.

[46] For instance, the Netherlands spent ten years working in its EIA system though independently from EC Commission's initiative (Wood 1995). EIA legislation came into force in 1986 regulated by EIA Decree in 1987 and also incorporating EC Directive on EIA

- EIA is seen as an add-on to the project since EIA begins late on the decision making process
- Many projects with relevant impacts escape the EIA process since EIA is mandatory for projects of Annex I of the Directive, but no further consistent criteria were established for projects of Annex II of the Directive.
- Public consultation and participation is minimalist in the law, vague, late in the process with no specific mechanisms and schedules stated.
- No requirements exist for EIA follow-up (monitoring, auditing or ex-post evaluation).
- No provisions exist for application of EIA to plans, programmes and policies though foreseen in the Environmental Bill of 1987
- No definitions of EIA and of EIS are provided
- The final comments from the competent authority in charge of the EIA process are non binding for the licensing process
- A great centralisation of the EIA system exists. Public authorities can be the developer, hire consultants and control the review of EIA. Observa (1998) suggests that it is an interventionist model in which functionality and applicability rely in the State control on matters related to environment.

A review of EIA legislation was enacted in 1997 – the Decree Law 278/97 and the Regulatory Decree 42/97 by imposition of the EU in order to correct some deficiencies in the transposition. These deficiencies were especially related to projects of Annex II of the EC Directive 85/337 EEC and the thresholds that national governments should establish for EIA consideration. The amendment done to legislation tried to promote a more objective control and specific criteria on projects of Annex III (corresponding to Annex II of the EC Directive) to be submitted, enlarging its number.

In the Portuguese legislation EIA is applied to both public and private projects, which by its dimension, nature and location are likely to produce significative effects on environment. EIA applies both to projects of Annex I of the Decree Law 186/90 (equivalent to Annex I of the EC Directive) and to projects of Annex III of the Decree Law 186/90 and Regulatory Decree 38/90 (equivalent to Annex II of the EC Directive 85/337/EEC).

The competent authority for EIA is the Minister of Environment (Art.4, § 1, Decree Law 186/90) who will further determine the entity in charge of the EIA process for instruction, review and public consultation. Since 1993, by internal norms of the Ministry of Environment (Dispatch 84/MARN/93) the competent authority for EIA is the General Directorate for Environment (DGA).

The information to be provided by the developer through the EIS is stated in Art.3, § 3, Decree Law 186/90 and Art.2 of the Regulatory Decree 38/90. For Annex I projects, it is extensive, including: description of the project (characteristics in phases of construction and operation, use of resources); environmental baseline data and perspectives of its evolution in physical, biological and ecological factors, environmental quality, population and activity; land-use planning, protected areas and other restrictions; impacts on environment and mitigation measures. There is also reference to the Annex III of the 85/337/EEC Directive transposed to Portuguese legislation in Annex II of the Decree law 186/90. The review done in 1997, the Decree law 278/97, substitutes however, the content of the EIS information above stated by the transcription *ipsis verbis* of the Art.5, § 2 of the EC Directive, becoming less detailed. It also states in Art.5, § 4 that the specifications of the Annex II of Decree Law 186/90 should be taken into consideration in the elaboration of the EIS. However, in spite of this transcription *ipsis verbis*, one word is missing. In fact, the Annex III of the EC Directive states in its § 3:

> A description of the aspects of the environment likely to be significantly affected by the proposed project, including in particular population, fauna, flora, soil, water, air climatic factors, material assets, including architectural and archaeological, heritage, landscape and the inter-relationships between the above factors.

The Portuguese translation "forgot" the word population all the rest being equal. It is hardly plausible that such forgetfulness could occur by chance from jurists in charge of the transposition of legislation. Conversely, it is seen by some people as reflecting a narrow concept of environment where bio-geo-physical factors are dominant. This also reflects a lack of an integrative view of environment. Widening the dimensions of environment to include socio-economic factors is a relevant trend especially since the 1980s and concepts of sustainable development. Social economic dimensions of environment encompass economic structure, demography, housing services, quality of life and values (Glasson et al. 1994). Actually one of the problems attributed to

Portuguese EISs has been the less importance given to social impacts, being one common referred criticism by the public (see also chapter 9, point 9.5.1).

There are neither requirements for a scoping stage nor requirements for any kind of consultation between the developer and other bodies, before the submission of the formal EIA to the licensing authority. As well as the 85/337/EEC Directive, consideration of alternatives is not a mandatory requirement in Portuguese legislation, although stating that if considered appropriate an outline of the main alternatives studied by the developer and reasons for its choice, taking into account the environmental effects should be included in the description of the project. No requirements exist also for EIA follow-up. No monitoring or auditing phases or ex-post evaluation are foreseen in legislation.

6.1.2 Procedures

Fig 6.1 presents the Portuguese EIA system according to Pinho (1994b). The Decree Law 186/90 in its Art.3, §1 states that the EIA process begins when the developer presents all the documents concerning the project and the respective EIS to the licensing authority. The licensing authority submits then the EIS to the competent authority for EIA –The Minister of Environment who personally nominates an Evaluation Commission for the specific project at stake composed by senior technicians of sectoral areas of central and regional environmental administration (DGA, INAG, IM, ICN, IPAMB and DRARNs). Since August 1995, internal procedures from the Ministry of Environment were issued stating that DGA (General Directorate for Environment) is the responsible for all the projects of Annex I and DRARNs (Regional Environmental Departments) were responsible for the projects of Annex II of the EC Directive, (which corresponds to Annex III of the Portuguese Regulatory Decree 1997). INAG was responsible for all the projects related to water management both from Annex I or Annex III (see fig 6.2).

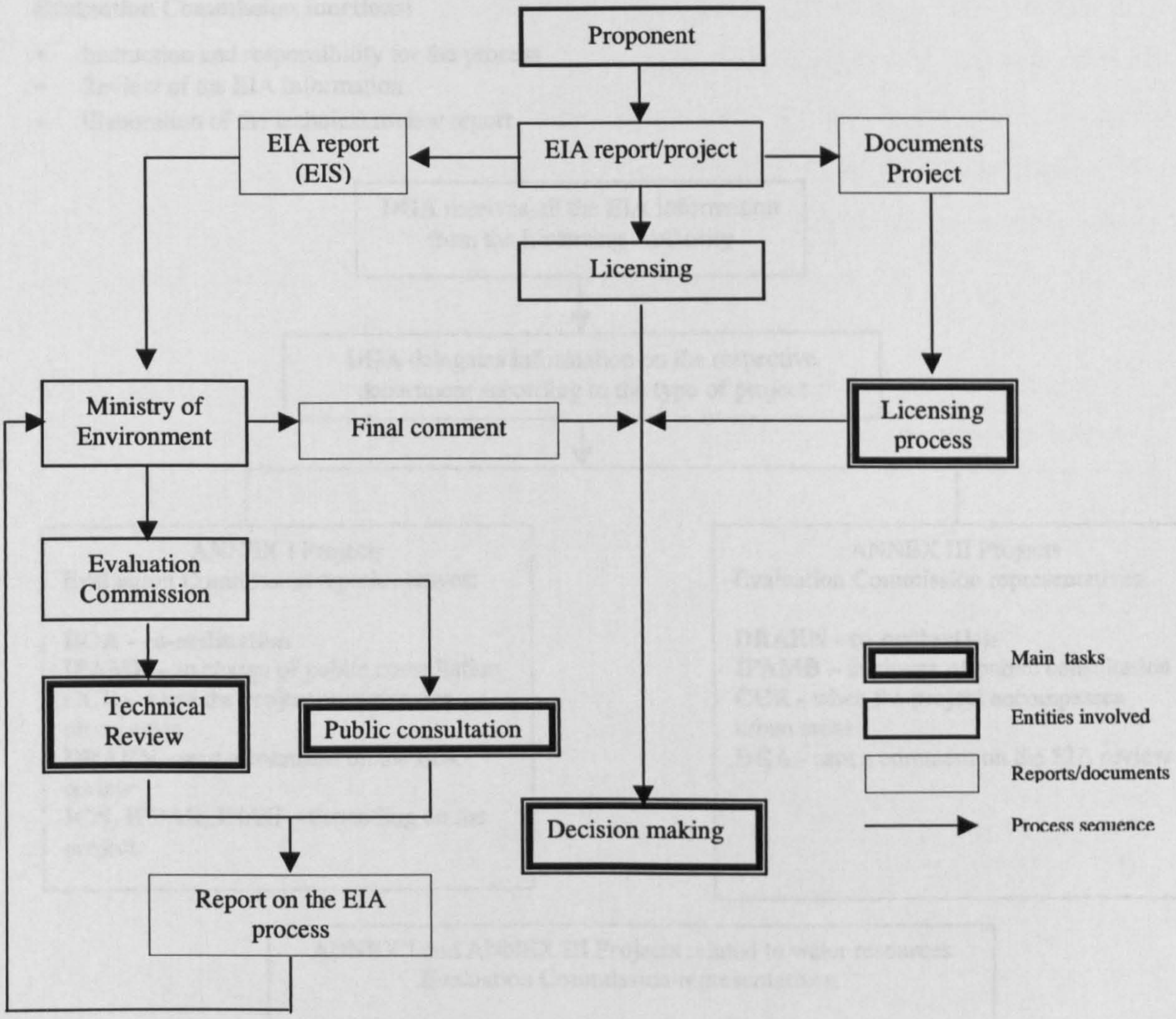

Fig 6.1 The Portuguese EIA system.
Source (Pinho 1994)

The Evaluation Commission promotes the EIS review, the process of public consultation and participation and should elaborate a report on these activities. The developer is the responsible for the EIS and the information to be presented is stated in Annex II Art.2 of the Regulatory Decree 38/90. The Evaluation Commission can ask for reformulation of the EIS or for further additional information before the review phase takes place. The process takes the maximum of 120 days and a final comment on the project signed by the Minister of Environment is then sent to the licensing authority in charge of the final decision- the approval or refusal of the project. However, the final comment from the Minister of Environment is non-binding, though legislation states that it should be taken into consideration in the final decision.

Evaluation Commission functions:

- Instruction and responsibility for the process
- Review of the EIA information
- Elaboration of the technical review report

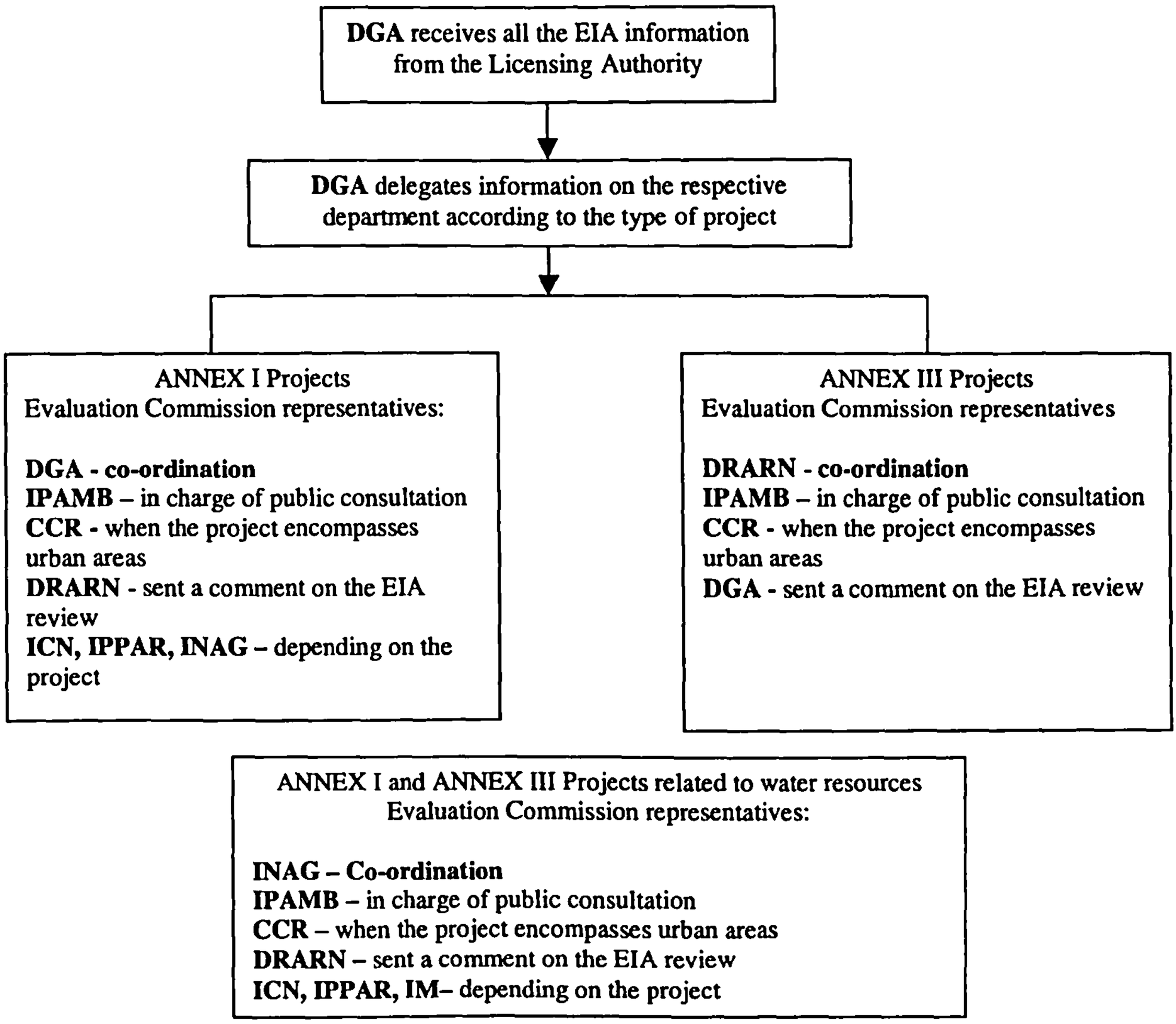

Fig 6.2 Instruction of the EIA processes and composition of the Evaluation Commissions

6.1.3 Comments

The poor approach given to EIA by the Portuguese system is enhanced by the comparison with most effective EIA systems. The Netherlands EIA system, which came into force in 1986 is considered one of the most comprehensive and effective EIA systems both in Europe and around the world (Wood 1995; Glasson et al. 1994). Arts (1998) considers that this is attributed to the strong tradition of land-use planning in a densely populated country as well as to the high and long-standing level of public interest in environmental matters. Fig 6.3 is an attempt to compare the Portuguese EIA system with the Dutch system considered one of the best models of good practice within

the same framework –the EC Directive on EIA. This comparison is just a means of illustrating how different approaches can be taken to the discretionary character of the EU environmental policy. It shows also how political and social contexts are determinant for valuing more or less EIA as an environmental management and planning tool. It can also provide useful insights in order to ameliorate the process since many of the problems have already been felt and solved by others.

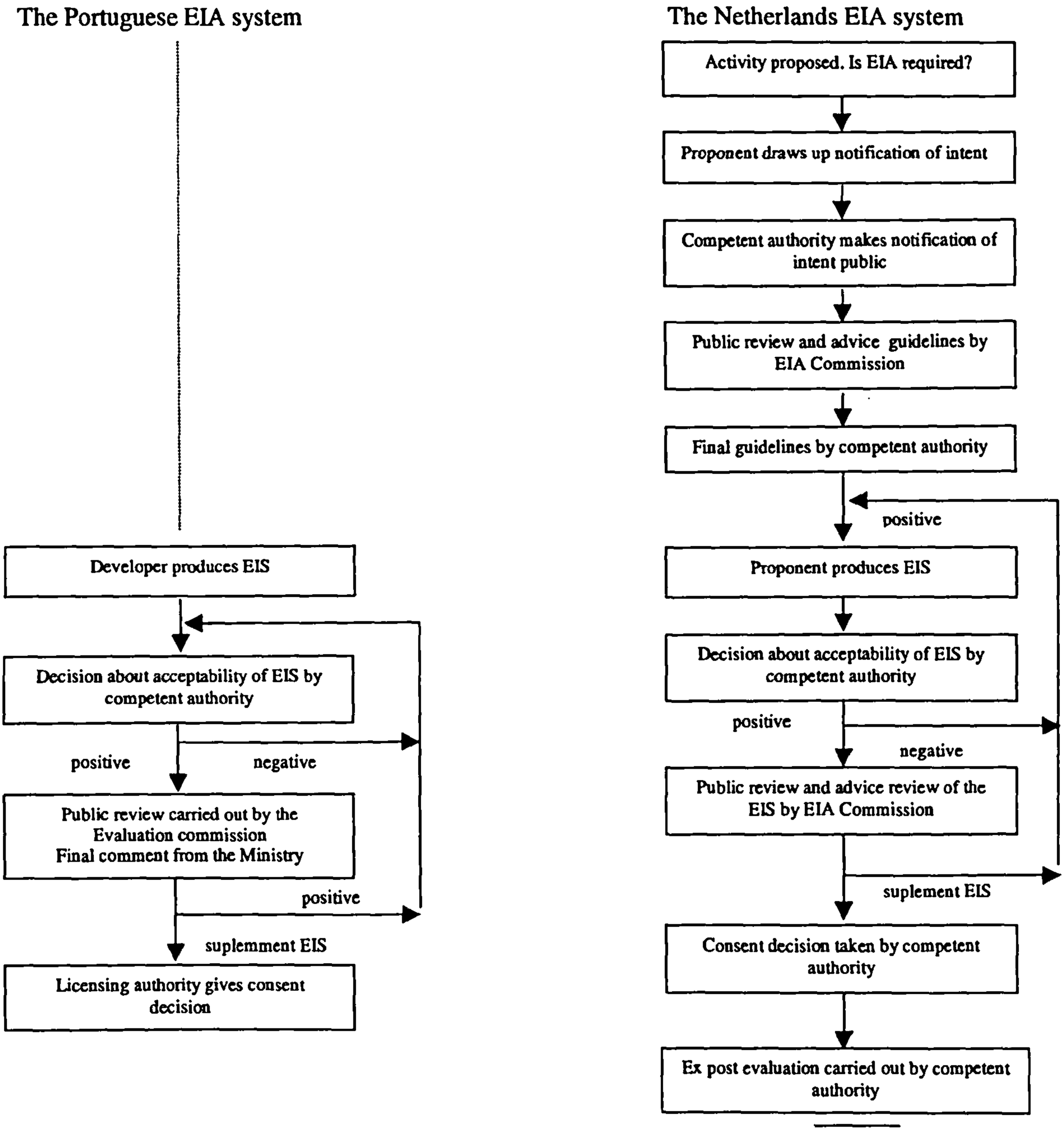

Fig 6.3. Comparison of the Portuguese and the Dutch EIA systems
Source: based on Arts (1998:42) diagram of The Netherlands EIA system

Fig 6.3 provides a clear picture of how EIA has worked at a low level of effectiveness in Portugal and far from its inherent potential to become an important contribution to sound decision making. The late beginning of the process in the Portuguese EIA system is perhaps its main deficiency when it is consensual today that EIA could only be effective and efficient if taken at an early stage of project planning, being an integral component of it. The incremental and integrative character of the EIA process supposed to work with various points of decisions where information feedback improving the project design and the process exists in the Dutch system, though absent in the Portuguese one. In the latter public consultation is just foreseen in the review phase and no previous involvement exist among the project team, the EIA consultants, the competent authority, the public and the licensing authority or other institutions interested in the project. In the Portuguese EIA system the process stops when the final decision is taken. No follow-up mechanisms exist to fulfil the broad objective of managing environment especially control in the implementation of mitigation measures proposed and impacts forecasted.

Other important aspects of the Dutch system are related to a clear division of tasks between different parties of the process (Arts 1998) and the existence of an independent EIA Commission, which prepares its advice with guidelines for the EIS and for the review. Arts (1998:44/45) characterises the Dutch EIA by a procedure based in checks and balances between different parties with very defined regulations and functions, where the motto is "think before you act"; there is external expertise and public consultation twice in the scoping phase and the review phase. There is also a program for ex-post evaluation.

6.2 EIA in the practice

6.2.1 EIA processes submitted

Ranging from June 1990 (when the EU Directive was introduced in the Portuguese legislation) to July 1997 the number of processes submitted was 444. These processes according to existing legislation are divided into two categories:

- Projects of Annex I- concern major projects with national and regional importance
- Projects of Annex III- concern projects with regional and local importance.

Out of the amount of projects submitted, 333 belong to Annex II and 111 to Annex I.

Table 6.1 Projects submitted to EIA (Annex I)
Source: Observa (1998)

Motor ways, main roads and railways	**92**	**82,8%**
Waste treatment plants	10	9,8%
Harbours	5	4,5%
Refineries	4	3,5%

Table 6.2 Projects submitted to EIA (Annex III)
Source: Observa (1998)

Dams	**94**	**28,2%**
Urban infrastructures	76	22,8%
Agriculture	60	18%
Industry	47	14,1%
Quarries	36	10,8%
Marinas	4	1,2%
Lodging industry	16	4,8%

Motorways from the Annex I, and dams from Annex III were responsible for about a half of all the projects submitted. Out of the amount of 111 EIA projects of Annex I submitted, 92% correspond to projects from the Public Sector (Public Administration 14,7%; Public Companies 75,5%) and only 9,8 correspond to projects presented by private entities. Conversely private proponents dominate in projects of Annex III with 60,9%, presenting the public sector 31,3% of these projects (Observa 1998).

6.2.2 Results of the EIA processes

The results from the evaluation of processes submitted, which are responsibility of the Evaluation Commission allow four types of comments: reformulation of the EIS; not favourable; favourable with conditions (application of mitigation measures) and favourable to a specific alternative when alternatives are at stake. Observa (1998) analysed 397 processes in this respect and the results are presented in Table 6.3.

Table 6.3 Final comments on EIA processes by the Evaluation Commission
Source: Observa (1998)

Comment from the Evaluation Commission	Absolute value	%
Favourable conditioned	**276**	**68,5**
Reformulation	67	16,9
Not favourable	41	10,3
Not favourable to one alternative	7	1,8
Others	10	2,5
Total	397	100
Without information	64	

The majority of projects submitted (68,5%) received a favourable comment though conditioned to application of mitigation measures. Only 10,3% received a not

favourable comment and in 16,9% a reformulation of the EIS was asked to developers. Since there is no control of application in the practice of mitigation measures this is a relevant factor contributing to discredit of the EIA system.

6.3 Public participation and consultation

6.3.1 Regulations and procedures

Beginning the process

Public consultation and participation in the Portuguese EIA system takes place in the review stage. No requirements exist to involve the public in a formal or informal way prior to the submission of the EIS. Regulations on public involvement are stated in Art.4 of the Decree Law 186/90, Art.4 of the Regulatory Decree 38/90 amended by the Art.4 of the Regulatory Decree 42/97. As far as the process of public consultation and participation in the EIA process is concerned the Regulatory Decree 38/90 in its Art.4, n°3 states:

> Public consultation is triggered by the publicity of the Non Technical Summary presented by the proponent. The NTS must contain the more important effects on the environment produced by the project, referring especially to the use of natural resources, emission of pollutants, disturbing facts (noises and smells) or the elimination of wastes, also identifying the preventive methods to evaluate and reduce those effects on the environment.

As there are neither different formal phases considered in the Portuguese EIA system there are nor requests for public participation and consultation before the EIA is submitted. There is only one phase of consultation provided by the law[47].

Definition of the interested public

The Decree Law 189/90 in its Art.4, n°1 establishes in the context of EIA, the obligation of promoting the consultation of "the interested public in order to allow a broad participation of the interested entities and citizens in the appraisal of the project submitted". The definition of the "interested public " is expressed in the Regulatory Decree 38/90 in its Art.4 n°2 as:

[47] Although a scoping phase is not foreseen in legislation it is sometimes done as an informal process by the proponent and often leads to agreements and commitments with municipalities and other public entities without any public involvement.

a) Citizens and representative organisations, namely environmental protection associations as well as local authorities from the region encompassed, in what respects projects of the Annex I, in which licensing processes have not yet participated" and
b) "Parish councils where the project is located or where it passes through, as well as those areas around the project if they happen to be affected by the project in question; the inhabitants and their representative associations namely local associations for the protection of the environment, in projects of the Annex III.

Conclusions of the Ministry of Environment working team for the review of the legislation on impact assessment (MARN 1996), stated that the law is not clear about the geographical scope as well as about the definition of the "interested public". The expression used in the law "region encompassed" was also considered by this group not well defined being at the origin of several problems. They claimed it was necessary a more rigorous definition of the geographical scope for the publicity of the consultation processes as well as a better specification of the "interested public".

The recent review of the law on Impact Assessment (Decree Law 278/97 and Regulatory Decree 42/97) did not change the existing legislation in these matters. It just refers that IPAMB will be the entity in charge of the entire process of consultation what was already done in practice since 1994 by internal norms of the Ministry of Environment. The review of the legislation in what concerns public participation and consultation just establishes in more detail the publicity of the process and this still according to the existing practice of IPAMB.

Design and management

The Portuguese EIA law is extremely vague and discretionary with regard to the design of public participation and consultation process and its management especially as far as mechanisms for dissemination of information and methodologies for participation are concerned. The law leaves to the discretion of the competent authority the design and management of the processes. As stated by Pinho (1994:177) the entities in charge of the process had to conceive in the practice the best solution namely in what respects the publicity of information, the promotion of debates, reception of the written comments done and the format and content of the final report.

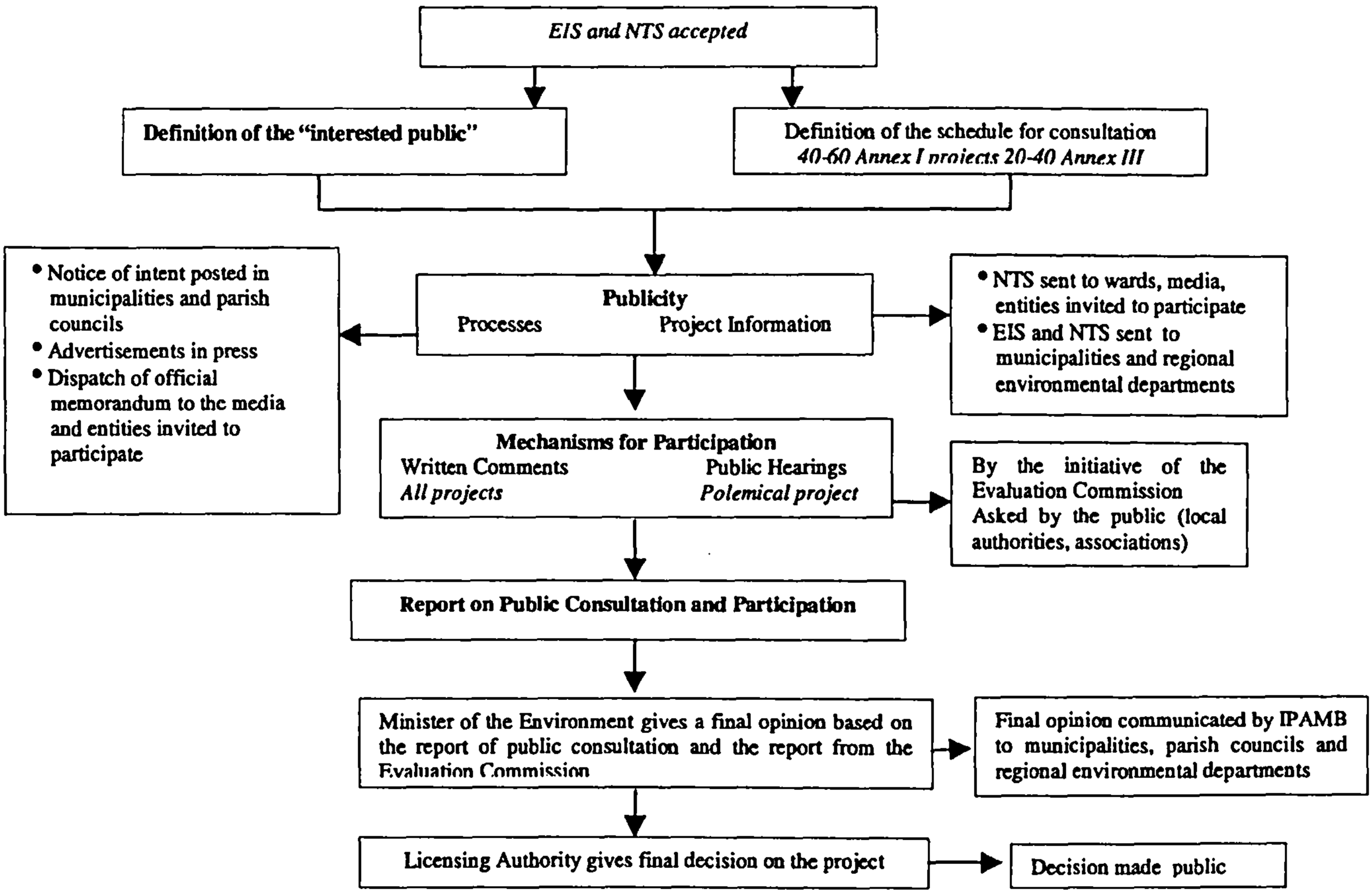

Fig. 6.4 Public consultation and participation in the Portuguese EIA system

The review of legislation (1997), clarify some aspects. The Regulatory Decree nº 42/97 states in its Art.4, nº 3:

> In order to promote the publicity of public consultation processes, announcements and edicts must exist in which it must be expressed:
>
> a) the identification of the process
> b) the timing for public consultation
> c) the places where the Environmental Impact Statement (EIS) and the Non Technical Summary (NTS) will be at public disposal
> d) the form the interested public can present comments on the processes
> e) the date and local of public hearings if it will be the case"

Those were important requisites missing and once again the review of legislation just considers formally what has already been done in the practice by IPAMB. However, indications about methodologies and procedures to be used in consultation processes are still missing. The law indirectly presents written comments stating in its Art.4, nº 5: "Concerning the process of public consultation written comments done, specifically related to the project will be considered and assessed."

A vague reference is also made to public hearings in Art.4 nº 6 of the Regulatory Decree 42/97, which maintains the old legislation to the letter:

> "When it will be considered necessary by the circumstances of the project, public hearings will be promoted, open to the interested public with the objective of discussion and debate of the specific aspects of the previously publicised project." and "a report of the process should be done in the next five days".

6.3.2 Implementation of the law

Facing the discretion of EIA legislation MARN internal norms and procedures have been set out to implement the process in the practice. Since the introduction in the Portuguese jurisdiction in 1990, of the 85/337/EEC Directive on EIA, changes in procedures have occurred by responsibility of the Ministry of Environment.

In what respects public consultation in EIA process, IPAMB through internal norms of the Ministry of Environment, organises the public involvement according to Fig. 6.4. The recent review of legislation (1997) consecrates IPAMB as the entity responsible for public consultation formalising the current practice since 1994.

The process begins with the assessment by the IPAMB and the Evaluation Commission of the information about the project, the EIS and the NTS delivered by the developer. If they are not considered adequate a reformulation is asked to the proponent.

If the information is considered adequate IPAMB proceeds to the identification of the "interested public" and to a definition of the schedule for consultation. The law foresees 40-60 days for projects of the Annex I and 20-40 days for projects of the Annex III. The publicity of the process is then done through edicts and announcements in the municipalities and parish councils of the region encompassed by the project. The dispatch official memorandum and the NTS are sent to the press (national and local radios and newspapers) and to the entities targeted for participation (environmental associations, local institutions and associations, trade unions and professional associations and institutions of local, regional and national administration). The EIS is available for consultation and inspection at the municipalities and Regional Environmental Departments (DRARN). The NTS has been recently delivered by Internet and is also sent to parish councils.

The mechanisms for consultation and participation are written comments, which could be sent to IPAMB or to municipalities, parish councils and Environmental Regional Departments. Public hearings are just held for polemical projects (Gil and Martins 1996). The law is completely omitted in this respect. They are usually held by the responsibility of the Evaluation Commission or when asked by the public, meaning associations and Local Authorities. After the end of the consultation phase and in the following five days, a report on the public consultation process as well as a technical report of the Evaluation Commission must be presented to the Minister of Environment. All the elements of the EIA process are then available for public inspection at the IPAMB Department (the report of public consultation, the report from the Evaluation Commission, and the final comment from the Minister of Environment).

The answer from the Administration to issues raised in the consultation processes is by the law, only the final comment of the Minister of the Environment, which is sent to places where the processes took place.

6.3.3 Public consultation and participation in the practice

As far as public participation is concerned out of all the projects submitted to EIA, only 355 had public consultation processes. The reasons for this are related to the lack of the Non Technical Summary (NTS); lack of accurate Environmental Impact Statement (EIS), developer withdrawal of the project, and pending matters (Gil and Martins 1996; Observa 1998). Tables 6.4 and 6.5 present the amount of projects by category with public participation processes.

Table 6.4 Projects with public consultation (Annex I)
Source: Observa (1998)

Annex I	*Public consultation*		*Total*
	Yes	*No*	
Refineries	3 (2.7%)	1 (0,9%)	4
Motorways	**74 (66,7)**	**18 (16,2%)**	**92**
Harbours	3 (2,7%)	2 (1.8%)	5
Waste treatment plants	9 (8,1%)	1 (0,9%)	10
Total	89 (80,2%)	22 (19,8%)	111

Table 6.5 Projects with public consultation (Annex III)
Source: Observa (1998)

Annex III	*Public consultation*		*Total*
	Yes	*No*	
Agriculture	17 (14,2%)	13 (3,9%)	30
Quarries	26 (7,8%)	10 (3%)	36
Industry	35 (10,5%)	12 (3,6%)	47
Dams	**81 (24,4%)**	12 (3,6%9	93
Infrastructures	61 (18,4%)	15 (4,5%)	76
Marinas	3 (0,9%)	1 (0,3%)	4
Lodging industry	13 (3,9%)	3 (0,9%)	16
Total	266 (80,1%)	66 (19,9%)	332 (100%)

80% of all the projects submitted had public consultation processes. In Annex I the majority of projects with public consultation refers to motorways (66,7%). In Annex III the majority of projects with public consultation processes refers to dams (24,4%) followed by urban infrastructures (18,4%) and agriculture (14,2%).

Comments received

There were invited to participate in the processes of public consultation (ranging from 1990 to July 1997), 10.547 entities and only 27,7% sent comments (Garcia et al. 1998: 40). The amount of comments received until July 1997 was 3824 (Observa 1998:55). Out of this total 2083 comments correspond to the project of the incinerator of toxic waste (Gil and Martins 1996; Observa 1998).

Source of written comments

Tables 6.6 and 6.7 present the source of comments by the category of project. As far as projects of Annex I are concerned the majority of written comments came from the Public Administration (48,3%). Public Administration is composed by Central Administration (presenting 20,2% of comments), Regional Administration (presenting 8,4% of comments) and Local Administration (presenting 19,7% of comments). Citizens presented 29% of the comments received (either isolated ones or through petitions). Environmental NGO's presented only 7,4 % of the total of comments received. The category of other associations presented 13,3%. Comments from political parties and universities are almost non existing with 1% of the comments each. In projects of Annex III (see Table VI), the same pattern of participation can be observed. However, there is an increasing of participation from environmental NGO's presenting 13,5% of the comments received.

Table 6.6 Source of comments received (Annex I)
Source: Observa (1998)

Comments received		*Projects of Annex I*				*General Total*		
		Refineries	Motor ways	Harbours	Waste treatment			
		Tallied record	Tallied record	Tallied record	Tallied record	row	Total	% row
Central Public Administration	1 comment		21	1	3	25	**41**	**20,2**
	2 to 3 comments	1	9	1	2	13		
	4 to 5 comments		2			2		
	6 to 7 comments		1			1		
Regional Administration	1 comment		8		1	9	17	8,4
	2 to 3 comments		7			7		
	4 to 5 comments	1				1		
Local Administration	1 comment		15		3	18	**40**	**19,7**
	2 to 3 comments		12	2		15		
	4 to 5 comments		2			2		
	6 to 7 comments		1			1		
	More than 7		3		1	4		
Environmental NGO's	1 comment		9		1	10	15	7,4
	2 to 3 comments		1	1		2		
	4 to 5 comments	2	2			2		
	6 to 7 comments			1		1		
Other Associations	1 comment	1	13	1	1	16	27	13,3
	2 to 3 comments		7			7		
	4 to 5 comments		1	1		2		
	More than 7		1		1	2		
Citizens	1 comment		6	1		7	**39**	**19,2**
	2 to 3 comments		10			10		
	4 to 7 comments		10			10		
	More than 7		10	1	1	12		
Political parties	1 comment			1		1	2	1
	2 to 3 comments			1		1		
Citizens petitions	1 comment		11	1		12	**20**	**9,8**
	2 to 3 comments		5			5		
	4 to 5 comments		2			2		
	More than 7		1			1		
Universities	1 comment		1			1	2	1
	2 to 3 comments			1		1		
General total	Tallied record	3	172	14	14	203	203	
	% column	1,5	84,7	6,9	6,9			100

Table 6.7 Source of comments received (Annex III)
Source: Observa (1998)

Comments		*Annex III projects*							*General Total*		
		Agriculture	Quarries	Industry	Dams	Infrastructures	Marinas	Logging industry			
		Tallied record	Tallied record	Tallied record	Tallied record	Tallied record	Tallied record	Tallied record	row	Total row	% row
Central Public Administration	1 comment	16	7	9	27	18		4	81	117	**26**
	2 to 3 comments	5	4		14	10			33		
	4 to 5 comments			1					2		
	6 to 7 comments			1				1	1		
Regional Administration	1 comment	6	2	1	9	6			24	34	7,5
	2 to 3 comments			1	3	5			9		
	4 to 5 comments					1			1		
Local Administration	1 comment	9	6	12	13	13	1	3	57	88	**19,5**
	2 to 3 comments	1	3	3	4	8		1	20		
	4 to 5 comments			2	1	2		1	6		
	6 to 7 comments			2	1	1	1		5		
Environmental NGO's	1 comment	4	5	5	10	13	1	3	41	61	**13,5**
	2 to 3 comments	1	2	2	6	4	1	1	17		
	4 to 5 comments			1	2				3		
Other Associations	1 comment	11	4	5	13	19			43	60	13,3
	2 to 3 comments		2	4	3	5	1	1	16		
	4 to 5 comments			1					1		
Citizens	1 comment	5	2	3	12	5		4	31	63	**14**
	2 to 3 comments	1	1	3	2	6		1	14		
	4 to 7 comments			3	1	4			8		
	More than 7		2	3	1	3		1	10		
Political parties	1 comment			1					1	2	0,45
	2 to 3 comments			1					1		
Universities	1 comment			1	3	4			8	11	2,4
	2 to 3 comments		1		1		1		3		
Citizens (petitions)	1 comment		2		3	1			6	15	3,3
	2 to 3 comments			2	3				5		
	4 to 5 comments			2		1		1	4		
General total	Tallied record	59	43	69	132	120	6	22	451	451	100
	% column	13,1	9,5	15,3	29,3	26,6	1,3	4,9			

Public hearings

Ranging from 1990 to July 1997, 63 public hearings have been held respecting 50 projects out of a total of 444 projects submitted and 355 including public participation. Some projects have had more than one public hearing requested by the Evaluation Commission as well as by the Local Authorities or simply because they concerned different regions. There has been an increase of public hearings since 1994, since 61% of the hearings were held after 1994 (Observa 1998). Tables 6.8 and 6.9 present the number of hearings held.

Table 6.8 Public hearings- Annex I
Source: Observa (1998)

Projects of Annex I	**Public Hearings**			**Total**
		Yes	**No**	
Refineries	Tallied record	2	2	4
	%	1,8	1,8	3,6
Motorways	Tallied record	**21**	71	**92**
	%	**18,9**	64	**82,9**
Harbours	Tallied record	2	3	5
	%	1,8	2,7	4,5
Waste Treatment plants	Tallied record	1	9	10
	%	0,9	8,1	9
Total	Tallied record	26	85	**111**
	%	**23,4**	**76,6**	100

Table 6.9 Public hearings -Annex III
Source: Observa (1998)

Projects of Annex I	***Public hearings***			***Total***
		Yes	**No**	
Agriculture	Tallied record		59	59
	%		17,9	17,9
Quarries	Tallied record		36	36
	%		10,9	10,9
Industry	Tallied record	**10**	36	46
	%	**3**	10,9	14
Dams	Tallied record	**6**	26,1	28
	%	**1,8**	69	70
Urban infrastructures	Tallied record	**7**	69	70
	%	**2,1**	21	23,1
Marinas	Tallied record	1	3	4
	%	0,3	0,9	12
Lodging industry	Tallied record		16	16
	%		4,9	4,9
Total	Tallied record	**24**	305	**329**
	%	**7,3**	92,7	**100**

Motorways from Annex I are the projects with more public hearings and industry followed by dams the categories of Annex III projects with more hearings held.

6.4 Conclusions

Portuguese legislation on EIA expresses a lack of political commitment to an instrument of environmental management and planning, which opens decision making to the public forum and asks for the consideration of technical/scientific as well as social rationalities in decision making. A reactive approach to EIA is followed and EIA applies at just an operational level; the lack of a scoping phase; lack of any procedures for EIA follow-up; the minimalist approach taken to public consultation and participation are some of the main pitfalls of the Portuguese EIA system. Problems with the Portuguese EIA system are also common to other countries. The political, social context is in a great part responsible. EIA has been felt at the beginning more as a "hurdle to be removed" than a useful instrument for sound planning.

In spite of these weaknesses, EIA has got roots in the Portuguese society being a current practice applied to projects considered in law. EIA has also contributed to co-ordination of sectoral dispersed legislation, which became more effective in the EIA context (Partidário 1994).

Portuguese EIA legislation has been reviewed in order to improve the process and to be adapted to the content of the 1997 EU review of the Directive on EIA. A task group was formed to help in this review (MARN 1996). During the writing up of this thesis new legislation on EIA was enacted –the Decree Law 69/2000, May, 3, introducing in the Portuguese normative the 97/11/CE Directive, which was the review of the 85/11/CE Directive. It also considers the ESPOO Convention on transfrontier impacts. Main changes introduced are the following

- EIA final decision is now binding to the licensing authority
- A voluntarily scoping phase
- Clarification of procedures for public consultation and participation, especially related to access to information and more flexibility of processes
- Clarification of EIA concepts defining terms for: auditing, public consultation; grant; Declaration of Impact assessment (DIA); monitoring; post-evaluation; developer; NTS; EIA; protected areas; Nature 2000 network.
- A post-evaluation phase and creation of an Institute for Post- evaluation
- Enlargement of projects to be submitted to EIA both in Annex I and Annex II.

One of the most relevant points is the recognition EIA received in environmental management since by the new legislation EIA decisions are binding for approval of the projects. A very important issue enshrined in the new law is EIA post evaluation through phases of monitoring and auditing and the creation of an Institute for post evaluation. Actually part of the discredit of EIA in the Portuguese system is related to the lack of control on the implementation of mitigation measures and on accuracy of forecasted impacts. Unfortunately, scoping considered a major step in EIA effectiveness is only given a modest place. It will depend on the willingness of the developer. More flexibility is given to IPAMB in the management of public consultation. However the involvement of the public in early phases of the process is also dependent on the willingness of the developer by proposing a consultation process in the scoping phase to the authority in EIA.

In the Annex I of this thesis a detailed analysis of the new legislation is carried out since the relevance it presents for this work. In the concluding part a section is also reserved to the way the new legislation can address important gaps detected due to the legislative frame.

Part III THE OPERATIONALISATION PART

7 AN ANALYTICAL FRAMEWORK OF APPROACHING PUBLIC PARTICIPATION IN EIA

7.1 Introduction

Oakley et al. (1991) claim that the evaluation of public participation in development, though receiving in the last years an increased attention is still in its infancy both conceptually and methodologically and point out that much work has to be done in this respect. Renn et al. (1995) consider that recent literature on public involvement has focused mainly on case studies and practical applications. Considering that public involvement is essential to achieve better decision making and that there is a need for new models of participation, Renn et al. (1995) created a broad normative framework for the evaluation of public participation models in the environmental policy arena. It is considered that meaningful participation implies that adequate procedures should be taken in order to provide acknowledgement of cognitive aspects of a problem and respective consequences as well as equal opportunities for participation of people affected by decisions.

Their framework presupposes two main objectives: effective environmental protection and adequate representation of public values. It is based on the theory of communicative action or discoursive theory developed by Habermas (1970; 1979). Discourse is the term used to define the style and nature of citizen participation and means: " equality among the participants, peer review as a means for verifying understandings and an orientation toward resolving conflicts in consensual rather than adversarial ways" (Renn et al. 1995:3). Two broad meta criteria for "right" citizen participation have been defined as *fairness* and *competence*. Fairness is based on ethical normative reasons and implies that people are provided equal opportunities to determine the agenda, the rules for discourse and to speak and raise questions, but also to have access to knowledge and interpretations (Webler 1995:38). Competence is based on functional-analytical reasons and is related to listening and communicative skills, self-reflection and consensus building and should involve all forms of discourse- explicative, theoretical, pragmatic and therapeutic. Fairness refers to opportunities for participants act meaningfully and four fundamental actions are considered: "attend (be a participant in the discourse), initiate discourse (make speech acts), discussion (challenge and defend claims) and

decide (influence collective consensus)" (Webler 1995:62). Those actions are applied to agenda and rule making, moderation, rule enforcement and discussion. Competence refers to the construction of the best possible understanding and agreements given what is reasonably knowable to the participants, and conditions are: "the access to information and its interpretation and use of best available procedures for knowledge selection" (Webler 1995:65).

Concluding on what is right participation, Webler (1995:75) states: "it encourages multi-way communication (...) is consensual and non hierarchical (...) respect for the autonomy of the individual (...) trust that the person will abide by reasonable rules for social interaction (...) relies on reasonableness of the citizenry to produce workable decisions (...) promotes critical self-reflection among the participants". An extensive list of criteria has been produced concerning fairness and competence. These criteria have been applied in the practice to a set of public participation models such as citizen advisory committees, citizens juries, planning cells, mediation, regulatory negotiation, compensation and benefit sharing and Dutch study groups. Public hearings or inquiries have been excluded since it has been considered that they "do not meet a sufficient number of criteria to be considered as candidates for ideal discourse" (Renn et al. 1995:10).

Palerm also using Habermas's theory of communicative action as well as considering Webler's meta criteria, defined theoretical-empirical principles for public participation on environmental decision making, (Palerm 1998; Palerm 1999). This set of normative principles concerns: definition of stakeholders, notification, time and venue of meetings, decision[48] and information to be available.

Renn and Webler's framework is in fact one the most encompassing normative ones to meaningful participation at a theoretical normative level. National EIA systems provide institutional arrangements and guidelines for participation more grounded in technical and practical problems, such as time, money, other resources allocated as well as social/cultural ideas for public involvement in decision making. It is clear that public involvement is dependent upon the structures and institutions of existing political

[48] For example, as far as decision is concerned Palerm states: "decision must be justified and make explicit how the arguments presented by the different persons and groups were considered; should be given to all participants and made publicly available" (Palerm 1999:239).

power. Existing regulations in the EIA systems are akin to shape the public involvement process and they "do not share the moral imperative power of the conditions of the ideal speech situation" (Webler 1995:61).

Specifically in EIA some authors and organisations have established principles and criteria in order to assess public participation effectiveness. For instance, Glasson et al. (1994:147) states that public participation to be effective "should provide information; cater for different levels of technical sophistication and for special interests; achieve a two-way flow of information and have an impact on decision making".

The United Nations Environmental Program quoted by Clark (1994b:166), states five basic requisites to public participation effectiveness: *Identification* - which groups or individuals may be interested in or being affected by a development action; *Dissemination* - delivering rigorous, understandable, accurate and timely information. As possible social, economical and environmental consequences of proposed development projects must be explicit in the dissemination of information; *Dialogue* - among those responsible for policies, plans and projects formulation and those directly affected, through meetings, seminars, public hearings or personal contact. *Assimilation* - taking into account public views; *Feedback* - declaration on decisions taken and the way decisions have been influenced by the public.

Smith (1993) adds more prerequisites for public involvement: the legal right and opportunity to participate, resource provision as well as representativeness of participants. Wood (1995) defines a set of criteria to public participation effectiveness in the EIA process, related to the objectives and aims of EIA. He adds to the conditions pointed out above: existence of published guidance; right of appeal on decisions taken; the use of appropriate methods according to the stage of the EIA process; non existence of secrecy inhibiting consultation; funds for participation, existence of obligatory consultees specified at various stages of the EIA process and adjoining authorities, states/countries when it is the case. Smith (1993:69) has produced a comprehensive framework for evaluation of EIA public participation presented in Fig 7.1.

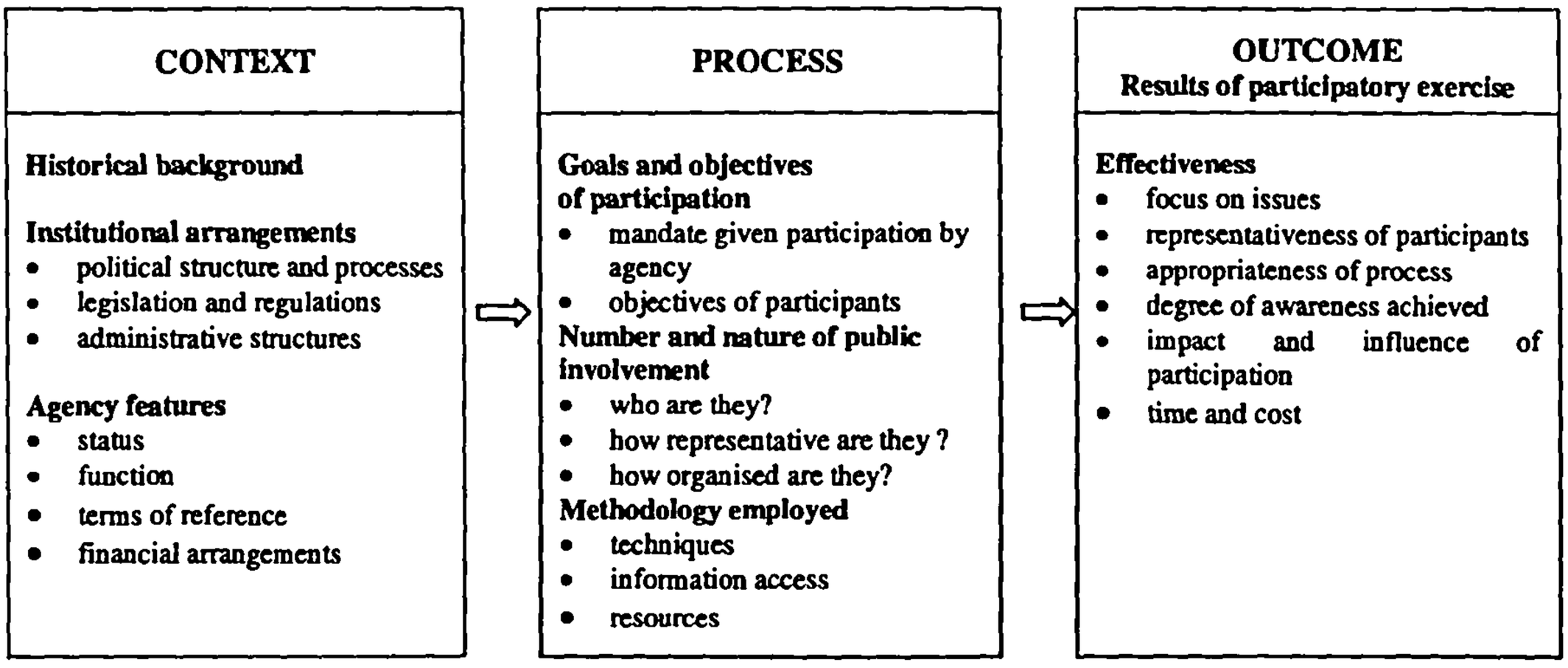

Fig 7.1 A schema for the evaluation of public participation
Source: Adapted from Smith 1993)

Mitchell (1997) added to the outcome defined by Smith (1993), the output. Output means the measurable aspects (number of options considered, number of interests accommodated in the solution) and outcome means the significance of the output, in the short, medium and long term.

An evaluation system was used in a study of the NATO/CCMS Pilot Study (Nagel and Verheyen 1996) dealing with three main topics: description of legal provisions to organise public participation; the practice of undertaking participation; the evaluation of current public participation processes. For each topic evaluation questions were defined and each of them was related to the different phases of the EIA process (screening, scoping, EIS preparation; EIS review, the decision making process and monitoring process).

7.2 Analytical framework development and its working in the practice

The complexity of the phenomenon of public participation, the large scope of initial research questions asking for a dominant qualitative approach have led to the search for an analytical conceptual model. The intention was to find a tool for EIA public participation analysis that could help in framing this investigation and guiding data collection and analysis.

Based on the review of the theoretical literature and empirical existing research about public involvement in environmental tools, an attempt has been made to systematise key issues inherent to public participation in EIA. Two broad items have been defined. One derived from the principles underpinning the vary concept of participation (developed in

chapter 3) and leading to the definition of main objectives of public participation. The other derived from ideas and conditions for effectiveness of public participation processes expressed in criteria. This has been done in order to develop and use in the practice a theoretical framework for public participation in EIA rooted in some consensual, ideal principles and suggestions of good practice through which the main characteristics of a specific public participation process could be defined, gaps identified and suggestions to its improvement could be done. Table 7.1 presents the systematisation of key concepts and its operationalisation to be applied in the practice.

Table 7.1. Operationalisation of key concepts in public participation effectiveness

KEY ISSUES	CONTENT	OBJECTIVES	CRITERIA
The "Why" issues	• Perceived benefits • Legislative conditions • Environmental awareness and consciousness/ citizenship	Influence and impact on decision making	**Usefulness**
The "Who" issues	• The public • Reasons for participation • Organisation of the public • Representativeness of processes	Assure all stakeholders have opportunities and conditions to participate	**Equity and Fairness**
The "When" and The "How" issues	• Phases of involvement • Design/management • Degree of public involvement • Information and communication • Methodologies/ mechanisms • Resources and monitoring	Appropriateness of the entire process adapted to the specific political social and cultural context	**Efficiency**
The "Which" issues (respect quality of processes and decisions achieved from a sustainable perspective)	• Articulation of EIA with policies for sustainability • Adequacy between legislation and implementation • Attitudes of stakeholders	Achieve sustainable goals Confidence in the process	**Coherence** **Transparency and reliability**

Any model presents weaknesses and limitations. On the one hand, it must be argued the existing difficulty in separating issues and concepts intimately related since they partially overlap and usually work interactively through the entire process. However, on the other hand, a model can provide a useful guide in the analysis of such a complex theme.

What emerges from literature is that there are a number of generic principles able to work in any virtual social/cultural context. However, the way those principles apply in the practice can vary considerably and those differences are important for their success.

Public consultation and participation does not work in a vacuum rather depends both on the existing EIA system as well as on the broad social cultural context in which it takes place which by its side has influenced the EIA system. As O'Riordan (1977:169) argues "Participation, like the common law, is moulded by case experience. There is no set pattern".

This analytical tool has been designed to work interactively with the body of theories on cultural contexts (presented in chapter 5) enlightening the specificity of Portuguese context. Results of empirical work carried out will also feedback the model reconstructing and complementing it according to the perceived reality. This is not a model conceived to be used as an evaluative tool. The procedural/normative model of Renn and Webler (1995) based on ideal speech situation applied to mechanisms for participation or Smith's framework for the evaluation of public participation in EIA, are those deserving the label of evaluative tools. This is an operational framework whose application within a specific EIA system can help to structure and guide the analysis of complex phenomena. It is an exploratory tool constructed with the intention of allowing a broad picture. The highlighting of some principles, objectives and obstacles of public participation in EIA in broad terms helps to throw into clearer perceptions reality and gives the chance to identify with more accuracy emerging issues and problems of a specific process in its specific context. The way the model will work in this research is presented in Fig 7.2.

It must also be stated that the intention of this research work is not to make an evaluation of an entire process still relatively new. Such an evaluation would require much more resources both in time and in methodologies used since it would need a profound analysis of the outcomes and outputs, as well as an analysis of processes both in quantitative terms and qualitative factors related to the change of attitudes of the different actors. It is rather, an exploratory study that intends to contribute to a better understanding of a still new instrument in a particular context and tries to create conditions for further testing of emergent hypothesis raised by theory building. Next an attempt has been done in order to more clearly define the key issues and criteria presented.

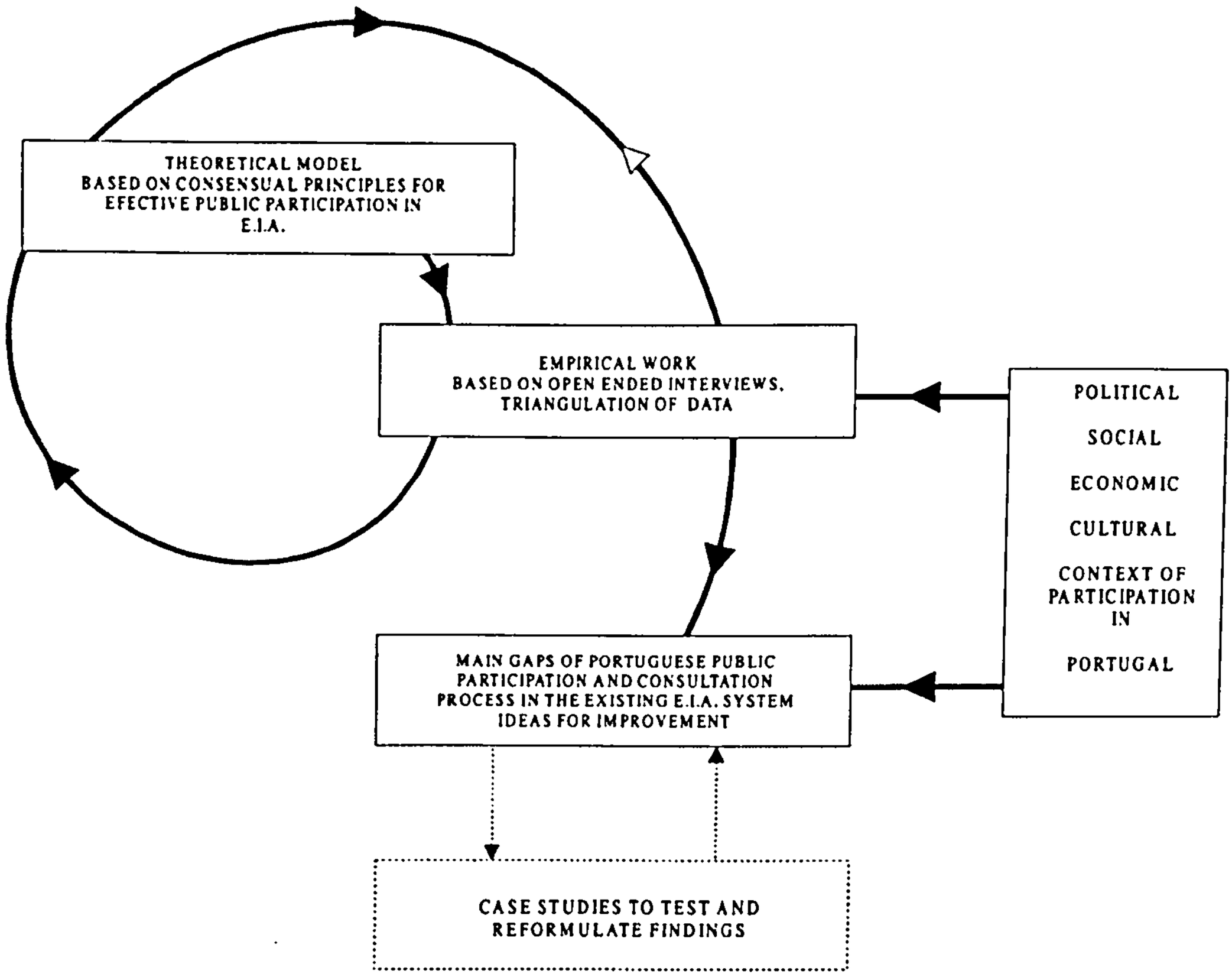

Fig.7.2 The feedback looping of the specific research project

7.3 Specification of main concepts addressed

7.3.1 The "Why" issues

The "Why" issues are related to the accepted and perceived usefulness of public participation and consultation processes. Usefulness means different things to different actors, though sharing the common objective of achieving values and rights that are more democratic through influencing decision making processes. According to the rationale for public participation based on philosophical, pedagogical and pragmatic principles (see chapter 3).

For the public should mean:

- A way to have a say and influence decisions that will affect them.
- A safeguard against decisions taken only by political/economical reasons
- A way of reducing discretion of the administration in the decision making process
- A way to influence upon the definition of issues and concerns
- A way of improving environmental awareness and consciousness
- A way of citizenship development

For the decision makers should mean:

- A way of achieving better informed decisions
- A way of integrating economic, social and environmental concerns
- A way to incorporate public views, inputs and information
- A way to get more people satisfied with decisions and plans

For developers should mean:

- A way to get an understanding of public views and feelings about a development action
- A way to facilitate the implementation of the project, to gain support, save money and time integrating timely public concerns and suggestions
- A way to avoid conflicts, delays and problems raised by a new development action

For technicians and environmental authorities should mean:

- A way to get access to specific local knowledge on environmental systems, cultural and social values
- A way to integrate scientific and laden values
- A way of checking the accuracy of predictions

The perceived usefulness of participatory processes by different stakeholders presents several dimensions or conditions that could be labelled as internal and external. Both are dependent on the specific political, social, cultural background. Internal conditions are rooted on societal values and beliefs meaning environmental values, environmental awareness and responsiveness, as well as on the degree of participative context and the kind of political culture which favour or not open decision making processes. External conditions are related to the existing legal rights, institutional arrangements and opportunities to participation and the way they are managed to allow and promote public involvement (as publicity to promote awareness of rights and benefits), which are more linked to organisational culture.

Environmental awareness, responsiveness and active citizenship

Considerations about societal environmental values and its influence in the EIA process have already been done in chapter 5 when analysing the importance of specific cultural contexts in EIA. It has been considered that societies with strong embedded environmental values and concerns are more akin to give value to EIA as a tool for better decision making.

It is expected in late modernity that societies and governments increasingly consider environmental problems since the environmental crisis is perceived everywhere and presents an international scope. Clear evidence exists that environment is too much embedded in social life to fell far of social and political agenda (Selman 1996). Environmental problems in the last years have evolved in such a way that it is widely accepted that long term economic growth is dependent on policies designed to protect environment and finite resources through ecological modernisation (Nas 1995; Hajer 1995). However ecological modernisation is not a straightforward path for developing societies where distribution of wealth still has a fundamental role in social organisation. It is also not a clear-cut policy for "societies of intermediate development" (Santos 1994) where patterns of consumerism have increased enormously and a lack of investment in environmental policies is an impediment to sustainable development. Many times people privilege short-term interests and objectives rather than long term sustainable ones. Fairness to future generations is many times less valued than interests of existing generations.

Environmental values more or less embedded in national cultures need to be developed into environmental awareness and responsiveness as conditions for participation. As argued by Selman (1996:155) " environmental literacy is a prerequisite for effective participation". This raises the question of environmental education considered 'the great resource' though facing the complex issue which is the contradiction of its objectives and the fact that education reflects to a great extent the dominant social beliefs and cultural values of a society. O'Riordan and Turner (1983) argue:

> Centralised, urbanised, technically specialised and administratively controlled capitalistic political economies create and interact webs of incentives that discourage the free and spontaneous expression of environmental responsibility.

The Tbilisi Declaration from UNESCO and UNEP (1978) gives important indications to environmental education and the pathways for its implementation. This declaration states that environmental education should address formal and non-formal education and must reach all the age levels, stressing the leading role of the mass media and the training of environmental specialists. It proposes a holistic approach with an interdisciplinary base and claims as its basic aim the awareness for individuals and communities to understand the complexities of environmental aspects and "acquire the

knowledge, values, attitudes and practical skills to participate in a responsible and effective way in anticipating and solving environmental problems and in the management of the quality of environment" (ibid:392). The role of community participation is emphasised by the involvement in active problem solving in the context of specific realities and creation of a sense of co-responsiveness in the built of a better future.

Agenda 21 puts education for sustainability at the centre of attention. UNCED (1992) states: "there is a need to increase public sensitivity to environment and development problems and involvement in their solutions and foster a sense of personal environmental responsibility and greater motivation and commitment towards sustainable development". Education for sustainability involves a commitment to a framework of specific, global, ethical goals, which speak for justice, equality and democracy (Fagan 1996:139). It helps the public "to examine critically the technologies, systems of economic production, cultural systems of reproduction, laws and politics and ideas and ideologies they currently employ for living with the rest of nature" (Huckle 1996:4). It is considered a "learning by doing" process with several actors from government to industry, environmental groups and population. Opening decision making to the public is a promising pathway for increasing environmental responsibility but "it will depend on the structure of the participatory program, however whether participants develop moral responsibility for long-term thinking and respect the needs of future generations" (Renn et al. 1997).

Another important condition is the cultural context of participation meaning the extent to which a society faces and accepts the role of citizen involvement in decision making. Hofstede (1980) establishes a link between economic welfare and democracy and defends that more democratic societies are more open and decentralised and consultative and participatory approaches are more accepted and even enhanced. A participative culture is influenced by a strong civil society where different interests are clearly organised and empowerment of citizens is recognised.

However, even in considered participative societies the degree of participation and empowerment changes. As recognised by Lee and Wood (1978) there is in America a tradition of handling environmental issues through public openness "lawyers,

politicians, publicists and pressure groups therefore often occupy roles which planners and planning authorities advisors and governments inspectors occupy in Europe" (see also section 5.7). O'Riordan and Turner (1983) also stress this point of view when commenting on the less committed way EIA has been accepted in European countries. There has been however a movement towards more public involvement in environmental management in Western Europe not only due to increasing citizen's concerns on environmental/social problems but also due to the EU environmental Directives and policy commitment to sustainable development.

Legislative conditions to public participation

Since EIA is intended to promote change in planning and decision making it must be enshrined in law, being specific, mandatory and enforceable (Gibson 1993). It is consensual that public consultation and participation in EIA must be a specific legal requirement, providing access to decision making process. However even existing in legislation "provisions for public input, often they may be invoked only at the discretion of administrative officials" as pointed out by Smith (1993). Nogueira and Pinho (1994) conclude from a comparative analysis of public consultation processes in different community EIA systems, that those ones with more detailed legislation are those where public participation processes present more efficiency, legitimacy and representation. Gibson (1993:12) states: "laws and processes that are weak, unclear or simply difficult to administer with consistency and efficiency do not just fail to foster greater environmental sensitivity in planning and decision making, they tend also to undermine the general credibility of government efforts to encourage environmental responsibility in planning and decision making"

It could be argued however that the level of detail will depend very much in the social cultural context of the EIA system and detailed legislation will not work so well in countries with non traditional tied legislative features. That is the reason why the European Directive presents a set of conditions to be applied in legislation by different countries according to its characteristics.

The existence of legislative conditions even tied could mean different things in practice. It is also necessary that conditions and mechanisms exist to implement the process. First of all publicity of the existing processes that could develop an awareness of rights and

benefits of participation should exist. As Smith (1993) states "public participation programs are generally more successful when combined with a public education program that summarises the technical analysis and the legal and institutional issues in an easy to understand way". Existence of guidance as to conducting and analysing public participation is needed as a fundamental requirement for participative processes.

7.3.2 The "Who" issues

The "Who" issues are related to the representativeness of public participation processes in order to achieve equity and fairness. Representativeness is considered a key issue in the literature referring public involvement. It is consensual that people directly interested or affected by specific questions of a development action (project, plan or policy) should have opportunities to participate meaning influencing decisions. Smith (1993:70) defines representativeness as "the extent to which participation is representative of all the interests associated with the issues under discussion". The core question is how to achieve in practice representativeness. Important issues related to the latter deal with the "publics" their reasons to participate and their organisation.

The "Publics"

First of all, the question "who is the public" should be addressed in order to handle and manage public participation processes. It is commonly argued that the public does not exist as an abstract and homogeneous category. Rather different publics exist representing a broad range of interests and expectations varying from process to process and participating by diverse reasons (Glasson et al. 1994; Roberts 1995; Petts and Edulgee 1994). Attempts to classify the public usually divide it in two broad categories: the active people or organised public and the inactive people or non organised public (Mitchell 1996; Goldsmith 1976).[49]

The former means organised interest groups such as quasi-statutory bodies, environmental associations, voluntary groups, pressure groups. They are organised and articulated and some of them usually have large professional and financial resources at their disposal. As Mitchell (1997:161) points out: "The reality is that many of the

[49] Goldsmith (1976:x-xi) using Hampton's categories of public in planning processes, still divide the active public in two groups: the minor elites concerning people with some experience in planning participation and major elites concerning groups with a long participative history many of them usually consulted by planning authority as public bodies, major industrial and agricultural interests.

organised groups which form the core of the active public make it their business to become involved in environmental and resource issues whether or not they are invited to become members in a partnership". It is not necessary to make special efforts to obtain their participation as they perform the function of commenting on development actions (Mitchell 1997). The latter means a "collectivity of individuals" (Goldsmith 1976) normally living near the development and perhaps those who will be most directly affected by the action. However, they do not usually get actively involved in environmental or social issues as they are more used to cope with issues at work and home (Mitchell 1997). They may not have experience and knowledge in technical issues and they usually lack financial resources (Glasson et al. 1994). However, depending on the circumstances, they could pass from an individual position to using a group action to fight for their aims. In this case common values are what gives meaning to the life of a group. As stated by Firth (1998) these are ad hoc groups formed around agreement about values for a special purpose, when they feel adversely affected by a project.

Reasons for participation

Reasons for public participation are rather different. Goldsmith (1976) states: to be informed; to impose their views; to dialogue with decision-makers. Some actors in public processes also see participation as a way of "gaining political points or national publicity" (Glasson et al. 1994:144) or as "a convenient path to political success" (O'Riordan 1976:167).

Many research studies conclude that people participate when they believe their interests will be affected by an action, and that it is the "visibility" of an action, which triggers a response by the public (Barlow 1995). Wood et al. (1995) argue in the same direction that people participate "only when their interest is clearly defined and perceived" though adding "and when a public participation process centres around a local priority". O'Riordan also shares this very idea that local issues are those in which citizens are more vitally interested though often seeming minor to authorities and regional politicians. Stating that the involvement of citizenry at large is a pressure difficulty of participation and one of its dilemmas, O'Riordan (1977:169) suggests that the right way seems to be the establishment of a link "between local area interest and a concern for the wider and longer term community welfare".

Some studies, which have tried to define the profile of people more likely to be involved in participatory processes, state that they are the middle classes (Arvill 1983; Goldsmith 1976) or higher socio-economic status (Hampton and Walker 1978 quoted by Barlow 1995). Goldsmith adds "older, male, owner occupier, long term residents" and Barlow (1996:3) still quoting Hampton and Walker states "better educated, older, settled individuals". Arvill justifies the dominance of middle classes in participatory processes by their access to information; their capacity to cope with complex environmental issues and their skills to manipulate, choose and influence decisions.

Wandersman quoted by Sanchez et al. (1988) agree on the importance of individual characteristics to participation though assuming that there is little empirical evidence on aspects such as age, educational level, social class, marital status and history of participation. Based on a broad review Sanchez et al. present some other variables for participation besides the individual characteristics such as: attitudes of the participants toward the promoters of the activity; their perception of conflict; the importance they give to it; achievement; anticipation; perception of one's abilities to achieve change and locus of control; the needs, opportunities and capabilities of people involved. Sanchez et al. point out that there is evidence in supporting the idea that a direct and positive relationship exists between the involvement in participation processes and these perceived attitudes: people attributing importance to their surroundings; people identified with neighbourhoods and other residents; people attributing the consequences of their actions to their own personal effort; people assuming responsibility for their situation. Whatever will be the reasons and motivations for involvement Roberts (1995:229) argues:

> It is a good rule of thumb to expect that the public will be concerned when something new, something large, or something different is proposed in or near their community. Concerns will even be greater if the project or activity is located close to their place of residence. Even relatively common activities, which an organisation does not see as a problem itself can cause concern amongst the public when it has not been informed and personal concerns have not been addressed.

Representativeness

There is widespread consensus that participative processes must provide opportunities for a wider public involvement, which must take into careful consideration the representation of groups or individuals interested or impacted by the actions (UNEP

Program; Glasson et al. 1994; Wood 1995; Pinho 1994). Hyman and Stiftel (1988) present the very same idea as: "a public participation program can be designed to obtain a broad range of values but the representativeness of the values that are expressed must also be verified".

Social desegregation is considered essential as a mean of identification and analysis of different groups in a community (Wood et al. 1995). "Targeting groups" for participation must consider several aspects as geographic, demographic, social and equity factors (Hyman and Stiftel 1988) in order to achieve representativeness. Renn et al. (1997:222) present three generic types of selection procedures that can be combined or structured sequentially:

- Self selection based on the volunteer principle (such as public hearings)
- Determination of social groups or constituents by the regulatory agency or a third party (invitation of stakeholders groups to the process)
- Systematic or random selection of members of the relevant public (such as surveys, focus groups, consensus conferencing, town meetings)

In principle, public participation should include representatives from all social economic backgrounds (Kakonge 1996). They are generally stated as: general public (individual citizens in a community); public interest groups (community associations, NGO´s, environmental associations); different branches and levels of government; economic development agents, business potentially affected, labour unions, professional organisations. Connor (1997) emphasises the need to obtain a social profile meaning a social data base prepared unobtrusively in order to define main characteristics of a community, its publics, including knowledge and attitudes to a new proposal.

Participation processes can have regulations specifying groups and organisations eligible to participate and can also establish criteria to identify the public directly affected as for instance people living at a certain distance of the development (Glasson et al. 1994). Some practical problems will occur when the development action presents a broad scope and could affect large amount of people as a national development action. Wood (1995) points out that there are advantages in specifying a list of consultees to be consulted at the different phases of an EIA process. Actually, one of Wood's criteria to public participation effectiveness in EIA is the specification of "obligatory consultees" at various stages of the EIA process adding adjoining authorities/states/countries where actions are likely to affect their environments.

It is also considered indispensable to take the necessary steps to guarantee the fullest involvement (Glasson et al. 1994) but also as argued by Smith (1993) the creation of mechanisms "to balance the influence and effects of lobbying in interest representation". The involvement of the public must also take into consideration ethnical/cultural and geographical diversity since, potentially, different views are at stake. Roberts (1995) points out that indigenous and immigrant ethnic groups must be involved in different ways than the "dominant culture' publics". The same idea is presented by Pinho (1994a) pointing out that in some cases the adoption of positive discrimination measures is even justified by the fact that there is an enormous resource inequality between opposite groups in an environmental conflict and this being a form of guarantee the participation of the powerless or people with lack of technical resources which could be used to mobilise their interests. It is important that for each case the entity in charge of the public participation process understand the diversity of the public and develops strategies that reflect this diversity (Roberts 1995:229).

7.3.3 The "When" and the "How" issues

These issues are related to the design, management and implementation of the participation processes, as well as to the stage of the decision making process in which people are involved. Though mandatory in the majority of legislation in EIA and often strongly officially encouraged, public participation faces the main problems with its practical organisation or with the application of the requirements (Weston 1997). This section will be divided in "When" (phases of involvement) and "How" issues the latter including the process design; degree of public involvement; the problem of information/communication; resources (technical and financial) and monitoring.

The "When" issues

Relevant literature assumes that theoretically public participation in EIA systems could be used successfully and with benefits to EIA effectiveness in almost the stages of an EIA process from screening to monitoring. In spite of being used in some jurisdictions in the screening phase as in Western Australia (Wood 1995) the scoping phase is the most common first stage for public involvement, mandatory in some systems (USA and California) required for EIA reports (Netherlands, Canada and Australia) or simply recommended and encouraged (New Zealand, UK) (Wood 1995). The review phase is the other stage of the EIA process where public involvement exists after the EIA report

is presented and before the decision making is taken. The stages of public involvement depend very much on the context of decision making from a fully participative to poor participative EIA systems.

Public participation promoted in a late phase of the EIA process is considered one of the most acute problems facing public involvement, leading to distrust of processes and disbelief in participation. There is widespread consensus that participation should occur in earlier phases of an EIA process in order to increase transparency of the process and effectiveness of results. The World Bank requires public participation in a scoping phase for funding projects. The Aahrus Convention states that consultation and participation should occur at the beginning of planning projects when all the alternatives and options are still open.

Developers are often afraid of opening public participation in early stages of their proposals. However, as emphasised by Petts and Edulgee (1994) even in those stages rumour and gossip often occur, being conditions for further problems difficult to overcome. Consultation and participation at the beginning help the identification of key environmental/social issues at stake. It can provide relevant information on environmental, social economic and cultural aspects. Since the proposal is still open to possible changes and alternatives it can have reflects on costs and time saving for the developer. Moreover, early consultation can help to clear misunderstandings, reduce rumour, and prevent conflicts by identifying from the beginning areas of controversy. It helps to create a climate of trust and confidence where discussion and negotiation are open. EIA in the scoping phase through public involvement improves the efficiency and credibility of the entire process through the establishment of the terms of reference for the study also creating a sense of co-responsiveness. One of the most advised aspects of public involvement in EIA is to be undertaken "in the feasibility stage when options are still being considered, so that community concerns can help the proponent devise a robust scheme" (UNEP 1996:201). Rules of good practice respecting timing of participation are expressed by Hyman and Stiftel (1988) as: "The timing of participation should be co-ordinated with the schedule of decisions to be made and the participation activities should contribute directly to the various decisions". Referring public expectations not being frustrated, Mitchell (1997:163) states:

> It is important to recognise the different stages or phases of planning and to ensure that partners or public participation exercises are focused so that those involved understand the stages and agree on the purpose of the partnership exercise.

The "How" issues

The procedures related to the organisation of public consultation and participation in the EIA systems are very different as they are intimately influenced by national policies and administrative structures and features which reflect national traditions of dealing with public influence in decision making processes. However it is possible to identify some conditions considered indispensable to achieve efficiency of the processes.

The organisation of participation processes faces several key points and is responsible for the success of the intentions. Undoubtedly a prerequisite for public participation is its existence in legislation as well as procedural measures to be applied in a systematic way. This is a way of legitimising the process and avoid discrepancy in its application. However, very tied regulations and specifications could transform participatory approaches in limited and formal processes with less useful results. A balance need to be established between existing regulations and the necessary flexibility to tackle participation processes according to the characteristics of the projects, phases of public involvement and stakeholders targeted. Usually in most jurisdictions there is a considerable discretion to decision makers and developers in the choice of methods to be used in participation Glasson et al. (1994).

Design/management

The design of a participatory process must take into account above all the objectives and goals defined for participation, the phases of the process in which it will be applied, the type of stakeholders to be involved, the methods and mechanisms to be used and resources available. According to Mitchell (1997:166) main aspects required for a participatory program must be: "rationale; kinds of partners and partnerships; elements for success; degrees of involvement; types of stakeholders; timing; program components; mechanisms; balancing fairness and efficiency; monitoring and evaluation". UNEP (1996:198) states key points involved in a program for public participation as:

> the objectives of EIA; identification of interested or affected parties; budgetary/time constraints and opportunities; identification of appropriate techniques to involve or consult the stakeholders; traditional authority structures and decision making processes;

identification of approaches to ensure feedback to the involved stakeholders; identification of mechanisms to ensure consideration of stakeholders views, opinions and suggestions".

Aspects of good practice in the design of participatory approaches recommend that "a blend of approaches be utilised that balances the intent of involvement with the role of information and the type of public to be involved" (Smith 1993). No single public participation method will fulfil all needs and in the practice a combination of methods will be appropriate depending upon who the communicator is (a public agency or a private company) the stage of EIA, the audience to be reached and the objectives to be achieved (Petts and Edulgee 1994:403/403). There is a need to balance both formal (institutionalised) and informal procedures (Wood et al. 1995). Some key aspects in the "how" questions are: degree of public involvement; methods and techniques; the role of information and communication; resources and monitoring.

Degree of involvement

This is a crucial question to be defined from the beginning and to be presented as the public must know what is expected and the degree of power sharing allowed. Mitchell put this question in terms of "desirable and feasible". In the literature on this subject there is a permanent reference to Arnstein's (1969) framework (see Table 7.2) about the "eight rungs of citizen participation" meaning the different existing ways of redistribution of power, which range from manipulation to citizens' control.

Table 7.2 The eight rungs on the ladder of citizen participation
Source: Mitchell (1997) quoting Arnstein (1969)

Rungs on the ladder of citizen participation	Nature of involvement	Degree of power sharing
1. Manipulation	Rubberstamp committees Power holders educate or cure citizens	Non-Participation
2. Therapy		
3. Informing	Citizens' rights and options are identified	Degrees of tokenism
4. Consultation	Citizens are heard but not necessarily heeded	
5. Placation	Advice received from citizens but not acted upon	
6. Partnership	Trade-offs are negotiated	
7. Delegated power	Citizens are given management power for selected or all parts of programs	Degrees of citizen power
8. Citizen control		

The Canadian Government presents a programme for planning and implementing public involvement, Praxis 1988, describing seven forms of public involvement presented in Table 7.3.

Table 7.3. Degrees of public involvement in the Canadian manual, Praxis (1988)
Source: Partidário (1992:97)

Persuasion	The use of public involvement techniques in legitimate endeavours to change attitudes without raise public expectations of participating in the planning process
Education	The use of information dissemination and general instruction to create an awareness of programmes and issues
Information feedback	The distribution by the authority of information on a policy planning situation on which the authority has a stated position and requests public feedback
Consultation	Use of formal dialogue between authorities and the public based on initially established mutually accepted objectives
Joint planning	Shared decision making. The public is represented on departmental planning boards, is given voting and decision making authority. Issues should be geographically specific and understandable by local participants
Delegated authority	Transfer of responsibilities, normally associated with the authority, to the public or other levels of government possessing the necessary expertise
Self determination	The undertaking of the planning process by the public directly

Public involvement in EIA varies from merely informing the public about a new proposal to more full involvement in decision making. The extreme case of public participation in decision making is rare because "most decision makers have a reluctance to share their decision making power with the affected community, feeling that they have a responsibility to make decisions on behalf of the wider community" (UNEP 1996:185). Usually EIA systems only go into tokenism from consultation to placation. The extension of public participation from project level to a strategic level and the intention to attain the goals of sustainability will require more strong public involvement and empowerment.

Methods and Mechanisms

A broad array of methods and mechanisms exist to put into practice public participation processes. The Canadian Federal Environmental Assessment Review Office's (FEARO 1988) presents about fifty different techniques on public involvement in EIA according to the objectives from giving information to seeking agreement decisions (Table 7.4).

Table 7.4 Public involvement approaches and selected techniques
Source: FEARO 1988 quoted in Petts and Edulgee (1994:402)

Purpose	Techniques
Knowledge about the issue/purpose	**Public information** Advertising, brochure, training programme, competitions, direct mail, exhibitions, news conferences, newsletters, news releases, position papers, publicity, publications
Opportunity to be heard before the decision	**Public information feedback** Briefs, community profile, focus groups, interviews, questionnaires, written submissions, computer-based participation, content analysis **Consultation** Public meetings, brainstorming, coffee klatches, conferences, Delphi process, dialogues, open houses, panels, phone lines, participatory television, simulation games, technical assistance, trade-offs games, workshops
Having an influence on the decision	**Extended involvement techniques** Advisory committees, task forces, charretes (extended series of meetings)
Seeking agreement on a decision	**Joint planning** Arbitration, conciliation, mediation, negotiation

Hyman and Stiftel (1988) present also a typology of methods of participation coping with two dimensions: duration and direction of communication based on the complexity of the goals and actors involved. Duration is classified "one time" when activities are scheduled for a particular purpose and "ongoing" when activities begin early in a program and are to be continued. The direction of communication is classified in "input", meaning information by the public, and "output" meaning information by the planners and public education and public relations activities as well as "interaction" meaning integration of both input and output.

Several attempts have been done to assess the effectiveness of different methods and mechanisms. For instance Smith (1993, see also Mitchell 1997:164) based on representativeness, information in and out, continuous exchange, ability to make decisions; Petts and Edulgee (1994:103) assessing effectiveness and potential problems; Renn et al. (1995) assessing fairness and competence of considered relevant models for citizen participation. Based on objectives and goals defined to assess the effectiveness of public participation, Glasson et al. (1994:147), adapted from Westman a review of some existing methods as presented in Table 7.5.

Table 7.5. Methods of public participation effectiveness
Source: Glasson et al. (1994)

	Provide information	Cater for special interests	Two-way communication	Impact on decision making
Explanation meeting. Side/film presentation	✔	1/2	1/2	--
Presentation to small groups	✔	✔	✔	1/2
Public display; exhibit models	✔	--	--	--
Press release; legal notice	1/2	--	--	--
Written comment	--	1/2	1/2	1/2
Poll	1/2	--	✔	✔
Field office	✔	✔	1/2	--
Site visit	✔	✔	--	--
Advisory committee, task force, community representative	1/2	1/2	✔	✔
Working groups of key actors	✔	1/2	✔	✔
Citizen review board	1/2	1/2	✔	✔
Public inquiry	✔	1/2	1/2	✔/--
Litigation	1/2	--	1/2	✔/--
Demonstrations, protests, riots	--	--	1/2	✔/--

In spite of the large array of existing methods for public participation in EIA and resource management, public hearings have been widely used and they are institutionalised in many jurisdictions. As pointed out by Smith (1993:68) "their use has been so prevalent that public participation is often incorrectly assumed to be synonymous with public hearings".

Public hearings are considered "notoriously poor mechanisms for information exchange do not facilitate dialogue and are poor evaluators of the public interest" (Smith 1993:68). Hyman and Stiftel (1988:49) also consider public hearings "formal, hindering open participation, intimidating, superficial for public involvement (...) its authoritarianism and elitism can increase public frustration and impede real communication". Hearings are neither instruments assuring participation nor representation because it is mainly a one-way information transfer and only some individuals representing some groups talk (Burdge and Vanclay 1995:50).

Conversely, advantages of public hearings have been recognised as: offering citizens an opportunity to get first hand information on project proponent's intentions and administrators an opportunity to hear about conflicting interests and views from people (Webler and Renn 1995). Especially for agencies and developers they offer advantages as looking efficient, quick, cheap, simply administered and satisfying the legal requirements (Smith 1993).

Public hearings present advantages and disadvantages. They cannot be the only method in which meaningful participation relies. According to Renn and Webler (1995) they do not abide for fair and competent discourse. What is consensual in literature is that each method offers advantages and disadvantages. No single method can fulfil the demands of public participation and a blend of methods should be used in a participatory process depending on the practical objectives of the process, on the characteristics of the project, the phase at stake and the characteristics of the public to be involved (Petts and Edulgee 1994; Renn et al. 1995; Wood 1995; Hyman and Stiftel 1988; Smith 1993).

Information and communication

The role of information

Information/communication has a pivotal role in public involvement once the entire EIA deals with information from its first beginning. The EIA process is one of sharing information between different stakeholders: developers, consultants, agencies, the public and decision makers. It is an objective of EIA to provide information about relevant environmental issues related to developmental projects, to the different stakeholders involved and feedback results of this information. To play a role in decision making, information provided should be "high quality and accepted by all parties"(Mostert 1996). There must be a permanent interaction of information feeding-back in the different stages. Several kinds of information/communication flow during the EIA projects such as:

Information provided by the lead agency in charge of the EIA process:

- Procedural measures to undertake participation
- Guidance on the entire process as well as guidance on administrative procedures, guidelines for each stage, criteria and advice on good practice
- Publicity of the EIA processes submitted
- Results of the EIA review
- Records and reports on public consultation and participation processes
- Conclusions about the entire process

Information provided by the developer:

- Declaration of intentions on a development
- Project presentation
- The EIA report[50] (EIS)

[50] In some jurisdictions EIA report is responsibility of the decision maker or the environmental Agency. The EU jurisdiction on EIA states that the proponent is the responsible for the EIA report.

Information provided by the public:

- On local knowledge, social, cultural conditions and constraints
- On issues concerning local residents
- On possible conflicts and expectations
- On solutions, mitigation measures, alternatives
- On the conclusions of the EIA report

Information provided by the decision makers:

- The results of different decisions
- Final decision and the way EIS results, review and public comments were taken into account
- Justification on the final decision (authorisation or refusal of the action) and conditions to implement the action

Mitchell (1997) considers two main phases of information in participatory processes: the "information out" phases meaning the dissemination of information from developers and agencies in charge, and "information in", meaning phases where the public provide inputs to the process. These phases are not linear, but cyclical and interactive during the entire process. Ideally they should work as described in the dynamic view of EIA process proposed by Petts and Edulgee (1994) presented in chapter 4, Fig 4.2.

Depending on the EIA systems the exchange of information among the different stakeholders in a process can begin at very early stages from screening and extend to monitoring. In most EIA jurisdictions the exchange of information with the public begins at the scoping phase where public inputs are collected and have proved to be very useful to developers, lead agencies and consultants elaborating the EIA report. In order to provide first information and gather inputs from the public (on site selection criteria, alternatives, terms of reference, assessment methodologies) techniques of information gathering can be used such as questionnaires, structured meetings, workshops with organisations. The ideal situation would be that the public consulted in this phase could have a say on the agenda for participation, contributing for definitions of rules and schedules (Roberts 1995). This is according to the fairness meta criteria defined by Webler (1995).

The other stage of full public involvement is during the EIA review. In many jurisdictions it is the only formal phase of information/communication. In this phase formal notification methods are used such as press notices and other publicity means.

Public meetings and public hearings have been widely applied being many times the only mechanism provided for two-way communication. Participation has also been increasingly encouraged in some jurisdictions in the phase of monitoring (implementation of mitigation measures and monitoring procedures).

Quality of EIA information

The EIA report is the central subject of the EIA process once it should contain all the relevant information for discussion (characteristics of the development proposed, alternatives considered, description of the initial baseline on environmental conditions; forecasting of the likely significant impacts with the statement of methodologies employed; mitigation measures proposed and indication of further monitoring conditions). The EIA report is often responsible for arguments to accept and reject the project.

A great deal of literature exists on EIA report elaboration focusing its content, organisation and presentation as well as on techniques, methods and criteria for its effective review (see also chapter 4). Many jurisdictions provide regulations, requirements or suggestions of good practice for the EIA report elaboration and review. Focusing on public participation the information presented in the EIA report and its presentation has a leader role. Specially, the section of the EIA report, the NTS as it is usually the only one read by the public and decision-makers. It is consensual that the information made available must be comprehensive, accurate, adequate, useful, rigorous, timely and understandable. The last aspect needs special care, as the issues tackled in EIA are highly technical and complex. The use of forms of visual communication has proved to be a great help (Moreira 1994).

According to Lee (1989:133) the basic condition for the assessment of the quality of presentation of EIA findings is "its appropriateness to the needs of its principal users". Users vary from experts to lay people with needs and expectations. Lee argues that three main categories must be taken into account. The general public and public interested bodies; personnel involved in the authorisation of the project and people of organisations involved in public consultation processes. This implies that a good EIA study should present non technical information addressed to decision makers and the public at large with non specific expertise, and technical information detailed enough for experts and reviewers to analyse the accuracy and credibility of the statements done.

Many of the criticisms on EISs result from communication problems concerning both the misperception of the nature of the audience and what effective communication is (Miller 1984:307). Lee (1989:133/134) presents a summing up of the main criticisms to EIA reports in early years of the introduction of EIA procedures, based on Canter evaluation which were summarised as the following:

- Lengthy and poorly structured with large bits of description and analysis of environmental conditions and lack of accurate predictions and impacts evaluation, failing in integrating specialist's contributions.
- Lack of description of methods and data used to predict impact statements as well as the existing degree of uncertainty
- Lack of capacity to communicate especially to non technical readers and be appropriate to decision makers and consultation processes. This is due to inexperience in presenting the information in a useful way.

An important aspect is raised in the second point and according to Lee stemming from the "hostile public arena" in which this information is to be used. The explanation is that it is easier to use quantitative data and justify. Conversely, when conclusions do not derive from them there is a tendency to hidden data and details of how they have been obtained, as they are more difficult to defend. This is linked to subjectivity in EIA. Mostert (1996) states that since subjectivity is inherent to any EIA study the important point is how to deal with it. He argues that the way is to state norms, values and interests at stake and by involving all parties in influencing EIA through mechanisms of scoping and public review and participation. Another important principle is to base EIA on accepted principles such as "sustainable development" whenever possible. Mostert (1996), claims that the uncertainties and subjective choices must be stated and justified and when this does not happen EIA could be considered "institutionally abused, because questions of social and political values are defined as technical problems presumably best left to the experts" (Mostert 1996:203 quoting Frankena 1988).

Another important aspect, respects EIA reports badly done or biased by developers' views considered an obstacle to effective public participation. In most EIA systems, EIA reports are responsibility of developers who choose the consultants. Wood (1995) points out the danger of consultancies selected by prices or suffering from bias and states that the way jurisdictions deal with assurance of quality in EIA reports, varies

from the existence of codes of practice, voluntary accreditation schemes to the extreme position which means the responsibility of the EIA report by the lead agency or the decision makers.

The review

The EIS is however subject to review in order to control its quality and adequacy. In many jurisdictions independent advisory committees are involved in the review stage. The review will be more effective when a scoping phase with consultation exists or as stated by Mostert (1996) "scoping can increase the effectiveness of reviewing".

The EIS review has two main objectives in the EIA process. The first is the evaluation of the adequacy of EIA information available to public participation and decision making. The second is the evaluation of the project itself in order to state an opinion about it. According to Lee (1989:135) "the EIS review is a check on the adequacy, accuracy and objectivity of the developer's EIS". Different procedures occur in EIA systems, respecting the responsibility for the review, varying from the competent authority which is in some cases also the licensing authority (UK) to an independent commission of selected experts (Canada, The Netherlands). The latter model has been increasingly accepted (Lee 1998). Also as stated by Clark (1994b) when the report is present by the developer an independent review is relevant to the reliability of the entire process, since the public should be confident in the impartiality of the project evaluation. According to Wood (1995:165) independent panels present two main advantages. One is reducing bias. The other is ensuring that the quality of EISs improve over time "since its opinions whether adverse or positive, should be both public and influential".

Considerable literature exists respecting the review of the EIA report based on quality and adequacy of information. The Lee and Colley (1990) Review Package from the EIA Centre of Manchester, using an hierarchical review framework and the review criteria by Tomlinson (1989) concerning main issues of EIA information in the form of yes or no questions, are two of the most known and adopted sources. Glasson et al. (1994) based on these sources propose a checklist to ensure the quality of EIA information using an amalgamation of both review criteria. It is a checklist of good practice for those reviewing EIA reports as well as a useful tool for those producing the EIA reports.

Under the EC Directive on EIA it is the developers' responsibility to provide an EIA report of good standard. The competent authority can ask the developer to provide additional information or the reformulation if the information is not considered adequate or complete. The "information in" and "information out" in the review stage is usually undertaken by written comments asked to the public and public hearings. A two-way flow of communication through dialogue between stakeholders must be increased.

It is considered very important for effectiveness of public participation that the outcomes of the review stage be made public and contain the comments done by the interveners. Following Wood (1995:229) "the publication of the results of consultation and participation is clearly a necessary check on their use in the EIA process" adding " there should be a right to inspect both public and consultee submissions and the use made of them by the responsible agencies". Disenchantment and disillusion often happen when public sectors present during an EIA process suggestions and questions which appear not be taken into consideration by the entities responsible (Pinho 1996). Nagel and Verheyen (1996) infer from the conclusions of a pilot study assessing participation in several EIA systems that a good rule of practice is the competent authority to identify the criteria which are used to accept comments, in order to separate substantial from non substantial comments as well as to identify issues accessible for further discussions.

The other aspect relevant to public participation process respects the final decision making. Not only the results must be publicly known but also the reasons and the conditions to it. Wood (1995:184) in one of his criteria defined for the effectiveness of decision making include "must the reasons include an explanation of how the EIA report and review influenced the decision?"

Right of appeal on decisions taken is a very feature ensuring that EIA procedures are carefully followed. However it depends very much on the EIA system. It is provided in the Netherlands, California, USA; in the UK the developer has rights of appeal against the LPA's screening decisions and against decisions in the planning applications but no similar right of appeal exist by the public or statutory consultees (Wood 1995).

Resources

Public participation processes involve a considerable use of resources both human /technical and material. It is generally stated in literature about participation that there is a need of staff training and education in order to handle participative processes (Oakley et al. 1991; Wood et al. 1995; Nagel and Verheyen 1996). Wood et al. (1995) state that people involved in EIA should have "good communication skills and should have training in mediation/negotiation skills". Oakley et al. (1991) present some points related to the dynamics of the context of participation in which the training of agents to support participative processes must be considered. Nagel and Verheyen (1996) recognise the benefits for all the parties that could be obtained by targeting training and guidance. Connor (1998:3/4) states that the management of public participation processes implies five functional roles for effective and efficient public participation programs. These have been summed up as follows:

- Facilitator- in order to bridge the gaps between relevant individuals and groups by fostering mutual acceptance, creating understanding and developing truth
- Social researcher – to prepare a social data base considered the essential foundation for public participation programmes
- Adult educator – using thoughtful strategies and sharp techniques to educate adults about a proposal penetrating stereotypes and offsetting opposition
- Publicist – to reach out to the general public through the mass media. It is relevant to recognise the constraints and limitations of media and overcome these problems
- Designer – to plan a systematic public participation programme linked to milestone events in the technical work programme. Define main points of a proposal, program objectives, program of work, level of effort, schedule and estimated budget.

Connor (1998:4) points out that for each role there are a set of relevant knowledge, attitudes and skills needed. He concludes that to get a sound staff strategy it is necessary to select "people for appropriate attitudes and train them in the necessary knowledge and skills".

Material resources related to the costs involved in developing participation programmes also play a considerable effort. Participation will require dissemination of information, provision and organisation of public meetings, public hearings and diverse other

mechanisms, the treatment of inputs received from the public and elaboration and dissemination of reports on conclusions.

The majority of the EIA systems have no provisions to funding to participants and this is an argument often used to justify the lack of involvement by the public (Oakley et al. 1991). The Canadian experiences on official funding for public initiatives to help participants, have proved to have positive outcomes as Wood (1995:237) states: "Participant funding is widely regarded as being a great success and is credited with increasing the quality of information, of debate and, subsequently of decisions". The problem is that is difficult to get equity in participation processes without financial assistance to local groups or the powerless as the existing difference among them and the developers are often large. Wood (1995) points out that official funding of public initiatives should exist for actions likely affecting large areas and producing significative impacts. Oakley (1991) raise however some problems related to the entity that should pay for participants, when these funds should be received and the criteria used to distribute them. Wood (1995) argues that the competent authority should define the criteria (and incorporate them in legislation) for the kind of projects with possibilities for participants funding.

Related to this is the problem of information access as far as costs of EIS (environmental impact statement) are involved. These costs vary largely in EIA systems from free charge to very expensive. If participation is to be fair and open these documents must be obtained at reasonable prices (Wood 1995). The use of electronic technologies in dissemination of this documentation and being accessible in several local places would perhaps be a step forward in saving money and time.

Monitoring

Monitoring of public participation in EIA is seen as an important step in achieving its improvement and effectiveness. Following Mitchell (1996): " without monitoring it would be difficult to know whether policies or actions were moving a society towards or away from characteristics consistent with sustainability". Planning effective participatory processes implies not only the identification of the public, choice of techniques and mechanisms for two-way communication but also the review or monitoring during the process and after its completion to make an assessment of its

effectiveness in order to improve further practice. Rules of good practice point out that a participatory process should be carefully planned and with enough flexibility in its design. Flexibility allows adjustments in the process in order to solve detected gaps or new necessities. Roberts (1995) states that it is important from the beginning to have a set review points or times where the public and the agency in charge of the consultation process could assess the approach taken and define, revise and confirm new strategies.

7.3.4 The "Which" issues

The "Which" issues respect coherence, transparency and reliability of the process of public participation and consultation in the EIA system in order to achieve sustainable goals, which are the main objectives of decision making in environmental planning.

These issues are deeply rooted on the context such as the political culture of a country, which favours or not open decision making processes; the organisational culture, which is more focused in short term objectives, resolving specific problems rather than focusing on long term preventive objectives as sustainable development; the prevailing ideas, values and societal beliefs related to "ideas on science" scepticism or confidence in the State. Coherence means the integration of EIA in the broad context of sustainability and co-ordination of sectoral policies. Transparency and reliability are fundamental to get confidence in the processes and are related to political commitment to EIA, adequacy between legislation and implementation and perceived attitudes of stakeholders. They deal in a great part with consistency of decision making perceived by the public leading or not to co-responsiveness in decision through participatory processes.

Articulation of EIA with policies for sustainability

The last goal of EIA and its inherent public participation is to influence and contribute to sound decision making, which foments sustainability.

Throughout the years of practice with EIA some "structural weaknesses" have been noticed and several measures to solve them have also been implemented in different ways with the same objective - to use EIA as an effective environmental management tool to achieve sustainable goals. This has meant to enlarge the scope of EIA from the operational level (project EIA) to normative and strategic level where main decisions are designed and implemented. At the operational level main important decisions have

already been taken and usually without environmental analysis (Sadler and Verheem 1996; Mostert 1996) and many times only by political and economical reasons.

Several attempts have been done to address this issue. The first used since NEPA deals with the statement in EIA of the need of the action as well as the choice of different alternatives. However, as pointed out by Sadler and Verheem (1996) "there are limits in addressing these considerations in project EIA with complex and controversial public sectors proposals". Some innovations have been tried as Regional Assessment, coordination and integration of EIA in comprehensive land and development planning, Programatic EIA, Environmental Inquiries as policy mechanisms (Sadler 1996). Smith (1993) presents a framework based on the need felt to redefine the role of EIA in sustainable resource management, incorporating EIA in the planning process. This EIA redefinition should take into account "foster sustainable resource management; provide a means for environmental planning; involve stakeholders in the development of a strategy for EIA. Partidário (1992) also presents a framework to establish a closer integration policy/EIA in planning processes named EAR (Environmental Assessment Review).

From all the attempts done and mainly with the recognition that to attain the goals of sustainable development, EIA should be applied to PPP (policy, programs and plans) where strategic resolutions were taken, SEA appears (see also chapter 4). The proactive approach of SEA purpose maximises its value for decision making (Sadler and Verheem 1996) because according to these authors, SEA provides for a capability to:

- Deal with the policy sources, rather than the symptoms of environmental deterioration
- Address cumulative effects at an early rather than late warning stage
- Streamline and focus EIA in those cases where policies, plans and programs initiate projects and activities

According to Smith (1993) and Mitchell (1997) planning processes are developed in three stages: normative, strategic and operational. In the normative stage decisions are taken to determine *what ought to be done*; in the strategic level decisions are made to determine *what can be done* and in the operational level decisions are made to determine *how will be done*. Many times problems in public participation occur because people are involved at the operational level but they want to discuss issues at the

normative and strategic level and these issues are already resolved (Mitchell 1997; Mostert (1996). As Mitchell (1997:163) points out "if people arrive at a public hearing or meeting with different expectations as to whether the issues being discussed are normative (mix of supply and demand management strategies) or operational (sites for new power resources) a high level of frustration can be created". The question is whether it is permissible to question policy decisions at an EIA project level. To discuss things in EIA of projects at a strategic level will imply great delays and complicate decision making. However, not to discuss can limit the usefulness of EIA and promote bias if policy decisions had not been based on quality or sustainable principles (Mostert 1996). This is a dilemma that could only be solved by enlarging EIA to a broader strategic level through SEA (Mostert 1996; Van den Borne 1996).

SEA is the EIA of PPP (Policies, Plans and Programmes). According to Glasson et al. (1994) a policy is a guide for action, a plan is a set of co-ordinate and time objectives for the implementation of a policy, and a programme is a set of projects in a specific area. They work in a tiered way since a policy provides the framework for plans, plans provide the framework for programmes and the latter for projects. In Fig 7.3 this articulation is presented.

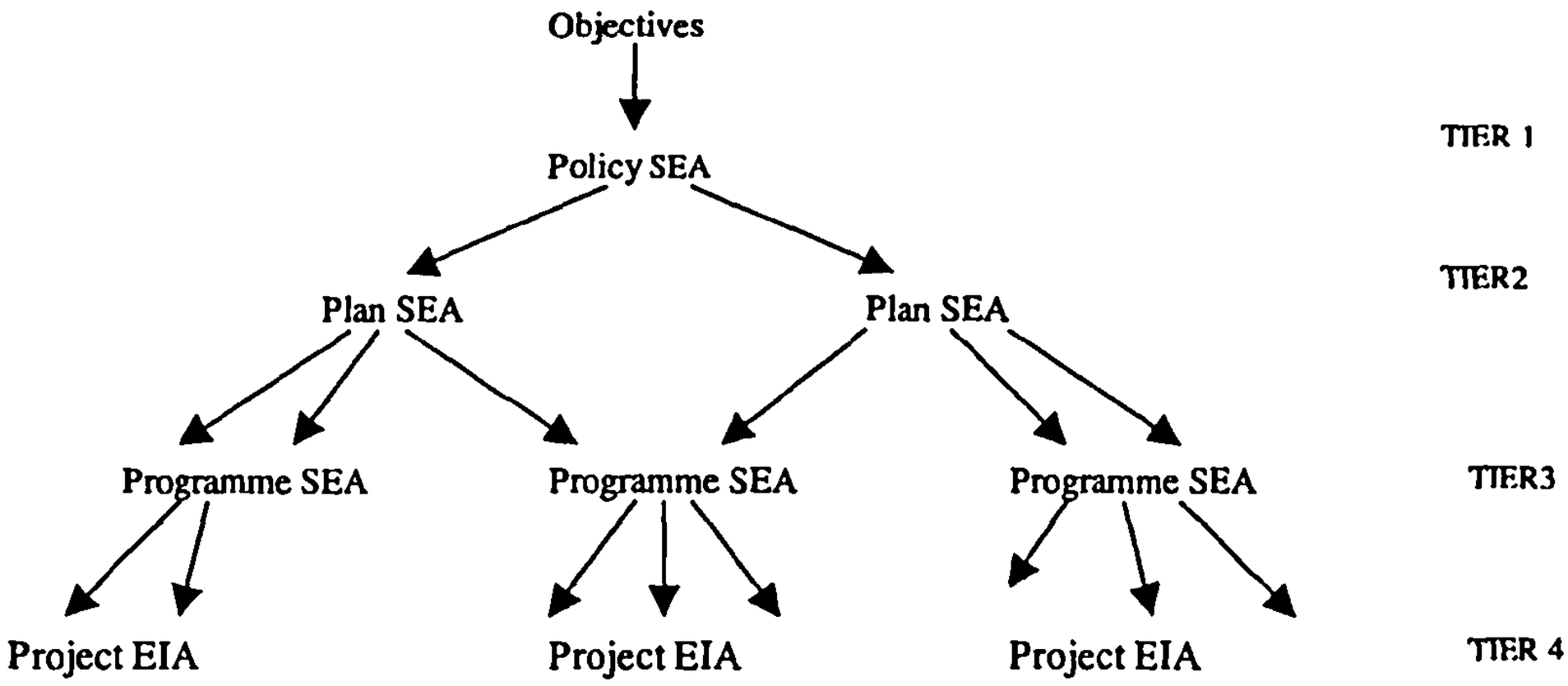

Fig 7.3 Tiers of SEA and EIA
Source: Glasson et al (1994:300)

Two types of SEA systems are described by Glasson et al. (1994): the environmental system where SEA expanded from project EIA and "aims to head towards sustainable development by extending green policies" and "trickle down system where the aim is to implement sustainable development directly by making it a central objective of each

PPP" (Plans, Programs and Policies). The USA and New Zealand systems present examples of the former and the Dutch one was the first example of a "trickle down" system.

Many limitations are still present with the implementation and effectiveness of the SEA systems. Glasson et al. (1994) focus some of them as political systems fostering more short term objectives than long term; difficulty to set effective parameters for sustainable development, difficulty in achieving political agreement at a global level as well as the amount of data needed; complexity in determining the carrying capacity. In spite of these limitations there is a widespread consensus in the enlargement of EIA to a strategic level and many attempts have been done with success, especially related to plans and programs. Public involvement is considered essential at this level though with different characteristics than a project level. More flexibility is required taking into account the open-nature of policy making. As stated by Sadler and Verheem (1996:87): "At this level the form of public involvement should be consistent with the nature and scope of the issues generated by the policy, plan or program and reflect the interests and values affected".

Political commitment and adequacy between legislation and its implementation

Nogueira and Pinho (1994) consider that the spread of EIA worldwide reflects its recognisance as an useful environmental policy instrument thus pointing out that whether some countries have adopted EIA as an assumed necessity to integrate environmental factors in decision making, others on the contrary, have applied it mostly because of external pressures, existing mandatory Directives and International Conventions. They also recognise that the initial EIA philosophy from NEPA, intending to open up decision making to public involvement has been blurred or even omitted in some national options. Smith (1993) in the same line of thinking points out that constraints of political commitment or adequate institutional arrangements are recognised as major barriers to the application of any EIA procedures reflecting lack of awareness of the benefits of EIA as well as its role in planning resource development.

Environmental management tools as impact assessment and land use planning are ruled or defined by institutional arrangements for its implementation. Institutional arrangements are defined by Smith (1993:30) as "a composite of legal powers, administrative structures and financial provisions, which give rise to a definable system

of decision making" and they respect administrative structures, decision rules, mandates, finances as well as operations that affect resource management.

The implementation of environmental policies implies first of all a political commitment but also robust administrative structures that make effective coordination between several areas implicated. Yearley et al. (1994:15) points out that "such coordination may be hampered because of inadequate administrative structures, institutional fragmentation, lack of resources and staff-power to commitment to environmental management or because actors do not treat environmental concerns as matter of priority". Pridham (1994) adds ministerial rivalry and bureaucratic lethargy as other factors hampering effective implementation.

Attitudes of stakeholders

Political commitment, existing legislation and institutional arrangements are important determinants of the success of implementation of impact assessment, but there is another important point depending on the attitudes of the public or specifically the stakeholders.

Environmental conflicts present specific characteristics such as: scientific complexity, uncertainty, irreversibility of some effects, with lack of precise definition of boundaries, parties and costs, ideological differences and this being the reason why many stakeholders become involved in different questions at different times (Smith 1993). Hyman and Stiftel (1988) add another fact to the political dimension of environmental issues: the poor definition of property rights for natural resources providing significant benefits to a small segment of the population.

Impact assessment deals with the governance of resources with implicit environmental conflicts and this implies the use of scientific information as well as political choices, these influenced by cultural attitudes, socio-economic conditions and institutional variables (Smith 1993). Especially in impact assessment the role of stakeholders is relevant as decision making in environmental issues is essentially a bargaining process (Smith 1993; Mitchell 1997). Dorcey (1986) quoted by Smith (1993:60) outlined four characteristics for the bargaining in resources management:

- A wide range and number of public and private actors are involved
- Individual groups act through coupled organisations
- These interactions create numerous arenas for decision making

- The actions, organisation and decision making arenas are linked by the common thread of bargaining.

Dorcey still stresses that the success of bargaining is influenced by the institutional structures, the power and influence of the actors involved, their individual bargaining skills and the opportunities for co-operation and accommodation. Smith (1993) sees the success of bargaining depending on two conditions: "the basis of conflict be understood and its different manifestations be recognised ".

Attitudes of stakeholders will be very much dependent on the knowledge and awareness of the process and its perceived reliability. Transparency is a relevant ingredient and as Clark (1994) points out, transparency is achieved when people feel confident of the entire process and that their values and preferences are taken into account in decisions. The existence of formal guidelines with impact assessment procedures and its publicity should have an important role in achieving transparency. These guidelines can also be used according to Smith (1993) to give directions to developers in different resource sectors as to the expectations for planning through impact assessment.

The involvement of stakeholders at early stages of the planning process like the scoping stage (formal or informal) will be most helpful to foresee the nature of problems, different views and possible alternatives as well as creating a basis for trust and commitment in solving problems and creating conditions for a sound decision making.

A further important condition dealing with attitudes of stakeholders and the effectiveness of public participation respects the inherent subjectivity of the EIA process already tackled in part when dealing with quality of information. Trust and confidence will decrease if stakeholders suspect that an EIA is biased, diminishing possibilities for compromises or acceptance of an action and leading to unfair decision making (Mostert 1996).

The creation of an environment of trust and confidence is essential to the success of any participatory program. When projects related to risk are at stake it becomes a main key issue. Covello and Allan (1988) cited in Petts and Edulgee (1994:401) present a comprehensive list of attitudes of those promoting risk communication in such cases in order to promote a climate of trust. These seven rules imply: accept and involve the

public as a legitimate partner; plan carefully and evaluate effort; listen to people's concern; be honest, frank and open; co-ordinate and collaborate with other credible sources; meet the needs of media; speak clearly and with compassion; For each of these seven rules guidelines exist to accomplish them.

Respecting attitudes of the different stakeholders and the effectiveness of public participation, Law and Artig (1993) quoted by Mitchell (1997) argue that more than attendance in public meetings, the effectiveness of the process of public participation is determined ultimately by "trust, communication, opportunity and flexibility". Mitchell (1997:157/158) presents six elements for effective participation related to the attitudes of participants as:

- Equitable representation and power for participants need to be agreed upon and established. Even though some parties may have fewer resources or capacity than others, means must be found to ensure that all partners are involved.
- Communication mechanisms. There is a need to facilitate both communication internally between the partners and communication with groups external to the partnership.
- Compatibility between participants. Such compatibility is often based on respect and trust even when legitimately different expectations and needs exist. With respect and trust differences can often be overcome and indeed can be used to help each participant to broaden his or her outlook.
- Benefits to all partners. If there are no real benefits to all the participants and if they are not perceived to be shared fairy then a sustained partnership will be difficult to achieve.
- Adaptability. Especially given the uncertainty and changing circumstances that are often encountered in resource and environmental issues. A willingness to be flexible and to learn from experience is usually a strong advantage.
- Integrity, patience, perseverance by partners. Often obstacles will be encountered, frustration will occur, progress will be slow or slowed down and signs of progress may not appear for some time. These elements combined with trust and respect, allow partners to get through the difficult times, which inevitably occur.

7.4 Conclusions

Throughout this chapter key issues respecting public involvement in environmental management, focused on EIA have been dealt with. Aspects of increasing consensus on public participation effectiveness have been pointed out based on a broad review of relevant literature. They formed the foundation for the analytical framework designed

and presented at the beginning on Table 7.1. The objective of this framework has been the creation of a tool that could help in a systematic and encompassing way the analysis of participation in a specific EIA system. It is a systematisation of main issues and conditions of good practice within the overarching goal of EIA - achieve sustainable development. Important contributes for this analytical tool were Renn and Webler meta-criteria of fairness and competence, Smith's EIA evaluative framework, Wood's criteria and many others focused throughout the chapter.

The representativeness of participation, the objectives to be achieved through participative practices, the design of processes, as well as issues of coherence of policies to be implemented, confidence and transparency of processes have been considered the key issues public involvement faces in EIA. These issues were set in categories labelled as Who, Why, When, How and Which. Criteria and conditions for analysis have been presented summed up as the following:

Usefulness

Public participation processes should have implications in decision making. The latter must reflect and whenever possible accommodate different views on a development action. In EIA the usefulness of public participation is to combine in the existing legal frame technical/scientific and social rationalities in order to get decisions based on the best available knowledge with greater public acceptance.

Usefulness of public participation in EIA presents also relevant aspects related to pedagogical principles. It is a means of increasing environmental awareness and responsiveness. It is also a means of developing more active citizenship where people can be aware of the mechanisms used in decision making policy. If it is true that EIA and public participation will be better valued in societies where environmental citizenship is higher it can also be argued that the dynamics created by participatory meaningful processes can contribute to development of this objective. Factors linked to usefulness are:

- Perceived and accepted ideas on the benefits of public consultation from stakeholders (public, developers, agencies, consultants, decision makers)
- Contextual values: environmental literacy, awareness and responsiveness
- Degree of participative culture: degree of openness on decision making and degree of organisation of sectoral interests

- Existence of legal rights and institutional arrangements for public participation
- Existence of guidance on rights and procedures to participation

Equity and fairness

Effectiveness of public participation implies that concepts of equity and fairness be involved. Some steps are relevant to achieve representativeness of stakeholders involved and interests and values at stake. Firstly is the identification of all stakeholders that could be affected by decisions. The second is the implementation of measures to involve them in a meaningful way, using strategies adapted to different "publics" affected. This is in order to provide a common ground of information, knowledge and dialogue. The last is the incorporation in decision making of interests and values at stake. Factors linked to equity and fairness can be expressed as:

- Existence of criteria to identify publics affected and conditions for involvement
- Existence of lists of consultees for different phases of involvement
- Conditions to balance the influence and effects of lobbying in interest representation with positive discrimination measures if necessary
- Funding for participants

Efficiency

There is widespread consensus that public participation should occur in early phases of planning in order to get the most benefits of it such as: incorporation of local knowledge; identification of public expectancies and areas of controversy; consideration of alternatives; creation of a climate of trust and obtain co-responsiveness of the public in the development action. In EIA, the scoping phase is ideal to achieve these benefits. The implementation of participatory processes should be planned taking into account the objectives of the process, the use of a blend of mechanisms that can provide information and knowledge, two-way flow of communication, feedback on decisions taken and time and resources needed. Meaningful participatory processes need time and resources but it should be considered that benefits produced by a fair process can compensate in the future time and costs spent. Competent people with skills and knowledge on the issue should manage public participation processes. Participatory programs and regulations should have a degree of flexibility to allow coping with specificity of projects, phases of consultation and "publics". Monitoring is important to

assess the development of programs, adapt to new situations and evaluate processes. Factors linked to efficiency are:

Phases of involvement:

- Before decisions are taken
- Involvement in early stages of EIA or the planning process
- Co-ordination with the schedule of decisions to be made contributing to them

Design:

- Flexible to be adapted to the characteristics of projects, phases and stakeholders
- Time and cost
- Provide dissemination of information; different phases of communication and dialogue; feedback and post evaluation

Information/ Communication:

- Wide dissemination
- Provide useful, accurate and understandable information
- Costs of EIA documentation at reasonable prices
- Outcome of the review stage made public
- Provide adequate mechanisms for two-way flow of communication

Degree of public involvement:

- Clear definition of the degree of public participation expected
- Participation in the agenda and schedule for participative processes
- Assurance that rules are known and accepted

Mechanisms and methods:

- Adapted to the stages of the project, to specific contextual aspects, the type of stakeholders involved and the objectives expected

Monitoring:

- Existence and implementation of mechanisms to evaluate participation processes

Coherence, reliability and transparency

The last goal of EIA and its inherent public participation is to contribute to sustainable development. Coherence in this framework implies that the EIA process is articulated with broad principles and accepted strategies for a more balanced future that preserves resources and takes into consideration interests of existing and future generations. This implies EIA at a more strategic level of plans, programs and policies. At a project level people is asked to participate but main decisions and fundamental options have already

been taken without public consultation or environmental consideration. Society should be involved in decisions about "what ought to be done" and "what can be done" and not only to determine "how will be done".

It is also relevant for public participation effectiveness that society has confidence in EIA and public consultation processes. Confidence must be a two-way process between citizens and governments and institutions. If sustainable development is the objective to pursue public participation needs to catalyse the public in adopting attitudes of cooperation in order to enhance shared values and goals rather than stress individual interests. This is the pedagogical role of public participation providing citizens an opportunity to learn on technical and political aspects as well as constructing an image on the issue that considers the generalised will and not only individual concerns. For this to happen it is essential that transparency of processes and decisions exist and this implies lack of secrecy on information. All the information relevant should be public, phases of processes must be understood; people should have a say in agenda and rules of participatory processes. There must be consistent mechanisms and institutional arrangements to provide the implementation of legislation and of the decisions taken.

Coherence:

- Articulation between EIA and broad environmental and planning legislation
- Extend EIA to other policies for sustainable development
- Co-ordination of environmental policies and educational programmes

Reliability and Transparency:

- Existence of political commitment to the application of legislation
- Existence of institutional arrangements to the implementation: legal, political, administrative, financial
- Conditions to perceived commitments to implementation: guidance; openness of the processes/lack of secrecy; transparency of actions; feedback on decisions taken; report on conclusions of participation; declaration on decisions taken and the way decisions were influenced by public the consultation processes
- Attitudes of people in charge: creation of a climate of trust, respect and openness

This analytical framework will be used in the practice in the next chapters related to the empirical work carried out. The assessment of this framework will be provided in the concluding part, in Chapter 12.

Part IV– THE EMPIRICAL PART

8. RESEARCH METHODOLOGY

8.1 Introduction

This chapter intends to present some basic assumptions taken from the beginning of this investigation on the relationship between the focus of the study and the philosophical options to deal with it. It will then move on to fundament the research design chosen and the procedures carried out to accomplish the objectives of the study. Those procedures are related to data gathering, data analysis and interpretation. Since issues related to trustworthiness are relevant in this kind of research it seemed important to present in detail main steps of this investigation.

8.2 Epistemological basis

Morgan and Smircich (1980) cited in Easterby-Smith et al. (1991:41) argue that the appropriateness of a research approach "derives from the nature of the social phenomena to be explored". Yin (1994) is more explicit attributing the adequateness of the research approach to three basic points: the type of research question posed; the extent the investigator has over the actual events and the degree of focus on contemporary as opposed to historical events. This study aims at a better understanding of the phenomenon of public participation in EIA, in the context of the Portuguese society and the dynamics created by this interaction. The phenomenon is somehow new, since it appears because of the enforcement in Portuguese legislation of the EU Directive on EIA in 1990, with mandatory procedures for public participation. Public consultation and participation is undertaken in a set of legislative and organisational procedures that constitute the frame of EIA system but is also undertaken in the main background context of social/cultural reality. Phenomenon and its context interact each other in such a form that it is difficult to separate them without emptying their respective meanings.

Philosophical debate underlying research epistemological issues on social sciences range from two main paradigms – the positivist and the phenomenological, though a great variety exist within each of them and attempts to interlink both have been tried. Fig 8.1 translates the extreme main views of each of them as far as philosophical level

(world views), social level (guidelines on the conduct of research) and practical level (methods and techniques employed by the researcher) are concerned.

Table 8.1 Key features of positivist and phenomenological paradigms
Source: Easterby-Smith et al. (1991:27)

	Positivism paradigm (Quantitative approach)	*Phenomenological paradigm (Qualitative approach)*
Basic beliefs	The world is external and objective Observer is independent Science is value free	The world is socially constructed and subjective Observer is part of what is observed Science is driven by interests
Researcher should	Focus on facts Look for causality and fundamental laws Reduce phenomena to simplest elements Formulate hypotheses and test them	Focus on meanings Try to understand what is happening Look at the totality of each situation Develop ideas through induction from data
Preferred methods	Operationalising concepts Taking larger samples	Using multiple methods to establish different views of the phenomena Small samples investigated in deep over time

From the main philosophical approaches to investigation, this research stems in a general way from the qualitative or phenomenological paradigm proposing a holistic view of the phenomenon. It means that a systemic approach is taken to understand the interaction of variables in a complex environment conversely to an analytical approach to understand a few controlled variables (Salomon 1991, in Miles and Huberman 1994). Reasons for this are the following:

- The focus of the research questions is on interpretation, on meaning rather than quantification. The understanding of a phenomenon relies on different perspectives and points of view in order to develop ideas through the induction of data. Quantitative methods as argued by Easterby-Smith et al. (1991:32) "are not very effective in understanding processes or the significance that people attach to actions"
- The phenomenon to be investigated was at the beginning unstructured or a collection of unstructured situations with great complexity. It was difficult to establish from the outset the relevant areas, issues of interest as well as definite ways to explore the issue. As such, a qualitative research as stated by Cassel and Symon (1994:4) "is less driven by very specific hypothesis and categorial frameworks and more concerned with emergent themes". Qualitative research allows flexibility in the research process. Actually, a great part of this research has

dealt with framing the issue in order to create a framework based on theoretical concepts and empirical work, which, could help in approaching it meaningfully.

- The relevance of the context in understanding public participation leads to a great number and richness of variables. It would be an almost impossible task to select the relevant ones. Experimental design only focuses phenomena isolating variables and typically control out the context (Yin 1994). Qualitative methods are then more appropriate since they "seek to understand phenomena in their entirety in order to develop a complete understanding of a person, program or situation. This is in contrast to the experimental paradigm, which aims to isolate and measure narrowly defined variables and where understanding is tantamount to prediction and control" (Rudestam and Newton 1992:32)
- The research focus is on a recent phenomenon, which has been evolving in a dynamic way, since a social phenomenon is not static. Only qualitative methods are sensitive enough to allow detailed analysis of change (Cassel and Symon 1994), since quantitative methods focus on what is or what has been recently (Easterby- Smith et al. 1991).

However, the point of view taken in this research is also pragmatic and takes Miles and Huberman (1994:4) realist perspective that "social phenomena such as language, decisions, conflicts and hierarchies exist objectively in the world and exert strong influences over human activities because people construct them in common ways". Easterby-Smith et al. (1991) also observe that in spite of a clear dichotomy in positivist and qualitative paradigms the real world of research is not black and white and involves usually a lot of components of both paradigms.

Both qualitative and quantitative approaches present strengths and weaknesses. Quantitative data are recognised by their reliability and representative samples allow very broad generalisations. Interpretation of quantitative data through statistics is considered faster and economical. However, quantitative methods are considered inflexible and artificial, less helpful in generating theories and not effective in understanding processes and significance people attach to actions. Their weaknesses are conversely the strengths of qualitative methods. The latter are considered in-depth, rich, holistic, allowing understanding of situations, contributing to the development of theories and capable of dealing with change. On the other side qualitative methods are considered less reliable, inherently subjective, harder to control and time consuming.

It has been currently advised that practical standards could be reached which are workable across these different perspectives. Triangulation has become a common strategy trying to join strengths of each approach to compensate respective weaknesses. Data used in this research, as explained further, rely in a great part in qualitative data from interviews. However, triangulation of data using quantitative data has also been used in order to interrogate findings, support or at least not contradict them. This triangulation included data source and data type (qualitative text, quantitative existing data) in order to pick triangulation sources that have different biases and strengths, complementing each other (Miles and Huberman 1994:266).

8.3 Research design and procedures

The exploratory character of this research as well as the interaction context/phenomenon and the contemporary character of the latter have led to face case studies as the more appropriate methodology from the set of existing qualitative approaches. Hartley (1994:227) argues: "the key features of case study approach is not method or data but the emphasis in understanding processes as they occur in their context. The emphasis is not on divorcing context from the topic under investigation but rather to see this as a strength". Moreover, case studies have a basic methodological exigency, which is combining several techniques, which allow different perspectives to cope with reality, overwhelming deficiencies of other conventional techniques. As stated by Yin (1989:23): case study is "an empirical inquiry that investigates a contemporary phenomenon within its real life context when the boundaries between phenomenon and context are nor clearly evident and in which multiple sources of evidence are used". Arts (1998) justifies the common use of case study in planning and policy research because the investigation of complex phenomena implies the understanding of the holistic and meaningful characteristics of real life events.

Flexibility and interactivity characterise the research design: Flexibility to be adapted to the evolution of results of empirical data and ongoing literature review; Interactivity meaning that the process is not linear but cyclical, feeding back different stages. The Portuguese specific participation process is seen as a broad case study with embedded case studies of real life EIA projects. The evolution of the research work done presents two phases of investigation working interactively.

The first phase aims at achieving a generic profile (broad picture) of public consultation and participation in the Portuguese EIA system. This means an understanding of the phenomenon in its legislative, institutional context as well as its implementation in practice and outcomes to allow the identification of main gaps and get ideas for its improvement. This broad picture was tested and reviewed during the ongoing research as significant aspects emerged.

The second phase aims at reviewing, completing and consolidating previous findings (a vivid picture). A main source of data was empirical data from the interviews to stakeholders of EIA processes. Triangulation with data from EIA processes, and document analysis were also important sources of data going in pair with literature review.

Twenty-nine qualitative interviews have been conducted during this investigation. Table 8.1 presents the list of the interviews done. Fig. 8.3 presents the design of the research project.

8.3.1 First phase

Data gathering

In the first phase, 13 open-ended interviews to stakeholders of the EIA process were the main source of empirical data, triangulated with unobtrusive measures. The latter refers to documents on EIA processes, empirical existing work and particularly the statistical analysis from Gil and Martins (1996) and Observa (1998) respecting public participation processes during the periods (1990-1995) and (1990-1997) respectively.

Sampling interviews to stakeholders

In procedural terms the basic idea was to let people representing a specific interest tell his/her point of view about the process, their understanding about its usefulness, effectiveness as well as the interactions with main features of the Portuguese context.

Stakeholders were defined in the sense of Burgoyne (1994:187) as "interested parties who affect are affected by experience and conceptualise the phenomenon". In spite of the fact that EIA stakeholders vary from project to project it is possible to define which main interests and views are at stake. Key actors vary but key roles are mainly the same. As Glasson et al. (1994:48/49) argue any proposed development presents "a

configuration of interests, strategies and perspectives" but it is possible to divide the actors involved in the planning and development process broadly in four main groups: developers; affected parties; regulators and facilitators (Glasson et al. 1994). Those categories were adapted to the Portuguese EIA system and interviews were conducted to representatives of each main group: the proponents of projects *(developers)*, EIA consultants *(facilitators)*; the regulatory agency in charge of public participation (IPAMB), Evaluation Commissions, Council for Sustainable Development and gurus on EIA *(regulators)*; Environmental NGO's at local and national level, Local Authorities divided in Municipalities and Parish councils, civic and professional associations *(affected parties)*.

Initial interviews have also helped in the selection of specific stakeholders. For instance the difference between municipalities and parish councils within Local Authorities emerged when different roles and positions have been stressed by one interview. The idea to interview a representative of CNADS (Council for Sustainable Development) also emerged when the articulation of decisions in the context of broad policies have been discussed in an interview. As pointed out by Burgoyne (1994:19) "collection of data from one interested party will tend to identify other stakeholder which can then be followed up".

An interview guide was used for the first interviews. It has been however modified through use including topics, which had not been included originally. For the first interviews a broad topic guide dealt with open questions[51] such as:

- How do you see public participation in the Portuguese EIA system?
- How does Portuguese society react to this instrument?
- How does the process work in the practice? (organisational procedures; mechanisms used)
- Main strengths and weaknesses of the process (related to the context, and to the law)
- Ideas for its improvement

[51] First question was used almost word-for-word at the beginning of the interviews though the latter ones have remained more as broad topics to deal with as the conversation was evolving and to be covered in the course of the interview.

Each topic gave origin to many other questions related to the ongoing conversation. The amount of data gathered when first interviews were conducted has led for the search of an analytical framework to guide data collection and analysis. The analytical model presented in the precedent chapter was then designed working also as a broad frame for interviews incorporating key issues derived from first interviews, which seemed relevant to research questions.

Contacts for the interviews were done by phone and then a letter was sent explaining the context of research (identification of the researcher, main issues and aims of the investigation, and the objective of the interview). Confidentiality of research was assured explaining that if parts of the interview were to be used in the final text they just give the stakeholder position (proponent, Evaluation Commission, etc). At the beginning of the interviews these issues were repeated stressing the objective of the interview for the aim of the research and it was asked permission to use tape record. Interviews were conducted in a conversational style and were taped; transcript and send back to respective stakeholders interviewed since this procedure is consistent with ethical factors of research. It is moreover advised in order to get reliability of data. One of the interviews was done by telephone since there was no possibility to talk to the person in other way.

Analysis and interpretation of data

Literature on qualitative interviews give important clues and set important considerations for its use in the practice, as for instance Marshall and Rossman (1995) Easterby-Smith et al. (1995); King (1991); Miles and Huberman (1994) Perti (1995). Marshall and Rossman (1995) state the five main steps of analytical procedures such as: organising data, generating categories, themes and patterns, testing emerging hypothesis against data, search for alternative explanations and write the report. For Easterby-Smith et al. (1995) seven categories exist in the analysis of data: familiarisation; reflection; conceptualisation; cataloguing concepts, recoding; linking and re-evaluation. All these steps have been summarised by Perti (1995) in two metaphors: "purification" and "unriddling". The former means transformation of raw data in more manageable data by "concentration on essentials", this implying a great familiarisation with data, and forming themes, patterns, categories. The latter means the interpretative explanations with references to other research and theoretical frameworks.

Data from the interviews followed basically those steps. Raw data have been transformed in more manageable data, after familiarisation with each interview and through formulation of themes, patterns and categories. Explanations have been asked through existing research and theory reports on findings have been done and re-evaluated against new evidence. It has been an iterative process until the end of research as presented by Miles and Huberman (1994) in Fig 8.1.

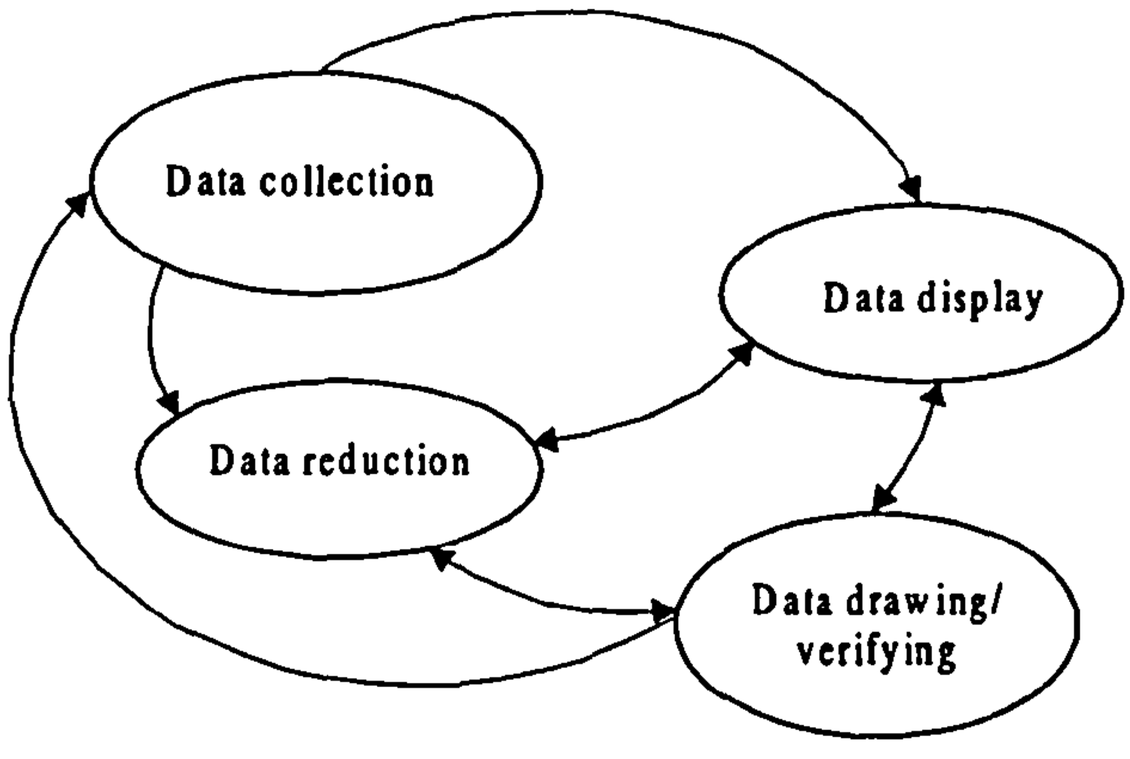

Fig 8.1 Components of data analysis: interactive model
Source: Miles and Huberman (1994:12)

Although the analytical model (presented on Table 7.1) was intended to be a "boundary device but not a straight jacket" to guide the analysis of data collected, according to Miles and Huberman (1994:269) it is "perfectly legitimate and often desirable to work from the top-down from a conceptual framework to the collection of information testing its validity". It could be revised, changed and completed as the work progresses. Theoretical constructs on cultural/social contexts especially the broad hypothesis of Santos about "semiperipheral societies" as well as theories on risk society and sustainable development were permanently present foreshadowing the interpretation of data, searching for new connections between empirical data of the real world and theory. This was due to the fact that it was necessary to equate practices, processes and concepts of EIA public participation specifically in the Portuguese context.

The search for alternative explanations has also been a systematic attitude trying to combine data from the interviews with other existing data to help validate conclusions. This is in the line of Perti (1995:18) who compares the work of data analysis and interpretation to detective work, stating that "the more clues that fit in with the explanatory model the greater is the possibility that the solution is the right one". The

strategy has been linking empirical data gathered with existing theory, asking questions as proposed by Easterby-Smith et al. (1991:109) about supporting or challenging existing knowledge and answering questions revealing differences:

- Does it support existing knowledge?
- Does it challenge it?
- Does it answer previously unanswered questions?
- What is different?
- It is different?

8.3.2 Second phase

After getting an initial generic profile of Portuguese public participation the second phase of investigation has been designed to use embedded cases of specific Portuguese EIA processes to test and review findings. This is an interactive model, which permits to examine previous findings from the first phase against the evidence obtained in case studies and revise and complete them. A meaningful aspect for the adoption of this strategy also refers to the importance of the public at large (resident's) points of view. Their opinions seem relevant and could only be obtained in real life cases, as their interests are not consistently identified as stakeholders out of specific processes.

In sampling case studies one criterion should be the date of EIA processes. More recent cases seem best suited as there have been innovations and there are signs of increasing participation. Another criterion should be the representativeness of the cases themselves, meaning its relevance to the subject. It would also be important that cases were completed meaning that the final decision making by the licensing authority has been known. Within these parameters it seemed appropriate to ask experts working in public participation processes an indication of a number of cases they would find more representative of the Portuguese reality and use their opinions.

However, when choosing case studies, an important project has been moving the entire Portuguese society. It was the project for the treatment of industrial waste in cement plants or the co-incineration case. It was a multi-faceted and highly polemical case. It could be considered as an extreme case of the phenomenon being studied or preferably a revelatory case because of its richness. Richness in this case must not be faced in the way it could be generalised but rather because it seemed to contain multiple structural incidences and interactions enhancing the main features of public involvement processes. Some of them considered relevant for this study are the following:

- The relevance of the social/political context in which public participation takes place
- The character of environmental problems considered by its high complexity "transcientific" or "wicked", meaning that they could not be solved by science alone
- The way social rationalities clash with technical/scientific and bureaucratic rationalities. Theoretically EIA should be an adequate tool to address those issues by bringing together in the context of decision making the best scientific knowledge and the relevant issue of values
- The articulation of decisions with principles for sustainable development due to the implications of waste management on quality of life at a local and global level, for present and future generations
- The way planning, EIA and decision making are interlinked since the question of needs is determinant implying consideration at strategic levels
- The way government, institutions and developers operate, react and interact with public expectancies and interests

The co-incineration project is then a paradigmatic case since the components and interactions involved shed light into the main fragilities of the EIA system and main deficiencies of methods and mechanisms used for public involvement. As stated by Hartley (1994:213) "The intention is to explore not typicality but unusualness or extremity with the intention of illuminating processes". The case is representative of main key features of complex decision making processes in the context of Portuguese society. It is a case where with particular accuracy top down approaches to planning and environmental management reveal the inadequacy to the needs of "Risk society" and principles of sustainable development.

The purpose of this case study has been to review and extend previous findings on public participation in the Portuguese EIA system already stated in the first phase of investigation. As argued by Yin (1994:38) "The single case can then be used to determine whether a theory's propositions are correct or whether some alternative set of explanations might be more relevant".

This is an in-depth case study in which an interpretive approach was considered the most appropriate to understand the dynamics of the phenomenon of participation in its specific context. The approach was mainly constructed based on different perspectives

given by stakeholders of this specific case or interested parties in the process. The analytical model (Table 7.1) was used again in order to guide the collection of data, to structure and give meaning to them. This is in the line of Hartley (1994:217) "to avoid the twin dangers of being overwhelmed by data and being drawn into narrative than theory building". It was also an opportunity to test the role of the analytical framework in operating as a broad model to be applied in public participation cases.

Second phase procedures

Qualitative interviews were once again the main source of empirical data since they permit a broad range of issues to be covered and focus on key elements. Triangulation was used with other sources of data such as the public participation files of IPAMB related to this case – Environmental Impact Study, reports from IPAMB, Evaluation Commission, Ministry of Environment and other institutions.

Sixteen interviews were conducted to stakeholders identified in the first phase: proponent, EIA consultants, Evaluation Commission, IPAMB, Local Authorities (municipalities, parish councils and association of municipalities), environmental associations at a national and local level, civic associations with important role in the process and groups of organised citizens. Since the project encompassed six different localities from the north to the south of the country, industrial and rural, it was considered essential that representatives of these different places were interviewed. Procedures identified earlier for the first phase procedures were also used to ask for and conduct the interviews A list of topics was used to address the main issues of the analytical model. Some topics have been reformulated and divided in sub-topics that have emerged from the interviews revealing key aspects of the case.

Analysis of data followed the same process used in the first phase. Although related to the specific case of co-incineration interviews conducted using the analytical framework tackled and referred also the broad process of public consultation in EIA and the context of the Portuguese society. The analysis done in the first phase was then reviewed and completed.

Particularly relevant as source of data was the report on the public consultation process by IPAMB, which included: a list of all the stakeholders invited to participate, documents on the publicity of the process, summaries of all the written comments sent

by the public, by place, category, position taken about the project and the issues raised in each comment. Nine categories of the public have been defined by IPAMB in the report on written comments such as: environmental NGO, political party, local association, institution from central, regional and local administration, local authorities, including municipalities and parish councils; trade-unions; enterprises and schools. The report also includes summaries of all the oral comments produced in each of the six hearings held, stating the name of the person and category of the participant and a summary of the main issues raised in the comments, which have been extracted from the tapes of the hearings. Public comments (written and oral) included in IPAMB reports have been used through content analysis as developed in chapter 10.

Document analysis was also very important. Most of the interviewees presented documents with public positions taken along the process respecting their associations, organisations and groups of interest such as minutes of meetings from municipalities and parish councils, technical statements on the project, public positions from environmental associations, civic associations and groups of citizens. Those documents have been organised and analysed in comparison with the content of the interviewees' discourse. They were an important part of the case study data base. Bibliographical review stressing literature on risk, was also a relevant complement to data as well as press review especially to structure events in chronological order.

There are reasons to believe that this case triggered different perceptions in public involvement in Portuguese society with profound future implications in EIA processes as well as in decision makers, proponents and the environmental agency attitudes.

Table 8.2 List of interviews done

Developers	**Public sector** **Private sector**	• Representative of main road projects (JAE) (1) • Representative of waste management project (2)
Facilitators	**EIA consultants**	• Representative in the area of social/economic impacts (1) • Representative in the area of public health (2)
Regulators	**IPAMB**	• Representative of Administration (2 interviews were done, one respecting EIA in general and the other respecting specifically the co-incineration case • Representative of public consultation management (1) • Representative of public consultation management (2)
	Evaluation Commissions	• Representative of INAG (Central Administration) (1) • Representative of DGLVT (Regional Administration) (2)
	CNADS (Council for Environment and Sustainable Development)	• Representatives (1) (2)
	Guru on EIA	• Representative (1)
Affected parties	**Statutory bodies**	• Representative of IPA (Archaeological patrimony)(1) • Representative of IR (Institute of waste management) (2) • Municipalities representatives: Évora, (1) Alhandra, (2) Association of Municipalities of Setúbal (2) • Parish Councils representatives: National Association of Parish Councils, (1) Alhandra, (2)
	Non Statutory bodies	• National environmental NGO's representatives: Geota (1) Quercus (2) • Environmental NGO's at a local level: Cegonha (Estarreja) (2) Ar Puro (Alhandra) (2) • Civic associations: Pro Urbe (Coimbra) (2) MIIB (Barreiro) (2) Maceira Saudável (Maceira) (2) • Professional Associations: Representative of Association of Biologists (1)

(1) first phase

(2) second phase

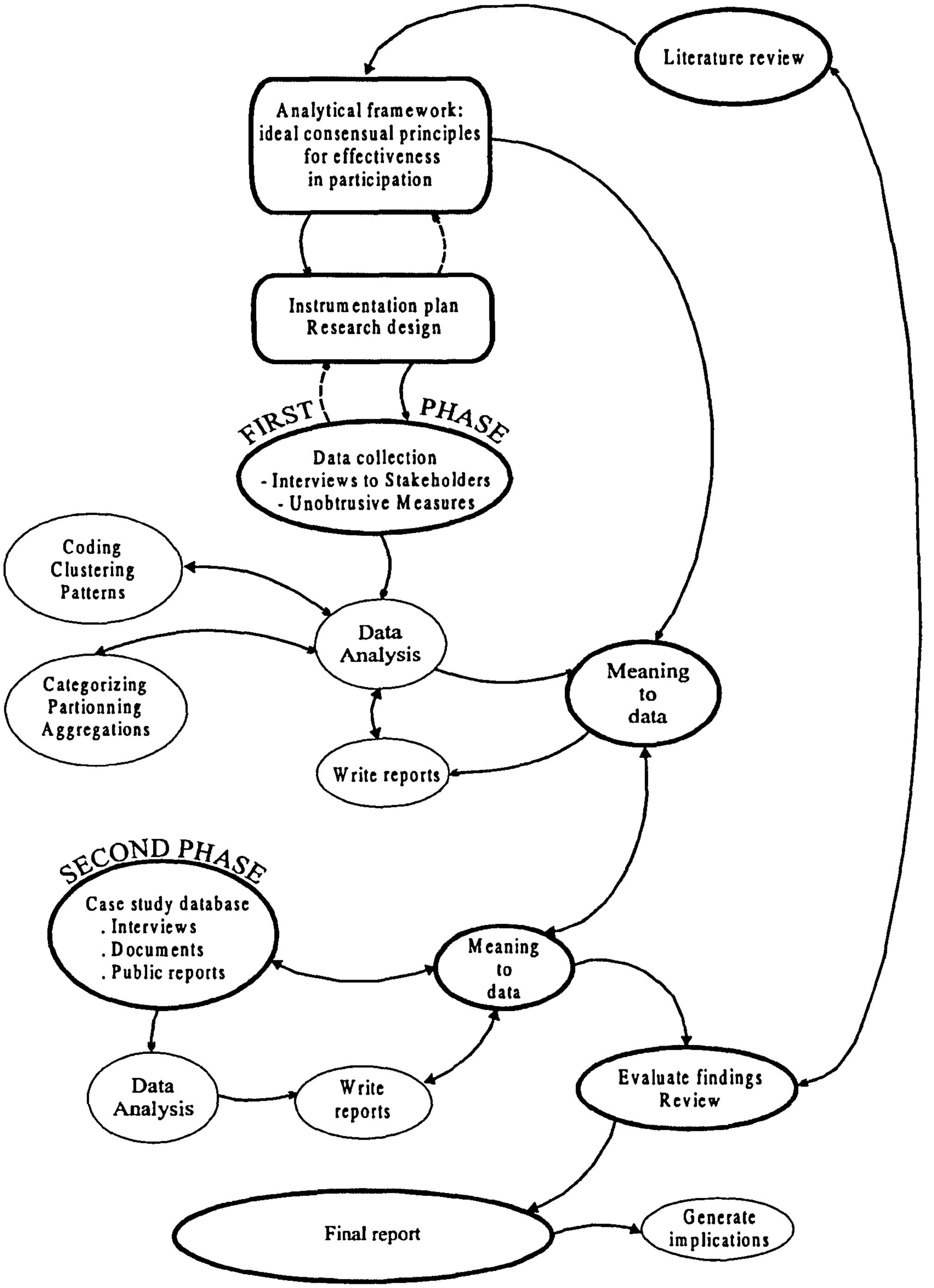

Fig.8.2 Steps in the research investigation

9 A BROAD PICTURE OF PUBLIC INVOLVEMENT IN THE PORTUGUESE EIA SYSTEM

9.1 Introduction

Having set an analytical framework for analysis of EIA public participation as well as explaining the methodology used, the following chapter will give an overview of results and interpretation of the empirical work carried out in the first phase of investigation respecting public involvement in the Portuguese EIA system. This chapter deals with the construction of a broad picture based on opinions of stakeholders interviewed, triangulated with other sources of data such as: existing empirical research mainly the statistical analysis from Observa (1998) and Gil and Martins (1996) and literature survey. The chapter ends with conclusions on the generic profile of participation interpreted within the broad theoretical framework defined.

9.2 The "Why" issues - Influence and impact decision making

The Why issues in this model deal with usefulness meaning perceived and accepted benefits of public involvement translated into the ultimate goal –influence and impact decision making. Usefulness also deals with two more important components of a public participation process: to contribute to increase environmental awareness and consciousness as well as to contribute to strengthen more active citizenship or as Webler (1995:72) puts it "a kind of on the job training for citizens".

9.2.1 Perceived benefits

In all the interviews done there is a recognition of the importance of public involvement in environmental management tools particularly in the EIA process. In theoretical terms, there is consensus that participation is a positive and useful concept with several benefits. Among those benefits, some stakeholders interviewed stressed philosophical principles underpinning the concept, exemplified by these excerpts:

> *(...)" it is a process which is quite indispensable to achieve sustainability because we won't get there with enlightened ideas. The major options in terms of civilisation might be taken with people. The universal experience demonstrates that the worst ecological catastrophes have happened in dictatorships. This should be sufficient to understand that it is not possible to get a better environment without people and this means to work and ameliorate mechanisms of participative democracy, that's the only way".* (Environmental NGO 1)

"The interests of proponents are not necessarily the same of those of people affected, people must have a word to say." (Parish council 1)

(...) "sustainable development presupposes participation but the instruments for dialogue need to be creative" (Municipality 1)

The majority of stakeholders stress however more pragmatic aspects. It is much referred the potential of public participation in ameliorating projects and getting better decisions due to the fact that consultation provides information on environmental, social and economic conditions as well as it allows the identification of public concerns and expectations. In different interviews the distance between project designers, proponents and local people's knowledge and values have been pointed out and the potential of public involvement to solve this has been focused:

"The projects are usually presented without taking into consideration local values, they are generally done by technicians in their offices" (IPAMB1)

"The benefits of participation are essentially to point out some aspects that have not been noticed because the technicians don't know all realities of the entire country (...) an expert team try to consider all the aspects, of course, but even doing so there are things related to local knowledge that escape them" (Proponent 1)

"There are certain realities that local populations can know and explain better than technicians because they know the region. We know how some environmental reports are done; in some cases biologists don't even go to the places" (Consultant 1)

"We cannot despise the great amount of local information that people living in the places have"(...) (Guru on EIA)

The information gathered on public consultation processes can contribute to make changes in the project, to analyse other alternatives or even reject projects as those excerpts show telling real stories:

"A change in the project was made to protect a specific place and it was the local population that informed us about its importance for the local community, although it was not of a great importance at a national level" (Proponent 1)

"If we had not done this process of consultation a terrible mistake would have been made with the best of intentions. There were three or four aspects of the situation that had completely escaped us and they were essential for local populations" (Guru on EIA)

"Sometimes the results of the public hearings are useful for the Evaluation Commission to justify the refusal of the project" (IPAMB 1)

Those are some aspects of positive contribution of public participation in improving decision making. The ultimate goal of public involvement is to contribute to impact and influence decision making. It is recognised by stakeholders that EIA with its inherent participation process has contributed to better decision making by providing information on projects and its impacts, using technical/scientific knowledge to inform decisions and by opening decision making processes to the public. The following excerpts are representative of the above:

> *"It is clear that the EIA process contributes to better quality of decisions, even when the decision is to change nothing, because at least it leads to a reflection about problems, about the coherence of proposals at stake, and so decision making is enriched by knowledge"* (Municipality 1)

> *(...) "EIA has contributed to the improvement of decisions. Decisions taken in the 1980's were quite impossible today, why? Because the process now is more transparent under the media's attention and above all decisions are informed with the contributions of the technical review and public consultation, which is minimally taken into consideration. The proof is that there have been projects rejected and projects to be reformulated"* (IPAMB 2)

Data from Observa (1998) shows the level of acceptance of projects in the period 1990-1997. In Annex I, 7,9% of projects submitted received non favourable comments; 16,8% asked for reformulation of the EIS and 68,3% were approved under the application of mitigation measures. The same pattern occurs with Annex III projects, except for non favourable comments that increased to 10,7%. It is not possible to state what has been the real contribution of public participation in those decisions. Its real impact in decision making lacks empirical studies. This is an important aspect to be addressed in further research. Some polemical projects have been refused or suspended due to public debate triggered by EIA processes (Wavebreakers of Douro River, Co-incineration of industrial waste, Castromil golden mines, Castanheira de Pêra dam). In cases such as the Wavebreakers of Douro River and Co-incineration, although final comments from the EIA processes were positive with incorporation of mitigation measures, the public controversy initiated in the formal consultation, increased after the decision and led to further suspension of projects. The case of Foz Coa[52] dam was different since at the time of the EIA process there was no public controversy and the final decision was positive. The intense debate promoted by the archaeological

[52] Gonçalves (1998; 2000) presents a comprehensive analysis of this case study within the dynamics of political power, science and public participation in the Portuguese context.

community sometime later, mobilised the entire society and led to rejection of the project. Contributing to this decision was not only the international recognition of the archaeological value of the engravings that would be destroyed by the construction of the dam but also the new political climate raised from the elections held at that time.

There have also been projects rejected as the result of public consultation in the formal phase as stated in this comment:

> *"We had two recent cases with negative comments. One respected a small dam, which puts in risk the population of the valley and public complaints have led the Evaluation Commission to reconsider the project location. The other respected another dam, which will submerge an agricultural area of a small adjacent village. Through public consultation and complaints of the residents it was advised the review of the project"(...)* (Evaluation Commission 1)

Those are perhaps extreme cases of the influence of public involvement in decision making in Portuguese society, due to a set of specific factors and dynamics created. The reactive approach taken in the Portuguese EIA system usually implies that only minor changes in the project and introduction of mitigation measures could be taken. This perspective is corroborated by those comments:

> *(...) "many times people interpret the process of public consultation as an administrative pro forma because it is late in decision making"* (IPAMB 2)

> *(...) "when those processes go to public consultation, what is important is already decided so the level of changes (except for drastic cases where projects simply stop, which is rare) is very small. It is difficult to introduce major changes and this is a profound limitation, not only to the quality of projects but also to the usefulness of participation and people resent this"* (Environmental NGO 1)

> *"Especially in big projects it is the methodology of the consummate fact that works and there is just a legal formality to accomplish"* (Municipality 1)

This is related to the late phase of EIA use in the planning process "the integration problem" (Ortolano and Shepherd 1995). Public participation takes place only after the project has been done and the EIA report presented. Moreover, there is no scoping phase or even any other phase of public consultation before the EIA is submitted. Usually, the proponents are already attached to specific design concepts and not receptive to ideas of change in their proposals (Ortolano and Shepherd 1995). Public consultation in this scenario is many times reduced to public relations and defence of

decisions taken just allowing some mitigation measures. Another problem encountering public participation in the Portuguese system is that there is often private consultation and sometimes arrangements between proponents and the political power especially municipalities and other institutions. This fact often leads to some discredit and mistrust from the public as explained in this excerpt:

> *"We are in a representative democracy but we are trying to act as if we were in a participative democracy. This means that public consultation is not only addressed to organisations and institutions but also to citizens and it takes place in a phase when representative democracy has already taken main decisions. (...) when the project is submitted, decisions have been taken already with municipalities concerning localisation and by the imposition of municipalities who are interested in it. There has already been an intervention of the representative democracy and when we go to public consultation people no longer trust the process"* (IPAMB 1)

9.2.2 Environmental awareness and consciousness

It is considered that environmental awareness has been increasing due to the EIA process especially on the side of proponents, consultants and Administration. As stated by Partidário (1994:12) EIA has had a fundamental role in the development of an attitude of environmental consciousness in decision making in Portugal. EIA has contributed to organisational reforms on some major institutions such as those in charge of public works concerned in ameliorating its environmental image as well as saving time. For instance, JAE and BRISA (major public developers of road projects) have created departments of environment hiring consultants on the area of environment to follow and evaluate the EIS asked to external consultants. They have also been promoting annual seminars on EIA with other departments of central and regional Administration with the contribution of EIA gurus at a national and international level. Those excerpts also support this view:

> *"There has been a great evolution from proponents and even the Administration in order to get sensitive to EIA role and its relationship to projects. EIA has contributed to more environmental awareness of proponents, designers and consultants; for example, issues of environment and patrimony have been internalised"* (IPAMB 2)

> *"Civil engineers were not very sensitive to these issues and they were the majority (...) It was necessary to create a department with environmental experts (...) Now we are the greatest investigators on archaeology because there isn't a road project that doesn't have implications at this level which have been unknown (...)* (Proponent 1)

Recognised by all interviewees is that participation within EIA has been contributing to positive changes in attitudes of main stakeholders. Decisions on public and private projects have never been open in Portuguese society: *"our developers were used to decisions taken in the cabinets of Central and Local Administration"* (Civic association).

Technical and scientific knowledge and consultancy have been of a marginal use in decision making in Portuguese society (Gonçalves 1998; 2000). She states that the exercise of power by Administration has been more based on diffuse believes or in pressure from some economic interests. Also pointed out by Gonçalves (1998) and Marques (1998) is that the use of scientific consultancy in public Administration has been usually done in an *ad hoc* form and not in an institutionalised framework, which when exists is very few effective. EIA has provided a new technical/scientific framework supporting decision making. EIA has also contributed to co-ordination and implementation of environmental legislation, which is abundant but dispersed with weak mechanisms of control (Partidário 1994). In several environmental areas analysed within a project, these sectoral laws are brought together making more effective its application in the practice. EIA has also been a flourishing market for consultancy. Many private companies have been created or adapted for this end. Authors of environmental impact studies are mainly in the area of private consultancy sometimes in consortium. Observa (1998) identified 159 companies of EIA consultancy.[53]

There is now a new dimension created by the EIA process that implies more visibility in decision making and disclosure of information to society translated in:

- Developers and consultants who became aware that projects are now at the public domain and that they have the burden of proof to demonstrate that the projects are environmentally sound
- Decision makers knowing that decisions have more visibility, that they need to present justifications and need to take into account results of the EIA process
- Competent authorities in EIA who need to cope with public views and integrate them in a public report
- The public in general increasingly knowing that there is an opportunity to be informed and to influence decisions

[53] There is however, a great asymmetry in the number of projects done since there is a large concentration of studies in some main companies (Observa 1998).

9.2.3 Active citizenship

Lack of a participative culture is a much referred feature of Portuguese society due to several contextual reasons already analysed in chapter 5. This lack of traditions of active citizenship shows up in EIA as recognised by stakeholders interviewed:

"I think that in Portugal there is a culture that is not a participative one" (Guru on EIA)

"The pattern of participation in EIA is low because it represents the pattern of participation of all of us (...)" (Consultant 1)

"In fact in Portugal there is a lack of habits of participation and generally a lack of civic habits; fortunately people got into a representative democracy easily but the component of participation in participative democracy is in its infancy. We are in associative and civic infancy" (Environmental NGO 1)

"American and Canadian people have a participative culture, they know that they should participate, they don't let things for tomorrow, they go to their associations; here is totally different, we need to ask people to participate, we must prepare the way for them to participate, all this is a learning process" (Evaluation Commission 1).

According to Clark (1994) one of the main advantages of public participation in EIA is an increase of public awareness and confidence in the decision making process. Can we state that EIA has contributed to this in the Portuguese society? First of all is the question of knowledge of such an instrument allowing for citizens' involvement in decisions affecting them. In spite of lack of surveys or other scientific work about the awareness society has on EIA mechanisms, something has been changing. Different ideas on this have been expressed on interviews from:

"The level of knowledge on EIA from population is very reduced, people are not able to deal with this, only people with background in this area and specific interests" (Civic Association) to:

"People know that there is now an opportunity to participate (...) people have the notion that an evaluation of the projects will be done and, with a public consultation process" (IPAMB 2)

It has been noticed in this research that people more directly working with EIA from IPAMB, Evaluation Commissions, proponents, environmental NGO's have a more positive view on the knowledge the public has on EIA, conversely to those who don't use it often. It is especially recognised that EIA practice has improved knowledge on the EIA process and some communities, which have had an EIA process in their place ask

about why some projects do not have EIA. It is also recognised by IPAMB that in the same area the second EIA process encounters a different climate and has usually improved participation:

> *"Places in which public consultation has already happened, it is easier, people do know what it is"* (IPAMB 3)

The majority of stakeholders interviewed states that participation has been increasing in quantitative and qualitative terms. This excerpt presents that point of view:

> *"We notice that people who participate by written comments or in hearings have increased in last years as well as the quality of interventions"* (Environmental NGO 1)

In quantitative terms it is not proved that public participation has been increasing along the years. The general pattern of participation is low. According to Gil and Martins (1996) in the period 1990-1995, 37% of the projects submitted received only 1 or 2 comments, 155 received 3 or 4 comments; 10% received 5 to 10 comments and 6% received more than 20 comments. Valadas (1998:26) refers that many projects did not have any public interest stating that in 1997, 21% of the projects did not receive any comment; 60% received up to 5 comments; 25,5% had between 5 to 10 comments and only 15% achieved more than 10 comments. There are projects with almost none participation (afforestation, small dams) and those with an intermediate level concerning especially motorways and big dams. However, projects related to risk especially waste management facilities present usually high levels of participation.

What could be stated is that awareness and knowledge on public participation mechanisms has been increasing and it has been used when people feel negatively affected by projects, as the results of participation in siting waste facilities have shown. Participation is reactive depending on the type of projects and the perceived influence they have on participants' lives. The project of the incinerator of toxic waste had 54,5% of the total comments received in the period 1990-1995. Also the project of co-incineration of industrial waste presented very high levels of participation with 149 comments with 57530 signatures in the formal phase of consultation and 2710 people participating in hearings. The amount of consultation processes done (355 processes with 63 hearings held in the period 1990-1997), which has been enlarged recently to more projects of Annex III (due to the 1997 review of legislation), associated with the great controversy that some projects brought to the public sphere is leading to

increasing awareness of EIA. In pair with this increasing awareness there is however an increasing acknowledgement of Portuguese EIA system fragility.

Even considering that the EIA system and public participation present several limitations and problems, the general idea expressed by stakeholders is that it has been an innovation in the Portuguese society. Representative democracy is well established since the 1974 revolution. However, the shift to more efficient forms of participative democracy is still beginning, encountering many problems. It is stressed that EIA in spite of recognised weaknesses is the institutionalised instrument asking for participation in environmental management that works more regularly, and with more efficiency. Those excerpts are a synthesis of those ideas:

> *"It is extremely positive because it develops habits, which didn't exist, including habits that will allow the population to demand participation in other fields such as land use planning, health service or anything else where these instruments do not exist or are very inefficient. The habits gained through participation with EIA could be used for other things. This has been extremely positive during those years of experience"*. (Environmental NGO 1) or

> *"The most noblest consequence of this is to lead people to participate and doing it to contribute to a better consciousness and information on problems even if people are not well informed or have unbelievable reactions (which are not common)"* (Local Association)

9.2.4. Synthesis

In spite of existing legislation allowing for public consultation in other instruments of environmental management and planning public consultation in EIA is considered the one that works more regularly and with more efficacy. Along ten years of existence EIA and participation got some roots in Portuguese society being considered an irreversible process whose practice and experience could even be enlarged to other areas. Public participation especially by giving information on processes and allowing public scrutiny has contributed to changes in attitudes of stakeholders. By opening up decision making to the public, creation of mechanisms for citizen's consultation, being under the attention of media it could be stated that decision making has been improved or at least has been more informed and discussed. Decision makers need to fundament decisions on techno/scientific basis and should take into account social rationalities; promoters and consultants must fundament projects and present them as environmentally sound. Organisational changes have been done in private and public institutions to deal with

EIA. The public increasingly knows that there is an instrument that provides information on projects and its likely impacts and that their opinions could be stated.

However, usefulness of public consultation in the Portuguese EIA system is hampered by several factors related to the broad context of Portuguese society as well as to the weaknesses of the EIA system and procedures taken. Related to the context it must be argued that EIA has worked in part as an "attack to the status quo". It has been a society with great secrecy where getting information on administrative aspects is usually not an easy process, where still prevails a mentality that control of information is part of control in power. It is a society with great centralisation of power from the State where administration is many times discretionary in the application of laws and far from citizens (Santos 1994; Benavente et al. 1997; Barreto 1996). It is also a society where mechanisms of representative democracy are well established though not coping well in the majority of the situations with mechanisms of participative democracy. Usefulness is still hampered by the lack of traditional habits of participation in society, lack of strong associations not only related to the environmental movement and that could be considered strong partnerships in decision making processes. Lack of environmental consciousness in Portuguese society is also a factor impeding stronger consideration of environmental issues. Economic factors are still preponderant in Portuguese society. If public consultation and participation and EIA are more effective where public awareness and consciousness are higher (O'Riordan 1977) conversely, participation can contribute to increase those factors since the debate is open to society. There is a specific case of Portuguese reality paradigmatic on this respect – Foz Coa dam[54]. Economic factors such as employment and energy where dominant in the phase of formal consultation, which has been restricted to the region with few information on the value of the pre-historic engravings. Since the debate was open to society due to the commitment of the community of archaeologists, information assessed and displayed, public opinion took the defence of more post-materialist values.

Related to the weaknesses of the EIA system and procedures for consultation main factors hampering the usefulness of public involvement are: The late phase it occurs in

[54] Foz Coa dam had a positive EIA evaluation in 1992. In 1994, during the construction of the dam more information from archaeologists was made public stressing the relevance of the pre-historic engravings, which would be covered by water. The enormous public debate raised led the government to suspend the works while waiting for an accurate assessment of the value of the engravings. In 1997 the government decided for the abandonment of the project in order to preserve the engravings.

the process leading to discredit and disbelief as well as a sense of lack of control and influence in decision making. The reactive approach taken in a traditional reactive society is not conducing to meaningful participation. Mechanisms for involvement are important issues influencing usefulness of public participation and will be dealt further in the "How" issues.

9.3 The "Who" issues- Equity and fairness

According to the analytical framework the "Who" issues deal with a main theme in public participation – representativeness- in order to get equity and fairness. This section will analyse the context of law and its implementation in practice. It will evolve to the analysis of who is the public participating in processes, the main interests and expectations dealing with reasons for participation, to conclude on ideas about how representative the process is in the Portuguese society and main factors affecting representativeness.

9.3.1 The institutional framework

In chapter 6, section 6.3.1 conditions for public participation in EIA have been stated and analysed in the context of existing legislation. The concept of "interested public" and the "region encompassed" are defined in the Regulatory Decree 38/90. According to this law, municipalities and environmental associations could only participate in projects of the Annex I. However, IPAMB invite both the councils and national environmental associations to all the processes as stated in this excerpt:

> *(...) "If we were to abide by the law environmental associations throughout the country wouldn't be consulted and neither the municipalities in the projects referred in Annex III. However it was conflicting with other laws. We have to make an outline on this because it would be unrealistic not to involve environmental associations in Annex III projects when ironically these are the ones that pose more environmental problems."* (IPAMB 1)

The involvement of parish councils was also not considered in projects of the Annex I and the situation was reviewed as the national parish councils' representative explains:

> *(...) "I found a gap which was the parish councils were excluded from the process. However, they are the administrative level, closer to the citizens (...) No one better than parish councils which is a different local level independent from the municipality itself, to be more able to recognise the problems of citizens"(...)*

One of the phases considered by IPAMB in the public consultation processes is the identification of the interested public. The publicity of the processes is addressed to: local authorities, regional and central administrative bodies, professional associations, environmental associations, trade unions, companies and universities. The media (local and national radio and newspapers) are invited to publicise the processes. Figure 9.1 presents the entities invited to participate formally in consultation of the EIA projects between the period of 1990 and June 1995. Gil and Martins (1996) point out that an effort has been done in order to a greater involvement of associations in the processes as they represent the interests and concerns of citizens in the places potentially affected. A representative of the Evaluation Commission explains the criteria used:

> *We don't identify the public, we identify important organisations which can mediate with the public and we take for granted that they will do it, for example, archaeological community will mobilise their publics, ecological community will involve their publics and so on"*

It is considered that the procedures used by IPAMB are far beyond the demands of the law and have tried to involve the majority of the interested public.

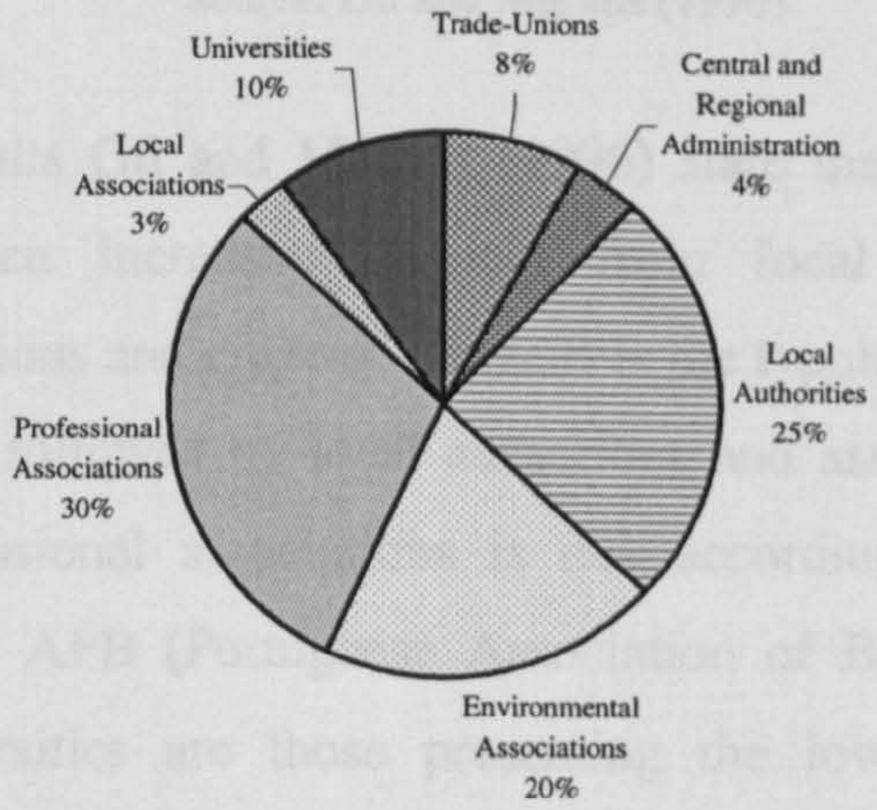

Figure 9.1 Entities invited to participate in public consultation processes (1990-1995)
Source: Gil and Martins (1996)

9.3.2 Who is the public

Written comments and public hearings are the formal mechanisms for public consultation in the Portuguese EIA system. For the analysis of who is the public participating it is important to take into account data from written comments obtained in the processes as well as data from the oral comments obtained in public hearings.

The public of written comments

According to an appraisal from Gil and Martins (1996) about the first five years of public participation in the EIA processes and considering 218 projects submitted, the number of comments received by the type of project is presented in Figure 9.2.

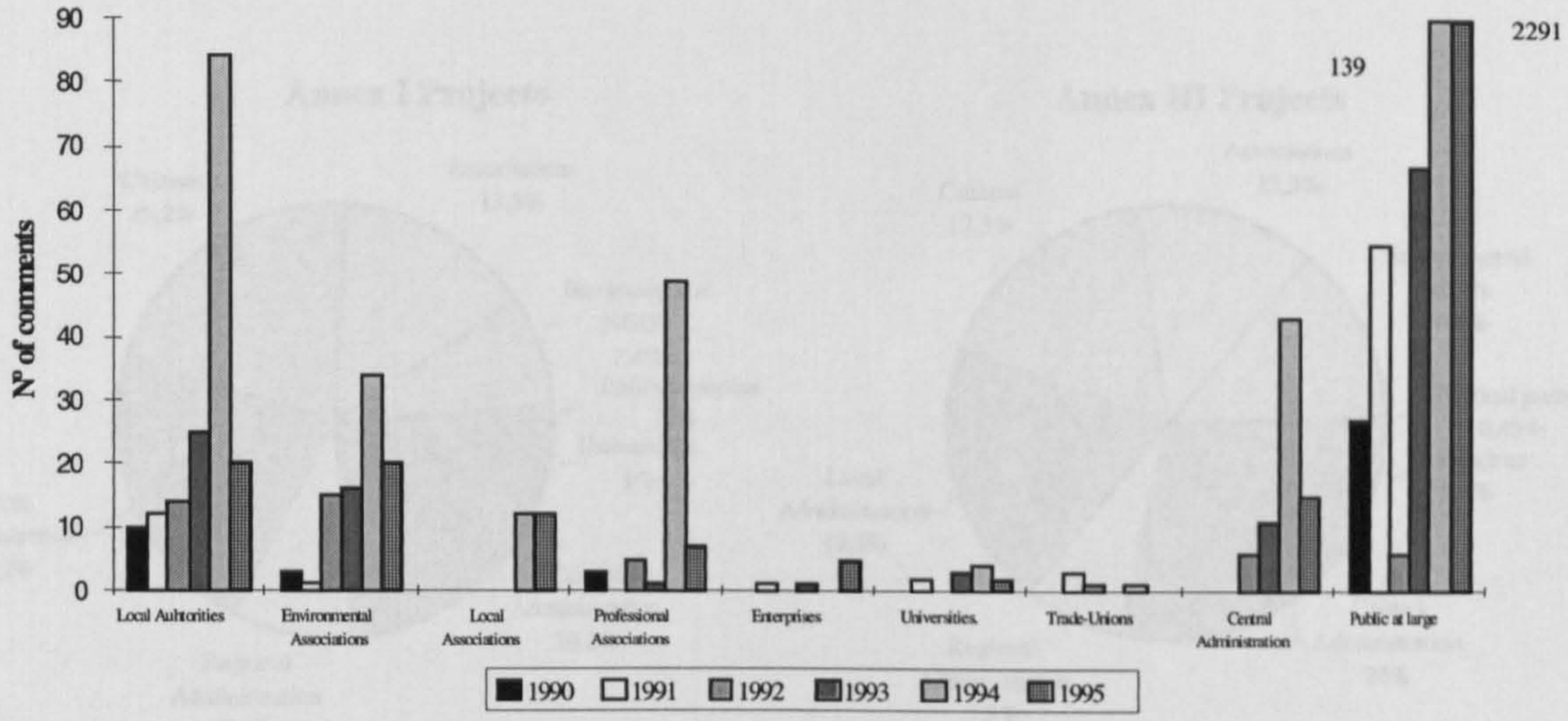

Figure 9.2 Number of written comments received since 1990 by its provenience
Source: Gil and Martins (1996)

Considering these results Gil and Martins (1996) state that public participation in a general way has been increasing namely from local and central authorities, environmental associations and citizens. Citizens is the typology, which has the greatest number of comments, followed by local authorities and associations. The increase in participation of professional associations is due according to them to the regular comments sent by the APB (Portuguese Association of Biologists[55]). Trade unions, enterprises and universities are those presenting the low degree of participation, sometimes none and environmental NGO's are those who present comments in a broad range of projects. A more encompassing statistical analysis has been done by Observa (1998) during the period 1990-1997, respecting 355 projects with public consultation. Observa concludes that just 27,7% of 10547 entities invited to participate by IPAMB have sent written comments. Desegregation of data by projects and categories of the public shows that in 89 projects of Annex I, the Administration (central, regional and

[55] APB was formed by the Decree Law 115/20.5.87 and the Decree Law 2/284/10.12.92. Since 1994 APB participated regularly with written comments. Since 1998 APB changed to Order of Biologists by the Decree law 183/98 and the stress has been put more on the training and accreditation of biologists to work with EIA.

local) is the category presenting more comments (48% of the total of comments received) followed by citizens (19,2%), other associations (13,3%) and NGO's (7,4%). Political parties and universities had almost none participation. Respecting 266 Annex III projects there is the same pattern except for environmental NGO's, which present a considerable increase with 13,5% of the total comments received as shown in Fig 9.3.

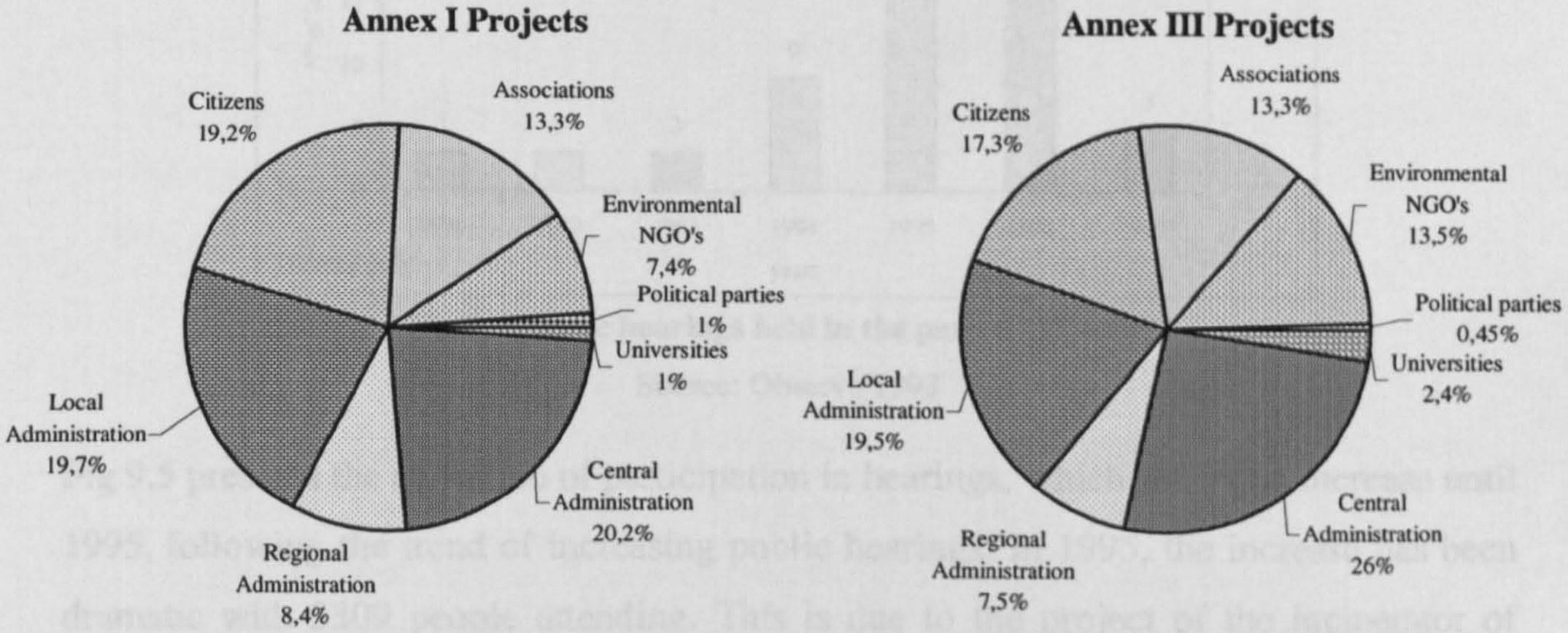

Fig 9.3 Written comments received in the period 1990-1997 by provenience
Source: Observa (1998)

In more recent projects there has been an increase of participation from Central and Regional Administration when compared with results until 1995 (Gil and Martins 1996), especially from the Central Administration which is the leadership of written comments in both Annex I and Annex III projects, followed by Local Authorities, citizens and associations. Universities maintain the same low level of participation. Political parties, a new category introduced by Observa present also very low levels of participation.

The public of hearings

As stated by Observa (1998) 63 public hearings respecting 50 projects, have been held in the period 1990-1997. This corresponds to 14% of the total of projects submitted. Fig 9.4 gives a perspective on the evolution of hearings, since the beginning of EIA. The majority of hearings have been held after 1994. Internal norms of the Ministry of Environment (Craveiro 1996) have contributed to this. In 1995, other set of internal procedures from the Ministry of Environment, respecting public consultation state that hearings should be held after considering "1) written requests by the interested public in order to inform, clarify problems and doubts 2) the verification of other special reasons

to justify such initiatives. It is advised that Annex I projects whenever possible should have a public hearing (MARN 1995: 9/10).

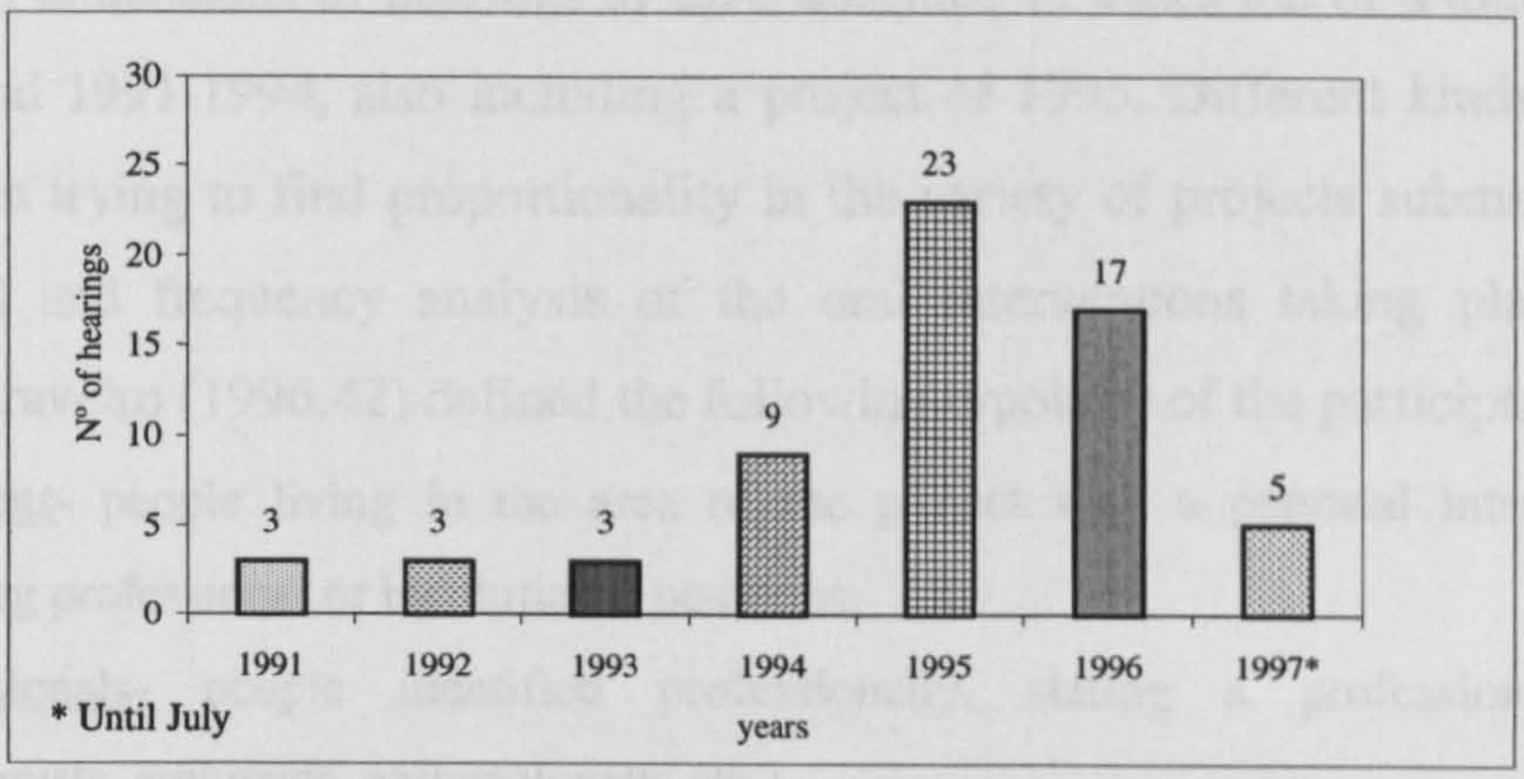

Fig 9.4 Public hearings held in the period 1990-1997

Source: Observa 1998

Fig 9.5 presents the evolution of participation in hearings, which shows an increase until 1995, following the trend of increasing public hearings. In 1995, the increase has been dramatic with 3309 people attending. This is due to the project of the incinerator of industrial waste, which registered 1020 people attending[56]. Since 1995, the number of attendants has been decreasing considerably. It is expected another increase in 1998 due to the process of co-incineration. Observa (1998) points out that out of the amount of people attending hearings in 1990-1997, which was 7149, just 779 people had an active intervention through oral comments, corresponding to 10,9% of the people attending.

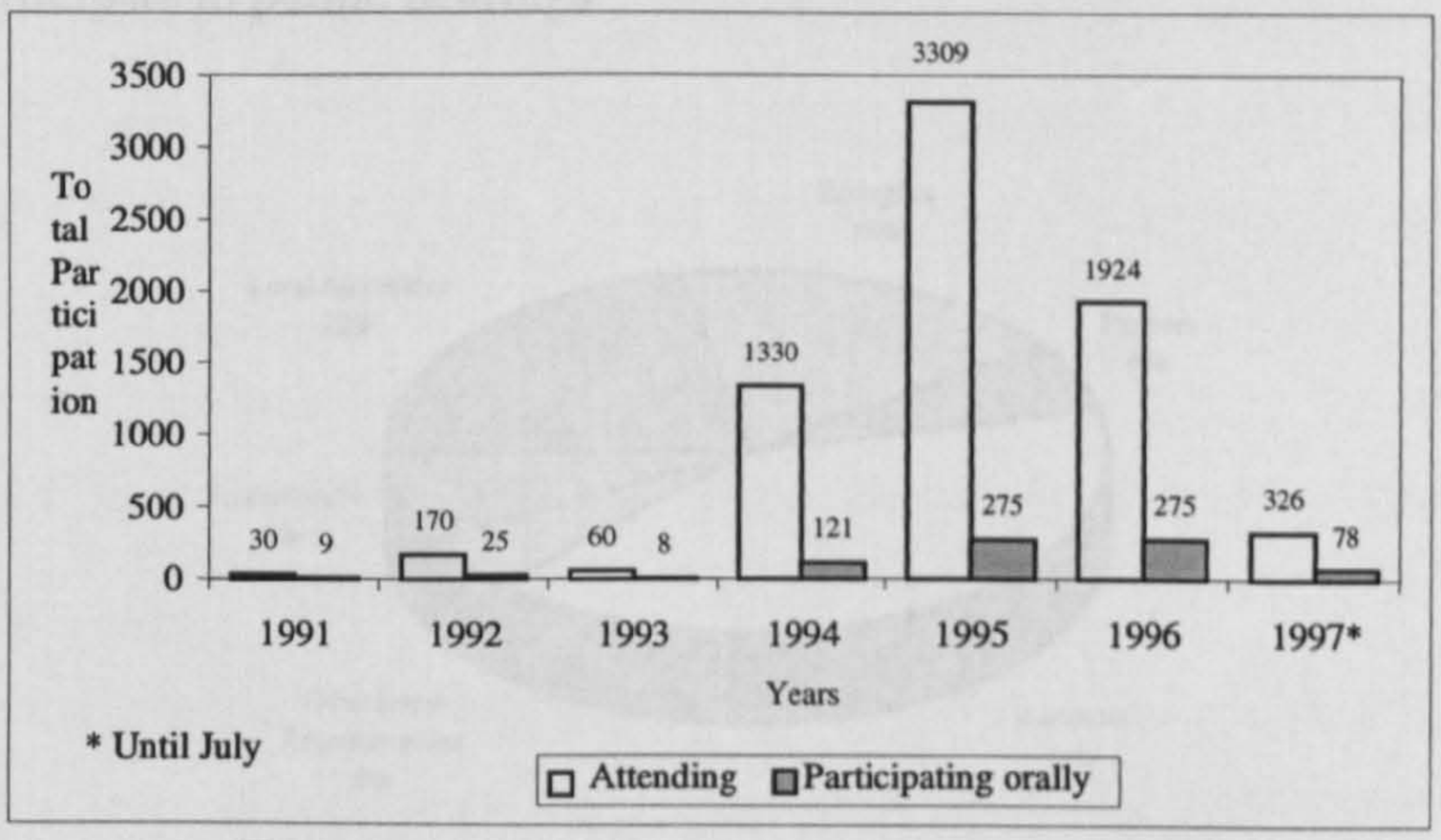

Fig 9.5 Evolution of participation in public hearings

Source: Observa 1998

[56] Public participation in the incinerator project took place between 23 January and 3 April 1995. There were three public hearings respecting this project: Estarreja with 300 people attending; Setúbal with 220 people attending; Palmela with 500 people attending. Another hearing had been foreseen in Sines though not held due to a boycott from the population.

Who is then the public in hearings? There is not any statistical analysis on the categories of public participating in hearings. Craveiro (1996) in a research work about the sociological dimensions of hearings in EIA, analysed 11 cases out of a total of 17 held in the period 1991-1994, also including a project of 1995. Different kinds of projects were chosen trying to find proportionality in the variety of projects submitted[57]. From the content and frequency analysis of the oral interventions taking place in those hearings, Craveiro (1996:42) defined the following typology of the participants:

- Residents- people living in the area of the project with a personal intervention, not referring professional or institutional positions.
- Professionals- people identified professionally, stating a professional expertise (economists, architects, archaeologists etc.).
- Farmers- people identified as farmers, landowners, site owners or producers.
- Local authorities- people identified as representatives of the local authorities as mayors of municipalities, officials and parish councils representatives.
- Ecologists- people representing national and local environmental associations
- Other local representatives- people identified as representing other local bodies with a corporatist logic defending local organisations and institutions.

Considering the number of interventions done in the chosen hearings residents presented the highest rate of interventions followed by local authorities and ecologists as shown in Figure 9.6. Central and Regional institutions of Administration do not usually participate in public hearings.

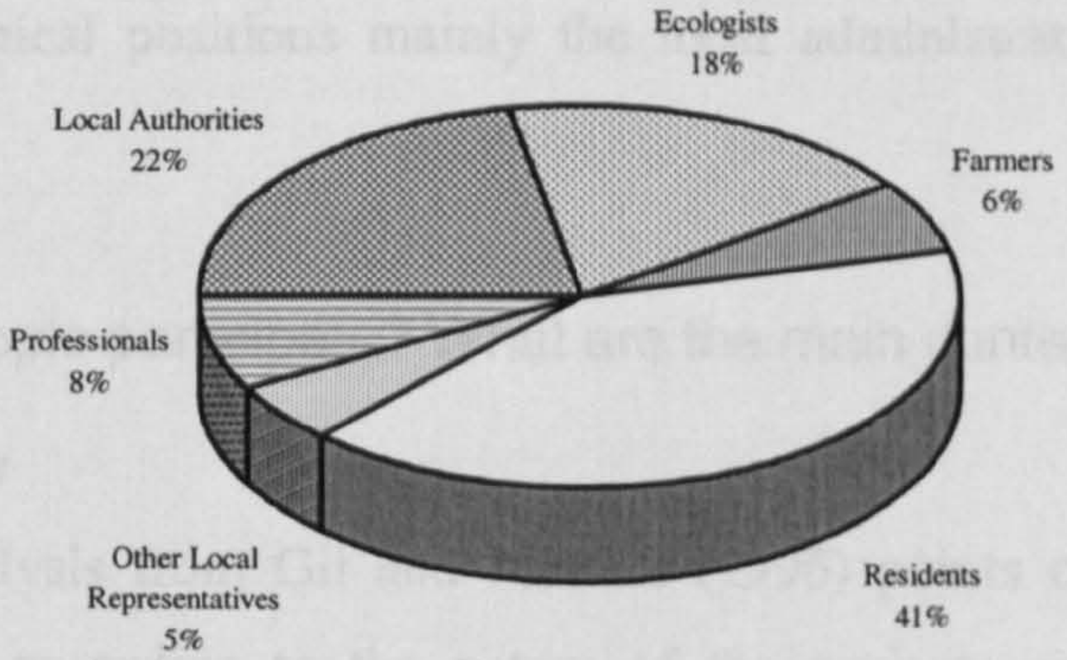

Figure 9.6 Distribution of the number of interventions in the hearings analysed
Source: Craveiro (1996)

[57] The hearings analysed encompassed: 3 dam projects; 4 main road projects; 1 industrial project; 2 projects respecting the new Tagus bridge; 1 project respecting the incinerator for industrial waste, this one in 1995.

The interviews done to stakeholders referring people who participate present an interesting categorisation:

> *(…)"There is a minority of people who is conscious and participate because yes, because they think they have rights to do it, and these people are available to do their utmost, to expose themselves simply because they feel the issues important, yet it is a very small minority. They are related to environmental associations and they have environmental militancy (…) we are talking about a minimum percentage of the Portuguese population who expose themselves to defend environmental values. Then, there is a huge universe of people prepared to come out to defend their own interests in environmental matters"* (Environmental NGO 1)

A more detailed view of participants in the Portuguese context can be seen through the eyes of this interviewee such as:

> *(…) There are personal factors, it is always the motivation, but they need to know that the project will cause troubles to them, this is the fundamental point. There are also political motivations, people intervening even without reason but because it is convenient to raise problems, it is a question of protagonists; there are people with environmental awareness the ecologists. When they can, they participate having already studied the problems very well; then there are those who are obliged to participate because they are in public positions related to the process so, they have got an obligation to go there* (Parish council 1)

Four broad categories of public in participatory processes are defined: people feeling affected by the project, mainly the residents of the area, usually not organised and fighting for their own interests, others participating with no direct interests but in the name of their environmental values and rights of citizenship, which are the ecologists organised in environmental associations. Another important category refers to people in political and technical positions mainly the local administration (municipalities and parish councils).

9.3.3 Why do people participate? What are the main contents of participation

Written Comments

The empirical analysis from Gil and Martins (1996) points out that the contents of participation vary according to the nature of the projects and the typology of the participants. As a sum up of what Gil and Martins (1996) stated:

In urban and lodging developments, comments done stress mainly socio-economical factors related to the quality of life of populations and are mainly from private owners

agreeing with the project. Local authorities and environmental associations are the groups participating more after private owners and they tackle different issues from criticisms to EIA reports, to the project and to aspects related to physical environment and socio-economical issues.

Afforestation and quarries received a weak participation from citizens. Comments came from local authorities, environmental and professional associations and were mainly not favourable, based on criticisms to the EIA report and questions related to ecological questions and air and water pollution. Industrial projects received comments mainly from local authorities, related to land-use planning, criticisms to the project or the EIA report. The majority of comments to dam projects were negative and came from local authorities, environmental and professional associations respecting ecological and social and economical issues.

Road projects were very commented by the residents, mainly against, in the majority of the cases by personal questions related to the quality of life, land use planning, accessibility, patrimony, tourism and environmental degradation. Conversely, the majority of comments done by local authorities were positive seeing these projects as contributing to economic development of the regions. Companies, trade unions and universities registered a very weak participation.

Waste projects were responsible for the majority of comments received especially the incinerator of industrial waste with 2284 comments from the public in a total of 2329 comments and only 8 agreeing with the project. Main problems raised were related to public health, water and air pollution, criticisms to EIA reports and the EIA process.

According to Observa (1998) in Annex I projects, motorways is the category receiving more comments, 84,7% of all the comments received. In Annex III projects, dams and infrastructures are those receiving most comments with 29,6% and 26,6% respectively of the total of comments received.

This analysis provides evidence that citizens participate more in projects related to social issues directly affecting them or where there is a risk for public health. Public health and risk factors are catalysers in the public comments if we take into consideration the projects of the incinerator and co-incineration, the most participated processes until now. This is according to what Lima et al. (1996:226) argue based on

the results of the Gallup inquiries: the "ecological sensitivity" of Portuguese people is stressed by an element of fear directly linked to health and health is one of the more alarmingly referred aspects related to environment. Local authorities and environmental associations are the typologies with more comments by type of project, and those who refer more different contents from procedural aspects to criticisms to the EIA report and to ecological, social and economical questions.

Oral Comments

Craveiro (1996) analysed the content of the interventions taking place in eleven public hearings according to two main dimensions: the frequency by the type of content and the time of intervention for each group of a defined typology. The analysis of the frequency of types of content allowed the following typology of dimensions: legal dimension; social impact dimension; patrimony and cultural dimension; decision-making dimension; ecological dimension; alternatives dimension; scientific evaluation dimension and other interventions. Craveiro concluded that social impacts dimension was the dominant (Figure 9.7) and more stressed by residents. He also concluded that there was a relationship between the social actors' content of interventions and their degree of knowledge and expertise: farmers more focused on problems related to agriculture; local authorities concerned with the adequacy between the project and other plans for the area; economists with the costs. However, ecologists were more focused on legislative aspects than ecological issues presenting themselves as experts in EIA legislation. Ecologists presented also a richer range of interventions with a more diversified content (Craveiro 1996:59).

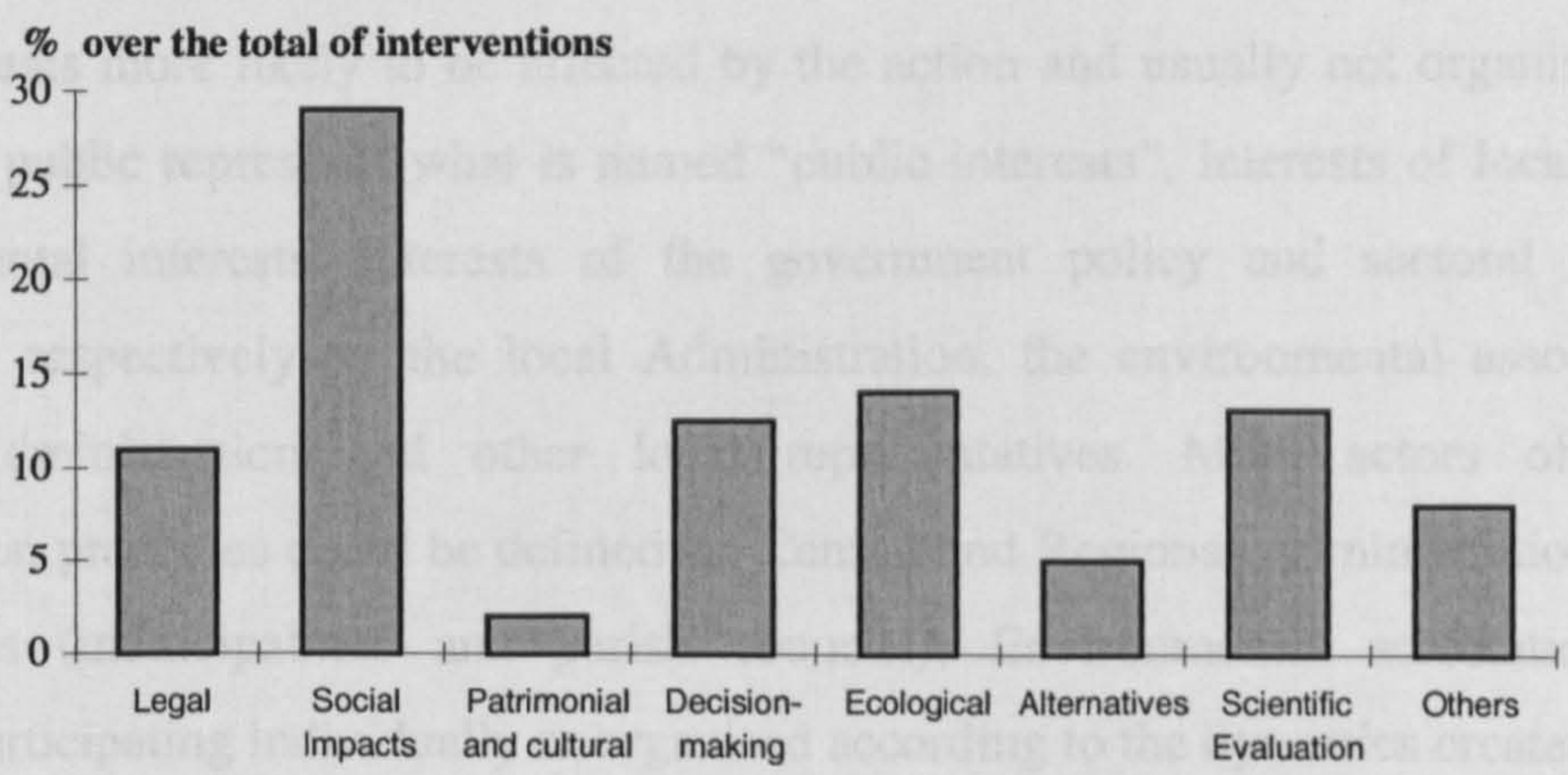

Figure 9.7 Dimensions of public participation in public hearings
Source: Craveiro (1996)

Analysing the time of interventions Craveiro concluded that there was not a direct relationship between the number of interventions by typology of participants and the time used in interventions. This could be illustrated since ecologists are reduced in number but they present the major time of interventions. It is the group monopolising the time with a great diversity of dimensions as well as the group that reveals to be best prepared to participate as they are familiarised with scientific and technical language dominant in the procedures of public hearings (Craveiro 1996).

9.3.4 Organisation of the public

The public in participatory processes varies from project to project and encompasses heterogeneity of different interests and expectations. IPAMB defined a typology of the public according to the targeted public invited to participate: citizens, environmental associations, professional associations, trade unions, companies, local associations, universities and institutions of the central, regional and local Administration. Observa (1998) followed broadly this typology though encompassing in the category other associations, trade unions, local associations, professional associations, and introducing a new category - political parties. Craveiro (1996) according to the content analysis of public hearings defined another typology: residents, ecologists, local authorities, farmers, professionals, local authorities and other local representatives. It is possible to typify categories of participation according to different objectives and points of view chosen for a specific approach. Although the public varies according to the project, region, and specific interests and values at stake there are some main actors always present in the processes. We can define them as the main protagonists of the Portuguese EIA participation processes. They are: the residents or citizens meaning a broad range of individuals more likely to be affected by the action and usually not organised. The organised public represents what is named "public interests", interests of local power, environmental interests, interests of the government policy and sectoral interests performed respectively by the local Administration, the environmental associations, central Administration and other local representatives. Main actors of public consultation processes could be defined as: Central and Regional Administration; Local Authorities (municipalities and parish councils); Environmental associations and citizens participating individually or organised according to the dynamics created during the process and local associations. Scientific community such as Universities, has not

been a major actor in public participation processes although individual members have had important roles in some processes.

Central and regional Administration

Institutions from central and regional Administration present regularly written comments on projects related to their respective sectoral areas. Invitations are addressed by IPAMB to several departments of Administration related to heritage, archaeology, parks and reserves, agriculture, forests, public health depending on the type of projects. It is the institutional consultation although occurring at the same time and using the same mechanisms of public consultation since legislation does not specify any conditions for institutional consultation. Participation from central and regional Administration has been increasing in last times. Central Administration is the category presenting more written comments in both projects of Annex I and Annex III. This excerpt corroborates the situation:

> *"As far as Administration and its institutions are concerned there is now an established routine of participation (...) they always present their technical comments usually very well documented. In that case EIA is a form of institutional consultation with a relative efficacy"* (IPAMB 2)

For instance IPA (Institute of the Archaeological Patrimony) always participates since 1997 in the institutional consultation, through written comments in the public process managed by IPAMB. However, in the case of dams co-ordinated by INAG they are invited to participate in the Evaluation Commission through the nomination of a representative of the regional department in the area of the project. For some large projects sometimes DGA (co-ordinator of Annex I projects) ask for a specific comment from IPA*: "In those cases when we send a comment to DGA we do not participate again in the public consultation process, otherwise we always participate"* (IPA representative).

Environmental Associations

According to the Portuguese law, specifically the Law nº 10/1987, environmental associations have broad important rights in order to protect environment and promote the quality of life. They have the right to information and consultation (Art. 5), the right to promote all the administrative means to protect environment (Art. 6) the right of prevention and control and the right to participate and take environmental damaging actions to court (Art. 7) Pureza (1996:43). They also have the right to participate in the

definition of environmental policy and legislation with the status of "social partners" (Partidário 1992). Pureza (1996) argues that in our constitutional frame they are foreseen as mechanisms of direct democracy and instruments of pressure over the legislator and the administration as well as supervisors of the environmental law. However, in the practice they present several fragilities at the national level (Pureza quoting Rodrigues 1995) hampering the effectiveness of rights expressed in legislation.

The environmental movement in Portugal is very recent. Melo (1997) states that its raise as a modern environmental movement can only be traced back to the middle of the 1980's[58]. With many years of delay and a very weak representation compared to the Western environmental movement, the Portuguese one has followed however, somehow similar pathways and trends. From a posture opposing economy to development and stress in conservation, they have evolved to a position of co-operation integrating concepts of sustainable development and ecological modernisation. Melo (1997) considers two periods in the Portuguese environmental movement. From the mid 1980's to mid 1990's- the phase of social recognition in which environmental groups developed in number, in members and efficacy assuming a posture of groups of pressure accepting the system but trying to change it by co-operation and awareness of public opinion. Melo states some facts contributing to this such as: at an external level the adherence of Portugal to the European Union and the publication of the Brundtland report. At an internal level the enactment of the environmental Bill (Law 11/87) and the law of environmental NGO's (Law 10/87) as well as the development of environmental expertise and the weight given to environment by the government at that time. In that period environmental associations collaborated in environmental legislation and promoted several mediatic processes to get public attention.

From the mid 1990's Melo (1997)[59] argues that the movement got its maturity by being increasingly recognised in society as the voice of social environmental concerns and became a partner in several consultive institutions of the State related to environment

[58] The visibility of environmental groups was very weak before the 1980's confined mainly to academic groups related to conservationism (LPN) and movements against the system performed by anti-nuclear campaign in the 1970's.

[59] The leverage point according to Melo (1997) was in 1994 when the President crossed the all country during 18 days to get in touch with real environmental problems affecting people and discussing environmental issues. In this initiative from the President of the State environmental movements were invited as well as political parties, local authorities and universities. Melo states that since then environment was not only socially respectable but became social and politically relevant.

and development. He concludes stating that the battle for awareness has been won and environmental public opinion is a fact. The new battle will be to bring to the forefront the passive supporters of the environmental movement to a more active intervention, creating habits of citizenship in a society where no traditions exist on this (Melo 1997).

The role of environmental NGO's in the EIA processes - far from common realities?

Environmental associations represent an important group in EIA consultation processes though not in quantitative terms. They have been accused of defending very sectarian interests mainly in the area of ecology (flora and fauna), far from social realities and concerns of populations. This attitude is considered polarised on the side of nature conservation and usually against new projects. Those comments represent such views:

> *"We don't have an ecological tradition. Actually, the majority of these groups are composed by experts with a lack of implementation on the field, so it is natural that there is one group concerned with birds, another one more concerned with fishes, that is true, we should be at such a stage of development that we have a web of groups encompassing all the sectors to give balanced answers"* (Parish council 1)

> *"I think that in Portugal and not only in Portugal we must say, several of these groups don't show the minimum sensibility to social problems (...) they have an essential role which is perhaps in the environmental area, other areas will be for other people but we can be sure that in participatory processes they will see their role reduced ...the more the participation increases the more confined their role will be"* (Guru on EIA)

> *"But in a technical point of view they are people who usually face the problems with seriousness but something is missing they are not very close to populations"* (Municipality)

> *(...) "just recently they have turned to the social conditions humans face but without being very effective in the way they pass the message"(...)* (Evaluation Commission 2)

The accusation done to associations of being far from reality of populations and only worried with aspects of conservation cannot be proved by the analysis of written comments by Gil and Martins (1996) as well as by the analysis of oral comments by Craveiro (1996). Conversely, these analyses showed that environmental associations presented more interventions on a broad range of dimensions than the ecological one. Craveiro (1996) concluded that environmental NGO's are the group with more variety of comments from legislative aspects, decisional dimension to ecological and social impacts. One representative of environmental associations explains the situation commenting on the subject:

"I agree that people have this image but I totally disagree with that as being the philosophy of associations (...) on the one hand many times environmental associations give an excessive emphasis to questions related to conservation of nature and patrimony because there is no one to defend these issues (...) obviously it is not only that their role. Their role is that it is important to defend populations as to defend animals but animals have no one to defend them and populations have (...) On the other hand, in many cases the main objections or criticisms made by associations are exactly related to the quality of life of populations. I'm remembering the industrial incinerator, the Alqueva dam and the new Tagus Bridge; those are emblematic processes and the main questions of environmental NGO's were for example: this project is supposed to achieve certain objectives, does it or does it not? This is an elementary question it is not to defend the animals, this is to defend the public patrimony, the public rights, the public interest (...)

Supporting the evolution of environmental NGO's to more integrated concerns:

"Comments from environmental NGO's are usually in environmental broad terms including population, legislation etc. The time of concerns with animals has gone they know they need the support of populations, without this support things cannot work" (IPAMB 3)

Criteria for participation

The small number of active members and the qualifications necessary to comment on EIA projects limits environmental NGO's participation in quantitative terms and lead them to use some criteria for participation. NGO's representatives explain the situation and the criteria usually applied:

(...) *"Environmental associations are little profissionalised. This kind of work, public consultation, is done in almost all the associations in an exclusive voluntary way and it is very workable and very time consuming to produce qualified opinions in these issues (...) So what happens is that environmental NGO's select a half dozen projects during the year and work on them, produce opinions and these opinions are very well justified (...) It takes a lot of voluntary work. So, it is not when we want but when it is possible" (...)* concerning criteria *(...) firstly projects that present effective problems since the main objective with an intervention is to solve problems and secondly projects where we intend that participation could have efficacy (...) There is then an aspect of efficacy and there is an aspect of example. If they are just emblematic projects serving as example they have also an important aspect meaning that we are investing to save work on other future projects"*

"In major projects with great repercussions we need to participate; we have to make personal sacrifices to present comments" (Environmental NGO 2)

Lack of resources

Environmental associations reflect the lack of civic organisation of Portuguese society as well as the lack of a participative culture. Moreover ecological issues in Portugal are recent and environmental awareness and consciousness, are low as the conclusions of Observa and Gallup inquiries showed (Lima et al. 1996 see also section 5.3.1) This is the very idea transmitted by an environmental NGO representative as:

> *(...) they can criticise associations by things they have done wrongly but they cannot criticise them by things that are not done because they do what they can, they don't do more because they cannot and they cannot because they lack human resources. (...) we have 10 million people in Portugal; related to environmental associations, at least actively linked to environmental protection there are perhaps 10 or 20 thousand (...) so we are talking of a very small universe of population when compared to the reality of other countries; from these 100 000 persons, just 200 or 300 are activists"(...)*

Environmental associations depend on funding from the State which are according to Pureza (1996) their second means of funding following the quotes of members though the latter are not regular. About funding two different opinions are brought about:

> *"Basically there is a big problem in their participation in Portugal they don't have money (...) they are obliged to organise very well their resources and they have to participate only in those projects in which, on the one hand they have capacities to do it and on the other hand are politically important"* (Consultant 1)

> *(...)"the main problem of environmental associations is the lack of human resources because when they exist, financial resources appear because people set up projects, find funds, keep busy; money will always appear, money is something not missing in this country, what is missing is will, engagement and commitment"* (Environmental NGO 1)

This lack of human resources is also reflected on the training of environmental association's representatives as the latter interviewee states:

> *"One of the reasons why we have weak associations that work badly in some cases or do not have capacity for intervention is because there isn't almost any associative training. People must be trained for this kind of voluntary work. Furthermore, to form a good representative takes years from that person and a lot of effort from those teaching him, it is complicated"*

Representativeness of environmental associations

Environmental associations present structural problems related mainly to human resources due in part to the youth of the environmental movement in Portugal and lack of traditions of participation. IPAMB recognises 116 environmental associations. The

Portuguese law classifies them in national (over 4000 members), regional (over 1000 members) and local (over 400 members). However the largest environmental association also being the oldest (LPN) has 1600 members though considered by special reasons related to commitment and work developed a national one. Half the total of associations has 100 to 300 members and 20% have less than 100 members and just four present 1000 members (Pureza 1996, quoting Rodrigues 1995). The great majority of them (more than 70%) were born in the 80's and many (about 55%) after 1985 (Pureza 1996). Portugal presents the lowest levels of ecological militancy in Europe at the same level as Russia (Lima et al.1996).

If environmental associations are not yet imposed as professional groups and they still are considered more as volunteers (Partidário 1992) they have been the main actors in the defence of environmental policies as one representative argues:

> *(...) Usually environmental polemics in Portugal are between the government or a municipality and environmental associations. It isn't among the parties. Parties don't do opposition in environmental issues (...) in the practice there is no doubt that environment is not a governmental priority, far from it (...) and the opposition to environmental government policies is still done by environmental associations (...)* (Environmental NGO 1)

Different kinds of environmental associations exist and whether the more recognised have a more organised and professional intervention in participation in EIA processes, there are those participating very sectorialy because they have an expert living in the area of the project usually a biologist or botanical. Their role in participatory processes has however been recognised and its activity is as important as the existing low levels of environmental consciousness as well as the environmental representations of the Portuguese people are considered individualistic with many characteristics of pre-industrial societies (Pureza 1996). They also are the most credible source of information in environmental issues for populations (Lima et al. 1996) corroborated by this excerpt:

> *"Many times populations come to us and ask "someone says this, someone says that, what is your opinion?" We make our comments and they believe us"* (Environmental NGO 2)

Moreover, 83% of the Portuguese consider that the performance of those associations has been beneficial (Lima et al. 1996:216). Claiming that environmental associations have increased their participation in EIA especially in great projects, Melo (1997) recognises however that the efficacy of their participation in public consultation has been minimal as far as changes in projects and plans are concerned with some

exceptions such as the new Tagus Bridge. Reasons for this are related to the fact that Administration is not obliged to answer questions posed as well as decision makers are not obliged to fundament technically their options (Melo 1997).

Local Authorities: municipalities and parish councils

Autonomy and power of Portuguese Local Authorities was only possible after the 1974 democratic revolution, and is enshrined in the Local Government Act (Law 79/77) and the Local Finances Law (Law 1/79). Local Power is represented at three main levels: the municipalities, the parish councils and the administrative regions performed by the counties. Municipalities with strong weight of the mayor, perform the executive power; municipal assemblies composed by the mayor, alders and parish council's representatives are the control and consultative power. Municipalities and parish councils are elected by citizen's vote but counties are dependent on central government. According to Portuguese Constitution, Local Authorities have great responsibilities in environmental protection, defence of population's quality of life and land-use planning. As stated by Oliveira (1996) Portugal has been for decades and decades without any type of legislation concerning land-use planning. During 1985-1986, a legislative process was developed to define a frame, which led in 1988 to the establishment of mandatory Regional Land-Use Plans and in 1990 to the Municipal Land-Use Plans. Municipalities have been then obliged to present their plans and after its approval, to promote its implementation. In these plans development objectives are proposed such as the distribution of economic activities, land-use classification and zoning, special arrangements, urban density and social facilities (Partidário 1992).

The process of conception and approval of those plans was slow as Oliveira (1996) argues, once in the beginning of 1993 only 11 from a total of 305 municipalities had their Land-Use Plans ratified; nevertheless in 1994 the great majority of plans were in approval phases. However, lack of technical support from the central administration, plans made by consultants out of local reality, the pressure felt to have a plan approved, lack of articulation between municipalities and lack of broad policies led to some constraints (Oliveira 1996; Partidário 1992). Land-Use Municipal Plans are considered more as physical planning instruments than real strategic plans to propose a balanced development. Partidário (1992:248) states: "although local autonomy has increased, the role of local administration is restricted to the spatial arrangement of the municipal

territory, with lack of power and resources to implement integrated development strategies". Despite the steps given towards autonomy of Local Authorities, Portugal still is one of the more centralised countries in Europe. The municipal debt corresponds just to 10% of the administrative public sector and the weight of the public Portuguese Administration in economy is one of the lowest in Europe (Silva 1996).

The role of Municipalities

By the power of the law, municipalities should be the great managers of the approved Land-Use Plans and the guarantees of environmental protection and quality of life of populations. Municipalities perform an important role both in the involvement of populations and in comments produced to the projects submitted:

> *"Municipalities obviously are indispensable in those processes because they have an enormous decisional capacity over the territory and great power"* (Environmental NGO1)

> *"There is an entity which has proved to be essential in the whole process.(...) I'm referring the municipalities. When they manage to interest people and exert their power, communities usually respond. But sometimes they also involve the populations in a less adequate way. When municipalities want to feel the throbbing of the people and involve them with the process in a positive sense then we can have good quality participation"* (IPAMB 1)

The influence of municipalities in the processes

Municipalities are involved in consultation processes in two different phases. The first one is informal and promoted by the majority of the developers who want to know the feasibility and acceptance of the projects, the best location and potential problems. The second phase respects the formal consultation process, promoted by IPAMB, which is addressed to the "public interested", organisations, institutions and citizens at the same time, after the EIA report being submitted. A proponent explains how does work the informal phase related to road projects:

> *"We promote the consultation when we are beginning the project. We are not consulting the public we are consulting institutions representing the public. Municipalities always know how projects are likely to be developed. It is extremely complicated to develop a project and at the same time municipalities continuing giving licenses for construction in those areas. This is a precautionary principle. Municipalities are always involved in the processes from the beginning (...)* ". (Proponent 1)

It is of course very important to consult public entities specially those in charge of Land-Use Plans, since the beginning of the projects as a way to take into account their

inputs. Wood (1995:230) points out that it should even been described in EIA legislation, obligatory consultees specified at various stages of the EIA process. To become involved at early stages of the planning process is the most efficient way to raise concerns and find alternative solutions. However, the problem seems to be that formal consultation involving all the possible stakeholders only takes place in a late phase when the majority of decisions have already been determined. This leads to reducing the representativeness as stated in this except:

> *(...) when the project is brought forward there has already been some decisions agreed upon with local representatives as regard location because it was insisted on by a Local Authority with an interest in placing it there, for instance. Therefore there has already been an action in which representative democracy worked and only after is the process opened to the public, to the citizen, and they don't see themselves taken into account"* (IPAMB 1)

Although informal consultation to representative bodies is important the problem seems to be the late phase of public involvement as this excerpt argues:

> *"The problem respects the phase of the project we are discussing. If we are discussing the EIA project in a final phase, the evaluation of public consultation can only serve to stop the project or to introduce mitigation measures" (...) It is a problem of the inefficiency of the process, it can only be solved discussing things in the right time."* (Environmental NGO 1).

How representative are municipalities in the EIA processes? A deaf ear performance?

Usually municipality's mayors are presented at the public hearings, which are held in municipal places. They usually talk at the beginning and present the position of the municipality sometimes speaking in the name of the population. Craveiro (1996) states that there are many examples of this municipal 'presidencialism' in public hearings and also out of them with the use of local and national media. Namely in rural areas, there is a strong delegation of power in municipality's mayors and municipalities have mechanisms of public involvement that could be triggered in favour or against a project. About this power to represent people some interviewees state:

> *(...) "The problem we see is that municipalities many times give opinions agreeing with developers or opinions that have nothing to see with the interests of populations, that is why the municipality is more at a regional level than at a local level. At the local level are the parish councils."* (IPAMB 1)

> *"At this scale municipalities don't speak to people and in most of the cases they don't speak to citizens not even with the parish councils. They complain about the lack of dialogue of the central government but the majority of the councils proceed worst in relation to parish councils than the central power to municipalities, much worse"* (Environmental NGO 1)

The IPAMB representative gives an example of a municipality deaf ear performance:

> *"A certain community rebelled during the consultation act because it feared that the project being discussed would enormously affect their cultural and built heritage. The first authority they immediately appealed was their municipality. (...) there were two alternatives at stake during the evaluation and we had the documents in our hands. As soon as the public consultation began, the municipality wrote us asking why had another alternative be presented when the municipality had already made all the necessary arrangements with the proponent regarding the solution to develop. Nevertheless, the situation angered the local people. The municipality made a decision in collusion with the administration and such an important agreement didn't include the community affected".* (IPAMB 1)

Farinha (1996:126) based on an inquiry done to all the municipalities, concluded that the channels of communication between the municipalities and the public or the different local players "were mainly one-way from the municipality to the citizen". Ruivo (1993) analysed the role of municipalities in the context of a semiperipheral society (Santos 1991, 1994). He states that facing the degradation of the structural financial frame of local authorities, the main political actors need to find complementary investments and several different resources that lead to the execution of a municipal intervention recognisably project undertaker. They use the mechanisms of a Providence society as defined by Santos: a strong web of contacts and personal relationships in key points appealing to shared solidarities as the forms to overcome centralisation rigidity and normative confusion of the political administrative system. According to Ruivo (1993: 435) this leads to weaknesses of the collective capacity of organisation. This performance privileging the voting system as a way of attributing all the competencies to representatives diminishes other forms of organised participation by the community. This also implies at the political universe the acceptance of a system of social order based on inequality (Ruivo 1993).

Economic development/environment

An important question deals with the protection of the environment by municipalities in the EIA projects as they have a great responsibility in this field. Those excerpts are representative of main views on the issue.

> *"Municipalities don't really care about patrimony, environment or things related. What is important is to build roads, buildings, sewage and increment the real estate speculation. The preservation of the natural environment doesn't matter at all"* (Parish council 1)

> *"There are obviously economic pressures and municipalities have been influenced enormously by that logic (...) it varies according to the places (...) There are municipalities that have recognised that environment must be a priority if not they will be in a very bad position. Thus there are honourable exceptions of municipalities which have assumed environment as an important issue (...) but the majority of them still have the opposite posture."*(Environmental NGO 1)

Brito (1997) referring the power of municipalities in urbanisation states that the great majority do not have their own lands, this making difficult the orientation and location of constructions as they do not have alternatives to bargain with developers. Municipalities support several times the consequences of land use speculation and are always under pressure from developers. Marques (1996:46) refers the difficulty of implementing environmental policies at regional and municipal level attributing this difficulty to the lack of resources and information as well as a qualified staff. Farinha (1996) based on an inquiry done to the 305 existing municipalities related to Agenda 21 and the Aalborg Chart, concluded that 75% of the municipalities had never heard of the Aalborg Chart, reflecting a disturbing lack of information in this area. This excerpt goes in the same line:

> *"The translation of Agenda 21 has been done and also a strategic synthesis and they were distributed to all the municipalities but nothing has worked; those documents went to the libraries(...)* (CNADS)

Farinha also concluded that "think and act locally" is still the dominant rule governing local action in Portugal that is still very concerned with giving high priority to satisfy the populations basic needs. However, if the satisfaction of basic needs of populations must be a priority of the municipal role this could be done in a more or less sustainable way as Farinha recognises. The problem is how to adopt a sustainable way where no habits exist of involving populations in decisions where a lack of information persists and where the criteria for good performances still are in many places the number of constructions done. There are fortunately good examples of different approaches as this excerpt shows:

> *"We have from the beginning a concept of environment that cross all our policies. It is not a restrict vision but a vision in terms of global environmental management (...) Economic development has behind it a development that implies an integrated approach where social, cultural, physical environment are included. When we are doing our development plans we need to interlink all the components (...) Our Strategic Plan had many public debates (...) what is important is a collective responsiveness on projects (...) we have Municipal*

Commissions that are not mandatory in our legislation. They are composed of independent members and we systematically have meetings with them (...) (Municipality 1)

It is recognised however, that still many problems exist at the municipality level:

"municipalities will need to cope with lack of planning and urban speculation at least during one more generation" (Municipality 1)

Parish councils

Parish councils represent the level of local administration, which is closer to the citizens. However, its influence is more felt in rural areas than in urban areas where it becomes fuzzier and where municipalities reveal more prominence. The potential role of the parish councils in EIA public consultation processes is emphasised by the interviewees:

"The experience I've got both at a professional level and at the associative level is that parish councils are indispensable in these participatory processes. When there is a problem somewhere and this does not happen in the cities, but in rural areas, people go to their parish councils, so they are the first representative local level of populations' interests.(...) This means that a good piece of information about the projects, a transparent information to parish councils as well as a dialogue is essential in the context of local populations (...) and I would say even more important than municipalities." (Environmental NGO 1)

(...) parish councils are the entities where people go to complain" (Parish council)

"We have considered that they are the representative body closer to populations and we have begun to involve them directly in the process" (IPAMB 1)

The involvement of parish councils in the EIA processes

The representative of parish councils explains how they cope with this involvement:

(...) parish councils receive the notification of intent and the Non Technical Summary and this is what mainly interests an entity not having technical staff but daily living with the citizen's problems. Parish councils analyse it and detect effectively if there will have problems, not considered by the proponent, and to which municipalities don't give any importance"

What happens to this information?

The parish councils' representative explains:

(...)"sometimes parish councils have meetings with populations or they inform populations about the project, a motorway, a pollutant industry, they have conditions to pass the message to the population (...) but usually they don't have those meetings with the populations because it is not a habit. There are different conditions in the country. Normally parish

councils in the south of the country are more sensitive to environmental problems than those of the north and the interior"(...)

Lack of resources

There are many problems related to the capacity of the parish councils to participate and involve people in participatory processes as lack of resources (material and human) lack of information related to legislation, lack of experts and organised staff and lack of experience and knowledge on participation mechanisms. Commenting on this lack of information and technical and managerial skills:

"It is not enough to send the Non Technical Summary to parish councils we have to make their representatives aware of the problems. (...) in first place they were very astonished with the power they had in environmental issues; they could produce comments on the project but actually they couldn't because they didn't feel prepared to do so (...) (Parish council 1)

Referring the lack of technical staff the parish councils' representative says: *"some receive the NTS at home they look at it and they don't know what it is"*. The idea of more information is present in those excerpts:

(...) "A stronger involvement of parish councils would be absolutely indispensable but this implies having specific training courses to acquire the skills they need for the position and also implies that the parties and organisations which propose these people should be concerned in providing information and expertise to future local representatives about these issues, but they don't do it in the majority of cases" (Environmental NGO 1)

"Municipalities and parish councils should have workshops to understand how to deal with EIA information. I have always argued that we should do workshops explaining what public consultation is" (IPAMB 3)

Usually parish councils do not have a strong participation in the municipality life due to the lack of human and financial resources and the distance and authoritarianism of many municipalities. The 305 Portuguese municipalities absorb 95% of the local financial resources and only 5% goes to the parish councils (Silva 1996). However in the majority of cases this weakness is also its strength when related to pressures of lobbies and economical groups. Their impartiality is recognised by some interviewees:

(...) "It is worth investing in parish councils while they were not corrupted by the system and I'm afraid they could be one day, the municipalities are corrupted by the centralisation and I'm afraid parish councils could also been addicted to this when they've got more resources and competence" (...) (Parish council 1)

> *(...) "Parish councils are not yet contaminated by economic lobbies. (...) usually they don't have any environmental posture because no opportunities are given to them and should be given. Cases in which parish councils have been given a great involvement in these kind of processes usually positive results have also been obtained because it is like that: at least to trigger potential situations of conflicts before conflicts happen"* (Environmental NGO's)

A guru on EIA told an experience of a pilot process of public participation in an EIA motorway project, before the enactment of EIA legislation. The levels of participation were very high and the outcomes very positive according to him. This was due to the involvement of parish councils and municipalities though not using formal methods. The parish councils' representatives were considered the major dynamic forces of the process that created a strong positive process of communication flow. IPAMB has considered the importance of parish councils in participatory processes and even against the law, invited them to participate in all the processes. Moreover, new functions were given to them in the publicity of processes by the access to the NTS and the notification of intent. However, this fair attitude to get better representativeness has not been compensated with any other measure to assure its efficacy as training courses to representatives or funding for participation. We can say that the potential of this measure faces in the practice barriers difficult to overcome, as stated by the parish councils' representative:

> *(...)" The consultation process must continue. The level of information and awareness of citizens at all levels must be increased and through the involvement of parish councils. In order to get this it is necessary to give resources to parish councils, not everything is resolved by imagination.*

Citizens

Citizens usually participate alone but sometimes in organised groups depending on local synergies developed and concerns on projects. Two main factors leading to public involvement have been emphasised in literature as the factor of residence and the factor of risk (see also chapter 7). Those are important catalysts for participation. In the Portuguese EIA system, projects related to risk perception (incinerator of hazardous waste, incinerator of solid urban wastes, co-incineration and landfills) participation from residents has been great. The dimension of social impacts is the most referred by citizens in written comments (Gil and Martins 1996) and in public hearings (Craveiro 1996). Excerpts of interviews state on this aspect:

"Social cultural values are the privileged values of populations, people participate when they feel affected, they don't want to know about environmental questions" (IPAMB 1)

"People participate by the degree of damage they will suffer and nothing else, people participate to defend specific interests. Environment by itself is not enough (Consultant 1)

"In a general way people do not present questions related to environment but questions related to their own patrimony" (Proponent 1)

"A project with local relevance that could work as a threat or a positive thing determines the public involvement and people tend to be selfish in this involvement" (Guru on EIA)

The portrait of environmental values of the Portuguese people reveals a society with great concerns with environmental problems though with a great lack of responsiveness in their solution (Lima et al. 1996). Contributing to this is above all the environmental awareness deficit, since 92% of people interviewed considered the phrase "people not knowing what to do to protect environment" the most important cause of environmental problems (Lima et al. 1996:227, see also section 5.3.1). On the other side it is the chronic deficit of active citizenship (Benavente et al. 1997). Analysing the profile of environmental litigation in Portugal Pureza (1996) concluded that there is a deficit of mobilisation in society to the rights of third generation and a great concern with economical and social rights compared to post-materialist values associated to environment. It is also considered that in recently modernised societies the prevalence of consumerist values presents a powerful obstacle to environmental values (Pridham 1994:89). However, as stated by Beck: "nature is society and society is nature" in the late modernity. In EIA the enlargement of environment to interlink biophysical and social aspects is getting increasing consensus. Problems posed to quality of life of populations have been increasing and they are a catalyst for participation as argued:

"What is going on is that more and more people are being directly affected by a bad environment and this is the key factor obliging people to move (...) people can participate to save the country or could do it when someone is stepping on their toes. The bad environment nowadays affects the majority of people that is why people will participate in the future being individualistic or not". (Environmental NGO 1)

9.3.5 Representativeness of the process

Representativeness is considered one of the significant issues in the literature referring public participation. It is a key issue to the success of any participatory process but it

also is a relevant component of its validity (Street 1997). In order to achieve representativeness in practice one needs that "the design of any public participation scheme should attempt to identify the publics concerned and take the steps required to ensure their fullest involvement" (Glasson et al. 1994:144). Stakeholders in environmental and planning issues present not only different interests and values but also a huge disparity of resources (technical, financial and organisational) and a balance of this inequality is needed in order to get equity and fairness of the process.

The first condition to achieve representativeness is the identification of the public interested. Analysing public consultation in the Portuguese EIA system in this respect it must be considered that a great effort has been done by the entity in charge of the process, the IPAMB, since 1994, in order to enlarge the concept of the "public interested" and the "encompassed region" defined in legislation. IPAMB's performance in this aspect exceeds what is established in law, involving more fully local authorities as well as environmental associations in all Annex I and Annex III processes. It is not a common procedure from the administration in the specific Portuguese context to override the law exceeding the minimum requisites. It is an example of how the knowledge of the practice helps the amelioration of the law and reveals a commitment from IPAMB. Another effort has been done by IPAMB in the identification of local associations, inviting them to participate in the processes as they could work as catalysts for public involvement.

However, representativeness of participatory processes needs a second condition perhaps even more important, which is to take the steps to ensure the fullest involvement of the public concerned. This condition is much hard to achieve as depending on many structural and organisational factors as well as on political will and commitment. Specific socio-cultural context will need specific solutions for public involvement if it is to be put in practice. Representativeness of EIA processes is hampered by the lack of mechanisms and measures to balance different interests at stake in projects. In the Portuguese EIA system different publics are not recognised in their specific characteristics, and procedures are normalised in the access to information, understanding of information and ways of participation. The minimalist approach taken is reactive. The late phase in which public involvement occurs often leads the public to think that participation is not worth, that main things are already decided.

9.3.6 Synthesis

The Portuguese political culture is characterised according to Santos (1991, 1994) by the authoritarianism of the State implemented with an enormous bureaucracy of respective institutions and organisations and a clientelist system where a web of interests and contacts dominate and cross the entire society. Those features do not favour openness in decision making or give a positive value to it. Nevertheless the evolution of the Portuguese society presents nowadays, different trends. On the one side it still could be seen as defended by Smith (1994):

> the disproportionate influence of political interest groups may have other undesirable side effects such as encouraging apathy or polarisation by reinforcing the belief that individuals cannot influence public decisions and reducing the commitment of diverse groups to successful implementation of the policies that are adopted.

This happens in Portuguese society as argued by Chito and Caixinhas (1993) when pointing out that the public maintains a certain mistrust on the effective results of participation and the involvement of various citizens' organisations has been small. On the other side the public has been asking for a larger intervention in public decisions as shown by different non-organised forms of participation such as demonstrations and other actions challenging the established status. Vasconcelos (1996:2) states that in Portuguese society nowadays "the public is demanding greater legitimacy and improved justification of decisions and a growing involvement in decision process". The NGO's representative states in the same line of argumentation:

> *(...) "In all the cases in which people have felt directly affected people have reacted and reacted in a way that many times is not organised not even with capacity or efficiency, with the desirable competence but they have reacted. I have no doubts that problems will be greater and undoubtedly people will react. The challenge is to find pacific forms of public intervention in order to avoid social open conflicts" (...)*

EIA is a key tool to approach participation with pacific forms for public intervention since in EIA social rationalities theoretically must be considered as important as scientific/technical and economic ones. This would imply however, great changes in EIA practice in order to provide an essential forum for civic debate on environmental issues.

There is at a general level lack of organised forms for people participation in decision-making. EIA process is perhaps the more institutionalised form of public participation in environmental management in the Portuguese society. However, as Vasconcelos (1996:2) argues: "the institutions are not adequate to respond to the growing demand for a more direct involvement of the citizen" adding: "Operating as safety valves the existing institutions are better classified as courts or arenas but they are far from being the forums so urgently sought by citizens".

Portuguese environmental associations have still little implementation on the field. They function as a kind of supervisor of environmental policy but need to act by criteria of efficacy and efficiency, as they need to manage an enormous lack of human resources.

Municipalities are accused of not having a two-way flow of communication with populations. They portray the strong weight of the representative democracy that delegates in our context the power in representatives. They do not have or implement mechanisms to involve people they represent and often act without consensus of the community's interests. Their role is however essential as the practice shows that populations ask for their intervention when feeling threatened by a new project. Parish councils once they are at the level closer to populations can involve people and trigger dissemination of information and promote dialogue. However the lack of structural resources impede its important role as a community forum. Experience has shown that when municipalities and parish councils work together in order to involve populations from the beginning, the processes become more representative though this not being a common procedure. Farinha (1996) about sustainable development and implementation of Agenda 21 suggests that municipalities should implement municipal committees where local partners meet to discuss one particular subject e.g. transportation. Those committees should be enlarged to EIA projects under discussion encompassing parish councils and local representatives. To involve local authorities in the organisation of public participation, giving them a dynamic role in the dissemination of information seems an important step in the involvement of populations. Training technical staff in municipalities and parish councils, working in cooperation with IPAMB could improve the entire process.

To obtain better representativeness of participation means to invest more in the process using more meaningful mechanisms of involvement that could balance different rationalities and very different resources. However, the first condition to achieve representativeness is to involve all the stakeholders from the beginning of the processes before decisions have been taken, using formal and informal mechanisms, tailored for different projects and especially for different publics.

9.4 The "When" and the "How" issues: efficiency

The "When" issues and the "How" issues are considered in the analytical framework related to the appropriateness of the entire process in order to get efficiency. In spite of being considered together in the framework for the purpose of this chapter, they will be dealt separately. The "When" issues are considered relevant in any public participation process. They are crucial issues for credibility of processes and for the effectiveness of the entire EIA process. There is substantial evidence that EIA effectiveness ought to benefit from the main positive aspects of public participation if it is done at early stages of the planning process.

9.4.1 The "When" issues – Early in the process

The institutional arrangements

In the Portuguese EIA legislation there is no reference to specific phases of the EIA process. According to the law, the EIA process only begins when the proponent delivers the project and the EIA report to the licensing authority. Public participation is triggered by the publicity of the EIA report and the NTS by IPAMB (see also section 6.3.1).

As there are no different formal phases considered in the Portuguese EIA system there are neither requests for public participation and consultation before the EIA is submitted. A scoping phase is not foreseen in legislation. Our legislation transcribes the EC Directive 85/337 on EIA, concerning its structure and content reflecting its indicative and generic character. Respecting the stages of the EIA process, Pinho (1994) points out that the formalisation of the process by stages and its respective accompaniment by the environmental authorities could transform the EIA process into a heavy and costly one. However he recognises that the Portuguese EIA process has many objections in this respect neither allowing or even encouraging any involvement of the environmental administration neither in early phases nor in the preparation of the EIA

report. As pointed out by Glasson et al. (1994:76) "this lack of early discussion is one of the major limitations to effective EIA to date". A scoping phase is being increasingly adopted in different EIA systems and in many European countries. A voluntary scoping phase has been introduced in the five-year review of the EC Directive 85/337.

The late phase of the EIA process, when the project is already done, and the lack of co-ordination between the EIA team and the project designers (leading to a lack of consideration of environmental issues since the beginning) are some important gaps of the Portuguese EIA system (JAE 1994; MARN 1996). The involvement of the competent authority in EIA and the public is undertaken after the project and the respective EIA report have been concluded and delivered to the licensing authority. At this time important decisions have already been taken and a low probability of introducing changes to the project exist.

At the beginning of the implementation of Portuguese EIA legislation many of the projects submitted to public consultation were already approved by the licensing authority and in some cases the implementation of the project had already begun (Chito and Caixinhas 1996:49). In an appraisal done to the Portuguese EIA, Raposo (1995:63) concluded that from 198 processes analysed between 1990 and 1995, 74,7% corresponded to projects in final phases and only 24,7% corresponded to projects in previous phases. This reveals common difficulties in the implementation of a quite new process. There were also some few positive experiences with preliminary EIA's voluntarily produced by some proponents with the accompaniment of an Evaluation Commission[60].

The late phase of EIA public consultation is considered very negative by some of the interviewees leading to less participation, to disbelief and less usefulness of the process as these excerpts show:

> *"The most negative aspect of the entire Portuguese EIA system is that in the majority of the cases when we arrive at the phase of public consultation, part of what has to be decided has already been. I think this is extremely negative and even non prestigious to the process and people do not believe in the usefulness of processes."* (Environmental NGO 1)

[60] According to Partidário (1994) those were experiences which have had positive results. However she argues that the efficacy of these experiences (Evaluation Commissions working with proponents in early phases) was reduced by the fact that legislation considers their role just when the EIA report is submitted.

"This involvement should begin at the screening and scoping phase in the initial definition of what an EIA is and there are methods and ways of doing this(...) the lack of perception of control by the public leads to non-participation. It is then the system and the way the process is framed that leads to more or less participation." (Consultant)

"there have been previous decisions, it is unbelievable today to present a project without talking to the municipality, without having determined this or going round that and only then is the project presented to the public. It seems then that we are kidding."(IPAMB 1)

"People feel that it isn't worth it. Sometimes I feel a total discouragement, there is a great number of citizens saying that it is not worth it because it is a consummated fact and they are purely fatalist stating that there is nothing to do" (Parish council 1)

The late public consultation process leads to subversion of the democratic character of decision-making processes, benefiting developers, which are many times entities of the central or local Administration (Craveiro 1996). However, practice has been changing and some attempts have been used to ameliorate the process. Concerning road projects an agreement has been reached between IPAMB and JAE (Junta Autónoma de Estradas) and BRISA, the main proponents of road projects in Portugal, stating that the EIA process would be carried out in two different phases: The first one in a previous stage when there still is the choice of alternatives and large corridors. Public consultation is carried out at this phase. The second one when the project is concluded and mitigation measures integrated though without public consultation. A representative of JAE explains the situation:

"The most important phase in environmental terms is the previous phase consisting of the choice of possible corridors.(...) It is at this phase that public consultation takes place because it is the phase of main options.(...) When we move on to the final project the road can vary within these 400 metres and things people have referred such as a house, a wheel, we try to make some arrangements. Those are recommendations from the Evaluation Commission, many of them as a result of public consultation. There is no public consultation in a later phase the law does not foresee it (...) I doubt about its usefulness". (Proponent 1)

A representative of IPAMB presents a different view on the importance of a second phase of consultation:

"What is in legislation is that public participation must be done when the project is concluded. Evaluation takes place at the execution stage. (...) For the EIA of projects in previous stages the evaluation takes place in this stage. The last stage of the project is just to present to the Ministry of Environment mitigation measures proposed, but there is no public consultation at this stage. I consider that this is not correct because questions raised at these

> *different phases are completely different. Consultation should also exists at the final phase though shorter. Populations should be also consulted at the final stage; there are some measures that could be taken to avoid less damage to populations."* (IPAMB 1)

The introduction of this agreement between the Ministry of Environment and main proponents of public works was regarded as a positive step despite the unsolved problem of not considering any further consultation phase. However, it presents some other problems as explained in this excerpt:

> *"The problem is that this measure does not have legal frame and thus the legal process itself becomes confused. The only thing the law states is that the EIA process must be carried out before the works begin. (...) what I do know is that recent assessments have been done in previous stages but the problem is: the evaluation at this phase does or doesn't abide by the requisites of law, this is not a solved question and what happens is: there are EIA processes at previous stages and EIA processes at later stages and others at both phases. Some of the latter do not have consultation in both phases; there is consultation just in the first or in the second phase. So this is very arbitrary, this depends on the cases there isn't only one norm and this is bad. Of course this must be stated in the law in a rigorous manner and the way to do this is very simple; two phases of consultation should exist, two phases of evaluation one phase at a previous level and another one later"* (Environmental NGO)

As Mitchell (1997:118) puts it using Gibson's principles for effective impact assessment: "impact assessment should be based in the law and should be specific mandatory and enforceable". They consider that the voluntary adoption is inappropriate, justifying this because "impact assessment is an attack on the status quo and is intended to lead to change in planning and decision-making". So they defend that "the assessment of expectations must be clearly understood, key tenets must be based on law and compliance needs to be legally enforceable". One can see based on this principle how Portuguese legislation has been weak and vague allowing various interpretations that lead to different practices with lack of effectiveness and credibility of the process.

The importance of a previous public involvement: the scoping phase

There are main advantages of consultation and participation in early stages of the EIA process especially at the scoping phase (see also chapter 7) such as: help to state the scope of the assessment; information on the main doubts, expectations and problems of the populations affected, use the inputs of populations' knowledge about the area and make the process more credible and transparent. These advantages are well stated by the majority of the interviewees.

Increase the quality of the process

"Public consultation in the scoping phase is very important, absolutely essential. I would say that is something in which everybody related to this process, experts, citizens and environmental associations, people working on these things and all the experts on this issue consider absolutely indispensable (...) I hope the new legislation will take this into consideration as I think this is extraordinary important because the quality and the usefulness of EIA depends strictly on what is defined at the beginning as objectives of the assessment as well as the content the assessment might have" (Environmental NGO 1)

Avoid conflicts

(...) "I think that the involvement of society must be done at several levels among various phases of the project. On the contrary we don't go to any place, because conflicts begin rising and conflicts exist, even different opinions exist among populations. I defend a prior involvement but not in the way we do public consultation now." (IPAMB 1)

Better quality of EIA reports

"I am sick of seeing impact assessment reports with very interesting information but they completely fail in essential issues, they do not tackle them. (...) There have been many EIA reports with lack of quality and this lack of quality has many reasons. Sometimes people are not competent, sometimes they don't have time enough and sometimes there is no data available. Independently of the quality of the consultants' team, even reasonable teams produce bad studies,whicht are not adequate to what would be necessary, because the scope of the study was badly defined. Besides the technical formality that must exist, obviously, it is exactly the public consultation through the transparency of the process in the scoping phase that will work." (Environmental NGO 1)

Glasson et al. (1994:76) point out that the involvement in the scoping stage "enables the limited resources of the team preparing EIA to be allocated to best effect and prevents misunderstandings between the parties concerned about the information required in a impact statement". This is according to a MARN appraisal of the Portuguese EIA system (MARN 1996:8) referring explicitly that the lack of a scoping stage implies deficient quality of studies, namely by incorrect definition of alternatives, issues to study and respective depth, creating problems in the evaluation of the process. The absence of scoping can be also considered the main cause of asking further information to the proponent and the main reason for the reformulation of studies.

Increase credibility

Presenting the case of an EIA project experience before EIA legislation was enacted and where there was an initial involvement of the interested public a guru on EIA states:

"This case demonstrates how people who have been well informed and asked to participate in a phase where they were conscious that decisions have not already been taken, and it was not just a pro forma, they participate" (Guru on EIA)

Consider inputs from the public

"Public participation must begin at the screening and scoping phases. For instance, if you want to do an impact assessment of an incinerator in USA you just begin to discuss it, you are going to talk to a lot of people to know what is important to make a risk assessment and one of the groups to which you are going to talk to is exactly the population because there are certain things that population can tell you better than the experts" (Consultant 1)

EIA deals also with social rationalities besides technical/scientific ones. As argued by Mitchell (1997:118) it "is as much value-laden as scientific" and this being the reason why "broad participation and scrutiny is the best means to combat the narrow biases and encouraging careful attention to matters of public concern".

Transparency

"The existence of a consultation process in the scoping phase is a guarantee of transparency and this is essential because even if no one goes there to give opinions people who produce the terms of reference, people who do the methodological proposal, know that this will be subject to a scrutiny and just because of that they are more careful. Obviously there is always a chance to effectively have useful contributions. Above all, one knows immediately which are the problems, before assuming any project commitments. (Environmental NGO 1)

The scoping phase is an important phase of decisions from which will depend in a great part the quality of the EIA report and its social acceptance. Among those decisions some of the main important areas are: identification of concerns and issues of the affected parties regarding consideration; alternatives to be assessed; identification of key impacts and respective depths of analysis; key issues for further monitoring (Tomlinson 1984; Glasson et al. 1994). Beanlands and Duinker cited by Tomlinson (1984) consider two categories of scoping: social scoping, "to provide the social value concerns of the public" and the ecological scoping. Social scoping could be considered "the establishment of the terms of reference in which impacts should be considered" and ecological scoping "on the other hand established the terms under which the impacts can be effectively studied or need to be studied" (Tomlinson 1984). It seems then relevant that the scoping phase must have a consultation process if benefits of consultation should be taken into account.

In spite of an almost consensual agreement among stakeholders about the advantages of early public involvement in the EIA processes, namely in a scoping phase several doubts and procedural issues remain about its implementation as the IPAMB representative argues:

> *"We have never applied a previous consultation process because legislation does not allow it. We would like to move on this phase with pilot experiences to analyse until what point we must involve people in a prior stage in the scoping phase. Of course it could not be in the same form we use to do public consultation in the final phases of the process"* (IPAMB 1)

One of the problems with a formal scoping phase is who will be responsible for it. Glasson et al. (1994) consider that "formal scoping raises the ancillary issue of who could carry it out". Different EIA jurisdictions apply different approaches to scoping depending according to Tomlinson (1984) upon different abilities and willingness of parties to become involved. Some approaches use the competent authority as being the party responsible for producing the terms of reference after having a public consultation process. In some others the proponent is the party responsible for producing the terms of reference and submitting it to the competent authority for approval. Wood (1995:131/132) points out that as scoping decisions deal with the issue of significance:

> (...) in the last analysis need to be made by individuals with the appropriate level of knowledge and expertise who are able to say from past experience: what effects are likely to arise; how they are likely to impact on the environment and what steps might be taken to deal with them", varying from
> "the use of appropriate consultants by the proponent through formal or informal consultations of interested parties at all levels of government and all interested private citizens and organisations to the use of specialists panels and a representative consultation committees".

Since the Portuguese EIA system stems from the EC Directives on EIA it is expected that it will follow the same model explained by a guru on EIA:

> *(...) What is going on in the EC Directive review is a typical solution. They consider and propose that scoping must be a right, though the Directive doesn't say that it is mandatory. The proponent must be helped in the process of initial conception by the Administration itself, the same body of the Administration that will later conduct the review of the EIA and this is perfectly logic." (...)*

Facing the review of the EC Directive Portuguese law must also be reviewed in order to incorporate new requirements. The legislation working review group (MARN 1996:9)

proposes a formal scoping phase to be adopted expressed in legislation, which should clearly state its objectives and contents. They propose that the scoping phase must be the responsibility of the proponent for all the projects of Annex I (national importance). They also consider that the terms of reference (the result of the scoping phase) should be mandatorily presented to the administration, which will voice an opinion, either agreeing or recommending changes, which would guarantee the adequacy of the EIS.

Another relevant issue of a formal scoping phase deals with the scope of its application. Whether it must be applied to all projects submitted to EIA or just for more important projects (Annex I) as well as whether public consultation in the scoping phase must or must not be mandatory for all the projects. Agreeing with public consultation at the scoping phase stakeholders claim however for flexible EIA system where different projects would have different procedures:

> *(...) "It depends on the cases. There are situations of "large projects" which need from the outset, from the design process two phases, one to sketch broad technical solutions and then a second phase a more detailed one and in all these cases public consultation makes sense. However I wouldn't say that in all the cases, systematically it would be correct to consider that a project must have two phases. I think we must move on to what large projects are (there is a typology they must be around 15 or 20 types of projects) and I think that in those cases the scoping phase must be a right and a duty."* (Guru on EIA)

> *"I defend that several phases of evaluation must exist in projects such as in big infrastructures, which must have different phases of evaluation according to the level of the project development and have public consultation at the scoping stage (...) A scoping phase with public consultation seems absolutely essential to me. The only way to assure a good scoping phase, besides the technical part is exactly public consultation"* (Environmental NGO 1)

> *"We have national projects and in those cases the involvement should be at a national level and then we go to the screening and scoping at a deeper level. Then there is all those concerned, the Evaluation Commission and the population, giving inputs that must be scientifically studied, then, we have the EIA and the final public debate. This is a very linear process"*. (Consultant 1)

Synthesis

The first statement considered relevant about the "when" issues in the Portuguese EIA system concerns legislation, which is on the one hand very vague and generic and on the other hand, conversely, very minimalist. The former deals with the fact that the law just

states that the EIA process begins when the proponent presents the project and the EIS to the competent authority without explaining which phase of the project (preliminary, previous or execution). This allows several interpretations and different practices. The contact of the administration, environmental authorities and the general public is only made when the main project decisions have already been taken. The latter deals with the establishment of just one phase of public consultation denying the benefits of any integration of inputs from the interested parties.

A common view among stakeholders is that a formal scoping phase should exist, mandatory in legislation in order to achieve a better quality of projects and EIA statements as well as to increase efficacy and effectiveness of the process. It is also recommended in interviews that public involvement should exist early in the process in order to introduce the benefits of inputs from the public and promote more transparency and credibility of the decision making processes. For large projects it is consensual that different phases of evaluation with consultation must exist at an early level where main decisions are still open and at a final one, when the project is more developed.

However the responsibility for the scoping phase is divided between being the proponent or an Evaluation Commission from the Administration, that later will proceed to the EIA review. Whatever the approach is (both exist in European countries) it is important that an effective interaction between the proponent and the authority on EIA should exist from the beginning in order to achieve adequate terms of reference taking public consultation into consideration. Another relevant aspect is the existence of guidance on scoping, as defended by Wood (1995:132) "The scoping stage in the EIA process will clearly be discharged best if guidance on scoping procedures and methods is available to the proponent and to the other participants". In the same text Wood recognises that "the preparation of action specific guidelines than generic or general guidelines renders the EIA process markedly more effective".

Concerning the context of Portuguese society if a scoping phase is to be applied a formal consultation stage must be implemented and the IPAMB must be in charge of it. It could be done at a preliminary phase where just main intentions and alternatives were sketched out. The identification of the interested public will be more effective considering the practice of IPAMB on this subject. A Commission with IPAMB and independent experts in the area would increase credibility and transparency and in the

Portuguese society this is very important if one is interested in meaningful participation. Moreover secrecy of information in Portuguese society is still a common practice (Schmidt 1996:17; Palmeirim 1996:19) and as Tomlinson (1984:187) refers " in situations where there exists limited exchange of information and concerns between the proponent, relevant agencies and the public there is the possibility that significant issues may be overlooked".

The method to use in this prior involvement in a scoping phase could be quite different from questionnaires to surveys and comments. However Wood (1995:130) argues that "public meetings are the best way of ensuring open dialogue about the significance of impacts". The same idea is presented by Glasson et al. (1994): "good practice would be bring them (all the affected parties) together in a working group and/or meetings with the developer. Pease and Smarton (1984:261) point out that results of several participation programs for this phase, reveal that the small group scale is "the best mode of involvement if feed-back and interaction are the desired goals of the involvement process". The small groups will include representatives of all the affected parties such as: local officials, planning commission members, local citizens knowledgeable about the area and experts on different fields.

After conclusions and ideas for the terms of reference, a period will be open for comment on it. This will increase the openness of the process. It could be argued that this would also imply an increase of time and costs of processes. However if we recognise that the scoping phase is to a great extent the responsible for better quality of EIA projects as well as potential large social acceptance then it will be worthwhile. Many further problems will be avoided.

9.4.2 The "How" issues – Appropriateness of the entire process

The "how" issues are related to the design of the entire process as well as to its organisation and management by the competent entity. Here it will be analysed the process designed by existing Portuguese legislation, and the process implemented in practice by the entity in charge, stressing on dissemination of information, the quality of information, mechanisms and methodologies used to promote dialogue and feedback. Also an assessment of the appropriateness of the process is presented.

The institutional arrangements

The Portuguese EIA law is extremely vague and discretionary with regard to the design of public participation and consultation process and its management especially as far as mechanisms for dissemination of information and methodologies for participation are concerned. The Decree law 198/90 and the Regulatory Decree nº 38/90 leave to the discretion of the competent authority the design and management of the processes. As stated by Pinho (1994:177) the entities in charge of the process had to conceive in the practice the best solution namely in what respects the divulgence of information, the promotion of debates, reception of the written comments done and the format and content of the final report. The 1997 review of legislation clarifies some aspects as earlier stated in section 6.3.2 related to the publicity of the processes. Those were important requisites missing and the 1997 review of legislation considers formally what has already been done in the practice by IPAMB. However, indications about methodologies and procedures to be used in consultation processes are still missing. The law indirectly presents written comments stating in its article 4, nº 5: "Concerning the process of public consultation written comments done, specifically related to the project will be considered and assessed" and as stated in article 4 nº 6 of the Regulatory Decree nº 42/97:"When it will be considered necessary by the circumstances of the project, public hearings will be promoted, open to the interested public with the objective of discussion and debate of the specific aspects of the previously publicised project". The law concludes in nº 6: "When the timing established for consultation is finished a succinct report specifying the steps undertaken, the registered participation and conclusions on it, must be made in the following five days". The feedback on the process meaning information about several decisions including the final one (grant or refusal) is stated in article 9, nº 1 of the Decree Law nº 278/97 as: "The final decisions about projects and respective processes must be made public".

It is argued that the Portuguese law is far from achieving the orientations of the EC Directive (Nogueira and Pinho 1994) and does not guarantee the principles expressed in the EC Directive concerning public participation (MARN 1996). The most worrying aspect has been considered the lack of definition of regulatory procedural mandatory elements to the process (Nogueira and Pinho 1994), usually not used by the Portuguese administrative decision-making system. The dependence of the procedures used on

IPAMB and on the Ministry of Environment discretion and not on the law, generates confusions and does not defend citizen's rights (MARN 1996).

Facing the discretion of EIA legislation MARN internal norms and procedures have been set out to implement the process in the practice. Those changes have been in a great part based on the experience got in the practice. This evolution has been made in two main vectors: Decentralisation of the EIA process management and centralisation on IPAMB of everything related to public consultation and participation. The former deals with the instruction of EIA processes, and the definition of sectoral co-ordination according to types of projects (see chapter 6 and Fig 6.2). IPAMB through those internal norms organises the public involvement.

The process begins with the assessment of EIA information (EIS and NTS) by the IPAMB and the Evaluation Commission. If they are not considered adequate a reformulation is asked to the proponent. If the information is considered adequate IPAMB proceeds to the identification of the "interested public" and to a definition of the timing for consultation. The law foresees 40-60 days for projects of the Annex I and 20-40 days for projects of the Annex III (see chapter 6). The publicity of the process is then done through edicts in the municipalities and parish councils of the region encompassed by the project. The dispatch official memorandum and the NTS are sent to the press (national and local radios and newspapers) and to the entities targeted for participation (environmental associations, local institutions and associations, trade unions and professional associations and institutions of local, regional and national administration). The EIS is available for consultation and inspection at the municipalities and Regional Environmental Departments (DRARN).

The mechanisms for participation are written comments, which could be sent to IPAMB or to municipalities, parish councils and Environmental Regional Departments. Public hearings are usually held by the responsibility of the Evaluation Commission or when asked by the public, meaning associations and local authorities. They were just held in 14% of the projects submitted in the period of 1990-1997 (Observa 1998). After the consultation phase and in the following five days, a report on the process as well as a technical report from the Evaluation Commission must be presented to the Minister of Environment. All the elements of the EIA process are then available for public

inspection at the IPAMB department (the report of public consultation, the report from the Evaluation Commission, and the final comment from the Minister of Environment). The answer from the administration to issues raised in the consultation processes is by the law, only the final comment of the Minister of the Environment, which is sent to places where the processes took place.

Dissemination of information about the processes

A considered prior effort from IPAMB has been the publicity of the processes for public involvement as the IPAMB representative argues: *"Since 1994, we have invested especially in the area of publicity"*. This effort has been recognised by the interviewed stakeholders:

> *"The level of publicity today is much better than it was some years ago (...) important steps have been taken compared to what was done some years ago and this reflects in the increase of participation."*(Environmental NGO 1)

> *(...) "I have noticed that IPAMB has been mainly concerned in promoting a huge divulgence of processes"* (Proponent)

In spite of this commitment from IPAMB in the publicity of the processes it is however considered that information does not reach the residents in the area of the projects submitted as these excerpts reveal:

> *(...) "The information about the processes is posted in parish councils and municipalities of the area but people still don't have this information"* (Proponent 1)

> *(...) "People are not informed ...the main problem is that people are not informed. In this country there still is a great problem which is the lack of information"* (Parish council 1)

> *"A systematic information to residents is still lacking. (...) What is not done in a general way is an individual contact respecting the residents, people living in the affected areas. In cases where this was done it was responsibility of local authorities."* (Environmental NGO 1)

The idea that passes from the interviews is that supplementary efforts in publicity must be done if a large involvement of the public is to be achieved. This is a country with lack of traditions of organised citizen participation in public life. The EIA process is recent in Portugal and it still is a novelty to ask for public participation. Mechanisms for more active involvement are requested by some of the interviewees:

> *(...) "Participation makes sense since the moment that strategies for an active involvement of populations exist."* (Guru on EIA)

> *"We need more direct action, more information and awareness (...) the process must continue and the level of information and awareness of citizens must be increased and with a great involvement of the parish councils"*. (Parish council 1)

What could be considered an efficient process of publicity in other countries has not revealed to be sufficient in Portugal. There is for instance a publicity of the processes in local and national newspapers.

> *(...) "There are advertisements in newspapers but surely most people do not read them"* (Environmental NGO1)

> *"Publicity in newspapers is 1/8 of page and not different from other publicity, who reads it?"* (Civic association)

The level of people reading newspapers in Portugal is very low compared with other European countries. As concluded by Schmidt (1996) the most read things in Portugal are the subtitles on television. That is why the solution presented by an environmental NGO representative makes sense:

> *(...) "Publicity of public consultation processes on TV must exist for more important projects or even for all the projects, as there is the weather forecasting or the agricultural bulletin, the same attention should be done (...) also an individual distribution of information as done by supermarkets or publicity in mail boxes in all the municipalities interested by the project"*

It is very much dependent on municipalities and parish councils the publicity of EIA processes:

> *"We ask municipalities and parish councils to make the publicity of the processes. We send the information but it stops there (...) they need to know what to do with the information"* (IPAMB 3).

Lack of technical expertise, lack of resources hamper in many cases publicity of information. Moreover, it often depends on the interests of local power to make a huge publicity or not. Dissemination of information about the EIA projects faces the same difficulties already stated above plus difficulties related to procedural aspects. These procedural aspects respect the access to copies of the EIS and the NTS as well as the lack of mechanisms to help understanding this material. The EIS and the NTS are available for consultation in municipalities and could be purchased usually at the price of photocopies. Administrative services however are not prepared in the majority of

cases to face requests from the public on EIA information. To obtain copies of this material is not always a simple task as those excerpts point out:

> *(...) "It is a soap opera to get copies of the EIS. I wouldn't say it is a complicated process nevertheless the public must know where to go, must go there and ask for the copies. Only after a week the copies come and there is also the price (...) I know it is expensive. This is a waste of energy from the Administration services because there are hundreds of people wasting an enormous amount of time dealing with these issues even at a top administration level"* (Environmental NGO)

> *(...) "to get copies is difficult but many times the EIS isn't there (...) not a long time ago a journalist spent 8 days waiting for the EIS and nobody knew where it was in the municipality"* (IPAMB 2)

The NTS could be consulted at the parish councils as well but many of them do not have regular public attendance services or facilities to provide copies. The other problem is related to the question of providing information about the questions and issues raised upon the project and its likely impacts. There is an inadequacy from the entities where consultation takes place to dialogue with the public and answer their questions:

> *(...) "The greatest inconvenience for people is when they go to the municipalities where the EIS and the NTS are, in search for some explanations and they aren't able to provide them. There is a technician there going about his business and as soon as he has shown the report he simply says: figure it out for yourselves"*(IPAMB 3)

> *(...) The problem is that the EIA report is just alone in the municipalities and people are afraid of going there and open such a document. So, besides the EIA report there must be a set of technicians circulating or being at certain places to inform people about their questions"* (Evaluation Commission 1)

IPAMB is the entity available for this purpose but this implies going to the IPAMB department in Lisbon. Information and explanations asked by the public about the project and its impacts can be addressed by written comments during the phase of *consultation.* The normal procedure to respond to questions is simply sending the report of consultation, the technical report from the evaluation commission and the final comment from the Ministry of Environment, at the end of the process, to the places where public consultation took place. IPAMB has done an effort to answer specific questions posed in written comments, though with little efficacy since it is usually late in the process. When public hearings are held there is some room for explanations on questions raised by the

public. However, public hearings are just a once-off exercise and are only held in a minority of the processes.

To solve the problem of getting access to EIA information the environmental association representative presents as a mechanism of great help the introduction of EIS and the NTS in the Internet with the benefits explained as:

(...) "It could solve the problem of copies of the EIS and the NTS because it is foreseen that in a short period of time all the municipalities and parish councils will be linked onto Internet. This should be a prior issue at the governmental level and to the schools too. Even when people don't have access to Internet at home they could go to a place with access to it and ask a copy of the NTS. They will pay but it is printed at the same time; it wouldn't be the awful scene it is now. It is very important because it creates a new channel of information and would enormously decrease the bureaucracy related to the process of getting copies. The other information such as the EIS must also be available in some way; this information is public by definition. The information at a basic level must be disseminated by other means but the most technical and detailed information I think Internet will solve its dissemination. It is an essential tool because it allows a capacity of response which doesn't exist now."

However, this question of dissemination of information through Internet has a controversial aspect pointed out by those interviewees:

(...) "What I can say to you is that when I hear that we are going to increase public participation by putting the EIS and the NTS on the Internet, this is a process that is not according to cultural values of populations. It is also expensive. I don't mean not doing it perhaps it makes sense, what I mean is that it could be dangerous because it could be thought that information is disseminated naturally and it isn't. Internet is extremely selective and it raises the question of representativeness. (Guru on EIA)

(...) "The Internet fashion, but who has access to Internet? It is a very low percentage of the population" (Proponent 1)

Despite of agreeing with the selectivity of Internet, the Evaluation Commission representative states another advantage actually related to the selective aspect itself:

(...) Internet is very selective but it has a great advantage linked to the scientific community. Those are public sectors more alike to use Internet and they could have a direct access to information (...) all the scientific community can get this information. Things are sent from IPAMB to universities but as there is no mobility among different departments information is retained in the head office and when sent to departments it is already out of date" (Evaluation Commission 1)

Internet could be an important step to solve the problem of procedural aspects related to efficiency in getting access to EIA information from the Administration services. However it does not exclude other means of dissemination of information this being also stressed by the environmental association representative:

> *(...) "The aspect of participation is not solved by Internet. Internet could be an enormous help but it isn't enough. Other mechanisms of publicity must be used. Even when Internet is largely spread there will be many people without it or not knowing how to cope with it. The simple access doesn't solve the problem." (...)*

It is also this environmental association representative who gives different ideas for the dissemination of information as mail distribution of the NTS to residents of the affected areas as it is done by municipalities in fortnightly or monthly journals and the use of TV announcements for the processes.

The quality of information

Information about the EIA projects is presented through the EIA report, always including the EIS and the NTS. The NTS is an independent volume summing up all the relevant information with the objective of reaching the public at large using a clear and accessible language. The NTS is very often the only information used by the public and decision-makers (Glasson et al. 1994; Wood 1995). That is why according to Glasson et al. (1994:149) the NTS "should thus briefly cover all relevant impacts and should ideally contain a list or a table that allows the reader to identify key points at a glance". Portuguese law on EIA information, the Decree Law nº 278/97, in its article 3 states that the EIS should at least include:

- A description of the project with information respecting localisation, conception, dimensions;
- A description of measures foreseen to avoid, reduce and if possible to mitigate negative effects;
- Data considered necessary to identify and evaluate the main likely effects of the project on the environment;
- A Non Technical Summary with the information stated above.

These minimum requisites are a common situation in the majority of jurisdictions on EIA as Wood (1995:143) points out arguing that" few jurisdictions specify how the findings presented in EIA reports should be derived". From the interviews done to stakeholders in

the Portuguese EIA process, three main deficiencies are presented as common pitfalls in EIA information especially the NTS, which is the relevant information for the public. The two first are related to the presentation of information and its appropriateness and the third one is related to the credibility of information. Those are:

- Abuse of technical language
- Difficulty in reaching all the sectors of the public
- Information biased by proponent views

Abuse of technical language

> *"In most of the cases the NTS is too lengthy, too technical and many times doesn't tackle issues in depth in the sense that doesn't give information about what people want to know"* (Environmental NGO 1)

> *"Sometimes there is also a difficulty in writing technical things in a common language. You cannot imagine how difficult it is because there are things that we don't know what other name to give to them (...) sometimes it is very hard to make EIA consultants using a common language."* (Proponent 1)

Difficulty in reaching all sectors of the public

> *(...) "People participate more by non-environmental reasons, motivated by personal interests. When they are worried with environmental issues such as noise, pollutants concentration or crossing a natural reserve, the NTS doesn't provide information enough and they need to consult the project, the EIS"* (Proponent 1)

> *(...) "There is no uniformity and it is very difficult to achieve it unless we adopt a methodology for EIA and I personally defend one. We need to rethink it otherwise we cannot find a document useful for different levels."* (IPAMB1)

The accuracy and relevance of EIA information receives a great attention in literature and have been tackled in chapter 7. Glasson et al. (1994) present a set of conditions to elaborate public EIA information referring contents, organisation and presentation for clarity of communication. The EIS being "specific, honest and unbiased", "with a clear structure", "easily visible subtitles", "logic flow of information", "key points clearly indicated" is some of the important points defined.

There is no much research work until now about EIA reports presented in Portugal. A work was done referring the cultural heritage aspects. Raposo (1995) analysed 206

processes in the period 1988 to 1994 with the objective of making an appraisal on the architectural, archaeological and ethnographic patrimony. Main conclusions revealed that in this subject 40% of the EIA reports were omitted as far as patrimony was concerned. 1/3 of the reports classified impacts on patrimony as "non-existing", "non identified" or "eventual" and less than 20% classify impacts as negative and less than 20% as positive. The evaluation done in the EIS was according to the authors of this appraisal based on subjective criteria with lack of rigour. Information used was in the majority of the cases institutional consultation with fieldwork limited to 25% of the studies. In 206 processes analysed, only in 8 studies the reformulation of the projects has been recommended. A few more than the half of processes had included references to patrimonial issues in the NTS, the relevant document for the public and decision-makers. However, when analysing the evolution of the situation from 1988 until 1994, some positive aspects are referred as an increase of archaeologists in EIA teams, an increase of fieldwork, identification of patrimonial aspects and inclusion of mitigation measures.

In an appraisal done to EIA processes of roads an inquiry to MARN technicians of the Evaluation Commission (Garrett 1994), EIS's badly done was considered one of the main deficiencies of the EIA process in Portugal with 53% of the answers (Fig.9.8). However when asked about aspects considered as being improved in the last years, the quality of EISs got 63% of the answers (Fig. 9.9), showing according to Garret (1994) more experience, better technical qualification and expertise of EIA teams.

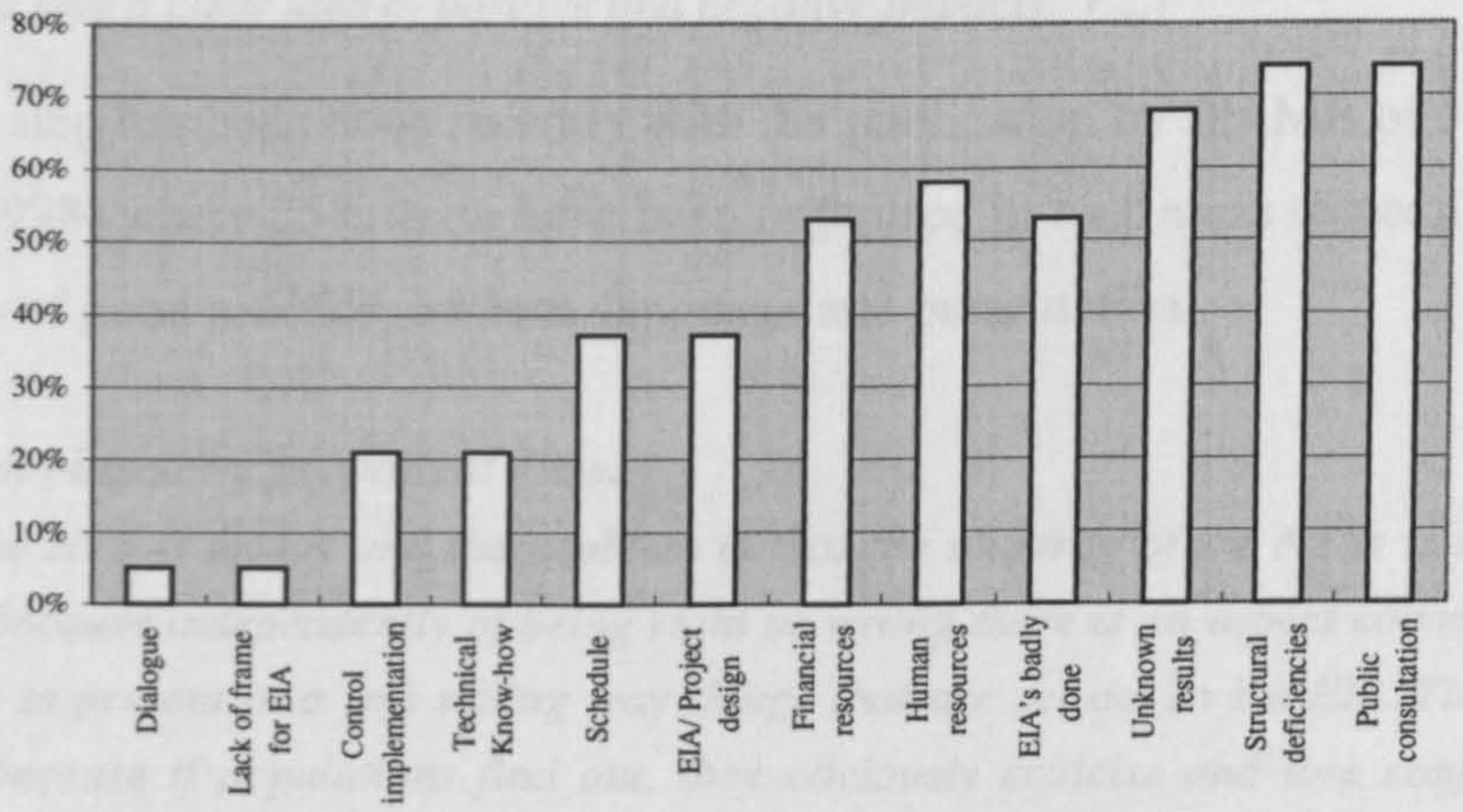

Fig 9.8 Main deficiencies in Portuguese EIA processes
Source: Garret (1994)

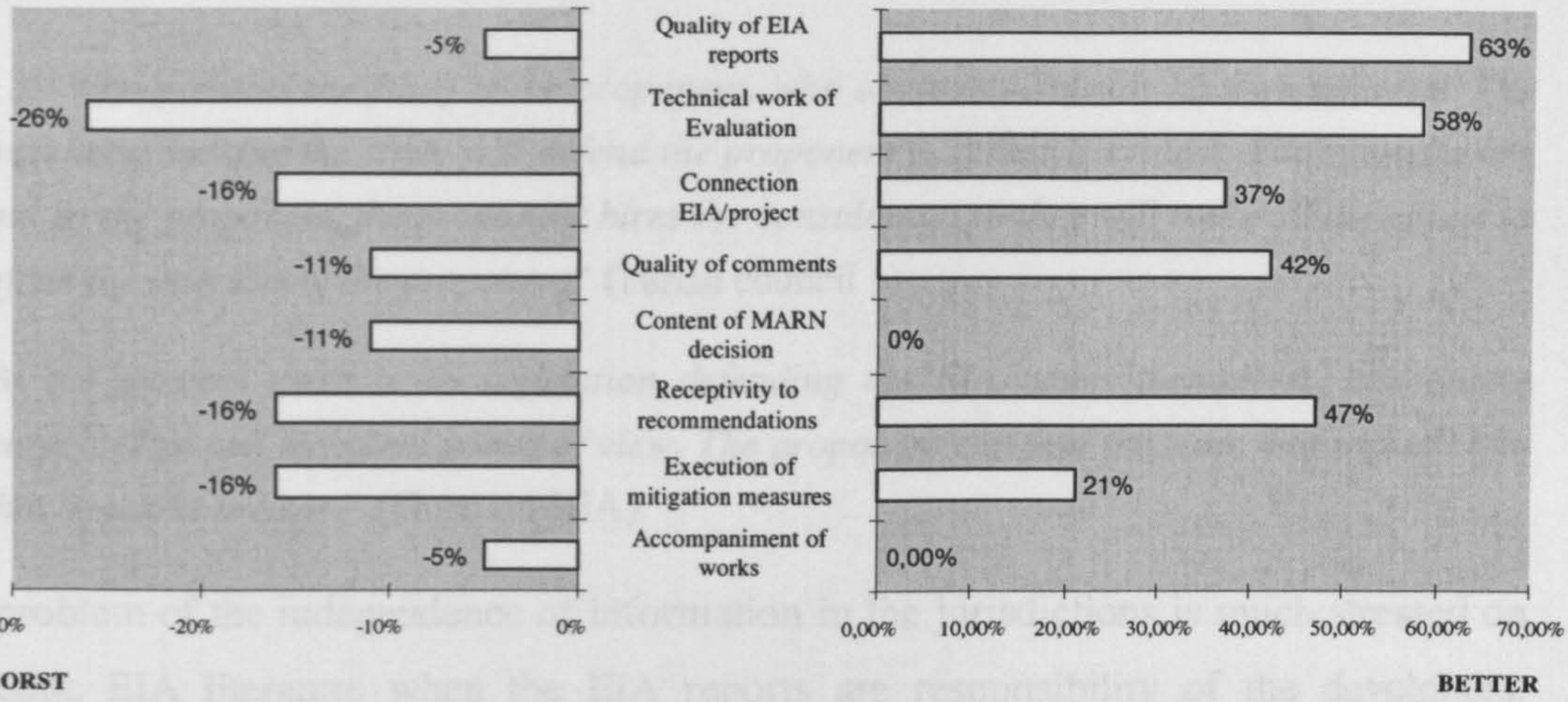

Fig. 9.9 Aspects considered better or worst in Portuguese EIA processes
Source (Garret 1994)

The existence of direction and guidance for the elaboration and presentation of EIA reports would be a great help to all the stakeholders of EIA processes (Wood 1995). Besides its importance for the authors in what concerns both content and presentation it could also help the uniformity of EIA reports based on improved quality. Lack of directives and guidance is a significant pitfall in the Portuguese EIA system. There is no institutional guidance for EIA information (EIS and NTS) besides the contents of the law, which are the minimum requisites. Some main proponents of roads linked to the State established their own guidance as stated by a proponent representative:

> *(…) "Related to EIA projects we give the norms because we are those who know how a road project is done. We have recommendations perfectly defined with everything we find necessary to the execution of a project. Then it is MARN responsibility to verify if things are well done. In those recommendations we also define what is a NTS. One of the functions of the NTS is to give a clear idea of positive and negative impacts" (…)*

A positive step has been done recently with the publication by IPAMB of NTS guidance (IPAMB 1998) where 55 criteria have been organised in four areas respecting: structure, procedures of good practice, content, language and presentation.

Information biased by proponent views

> *(…) "The NTS is an art and the problem is that the majority of the NTSs is everything but artistic because independently of being right or wrong there is an aspect commonly revealed which is to present in a soft selling way things that are set out in the EIS. This causes bad results because if populations find out, they obviously criticise and lose confidence in the process. On the one hand there is a fraud which is to present things in a pleasant manner (…) EIA is provided by the developer it will never advise that a project shouldn't go ahead"* (Environmental NGO 1)

(...) "Who presents the study is the proponent, who obviously defends his own interests. The consultants making the study will defend the proponent (...) that is evident. The expenses are paid by the proponent, the proponent hires the consultants, so they will make all the efforts to defend the interests of the proponent" (Parish council 1)

"At the moment there is no legislation defending the EIA teams themselves, concerning deontological and technical points of view. The proponent can find the team that will tell him what he wants to hear." (Guru on EIA)

The problem of the independence of information in the jurisdictions is much stressed on academic EIA literature when the EIA reports are responsibility of the developers. Consultants doing assessments are very much dependent on proponents to freely express their views (Barrow 1997). The problem is also stressed when related to the review of EIA reports and impartiality of reviewers (see also chapter 7). The most radical solution is that one in which assessors and reviewers are divorced from the developer. In some jurisdictions the authors of EIA are chosen by the decision-maker or the lead authority. This was the original NEPA model used for example in California, in which the proponent pays but the relevant agency is the client (Wood 1995). However, in the EU Directive, the EIA is responsibility of the developer. A commonly presented solution to solve the problem of independence of the EIA information as well as its quality is the accreditation of consultants or the existence of codes of practice. The Portuguese legislation is omitted in what refers to the EIA authors' statute. Any citizen can present an EIA report independently of his academic background or experience in the field. Developers can hire anyone to develop the EIA assessment. What happens in many cases is that the function of the EIS is just to obtain the project approval (MARN 1996). The accreditation of consultants is foreseen as a way to solve this problem. As stated by Barlow (1997:295) "Developers would soon hesitate to engage non-accredit assessors for fear or loss of face and those denied accreditation or those who had lost accreditation through malpractice would find it difficult to stay in business".

As EIA assessments use a broad range of different disciplines no professional association can encompass all the areas. MARN (1996) proposes that the accreditation of EIA teams should be done by the Administration in collaboration with professional associations which seems a feasible and practical solution. Important positive steps have also been done in last times in at least two different areas archaeology and ecology. IPA (Institute of Archaeological Patrimony) just gives a favourable comment to the EIS if the teams

have presented a previous draft to IPA with the methodology used. The Association of Biologists have also introduced measures for accreditation of EIA consultants as well as technical support to the new ones.

The review of the EIA report

When the developer presents the EIA report, an independent review is relevant to reliability of the entire process. Public should be confident in the impartiality of the project evaluation (Clark 1994b). EIS review has two main objectives in the EIA process: the first is the evaluation of the adequacy of EIA information available to public consultation and decision-making and the second is the evaluation of the project itself in order to state an opinion about it (see also chapter 7). Under the EC Directive on EIA it is the developer's responsibility to provide an EIA report of good standard. The competent authority can ask the developer to provide additional information or the reformulation, if information is not considered adequate or complete.

In the Portuguese EIA system the review is the responsibility of MARN through the Evaluation Commissions, designated according to the type of project submitted. No data exist of what methods the Evaluation Commissions use to assess the accuracy and quality of the EIA reports. As stated by an IPAMB representative:

> *"It has been tried but not possible until now to use any methodology for a structured review. Each commission has its own working method: for instance, the review proposed by Manchester University has been translated by the Ministry of Environment but as far as I know it has been never used by any Commission"* (IPAMB 2)

Some criticisms have been done to EIA Evaluation Commissions in the Portuguese EIA system. Partidário (1994) states that the review done by those commissions is not uniform and there is usually a lack of sufficient technicians specially those covering all the expertise areas needed. She argues that the elements of the Evaluation Commissions are representatives of the central administration and very rarely experts of different areas required. She defends that a reformulation is needed in order to guarantee an adequate technical capacity according to needs required and essentially based on an independent technical and scientific expertise.

An appraisal of MARN on the efficacy of EIA road processes (Garret 1994) to MARN technicians, revealed that when asked to state aspects getting better or worsen in EIA

processes, 58% of the answers considered that the technical work of Evaluation Commissions have been improved while 26% considered that it got worse. (Fig.9.9). These opposed views are explained (Garret 1994) by the enormous diversity of possible situations in each process: different constitution of the Evaluation Commissions, different EIA teams and proponents. This is according to Partidário's criticisms stated above and reveal a lack of uniformity in the evaluation processes and a lack of directives, and guidance, the latter being also a criticism to the entire EIA process in Portugal.

Dialogue and Communication

As referred earlier formal public consultation takes place just in the review stage. It has been considered that Portuguese public participation in EIA presents a minimalist approach (Partidário 1994). Written comments do not provide an efficient two-way flow of communication. Specific answers to questions asked are not previewed in the law. Usually the feed back received is at the end of the process, by the public display of both reports from the Evaluation Commission and IPAMB's public consultation as well as the final comment from the Ministry of Environment. Those documents are sent to the places were consultation took place and also remain available in IPAMB department. An effort has been done by IPAMB and the Evaluation Commissions to solve the problem raised by the lack of dialogue trying to give some explanations to written comments that ask for more information, as stated by these interviewees:

> *(...) "When people ask questions, the process has not been prepared for this (it was only during this struggle that we found it out) we make every possible effort so that the citizen get an answer. It is something that had never been done before. This procedure helps to credit the system."* (IPAMB 1)

> *"What we are doing is answering to requests on information during the consultation process independently of the final report (...) That is one aspect of the Evaluation Commissions participation but it is usually when the process is at the end"* (Evaluation Commission 1)

Nevertheless the period of consultation is limited and many questions run the risk of not being responded on time not allowing a full aware participation. To provide information about the EIS and the NTS is not considered and as referred before no technicians from the administration are available for this purpose as this excerpt shows:

> *"people ask a specific question and they answer it with an autistic attitude, with the same answer to everybody, despising participation from people. It is difficult to answer but it is a price one must pay for transparency"* (Local Association)

Written comments are very poor participatory mechanisms when used without any other methods of consultation, which could close its gaps. Moreover they are not adapted to cultural traditions of the Portuguese society, aspect referred by some of the interviewees:

(...) "written comments are not at all adapted to our culture" (Consultant 1)

(...) "Written comments can present difficulties. We still have illiterate people (IPAMB 1)

(...) "unfortunately there are many people that cannot write" (Proponent 1)

Conversely it is considered by the interviewees that oral communication through public presentations, public meetings, debates are fundamental participatory mechanisms as more according to cultural uses and needs of the Portuguese society:

"The oral communication of processes of participation is absolutely fundamental. So it must exist oral communication exactly to reduce conflict but it must be an oral communication since the beginning that receive the inputs from populations and produce changes in projects. If people understand this is happening in reality, conflict will be less and participation higher because there will actually have a share, a conjugation, a joint effort." (Consultant 1)

"There is a great component -the oral tradition, people like to talk and to debate. That is why I will always see debate as essential in any process of participation."(Guru on EIA)

"What we see is that civil society doesn't have a space for their interventions and faced with this one it has been clear their great need to speak. We have to listen to the communities, but how? We have to find out what mechanisms to create because they have to talk. Most of the times they don't go there to discuss the process at all" (IPAMB 1)

Oral communication in public consultation could only be achieved through formal public hearings the only mechanism of this type foreseen in the Portuguese law. Legislation leaves to the discretion of the competent authority the criteria to held the hearings. Those criteria are not explained but usually public hearings are promoted by the initiative of the Evaluation Commission or when requested by municipalities and associations. The IPAMB representative states his point of view on this:

"I think that hearings shouldn't be made compulsory since they have such high costs, gather so many people and technicians around them. My only question is whether it is legitimate to be developing thirty or so projects of small dams across farms in Alentejo and conduct hearings in such cases with whom? However it would be sorrowful not holding them whenever the project justifies" (IPAMB 1)

The proponent interviewed representing the area of road projects states concern about proliferation of public hearings. It must be stated that road projects suffered a boom since

the 1980's and between 1990 and 1997 they represented 66,7% of the projects of Annex I submitted (Observa 1998).

> *(...) "The increase of hearings creates us many problems. They are always held at 7 or 8 p.m. out of working hours and usually they take long time. If for each project and for each parish council a hearing were to be held we wouldn't have available staff to do so"* (Proponent)

As any other methods for participation public hearings present advantages and disadvantages (Wood 1994; Glasson et al. 1994). Besides the advantages stated about oral communication being more adequate to Portuguese cultural habits the environmental association representative presents another positive one still related to cultural aspects:

> *(...) "Public hearings are considered very important in Portuguese society because they are extremely useful to express people's concerns and this is a relevant aspect because the majority of people is badly informed and the exising tradition of our administration is to care nothing about public concerns. The simple fact that a public hearing qualify and expose people's worries is extremely positive and in many cases has presented good results." (...)*

However, disadvantages are also stated by this interviewee such as the inefficiency in getting useful information:

> *(...) "Public hearings have obviously various types of deficiencies (...) the more evident is not working as a method of getting information or inputs for processes because they are totally open processes, not focused. The majority of things said there have no interest, it isn't useful information in terms of information to support decision-making."* (Environmental NGO 1)

According to the extent of public power on decision-making, public hearings performance is considered "low-allowing a two-way information transfer, allowing a limited discussion but not permitting ongoing communication and being time consuming" (Glasson et al. 1994, based on Westman 1985). Those deficiencies presented by public hearings could be solved with the use of other techniques of consultation. A broad array of methods is available earlier discussed in chapter 7. Considering the aspect of getting information or inputs referred by Glasson et al. (1994) as "catering for different levels of technical sophistication and for special interests" a suggestion is presented:

> *"If the objective is to get more accurate information it is very useful to promote conferences and workshops more specifically addressed to certain institutions, municipalities, environmental associations, professional and economic organisations. This doesn't question the importance of public hearings to give information to populations but also get information on decision matters in a more efficient way. Hence there are many other methods for divulgence of information through press, telephone hotline, questionnaires, surveys, referendum and these have never been applied"* (Environmental NGO 1)

Besides the minimalist approach to public consultation in Portuguese EIA system only using written comments and hearings for polemical projects there is another problem which is to combine information and communication at the same time and in an only stage. The methods used must at the same time give information and receive opinions and comments about the project. The IPAMB representative acutely presents this point:

> *"The consultation model we use isn't the best (...). There is no distinct separation between the period of publicity and the participation one. (...) it means that we receive most of the participation right at the closing of the consultation and we must deal with this unsettling question: we should by now be getting knowing participation but people still are full of questions and doubts.* (IPAMB 1)

This problem could only be solved by the use of other parallel means of consultation and participation. MARN (1996) also argues that the law must consider the hypothesis of other forms of publicity, information and mechanisms to get the inputs from the public (conferences, workshops, telephone hotlines, distribution of leafleting to residents, interactive EIA). We can conclude that Portuguese law is minimalist just stating the minimum requisites for consultation thus not giving chances for flexibility in using different approaches. About this the representative from the IPAMB presents his claims:

> *(...) "If the law gives us the responsibility of developing public consultation why shouldn't it allow some malleability according to each public (...)* (IPAMB 1)

> *(...) "It should be at the discretion of who is in charge of public consultation. Many other mechanisms should exist to maximize participation not only hearings. Sometimes hearings are just confrontation and the information we got there is not very useful"* (IPAMB 2)

The other relevant question is the lack of adequacy of methods foreseen in legislation (written comments and public hearings) to the different objectives of participatory processes. "Methods are tailored for specific purposes and settings" as pointed out by Hyman and Stiftel (1988) These methods cannot get significant inputs from the public so helping to determine the populations' values and do not allow conscious participation as the IPAMB representative states:

> *(...) "In fact we do need to inform populations and it is not during a public hearing that we are able to do so. When in participation we should be in possession of the public main issues and concerns and presently we never are."* (IPAMB 1)

Consensual principles of good practice advise that methodologies for participatory processes must be dependent on the stage of the process at which they are employed

(Wood 1995; Glasson et al. 1994; Smith 1993). The methods used in Portuguese participatory processes are best suited for final phases just before decision is taken not allowing involvement in early stages. There is a broad array of mechanisms for other phases of consultation especially related to getting the views of populations, information and debate not used until now what decreases the quality of the processes and the benefits that could be brought about through them.

Feedback of information

The integration of public consultation results in the review stage and in the final statements of the Evaluation Commissions is a relevant aspect of the EIA process. An effort has been done by IPAMB in order to achieve this:

> *(...) "But our concerns always are that matters discussed in public consultation, main issues raised during the public hearings should also be dealt with in the Evaluation Commissions and to know whether and how they've sunk in"* (IPAMB 1)

It should be a main task of the Evaluation Commissions to centralise all the information and dialogue made public during the review processes as well as doing a final comment on the process taking it into consideration. Another important aspect related to feedback on information deals with the publication of the outcome of the review process and the final comments on it. Evaluation Commissions elaborate a report on the project and sent it to the Ministry of Environment with a report on public consultation process done by IPAMB for its approval. This is a process very much centralised once all the processes need the approval of the Ministry of Environment itself.

In the research work about EIA and patrimony in which 206 projects were analysed (Raposo 1995:79) it was concluded that in 34 projects submitted (17,2%) final comments from MARN were not known. The majority of final comments were according to Evaluation Commissions comments, and in 5,1 % of the cases were different. This research work refers that considering the non-existence of database on EIA processes it has been rather difficult to find information about the entire processes. They add that there have been many difficulties to know MARN final comments on projects but insuperable difficulties in reaching the final decision on projects from the licensing authority. Only in 28 processes they could find results of final decisions. (Raposo 1995:81). A positive evolution has been done by IPAMB since 1994 and all the results of public consultation processes are now made public. However, final decisions

from the licensing authority are still not easy to find nor sent to the Ministry of Environment as this excerpt states:

> *"The final decision from the licensing authority is not sent to us. We don't have this data. We have the notion that they are usually according to comments of EIA because if not newspapers would publish this. Sometimes schedule is over but the licensing authority waits for the result of the EIA process. But unfortunately, there isn't any procedure for divulgence of this information and we would like to make it available to people who participated"* (IPAMB 2)

It is however expressed in legislation in article 9 of the Decree Law nº 278/97 as: "Final decisions taken about projects and respective processes must be publicly known." In practice this is not a usual procedure and it is rarely justified when they are not according to MARN final comments.

This difficulty in getting information about the final outcome of processes reveals the attitude of secrecy still used by the administration and a kind of despotism in its performance. EIA process asking for public participation and opening decision-making to public knowledge is a strong shake in the modus operandi of central administration and implies a shift in organisational procedures as well as different attitudes thus difficult to change quickly.

The management of the entire process

The management of the entire Portuguese EIA process is totally centralised on the Ministry of Environment as the review stage, final comments, public consultation and further accompaniment of works belongs to MARN. Sometimes MARN is also the developer as well as the licensing authority. The Evaluation Commissions are composed by representatives of several departments of MARN and until 1994 they have also been in charge of consultation processes. This situation has been criticised by the existing dependency of evaluators, proponents and decision-makers. In 1994, IPAMB was nominated to the management of public consultation. The centralisation of EIA public consultation in IPAMB presents several positive aspects recognised by stakeholders:

> *(...) "These processes were at the beginning conducted in a very amateurish way but now that situation has been overcome by IPAMB."* (Environmental NGO 1)

> *(...) Such a concentration allowed IPAMB to really focus on participation, acquire knowledge, invest in the area and dedicate itself entirely to it. (...) On the other hand communities have started to show some reflection on the fact that there is now an entity*

which is trying to regulate, negotiate and develop the process; and all this has generated a certain credibility. I haven't the slightest doubt that this has worked". (IPAMB 1)

(...) The process has become much better at an organisational level (...) There is today a range of procedures and we know when the consultation process is triggered. The edicts are correct, they accomplish schedules, they receive comments, they elaborate final reports, everything is now working much better (Evaluation Commission 1)

(...) "The process has been improved. In a general way it has efficacy" (Proponent 1)

It is also recognised by stakeholders the commitment from IPAMB to the entire process:

"I know the organisms in the environmental area and I consider that effectively IPAMB is the most capable of managing this situation (...) IPAMB is an odd entity because it belongs to the State, belongs to MARN but it has got a very special environmental mentality. The State is the most anti-environmentalist possible but IPAMB doesn't obey to this assumption, completely escapes from this rule." (Parish council 1)

(...) "I can remember some IPAMB technicians who actually take all this in a very serious way they show a great generosity and willingness" (...) (Guru on EIA)

(...) "Let me say to you that in global terms IPAMB has done a remarkable work, creating new dynamics, increasing participation as well as attempting to give clear answers to questions of people" (Consultant 1)

The centralisation of the management of consultation in IPAMB has revealed a great improvement at an administrative level. Benefits could be pointed out as:

- Better organisation and efficiency of processes by the implementation of a set of norms that have worked in practice.
- A guarantee of a fair treatment avoiding discretionary attitudes
- Control of the entire process allowing a knowledge of what is going on in EIA public consultation
- Rationalisation of resources
- Implementation of a documentation centre with database

Those were important features at an organisational and administrative level. What happens now is that IPAMB applies in the practice a model that works bureaucratically and even goes far beyond the requisites of the law. However, public consultation is still far from being effective. Contributing to this is exactly the lack of flexibility IPAMB has to manage processes differently according to their different characteristics and publics. This is recognised in those excerpts:

"The weakest point is the normalisation of processes. The formula used by IPAMB stopped in the success obtained, stopped in the satisfaction got in minimally accomplish a participatory process in time" (Evaluation Commission 1)

(...) Many times, what happens is that public consultation has been done with too much bureaucracy. It is almost a standard applied to all the cases" (...) (IPAMB 2)

(...) "This is the minimum, it is still the bureaucratic sense that dominates the Ministry of Environment and IPAMB which is: if we were obliged to do this we won't do anything more (...)" (Civic association)

There has been a controversy about the centralisation of all the consultation processes in IPAMB. Dissonant voices state that it does not make sense and those in charge of the evaluation process should manage in another level less centralised the public consultation processes. However, this view has been opposed by the opinion that centralisation has improved the process (compared with earlier procedures before 1994). Some others consider that if the number of processes increases (foreseen in the review of legislation) another formula should be found at a regional level to support IPAMB.

An Evaluation Commission representative presents a key question in this issue of managing the entire consultation process. It is a nice synthesis of the benefits with the IPAMB management and with problems still existed. He recognises the improvement done at an administrate level reflected in a better organisation, better results and an increase in participation as well as a more confident attitude from stakeholders. All this could be taken for granted. However other steps should be taken or as he considers it to move to a second stage of consultation processes:

(...) "There still is a lack of sociological frame taking into account the existing cultural patterns, the way civil society participates in the processes and through this analysis increasing public involvement. It requires more experts in social sciences and more means because public services have today difficulties at both central and regional level. A central institution has no possibilities to do it at a national level. It must also exist at regional level structures for participation. Actually IPAMB has a very centralised structure at public consultation level and considering that the majority of the projects are regional projects this is very difficult and implies to have a type of normalised performance, a standard assuring the minimum requisites. (...) it is necessary now a second jump obliging by one side in thinking of regional structures and by the other side in developing an expertise at social sciences level to frame the mechanisms for consultation". (Evaluation Commission 1)

Resources

Public consultation and participation implies the use of human and financial resources. The process implies the work of people organising and implementing in the practice the mechanisms considered necessary for the divulgence of information and to get the public views on the projects submitted.

This use of resources is divided between the proponent and the competent authority in charge of the process linked to government. Also the public in general spend resources on participation. Public participation has also direct costs to the developer but also indirect ones if the decision on the project based on the consultation results is negative. However many benefits could also be brought about to the developer through a fair and efficient process of consultation as the choice of a better alternative, integration of mitigation measures in the project, social acceptance of the action avoiding delays and confrontations. If implemented in an efficient way it could rather reduce many further costs to the developer.

It is very difficult or almost impossible to evaluate the costs of public participation as they are part of the complex and interactive EIA process. More mature EIA systems which, are more committed to public involvement, will spend more resources though conversely they theoretically will get more benefits. Wood (1995:253) referring the costs of the EIA process states "(...) there has been, as yet no reliable quantification of the effectiveness of EIA, and it may be that it can only be measured subjectively and qualitatively by examining the attitudes and opinions of those involved". In fact the important question seems to be how and to what measure has EIA and public participation contributed not only to more fair decision-making process with reduction of environmental problems but also in creating on people an awareness of the importance of their commitment to the choice of more sustainable solutions. As an interviewee presents it:

> *(...) "Good decisions have a cost and this process of public consultation needs to be evaluated with this scope."* (Guru on EIA)

The perceptions of the stakeholders on the costs and benefits of public consultation process suggest that benefits outweigh the costs and public participation is useful and necessary. It is however considered that resources used in public consultation processes are minimal and not sufficient to have meaningful processes:

"The resources spent with public participation are a minimal fraction of the resources of any investment. (...) The existing budgets for this are completely ridiculous it means that we have a half dozen persons working on this and it is nonsense, we cannot do omelettes without eggs. (...) for the available resources we have I would say that the level of participation and the quality of interventions is very good" (Environmental NGO 1)

"There is a great lack of human resources and to make each consultation process more effective and more participated needs a degree of effort IPAMB cannot bear" (IPAMB 2)

"We do not invest at all in those processes and now it is exactly one of the complicated problems we got, which is the lack of efficacy of those processes. There is a certain conservatism, inertia and the mentality of civil servant" (...) (Evaluation Commission 2)

(...) New methods imply a great availability of technicians and resources and we do not have them. The investment in this area is small (...) I think it is due in part to lack of traditions (IPAMB 3)

The process of consultation in Portugal attends the minimum requisites of the legislation and in terms of resources it is low if compared with more mature systems where people involvement is higher, or the case of Canada where even funding for public participation is provided.

Concentrated on IPAMB the management of the process involves a small staff of technicians. The practice has improved its organisation applying a standard. Public hearings are the heaviest mean of public involvement but are held for a small percentage of the processes and as Smith (1993:68) considers "public hearings refer some advantages especially for agencies and government such as looking efficient, cheap, simply administered and satisfying the legal requirements".

The publicity of information meaning the multiplication of EIA documents and announcements is in the Portuguese process the more expensive part of it. They were paid by the government but a recent internal law from MARN states that part of it must be paid by the developer, as this excerpt refers:

(...) "Now the developer must pay two things: First of all he must deliver more number of copies of EIA information (...) the other innovation is that the developer must also pay a tax for consultation corresponding to the value of the project that could go until 600 thousands escudos." (...) (Evaluation Commission 1)

This is still a small part of the process. Publicity in newspapers is very expensive:

(...)"Then there are the edicts, the NTSs but above all the announcements because IPAMB is obliged to publicise in national and local newspapers. In the national ones an announcement costs hundreds of Escudos and not in the prime pages." (Evaluation Commission 1)

The idea that consultation must be part of the developer investment is well stated in those excerpts:

"The costs of the public involvement must be in charge of the developer this is evident. There must exist a fee for the evaluation process that will revert to the Ministry of Environment, for the process (...) So put a fee on the nominal value of the investment and we have this problem solved" (Environmental NGO 1)

"The developers must pay. They must know, when doing any investment, that they are delivering a service, they are earning money and they must always earn money (...) What's the best way of rendering a service to any investment? It is to have from the beginning a collaborative attitude with the public, not only in the final phase." (Consultant 1)

Wood (1995:253/254) states that costs of EIA activities "are difficult to distinguish from other costs incurred in obtaining approvals". This is especially due to the EIA integration in the decision making process. However, based on an international review (including Hollick 1986) he states: "Costs of EIA as a proportion of total projects costs generally appear to range from about 0,1 to 1% with 0,5 percent being a commonly quoted figure". If we take into consideration that public consultation is just a part of the process no one can states that its costs are relevant. Portuguese EIA system in this aspect needs more efforts as the implementation of the process finds non organised infrastructures and lack of trained staff on this. If it has been a novelty in the Portuguese society since 1990 the practice of public involvement has created a new awareness in the public who is now more critical on its meaning and the procedures used.

Synthesis

The Portuguese EIA system has faced since 1990, several difficulties of implementation in the practice especially due to a discretionary law, lack of awareness on the importance of environmental problems and a complete new concept for the Portuguese society of opening decision-making to the public, challenging traditional top-down management. The latter explains in a great part why public participation in the EIA process has been dealt with in a so minimalist way. For a society with lack of traditional organised civil participation a double effort would be necessary for an effective

implementation. In spite of this it is the EIA practice the only existing example of regular and organised public involvement in planning decisions in Portugal.

The discretion of the law in a certain way could be considered a benefit particularly respecting public consultation. It allowed the experience of implementation being evaluated and changed according to the practice through internal norms of MARN. Much has been done essentially based on "learning by doing" and the law has been following results from the practice. A great commitment from IPAMB, which is not common in many departments of Portuguese Administration has brought about a new dynamics to the process. The centralisation of the management of consultation on IPAMB in 1994 has revealed a great improvement at an administrative level.

Nevertheless, some disadvantages are also presented as a result of this centralisation. The management of all the processes at a national level obliges IPAMB to use a standard model in order to operationalise the system. This implies a lack of flexibility in the choice of methods and mechanisms for different projects with specific characteristics and specific targeted publics. The normalisation has the perverse aspect of making consultation an abstract process and a legal formality. Moreover the law ties the efforts for further enlargement and the available resources at disposition are very scarce. One can say that procedures used by IPAMB efficiently accomplish and even overwhelm the minimum requisites of the existing law but they cannot address meaningful participation. A review of law is foreseen in order to incorporate the recent review of the EU Directive itself and a good opportunity is showing up to fill the existing gaps. Some main conclusions related to "the how issues" based on the treatment of data could be summed up in a need for more investment in the area of public consultation in EIA at several levels:

- A global increase of public awareness on EIA rights and benefits of participation
- Guidance and procedures need to be made and make public not only for public consultation but also for all the EIA stages
- A design process of consultation must take into account that information not only needs to be disseminated but also assimilated. There is a need to provide means for people get informed in order to participate consciously
- Improve supplementary efforts on divulgence and dialogue especially information to residents, using other mechanisms for dissemination

- Diversify mechanisms for consultation giving privilege to oral methods and to informal means for dialogue
- Creation of effective mechanisms for feedback on information. Decisions about processes must be publicly known with an obligation of stating how EIA conclusions are or are not considered and why
- Training staff for the review of EIA information as well as training staff for consultation. It is expected that projects submitted to EIA will increase with the review of the Directive. The creation of a staff in regional departments helping IPAMB at a regional level would be a solution to get more efficiency.
- Experiences and innovations should be developed in order to find out better ways of involvement, based on social research

Moreover, the introduction of public consultation early in the process, in the scoping phase, would solve many problems related, and contribute to increase the efficiency of the processes.

9.5 The Which issues – Coherence, transparency and reliability

The which issues in the model designed respect coherence, transparency and reliability in order to achieve better planning and sound decision making, which means sustainable goals. They are linked to perceived attitudes of stakeholders on the existing EIA system, the adequacy between legislation and implementation as well as integration and articulation of policies with principles of sustainable development.

9.5.1 Articulation of EIA with broad policies for sustainable development

Sustainable development is the final aim of decision making in environmental management. It is increasingly accepted that EIA can be an important tool in helping to achieve sustainable development. For example, World Bank has embraced EIA as a principal tool for ensuring sustainability (Ortolano and Shepherd 1995). EIA at a project level has received a great acceptance worldwide. However, it has been getting consensus in literature and practice that extends EIA to a broader level of plans, programmes and policies is an indispensable and urgent condition to a more balanced development. Environmental quality has deteriorated in so many parts of the world that piecemeal project by project approaches of conventional EIA no longer suffice to ensure

prudent environmental standards (Goodland 1998:97). As far as public involvement is concerned operating at a strict project level leads often to conflicts that cannot be solved and lead the public to more distant positions discrediting the system. It happens frequently that questions addressed by the public are related to more strategic and normative issues already defined without a public debate or information. This happens in Portuguese society as IPAMB representative points out:

> *"We are discussing the EIA of a motorway but the National Road Plan has already been approved without public discussion; we are discussing the location of an industrial plan but the respective land-use plan has already been approved without public participation. The point is that public consultation is too late in the decision making process"* (IPAMB 2)

Environmental problems are increasingly global problems. Solutions to deal with them must also be solutions supported by more encompassing policies, which can address social and economic concerns. The articulation of EIA and planning has been considered a "perennial problem" of EIA (Ortolano and Shepherd 1995). The enlargement of EIA to a strategic level has been advocated as the best solution to integrate sustainable development concerns. The debate at a broad level would facilitate decision making at a more operational level.

Although sustainable development is stated as the main objective in Environmental Bill of 1987 very few efforts have been done to its implementation. in the practice. A national framework of policies and principles still does not exist. Recently it has been created the Council for Environment and Sustainable Development (CNADS) which is composed of members elected by the government and representatives of civil society. The council has been working in a framework for the National Plan for Environmental Policies (PNAD). There still are no plans from local authorities applying Agenda 21. There are only some recent sectoral plans taking into account sustainable principles, indicators and criteria such as the National Plan for Forests, the National Plan for Environmental Health and the Strategic Plan for Waste Management (recently approved).

The Portuguese planning system has always been weak and faced more in the side of physical aspects, translated in a final document stating the planning blueprint than the flexible, adaptive and participative tool sustainable development asks (Partidário 1992). The current situation in planning is critical concerning institutional fragmentation and lack of political commitment to environment (Partidário1992:394). No articulation

exists between EIA and the planning process. EIA projects often conflict with land use plans due to uncoordinated legislation, lack of compliance with implementation of legislation, and above all lack of integration of EIA concepts in the planning process. The restricted role taken by environmental departments has been far from adoption of coherent policies.

9.5.2 Political commitment to institutional arrangements

Portuguese environmental Bill (Law 11/87) considers that EIA should be applied to plans and programs. However, this has never been regulated in order to allow its implementation in the practice. The enlargement of EIA to a strategic level is not foreseen in short term in Portugal. We use to be reactive to EU environmental policies and EU Directives still do not make EIA at this level mandatory in spite of being increasingly used in many countries all over the world (Therivel and Partidário 1996). Among some impediments to the use of SEA in Portugal the lack of priority given to environment, lack of strategic thinking, co-ordination between different sectors, which is contrary to the very sectoral compartments of Administration could be pointed out. The bureaucratic lethargy of peripheral countries (Pridham 1994) is also a factor hampering the perceived need for SEA as this excerpt shows:

> *"There is the same posture that existed one decade ago with EIA. It is a lot of work, a boring task. The idea is: when we are obliged to do it we will not have any solution, but until then, no, not at all" people still don't have the notion of the importance of the strategic evaluation"* (IPAMB 2)

> *"For minority sectors with knowledge, the concept of incorporation in planning is basic (...) we are elaborating components for the National Development Plan and our concern is to assure from the beginning that the environmental debate is instilled everywhere, but this still is a debate of elites"* (CNADS)

Environmental problems arrived late in Portuguese scene compared with other industrialised countries of Europe. They have not yet been a priority in a society worried with economic development. Portugal is now facing a pressure from the EU to implement more sustainable policies and at the same time pressured to perform better economically. The ecological modernisation that aims at articulation of both dimensions is still very far due to lack of awareness, investment in global integrative policies, incentive to industries and other productive sectors. This excerpt translate this situation:

> *"Environmental measures are more for the package than for the content. This happens in waste management; with pollution problems it is very clear; in planning it is apparent as well as with transportation. It is more a lip service, sometimes it happens"* (Local NGO)

EIA has been implemented at the beginning as an obligation by being a UE member state and not as a necessity felt to better deal with environmental management and the equity associated.

Implementation of effective environmental policies implies a great effort, commitment and dynamics in the institutionalised bureaucracy of traditional administration, which will conflict with its usual lethargy and established interests (Pridham 1994). Co-ordination of measures is hampered by: inadequate administrative structures, a great institutional fragmentation and lack of technical and financial resources. EIA legislation is paradigmatic on the degree of discretion adopting at the same time the more restrictive and the minimum exigencies.

9.5.3 Confidence in the process related to attitudes of stakeholders

The question of confidence is relevant in Portuguese society. It is a society where there is a permanent attitude of mistrust in Administration and government deeply analysed in Chapter 5 using Santos's framework and the empirical work of Benavente et al. (1997). Transporting those features to the EIA process there are some factors contributing to less confidence of the public in the EIA process as stated in those excerpts:

> *"There is a very reduced credibility and a great vulnerability applied in general to EIA in Portugal"* (CNADS 1)

> *(...) "There are strong reasons for lack of credibility and it is exactly because there is no transparency and no real participation of the public (...)"* (Civic association)

An important feature contributing to mistrust in Administration is secrecy on information in Portuguese society at a general level and particularly from Administration. Those excerpts translate the situation:

> *"There isn't in our public Administration a culture of openness in spite of our Constitution and laws on access to information"* (Environmental NGO 1)

> *"In a last analysis what we can see is an enormous difficulty in the access to information and data. The Administration of the State is very bureaucratic and works with great secrecy and this makes difficult the application of the Principle 10 of Rio Declaration, which is the access of population to data and information and their involvement in the decision making*

process always constitute a motive of conflict. Populations do not have access to data and information. Even sometimes deputies in the Parliament do not have access to data which result from the State reports" (CNADS 1)

"It is a rule for the civil servant, perhaps things are changing but the rule still is if nothing is said on contrary it is secret even when the Constitution and the law on access to documents of Administration state exactly the opposite" (IPAMB 2)

(...) "the intention is always to make difficult the access to information. Information sometimes exist but has no efficacy since people cannot get it on time or easily. People has busy schedules, work, family, and these small hurdles are transformed in great ones" (Local NGO)

It is enshrined in legislation the right to information in environmental matters. Portugal signed the Aahrus Convention, which provide a main example of the rights and obligations of government as well as organisations of society in the exchange of information related to environmental decision making. Sometimes, information related to environmental matters does not exist because there is little investment on baseline data. However in many situations, information exists but access to it is difficult. As far as emissions from industries are concerned the situation is very difficult as presented:

(...) Legislation protects industry. Every year I try to know what happens with the emissions from the plants here in Estarreja but it is a secret and this is unacceptable. I ask the information to the Regional Environmental Department and they answer that it is up to the industry to give it or not. There is another indignation about this because it it the industry itself that has the data and not an independent authority" (Local NGO)

As stated by Benavente et al (1997) it is the State itself that does not publicise its own legislation. Moreover when citizens know their rights to information the difficulties created by a hostile Administration and bureaucratic machine led citizens to apathy and resignation. At an EIA level in order to raise project awareness among all the interested parties proponents and competent authorities should ensure all relevant information to be available from the beginning and targeted for different publics especially those traditionally marginalised. It has been concluded in the "How" issues that information on EIA exists but is not effective since it is difficult to obtain and no mechanisms exist to transform information into knowledge and develop environmental consciousness. This is essential in the context of sustainability. The late phase of public involvement is an important aspect leading to lack of transparency, less usefulness of public consultation and reduced credibility of EIA processes. These aspects have been already

tackled. Another aspect is the considered lack of efficacy of EIA processes since no mechanisms exist for ex post evaluation such as monitoring and auditing. The great majority of projects submitted have received positive comments with application of mitigation measures (Observa 1998). However, no mechanisms exist to verify its implementation in the practice and the effectiveness of measures proposed. A common idea spread out is that mitigation measures just serve to approve projects and not to effectively mitigate negative ones forecasted. Those excerpts give an idea of the situation:

> *"One of the problems that exists in Portugal is that there is a total absence of control. In the great majority of projects there is no information whether the requisites defined in each EIA project have been or not implemented. Not even project developers have records of this nor the Administration controls if it is done in the practice"* (Environmental NGO 1)

> *"We are not doing any evaluation of processes and the public resent this. They have been involved in the process and then in the practice they don't see the implementation of what had been accorded and this completely discredits the process. There is a discredit from citizens and this has been often stated in hearings"* (IPAMB 1)

> *"The problem is that there isn't along the project an effective link among those doing the work, because there is neither no monitoring nor auditing"* (Professional association)

There is very little empirical work on the implementation of mitigation measures. Pinto (1996; Pinto 2000) dealt with this issue in her master's thesis. Related to the efficacy of EIA she analysed 16 projects in the North of the country in order to test the implementation of mitigation measures proposed in the EIS and by the Evaluation Commission in the final EIA report. She points out that despite being present in several EIS and comments from the Commission, these concerns do not correspond to effective further actions in order to mitigate impacts evaluated in the study. In eleven projects less than 80% of the measures proposed have been implemented. Just 2 projects complied with the implementation of all the measures and 3 projects have seen 80% to 90% of the measures implemented. She concludes that EIS's are becoming better but environment has not been rewarded with it. Another question is the efficacy of measures even when applied in the practice:

> *"What happens is that sometimes mitigation measures in the practice, even taken with the best knowledge at date, have revealed to be non efficient"* (Environmental NGO 1)

> *"People doing the evaluation are proposing things and they don't have experience of its effectiveness in the practice. The same happens often with consultants doing the studies. If we impose post evaluation with rigour everything will be improved"* (IPAMB 1)

Proponent also explains how important monitoring is for them:

> *"We are investing money and how then mitigation measures don't work? We need to verify this. We need to verify if they are useful"*

The law is absent in EIA ex post evaluation. However, it is stated in art 6 of the Regulatory Decree 38/90:

> "The non adoption of results from the responsible EIA authority implies the inclusion in the licensing process of mandatory control measures about negative effects on environment and mechanisms to follow, use of auditing and monitoring in order to evaluate the effects on environment due to the implementation of the project in order to allow compensation in time".

This is again a reactive approach nicely commented by this excerpt:

> *"This is a nonsense, one of the great mistakes of our legislation (...) Auditing should be done exactly to assess if recommendations are being implemented"* (Environmental NGO)

Scoping and monitoring are important steps to give credit to EIA and improve its effectiveness. The lack of credibility on EIA is enlarged to many other aspects related to environment. Complaints by citizens to environmental authorities on pollution, illegal dumping, attempts to destroy the patrimony usually didn't get any effective answer. The pollution pay principle is rarely applied in this country and illegal construction and damages to environment have been produced many times by the Administration itself by allowing licensing processes or through lack of efficient control on the implementation of projects. Environment is an area where aspects related to control are more visible since it is an area needing the co-ordination of several areas and articulation between several distinct entities.

9.5.4 Synthesis

Public participation needs the development of conditions for the flourishing of attitudes more oriented to cooperation rather than the pursuit of individual interests many times motivated by lack of confidence and trust in institutions. In the context of sustainable development this implies a great shift in traditional ways Administration and developers cope with environmental decision making. A relevant issue to address as the main objective of any planning or resource management action is sustainable development aims and principles. Strategic thinking, strategic planning are indispensable to raise

long-term objectives in a flexible way and with a straight articulation of sectoral areas implicated in development. The enlargement of EIA at a broad level of policies, plans and programs whatever the form it takes (incremental model, expanding the EIA projects or the "trickle-down" model) is a main step to sustainability. If sustainable development is to become a reality the need for broad consultation and participation in the strategy formulation and policy making process is indispensable (Street 1997). In the Portuguese EIA system coherence is hampered by a reactive and piecemeal approach just considering EIA at a project level and by a weak planning system many times in conflict with EIA projects. Addressing sustainable goals implies also a more participative society within a co-operative than adversarial framework. Some aspects hampering positive attitudes from stakeholders affected by actions are linked to perceived lack of transparency of processes due to secrecy of information from Administration and developers where information is not widely spread timely in the processes and where mechanisms to raise the level of debate do not exist. Late involvement of the public is a crucial aspect negatively correlated with the reliability of EIA processes. Another important aspect is the lack of EIA follow-up in the Portuguese system to assess the implementation of the mitigation measures, its effective role and the accuracy of predictions done. It is also indispensable to give credibility to EIA processes. This can only be achieved by giving confidence in the processes. It seems indispensable that transparency in information, coherence in linkage between projects and broad policies and decisions taken be effectively implemented in practice. This confidence should be a two-way street from the Administration and developers to citizens and citizens to government and developers.

9.6 Conclusions

The following charts try to sum up main findings in public participation in the Portuguese EIA system in order to obtain a broad picture addressed in this chapter. The picture has been constructed by interpretation of data gathered from the interviews to stakeholders of EIA processes, triangulated whenever possible with other sources of data and different types of data in order to increase reliability of results. The use of a specific case of Portuguese reality, studied in an in-depth form, which will be presented next has helped to better define, confirm and particularly to enhance features of this broad picture.

Table 9.1The "Why" issues – Influence and impact on decision making

Perceived benefits of participation	Usefulness of participatory processes is considered relevant from stakeholders in a theoretical plan. The perceived benefits are however differently stated by stakeholders interviewed: those stressing more pragmatic principles (better EIA project, better knowledge of public expectations and solving conflicts in planning); those stressing the underlying philosophical reasons (a shift from representative democracy to participative democracy in the context of sustainability); and those also presenting pedagogical principles (increasing awareness on environmental problems and institutional procedures and sense of citizenship co-responsibility). Despite weaknesses and deficiencies of Portuguese public participation it is recognised that EIA is the institutionalised instrument in the Portuguese legislation asking more regularly for the involvement of the public in decision-making.
Impact on decision-making	The real impact of participation in decision-making has not yet been analysed. No empirical investigation exists on the way public participation has influenced decisions by acting on the rejection of projects submitted or in the choice of alternatives. Although the final decisions from the EIA process are not binding to the licensing authority evidence exists that they have been in almost the cases accepted. Some cases have been rejected due to public controversy after the EIA decision making. In some other cases the Evaluation Commission took into consideration complains of citizens to justify the review or rejection of the project. However the reactive approach taken to EIA in the Portuguese EIA system usually implies that only minor changes in the project and introduction of mitigation measures could be taken. Some evidence exists that in spite of deficiencies especially the late phase of involvement, public participation has worked mainly as a way of developing different attitudes on stakeholders of the EIA process translated in several interactions: • The Agency in charge, which needs to cope with public views integrating them in evaluation reports. • Decision makers feeling that decisions have more visibility, that they need to present justifications on the results of processes • Consultants and developers, who became aware that projects are now at the public domain and that they have the burden of proof to demonstrate that they are environmentally sound • The public in general who increasingly knows that there is an opportunity to influence decisions.
Awareness and consciousness of environmental values	O´Riordan (1976:214) states that environmental citizenry is a prerequisite of EIA" since such people should be able to cope more effectively with the process of social change..." Environmental literacy and militancy is very low in Portuguese society. However environmental problems present now a great visibility due to important development projects and traditional lack of planning which have quickly changed landscapes the very some landscapes which people do not recognise anymore. With environmental degradation according to Beck (1992)".a historically unparalleled and so far completed uncomprehended social and political dynamic is set in motion…". Everyone can observe in the Portuguese context signs of change through increasing demands for participation not only in the existing legal frame but more significantly out of it through demonstrations, riots and boycotts. A challenge is confronting the entire society. Environmental concerns have been recently a forum for civil society participation in public life even though the latter has not been in many cases neither organised nor efficient. It is a challenge for institutional arrangements of the Administration and for organised public structures especially environmental NGO's and this implies a vast work in the area of information, citizenship rights and environmental consciousness. EIA still is a recent process in the Portuguese society. No empirical studies exist on its effective knowledge by the public. There is a perception that public participation has been increasing; though not confirmed by statistical data. What could be stated is that there is more awareness of this instrument in society. The amount of consultation processes done, which has been enlarged recently associated with the great controversy some projects brought to the public sphere is leading to increasing awareness of EIA. In pair with this is also an increasing awareness of EIA fragility and weaknesses.

Table 9.2 The "Who" issues - Equity and fairness

The Public	From the interviews and the empirical data respecting 355 projects submitted between 1990-1997 (Observa 1998) it is possible to state: • Public participation presents in a general way a low level of involvement • Public participation varies from project to project. There are projects with very low levels of participation (industrial plants, afforestation, and quarries), others with some more participation (roads, dams). Projects related to waste management present very high levels of public involvement. • Central Administration is the category presenting more written comments followed by local authorities and citizens and environmental NGO's • Citizens followed by local power and environmental NGO's are those with more participation in public hearings • Trade unions and universities invited to participate on the processes are those presenting the lower involvement According to motivations for participation some main groups or actors could be defined: Environmental NGO's; Public in general usually residents of the area; Local power performed by municipalities and parish councils; Institutional organisations with responsibilities in specific areas (parks, patrimony, ecology); Local associations and institutions organised by corporations and interests.
Organisation of the public	• Environmental organisations perform the more organised group (those who present more comments and in a more diverse subjects with relevance for legislative and institutional procedures as well as technical criticisms to EIA reports). They present however several constraints especially human resources once Portugal reveals the lowest level of ecological militancy of European countries (Lima et al 1996). This lack of resources obliges NGO's to select projects according to criteria of efficacy choosing the most emblematic ones. • Municipalities have a great power in managing their territory. They are involved in consultation processes in two ways. The first one is informal and used by developers who want to know the feasibility and acceptance of projects. The second one respects the formal consultation process open to the public. Channels of communication between municipalities and the public are usually only one-way. They give privilege to strong webs of personal contacts as forms to overcome centralisation rigidity and normative confusion of the administrative political system and this leads to a lack of dialogue and weaknesses of collective capacity of organisation (Ruivo 1994). • Parish councils are closer to the citizens. However their little power, lack of trained staff and material conditions as well as the lack of effective dialogue with municipalities make them a less effective structure to represent interests of populations. • Residents and the public in general are usually not organised participating at an individual level sometimes in-groups of interests with immediate objectives. In rural areas they often ask for the support of parish councils and municipalities. • Organisations and institutions from the State participate only with written comments related to their specific technical areas.
Reasons for participation	There is some evidence that participation reveals a society more worried with more materialistic values meaning more concern with their own patrimony, direct interests and degree of immediate damage suffered than a society worried with post materialistic values as the rights of future generations equated to broad environmental policies and practices. Public at large participate more in projects related to social issues affecting them. Perception of risk is an important factor triggering participation comments. Lima et al (1994) argues that ecological sensitivity of Portuguese people is stressed by an element of fear directly linked to health. It is more up the environmental associations the defence of post materialist values considering their higher environmental consciousness in a country with very low levels of environmental literacy and awareness.
Representativeness	Representativeness is not only important for the success of participation but is also relevant to its validity (Street 1996). If the identification of the interested people has been showing improvement the measures required for full involvement have not been successful. yet. Representativeness of processes in the Portuguese EIA system is hampered by: • Elitism and formality of mechanisms used to promote participation, which have been foreseen just more suitable for experts in scientific and technical language. • Late public involvement on the processes • Lack of investment in environmental education and consciousness • Lack of positive discriminatory measures to balance less powerful interests • Lack of adequate institutions to respond to a perceived demand for more involvement from citizens. • Lack of methodologies and measures that balance social rationality and technical /scientific rationality

Table 9.3 The "When" and the "How" issues - Efficiency of the entire process

Phases of participation	The phase in which participation takes place reflects and determines the quality of the entire process being a relevant element to its efficiency. Early involvement provides: better quality of EIA information, increase trustfulness, consider inputs from the public in time, and promote credibility and transparency of processes. Public involvement in the Portuguese EIA system only takes place when the most important decisions have already been made. This reinforces the idea that they only serve as a mean of legitimising decisions transforming participation in just a cosmetic exercise. Some positive steps have been taken in order to involve the public in an early phase after submitting the EIA draft report for main projects. However as the law just consider one phase of consultation, this procedure leads to several interpretations, confusions and different practices. If the involvement is done in an early phase there is no further consultation when the project is concluded. Stakeholders consider that a formal scoping phase with consultation should be mandatory in legislation in order to increase the efficacy of the process. For large projects it is also consensual that different phases of evaluation with consultation should exist beginning at an early stage. The enlargement of EIA to strategic and normative level has an increasing consensus and is advised by the UE. However in Portugal it is still felt as a debate of elite, though in many cases the questions raised by the public are exactly related to broad policies and plans to which the projects at stake are dependent.
Design	A model was found that has proved to work in the practice (accomplish schedules, solve bureaucratic questions guarantee same treatment for all the cases). This is achieved by a strict norm that technically works and even goes far beyond the law though framed by the restrictive character of law. It seems not to be a process designed for societies with low levels of civic participation and traditions of participation.
Information out (displayed by the Agency and the developer)	<u>Dissemination</u> There is some evidence that mechanisms for dissemination of information about processes do not reach all the layers of the public. Some polemical projects did not have almost any participation in the formal administrative procedure although later on and out of the formal process received great controversial participation. Information exist but procedures used do not seem effective in the practice. <u>Interpretation</u> No mechanisms are provided to help the interpretation of the technical and difficult EIA information (project and its likely impacts). No qualified staff is available to attend public requests on information. Positive steps from the Agency (not foreseen in the law) in order to answer to individual written comments have been inefficient to provide informed participation in time. Public hearings mixing information and opinions at the same time do not reveal capacity for informed participation.
Information in (public inputs to the process)	A minimalist approach is designed to get inputs from the public. Just one phase of consultation and only using written comments for all the projects and oral comments to the most "polemical" without specification of what polemical is. Those mechanisms are not adapted to the cultural background, which give privilege to the oral tradition and where debate is essential. Public hearings use verbal communication but they are however "intimidating, superficial, authoritarian and elitist". Some evidence exist that debate in public hearings does not allow useful inputs from the public. There is a prevalence of scientific and technical rationalities over social rationalities. The former domain and monopolise debate.
Quality of information	Main pitfalls of EIA information (EIA report and the Non Technical Summary) based on interviews are: • Information biased by proponents views • Abuse of technical language • Difficulty in reaching all the sectors of the public • Little attention to social impacts Those gaps reflect the absence of regulation on EIA author's statute and a system of accreditation of consultants; Lack of direction and guidance for the elaboration and presentation of EIA information; Late involvement among proponents, consultants and the Agency; lack of a scoping phase to define the terms of reference to be used on the assessment.

Review of information	The review process presents some pitfalls: mixture of functions due to a highly centralised system. The entity in charge of the review, the Evaluation Commission, is composed by representatives of the Ministry of Environment who is also sometimes the developer and the licensing authority. Lack of technical experts from different areas required; lack of uniformity in the evaluation process; lack of guidance specifications and procedures; lack of early definition of terms of reference for each project.
Integration and feedback of information	There is substantial evidence that there is a very formal use of information received on participative processes. No criteria and guidance exist on how public views are taken into account. There is usually a compilation of all the written and oral comments received and a synthesis done on this information. Issues related to what is useful information what is the weight of public opinions in quantitative and qualitative forms is not defined. This is a quite relevant issue to know until what point were public views taken into account. Feedback deals with the publication of the outcome of the review process, final comments and final decision. Results of the EIA process are displayed to the public on the places where consultation was held. However final decisions from the licensing authority are difficult to reach. Difficulties on getting information about the outcomes of processes still reveal an attitude of secrecy used in the Administration and a kind of despotism in its performance. Institutions are not prepared to face open decision making and transparent processes yet.
Management of the entire process	Centralisation characterises the EIA process where everything related is concentrated in the Ministry of Environment. Criticisms have been pointed out on the existing dependency of evaluators, decision-makers and sometimes proponents and licensing authority. Especially concerning public involvement processes there has been since 1994 a reinforcement of centralisation on IPAMB. Benefits are expressed by stakeholders as: better organisation and efficiency of processes by the use of a set of norms equally applied; control of the entire process; knowledge of what is going on with public participation in the entire country; implementation of a documentation database. However the management of all the processes at a national level implies the use of a standard model. This means a lack of flexibility in the choice of methods and mechanisms for different projects with different characteristics and publics. The normalisation has the perverse effect of making consultation a simple legal formality. A mix model with IPAMB in charge of directives and guidance and more decentralised ways with local authorities working together could be a more balanced process. There is a notorious lack of investment from the Administration in resources to provide public involvement.

Table 9.4 The "Which" issues – Better decision making by addressing sustainable goals

Articulation of EIA with broad policies	Although sustainable development is stated as the main objective in Environmental Bill of 1987, very few efforts have been done to its implementation. A national framework of policies and principles does not exist. Recently it was created a National Council for Environment and Sustainable Development, which is composed by members, elected by the government and 2/3 by representatives of the civil society. This Council has been working in a framework for the PNAD (National Plan for Environmental policies). There are no Local Plans applying Agenda 21 from municipalities. There are only some sectoral plans not yet approved taking into account sustainability principles, indicators and criteria: the National Plan for Forests; the National Plan for Environmental Health and the Strategic Plan for Waste Management. No articulation exists between EIA and the planning process. EIA projects often conflict with municipal plans, territorial plans and land-use plans. There is not an early and articulated involvement among the proponent, consultants, and the entity in charge of EIA and planning authorities. The enlargement of EIA to plans, programmes and policies is not foreseen in short term, though advised by the European Union. There is an agreement on its importance just by cultural elite related to the process. There are aggravated difficulties on implementation of sustainable development principles due to: Lack of traditions in strategic planning and medium and long term objectives • Lack of awareness and consciousness on its importance • Not being considered a national priority where economic growth still is a predominant concern • Increase of consumerist patterns against environmental values There is however a strong pressure from EU to implement environmental sustainable policies. This external pressure has also been combined with an internal increasing pressure though still weak. Environmental associations are important catalysts of this internal pressure.
Adequacy between legislation and implementation	There is a great discrepancy between the principles of environmental Portuguese law stated in the Constitution of 1996 and the Environmental Bill of 1987 and its implementation in practice. A great array of sectoral legislation exists with lack of co-ordination and sometimes contradictory. There has been a reactive attitude to EU environmental laws. Environmental problems have never been important concerns of Portuguese society until very recent times where they acquire a great visibility due to a significative development with EU funds. Portugal arrived late to the environmental scene facing now contradictory tendencies. By one hand is under EU pressure to implement environmental policies, by the other hand a tension is felt in order to accomplish the economic criteria also demanded by the EU and the single market.
Political commitment	The absence of commitment and adequate institutional arrangements are recognised as major barriers to the application of any EIA procedures Typically these constraints reflect a lack of consensus concerning the benefits of EIA (Smith 1993). Environmental policy and management are still not a national priority by the Government and the society. There still is a great commitment to economic development Parliamentary system and the political parties are not very aware of environmental concerns (neutral or delaying processes) Political parties are more linked to economic concerns and economic lobbies; employment and economic growth are priorities. Industrial sector faces environmental standards and measures as impeding the economic development, small and medium enterprises avoid costs of ecological modernisation and do not invest on the field. There is an increase of "consumerist values" in society hampering development of environmental values

Institutional arrangements	The implementation of environmental policies implies a great effort, commitment and dynamics in the institutionalised bureaucracies of traditional administration, which will conflict with its usual lethargy and established interests. Co-ordination of measures (planning, EIA, post evaluation) is hampered by: Inadequate administrative structures, a great institutional fragmentation and lack of technical and financial resources Conflicting relations between the administration when trying to implement demanding environmental tools and standards norms and other regional and municipal sectors or the private sector. The traditional web of influences the way EU Directives are enforced in practice, as EU Directives have a great degree of discretion to be adapted to the member states. EIA legislation is paradigmatic on the degree of discretion adopting at the same time the more restrictive and minimum exigencies. Environmental Ministry has not enough power and capacity to impose environmental standards and more efficient norms. Relations between ministries are often non-co-ordinated. Initiatives have been linked more to individual ministerial commitment than to a collective redirection of approach towards integrating environmental concerns into the ministerio portfolio" (Pridham 1994). Lack of infrastructure facilities Traditional hierarchical relationships between the Administration and society.
Confidence in the process	The EIA process lacks credibility by several contextual and administrative procedures. There is an enormous deficit of confidence from the public in the State and its Administration and this is extended to the EIA process. Portuguese society is very stratified in quite different cultural levels due to a heritage from the non-democratic, anti-scientific and demagogic culture (during 40 years). Very low levels of environmental information and consciousness allow easy manipulation of environmental conflicts, emotional attitudes sometimes not allowing the achievement of processes. Secretism of information is an important factor of the administrative bureaucracy of the State machinery leading to perception of lack of transparency in decisions. Secrecy also exists in industry and lobbies; information on environmental indicators is very scarce, information on projects and decisions is late and sometimes difficult to obtain. Deficient legal framework of EIA (late involvement of the public, elitist mechanisms of consultation, mixing different functions). Lack of human and economical resources from the Administration. Lack of post-evaluation and control mechanisms. Monitoring and auditing are absent of the EIA processes. This fact is of great relevance to the discredit of the EIA process. There is a public feeling that mitigation measures remain just in the paper and its efficiency is never evaluated in order to progress. There is also no trust in control mechanisms.

10 CASE STUDY: "THE PROJECT FOR CO-INCINERATION OF INDUSTRIAL WASTE IN CEMENT PLANTS".- THE FAILURE OF THE DAD (DECIDE, ANNOUNCE, DEFEND) MODEL

10.1 Introduction

As explained in chapter 8, this case has been chosen by its richness since it contains multiple structural incidences and interactions enhancing main features of public involvement in the Portuguese reality. It is an in-depth case study in which an interpretative approach was considered the most appropriate to understand the dynamics of the phenomenon of participation in its specific context. The approach has been mainly based on different perspectives given by stakeholders of this case, (representative of the six places at stake) through qualitative interviews. Triangulation was also used with other sources of data such as the files from IPAMB related to the process (reports on written comments and public hearings); reports from the institutions involved, document analysis and bibliographic review related to risk. A press review has been useful to structure events in chronological order (see Annex II, table A II 14).

10.2 Waste management polemics

Waste management is a relevant environmental issue and this can be proved by the enormous attention on it gathered by public opinion especially when siting waste facilities. Waste management is characterised by being a problem with increasing dimensions of severity and impacts (Smith 1993) since the production of waste has not been followed by effective techniques of treatment. Residuals can be recycled or treated by physical, chemical or biological processes but they cannot be eliminated because this is against the laws of conservation of mass and energy (Ortolano 1984). The dilemma is that the resource base of waste has been increasing (conversely to other resources) but the waste management aim is to reduce or sustain it (Smith 1993). The seriousness of the problem is so effective, proved that industrial waste that is being produced now can affect the quality of life on earth during more than 10000 years (Lima 1995).

Waste management is also the most poignant example that the DAD (Decide Announce Defend) model is no longer capable of solving problems related to hazardous waste disposal. It is also the area where the NIMBY (Not In My Backyard) syndrome presents the greatest expression as well as the area where the inherent character of conflict of environmental problems shows up in the most formidable way. The NIMBYism of

hazardous facilities siting is a universal phenomenon as Smith (1993) recognises in a review on the subject. It could be seen in such different places as the USA, Canada and increasingly in Europe, within more mature and less mature EIA systems. As put by Webler and Renn (1995:27) citing Morell and Magorian (1982): "Today...citizens have what amounts to a de facto veto over siting issues, despite legal provisions allowing legislative overrides of local opposition". Smith (1993) refers that the widespread disagreement to waste disposal siting has its roots in 1978 with the polemical case of Love Canal near Niagara Falls that has provoked serious problems to public health. Many other cases of serious troubles happened since then and amplified by the media have contributed to the difficult tractability of hazardous waste disposal[61]. Industrial accidents such as Flixborough explosion of the chemical plant in 1974; "Betelgeuse" oil tanker, Italy, 1979; Three Mile Island, Pennsylvania 1979; Alexander Keilland capsizing, 1980 (Ramsay 1984) or Bhopal accident in India and Vila Parisi, Bresil 1984 (Beck 1992) have also contributed to a climate of suspicion around technology with large influence in waste management processes.

10.3 Background of the project

Since 1985 due to pressure by the European Union, Portugal has been trying the implementation of a policy for waste management, though without an apparent success. A law was set up, the Decree law nº 488/85, which regulates the basis for a policy on waste management advocating the philosophy of the 3 R (Reduction, Reuse and Recycle). However the implementation of this policy has been almost non-existing. All the attempts done have been jeopardised especially due to a lack of a global coherent and systematic approach. The problem of waste management has been faced more on the side of sectoral strategies than comprehensive effective policies and plans.

Meanwhile, the situation of hazardous industrial wastes has been increasingly aggravated in recent past being completely out of control. There is no accurate data on the quantity, quality, provenience and destiny of hazardous wastes from the industry. Several partial assessments have been carried out by a private enterprise, Tecninveste, revealing an increasing and worrisome production of wastes. The first results known in

[61] Petts and Edulgee (1994:4) present a list with 14 incidents associated with the disposal of hazardous waste beginning in 1956 with mercury poisoning in Minamata Bay, Japan, with 800 cases of confirmed poisoning by methyl mercury.

1986 estimated in a million tones/year, the production of industrial waste in Portugal but not including domestic hazardous waste (CNADS 1998). The second attempt was done in 1994 and estimated in 1.4 million tones/year the production of toxic waste. In 1997 updated data revealed that 2.5 million tones/year of industrial waste from which 125000 tones classified as toxic were produced (SCORECO: EIS 1998).

Very few solutions exist to cope with the management of industrial waste in Portugal and there are no adequate infrastructures to face its correct disposal or use as fuel. No adequate systems exist for treatment of toxic waste. Solutions posed to industry are simply the storage and exportation. For storage there are two private companies, Quimitécnica and Lobbe (MAa, 1998). Some producers store toxic waste thus without environmental safety guarantees, others export waste and many others simply discard waste into the rivers and clandestine dumps. There is a landfill for industrial waste in Sines and a plant for treatment of industrial waste in Águeda but with a very low capacity.

Between 1987 and 1991, the DGQA (Direcção Geral da Qualidade do Ambiente – General Direction for Environmental Quality) presented a proposal for a management model for industrial waste the STRI- "Sistema Integrado de Resíduos Industriais" (Integrated System for Industrial Waste) which had foreseen a unity for physical/chemical treatment and incineration as well as two landfills and a transfer station. In April 1990 a public bidding was open to select an enterprise to construct and explore the STRI. ECOTEDRI was chosen presenting a project for waste treatment methods and locations. The project was rejected at a local level by the population and the municipality directly affected- Sines, in 1990. According to CNADS (1998) the kind of administrative procedure adopted without information and communication to the host population was the main reason for the rejection.

In 1994, the government reopened the process after receiving an appraisal asked to an environmental NGO – Geota, in 1992, on the current situation of waste management in Portugal and the use of a "methodology for information, public consultation and decision making for the implementation of a national system for management of hazardous wastes" (CNADS 1998). However, many of the recommendations of the Geota's report have never been implemented as to the elaboration of a national plan for

waste, a national inventory of waste, the creation of economic benefits for waste reduction and the internalisation of real costs in the management of waste treatment.

The process was reopened with a project for the incineration of industrial waste with five potential places for its location. The EIA process related was very controversial and public participation was the greatest ever seen. After a very polemical process the government in late 1994, decided in favour of the incinerator project to be located in Estarreja where there was support from the president of the municipality in spite of strong opposition from the population. However in that same year the European Union Council approved a new classification for hazardous waste – The European Catalogue of Waste (EU 22 Dec/1994) which made the incineration a non viable solution due to prohibitive costs for industry.

Facing the new situation, a resolution of the Portuguese Council of Ministers, nº 98/97 June 25, approved the co-incineration as the strategy to be adopted for industrial waste management. This resolution states explicitly that co-incineration in national cement plants is the preferential solution considering the environmental and economic advantages proved by comparative assessments done and the quickness of such implementation. The Decree law nº 239/97 established the rules for this waste treatment. Meanwhile, in late 1996 two Portuguese cement companies (CIMPOR and SECIL) presented to the government a project for the treatment of industrial waste (toxic and non toxic) through co-incineration, and the intention to constitute a consortium with a French Company to develop this proposal. In May 1997 a memorandum between the Minister of Environment and cement firms was signed in which the consortium, SCORECO, demonstrated the availability to produce services related to the treatment, use and disposal of waste. In July 1998, SCORECO presented to the Minister of Environment the project and the respective Environmental Impact Statement concerning the project of co-incineration of industrial waste in cement plants. A National Plan for Prevention of Industrial Waste (PNAPRI) has been elaborated since October 1998. Table 10.1 presents the main events of the co-incineration process, and Fig. 10.1 the location of the units at stake in the project.

Table 10.1 Main events in the co-incineration case

Events	*Date*
• *Government abandons the idea of an incinerator for industrial waste and considers the co-incineration process*	• *End of 1995*
• *SORECO is formed by ECORESÍDUOS (CIMPOR and CECIL cement plants) and Suez-Lyonnaise des Eaux (a French corporation) to put into practice the co-incineration process*	• *February 1996*
• *SORECO presents to the government a proposal for co-incineration*	• *November 1996*
• *CIMPOR and SECIL signed a memorandum with the Minister of Environment for co-incineration*	• *9 May 1997*
• *Resolution of the Council of Ministers, n° 98/97 – A strategy for industrial wastes including the decision to co-incinerate industrial waste in cement plants*	• *25 June 1997*
• *Dispatch n° 541/98, nominates the Evaluation Commission*	• *21 July 1998*
• *The project for co-incineration and the respective EIS were presented by the proponent to the licensing authority*	• *July 1998*
• *Decree Law n° 273/98 transposes to Portuguese legislation the Directive 94/67/CE of 6 December – incineration of industrial waste*	• *2 September 1998*
• *Public consultation and participation takes place*	• *31 August to 23 November*
• *Public hearings are held in the 6 places at stake*	• *1; 13; 15; 16; 22; 23, October 1998*
• *CNADS report*	• *3 December 1998*
• *Regulatory Decree n° 23/98 excludes the cement plant of Outão from the co-incineration process*	• *14 October 1998*
• *Report from the Evaluation Commission*	• *21 December 1998*
• *Final decision from the Minister of Environment*	• *28 December 1998*
• *Memorandum establishing a special system of monitoring, control of the co-incineration process in the cement plants of Maceira and Souselas*	• *6 January 1998*
• *A proposal from the "Green Party" (PEV) to suspend the process was approved in the Parliament*	• *January 1999*
• *Law 20/99 from the Parliament suspending the process of co-incineration*	
• *Recommendation from the Counsellor of justice to the government in order to suspend the project*	• *January 1999*
• *Decree Law n° 120/99 defines the regime of a Scientific Independent Commission to monitor and control the entire process of co-incineration*	• *16 April 1999*
• *Decree Law n° 121/99 defines competences of the Scientific Commission*	• *16 April 1999*
• *Decree Law n° 516/99 approves the strategic plan for industrial waste management*	• *2 December 1999*

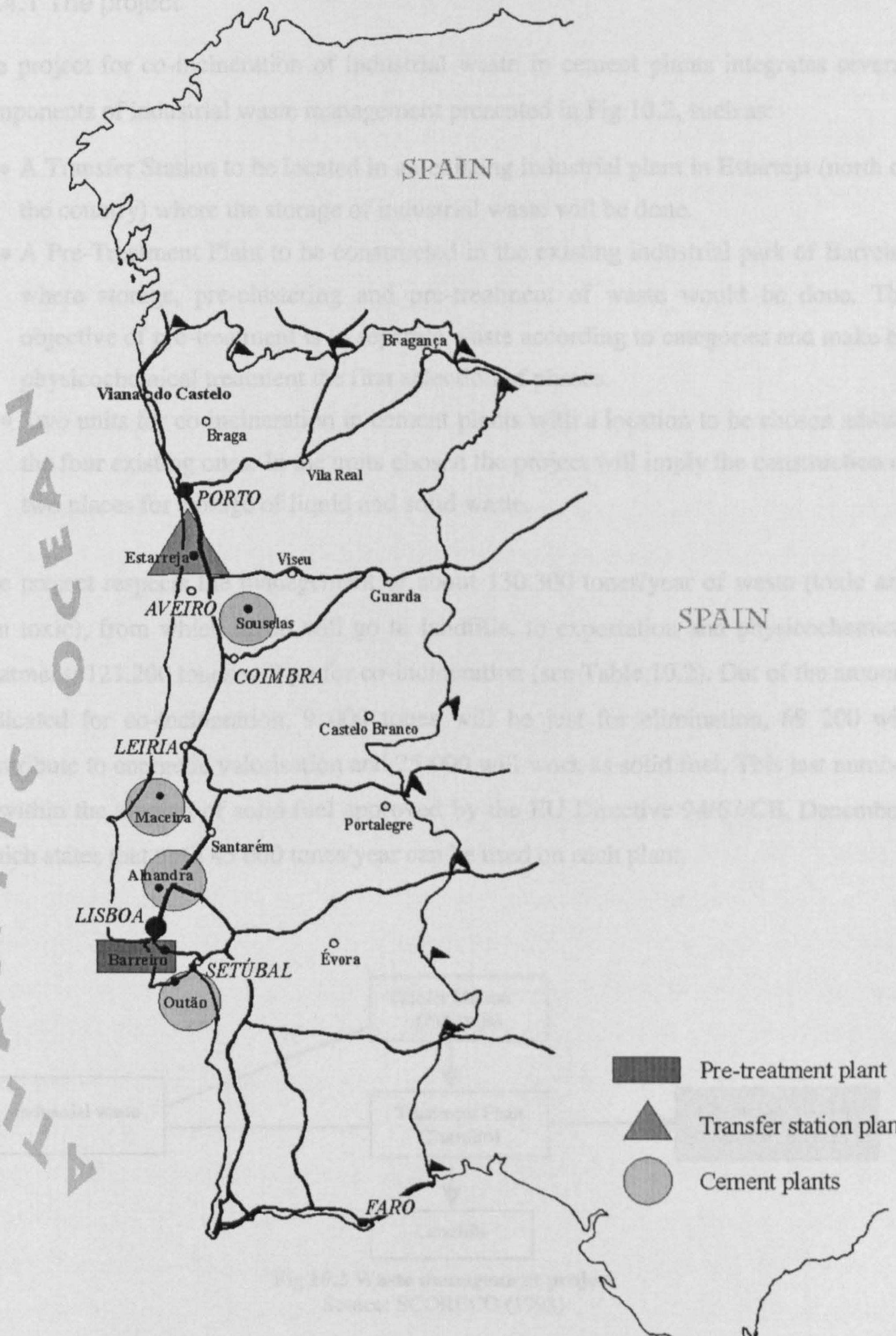

Fig. 10.1 Location of proposed waste facilities

10.4 The EIA process

10.4.1 The project

The project for co-incineration of industrial waste in cement plants integrates several components of industrial waste management presented in Fig 10.2, such as:

- A Transfer Station to be located in an existing industrial plant in Estarreja (north of the country) where the storage of industrial waste will be done.
- A Pre-Treatment Plant to be constructed in the existing industrial park of Barreiro where storage, pre-clustering and pre-treatment of waste would be done. The objective of pre-treatment is to separate waste according to categories and make by physicochemical treatment the first selection of phases.
- Two units for co-incineration in cement plants with a location to be chosen among the four existing ones. In the units chosen the project will imply the construction of two places for storage of liquid and solid waste.

The project respects the management of about 130.300 tones/year of waste (toxic and non toxic), from which 9.100 will go to landfills, to exportation and physicochemical treatment; 121.200 tones will go for co-incineration (see Table 10.2). Out of the amount indicated for co-incineration, 9 000 tones will be just for elimination, 69 200 will contribute to energetic valorisation and 25 000 will work as solid fuel. This last number is within the amount of solid fuel approved by the EU Directive 94/67/CE, December, which states that until 45 000 tones/year can be used on each plant.

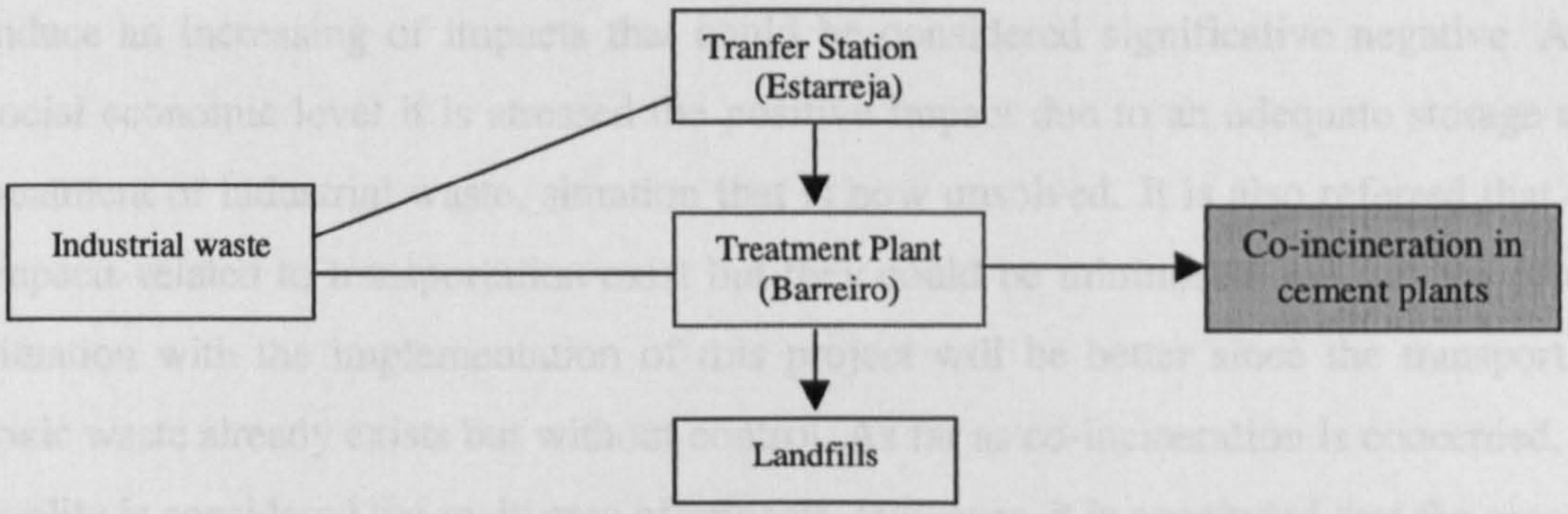

Fig 10.2 Waste management project
Source: SCORECO (1998)

Table 10.2 Amounts, characteristics and destination of industrial waste
Source: SCORECO

Quantities tones/year	Characteristics	Destination
22 300	Industrial non-toxic waste	Co-incineration (energetic valorisation)
4 000	Non toxic residues from packaging	Co-incineration (energetic valorisation)
1 000	Toxic residues from packaging	Landfills
60 90	Toxic industrial waste	Co-incineration (energetic valorisation)
9 000	Toxic industrial waste	Co-incineration (elimination)
5 300	Toxic industrial waste	Landfills
25 000	Residues (80% toxic and 20% non toxic)	Co-incineration (solid fuel)
500	Toxic industrial waste	Physicochemical treatment
2 300	Toxic industrial waste	Exportation

10.4.2 The Environmental Impact Statement

The Environmental Impact Statement was responsibility of the developer, SCORECO, according to the Portuguese legislation. It was composed of nine volumes and was done by several private consultant agencies. A study on psychosocial analysis and on public health was incorporated in the EIS. A Non Technical Summary (NTS), 40 page long, was also part of the information available.

The EIS described the project, presented comparative advantages and disadvantages of the process of co-incineration[62], and analysed the impacts related to this specific project based on existing environmental conditions. It was divided in parts according to the co-incineration plants, the Transfer station and Pre-treatment plant. In the latter case impacts were considered reduced by the application of mitigation measures considered in the project. It is stated that those industrial areas already present high levels of pollution (air and noise) so the construction and operation of the new units will not induce an increasing of impacts that could be considered significative negative. At a social economic level it is stressed the positive impact due to an adequate storage and treatment of industrial waste, situation that is now unsolved. It is also referred that the impacts related to transportation exist but they could be minimised and that the future situation with the implementation of this project will be better since the transport of toxic waste already exists but without control. As far as co-incineration is concerned, air quality is considered the main area of impacts. However, it is concluded that the process of co-incineration if applied according to the EU Directive 94/67 CE will not produce

[62] Highest temperatures, lack of solid residues, low cost, fewer risks and more safety, flexibility of the process and energy use were some of the co-incineration benefits stated when compared with the incineration process.

relevant impacts for public health in each of the four existing locations. All the other impacts related to risk were considered potentially negative. A set of mitigation measures and recommendations proposed would reduce those impacts considerably. Positive impacts were also focused such as the solution for waste industrial management, the use of alternative fuel, which would save 10.000 tones/year. It was also considered the need to re-qualify the places around cement plants chosen for co-incineration by the adoption of chimney filters that would benefit population suffering for long time air pollution from the cement plants.

Mitigation measures proposed also included the control and monitoring of the process by SCORECO, the set up of an emergency plan, control of the produced cement and the creation of a Commission to control the entire process by the Ministry of Environment. The conclusions state that no significative negative impacts to the environment and public health were foreseen in each of the potential four locations for co-incineration since mitigation measures were implemented. The final project evaluation was considered positive by solving the very complicated situation of industrial waste.

10.4.3 The Evaluation Commission

In July 1998 a dispatch from the Ministry of Environment and the Ministry of Equipment, Planning and Territorial Administration[63], nominated the Evaluation Commission for the EIA of the co-incineration of industrial wastes (Dispatch nº 54/98, July 24)[64].

The Evaluation Commission analysed the project and the respective EIS and concluded: "in spite of debilities in the EIS on important aspects they are not an impediment to open public consultation on the subject" (MAa 1998:2). The report from the Evaluation Commission adds "an informed participation and positive contributes from several groups of the civil society are expected" and "this is not an obstacle for asking further information to the promoter in order to solve EIS's gaps, especially related to quantities of waste to be co-incinerated and air quality impacts". The Minister of Environment on September 30, 1998, asked CNADS (National Council for Development and

[63] This dispatch substituted the Dispatches nº 3255/97, 4 July and nº 3624/98, 3 March, already nominating the Evaluation Commission for this project.

[64] The Evaluation Commission in charge of the EIA process would be composed by ten elements from the Administration (IMG; ICN; DGA; IPAMB; DGA- Vale do Tejo; DGR; CCRC; CCL; DGRI) and co-ordinated by an independent expert.

Sustainable Development) a comment on the project. This council created a task group to analyse the entire process and produced a final comment by unanimity on December 3, 1998. Although the Commission has recognised that the solution of the co-incineration of industrial waste was, according to the existing state of art a viable solution for industrial waste problems, they have argued that no conditions existed in order to decide on the siting for co-incineration units. This was especially due to a lack of a broad process of citizens' information adding, "information is a way to develop national solidarity which must work in such a process" (CNADS 1998). Specific recommendations were stated with an urgent character in several considered key issues such as information and communication, credibility of the process and global policies.

10.4.4 Public consultation and participation

IPAMB was according to the Portuguese legislation in charge of the public consultation process. The process of public consultation took place between August 31, 1998 and November 23, 1998, during 60 working days, according to the existing legislation on EIA (n°4 of the Decree/Law 186/90 and Art.4 of the Regulatory Decree 42/97). The publicity of the process was triggered through:

- Availability of the EIS and the NTS at IPAMB, Regional Environment Departments and six municipalities directly involved in the project.
- Availability of the NTS in the 29 parish councils affected by the project
- Publicity through Internet with the NTS available
- Advertisements in national, regional and local newspapers (10 newspapers, 4 national and 6 regional and local)
- Press notices in 27 other newspapers with the NTS
- 35 national, regional and local media were invited to publicise the process
- Invitations sent to 200 entities including the 6 municipalities and the 29 parish councils affected by the project. Six public hearings were held corresponding to the municipalities involved: Estarreja, October 1, 1998; Alhandra, October 13, 1998; Souselas, October 15, 1998; Maceira, October 16, 1998; Setúbal, October 22, 1998; Barreiro, October 23, 1998.

IPAMB elaborated a report based on the analysis of the comments received both written and taped from the public hearings held. The report included the aspects related to the process itself (schedule for consultation, documents publicising the process and places

where the hearings had been held) and main conclusions from the public consultation process. Comments received were set in clusters of issues related to their content such as: considerations at a broad policy level; gaps in EIA; claims about environmental problems caused by cement plants; claims respecting the location. A synthesis on comments received and conclusions were also part of the report. It is concluded that:

> "...in a general way, comments received were not favourable to co-incineration in the sites at stake, as well as to the location of the Transfer Station in Estarreja and the Pre-treatment Plant in Barreiro" adding that "the main questions raised by the public should be taken into consideration in the decision making process" (IPAMB 1998)

10.4.5 The final report from the Evaluation Commission

The Evaluation Commission based on the information from the EIS, the public consultation report, meetings with the government and the promoter as well as visits to other co-incinerators in France and visits to the locations proposed in the project, concluded: "there are no technical questions that could impede the location of any of the components of the project". They argue: "technical problems posed by different components of the project could be faced technically with sufficient environmental efficacy, since solutions assuring the strict compliance with legal procedures will be adopted" (MAa1998). Considering the specific aspects of each location it was decided that the best location for the co-incineration was Maceira and Souselas cement plants. There was also an agreement on the Estarreja Transfer Station as well as on the Barreiro Pre-treatment Plant. However, several recommendations were stated:

- Implementation at local level of Accompaniment Commissions for each of the units of co-incineration chosen
- Creation of a flexible and temporary unit dependent on the Ministry of Environment to follow the entire process with interaction among the promoter and public entities at all levels, in order to assure an efficient management of the process of toxic waste treatment in the phases of licensing, operation and monitoring
- Definition of types and quantities of waste to co-incinerate in a gradual and progressive way, subjected to the following criteria: co-incineration of 16000 tones of toxic waste; a first period of experimental co-incineration during six months should be implemented in Souselas.

It was considered that in spite of accepting the solution of co-incineration there was a necessity to complement the policy for industrial wastes, stressing priorities namely the

reduction of production of wastes and the identification of instruments for political intervention. It was also argued that there was urgency in installing controlled landfills for industrial waste at the same time.

The Evaluation Commission final report was essentially based on technical/scientific rationality. In spite of the controversy associated with the process of public consultation with a great majority of comments against, very little consideration was done to public opinions or issues of social acceptability. There was also the report from CNADS stating that there were no social conditions to decide on locations.

10.4.6 The final decision

On December 28, 1998, through a dispatch of the Minister of Environment the project of SCORECO was approved with locations for the co-incineration in Maceira and Souselas as recommended by the Evaluation Commission in spite of the perceptible climate of social conflict on the issue. The dispatch stressed the conclusions of the Evaluation Commission namely measures for accompaniment of the process, control and publicity of results. A program to re-qualify environmentally the areas around the cement plants should be done with control mechanisms defined. The nomination of a technical commission composed by representatives of the Ministry of Environment, local authorities and universities to monitor the process of co-incineration was also foreseen. A commission directly dependent on the Minister of Environment would be nominated to follow the waste management process for industrial waste and especially the co-incineration. The reasons for choosing Souselas and Maceira were stated as concerning the existing environmental degradation in those places that were considered urgent to reverse. Geographical location of these places by its centrality in relation to places generating wastes was also argued. It was proposed that the process of co-incineration would begin in Souselas during an experimental period for the evaluation of the process and control of the mechanisms applied. It was also proposed for each of the places chosen, the implementation of a project to re-qualify those places including landscape plans, reinforcement of basic sanitation and others related to the well being of populations.

A new phase of the process begun after the decision making, which was characterised by intense politicisation of the decision, public demonstrations, riots and protests in the

locations chosen. Civic movements with the support of environmental associations actively performed the protest. The debate was enlarged to scientific community and political parties through the Parliament.

The implementation of the project was postponed by the Parliament (Law 20/99) suspending the entire project until certain basic conditions were met. Those conditions were: the presentation of a National Strategic Waste Management Plan giving high priority to the philosophy of 3Rs; inclusion of an exhaustive inventory of industrial waste produced in the country; nomination of an Independent Scientific Commission to give an appraisal on existing means of treatment of hazardous waste including co-incineration. Until those conditions were met, the government should take the necessary measures to control the storage of industrial waste.[65]

Having given a general description of the process, this case will now be approached using the model for public participation constructed in the first phase of investigation.

10.5 The "Why issues"- Usefulness

According to the analytical framework (chapter 7) the "Why" issues will be addressed in this section respecting:

- Influence and impact decision making
- Increase environmental awareness
- Strengthen more active citizenship

10.5.1 Influence and impact on decision making

Surprising, as it may be two different final decisions, opposite in results were taken in this process. The first was the immediate consequence of the EIA process, the approval of the project under certain conditions (mitigation and monitoring measures) and the siting of co-incineration in two of the four places at stake -Souselas and Maceira. This decision was taken by the Minister of Environment (Dispatch 98/12/98) based on the report of the Evaluation Commission. The second final decision (four months later) was taken by the Parliament (Law 20/99) suspending the entire project until certain basic conditions were met.

[65] However, after the decision from the Parliament to suspend the project, the Decree Law 120/29 was set up defining the regime of a Scientific and Independent Commission to monitor the process of co-incineration in the chosen places, which provoked an enormous controversy.

There is a consensual attitude of the stakeholders interviewed that the public reaction triggered by the process of EIA public consultation, played a relevant role particularly in the decision from the Parliament suspending the project. The enormous public controversy and dispute during the formal process of public consultation, which was maintained after the siting decision and even increased in the places chosen, had a decisive influence on the further suspension of the project.

There is also a consensual attitude that the public consultation process has brought improvements to the decision of the Minister of Environment through the effective incorporation of a set of mitigation and monitoring measures. Some of the mitigation measures foreseen in the final decision such as providing cement plants chosen for co-incineration with chimney filters have been further enlarged to all the cement plants. It was the public recognition of the harmful conditions in which, neighbours of cement plants have lived for decades. Plans to re-qualify the areas affected were also approved as well as the monitoring and evaluation of the co-incineration process for an experimental period of six months before the entire process could pursuit.

However, the contributes to improve the process were not enough to populations selected and the debate evolved to a more political level through a coalition of civic associations and representative democracy culminating in a debate in the Parliament suspending the project. Box 10.1 and 10.2 present some extracts of the interviews on the influence of public involvement in decision making.

Box 10.1 Influence of public participation in the decision making process

I would say that public consultation process influenced in a great extent the final decision, negatively in my own point of view (Developer)

This is a clear example of how participation influences decision making. What we may question is how useful is to postpone the decision (IPAMB)

This is a complicated situation. Actually it was the public consultation process that determined the final decision. Structurally, on the technical and scientific point of view we didn't have any doubts about the rightness of the project. (Evaluation Commission)

Populations have got the postponement of the process (Consultant)

Public consultation and participation have had a great weight in the final decision (Association of Municipalities)

This was a more political process than a process based on technical aspects; this process resulting in a tremendous struggle, clearly determined the non-approval of the project. A project could be very good technically but if it causes such an opposition it leads to difficulties from politicians to approve it and often they don't approve (National Environmental NGO)

It clearly was the process of public consultation with its enormous popular opposition, the public debate and public demonstrations that influenced the decision making of postponing the project (Parish Council)

The main actors in the final decision were the populations (Group of Citizens)

In the Minister decision, public participation didn't count at all, she didn't take it into consideration, neither promoted it and a process like this without citizen's participation could only end up with this result. The decision of the Parliament although the parties have assumed it as a victory of some against the others was the fruit of negotiation and participation of associations. It was a case where associations participating and negotiating directly with political parties at the Parliament, achieved an agreement. If were not because of the populations political parties would never had taken such position that they took later when they brought the case to the Parliament (Civic Association)

The postponement was due to the upcoming elections, in a clear response to the public's reactions (Local Environmental Association)

Box 10.2 Influence of public participation in ameliorating the project

Those are situations that could even be profited to ameliorate many questions and the co-incineration was important in this aspect. People complained a lot on the bad environmental performance of the cement plants and their lack of respect for some parameters; if people had not complained perhaps industry wouldn't have shown willingness to ameliorate environmental conditions (Consultant)

People got some conditions not foreseen before, although talked for many years such as the filters in cement plants and the constitution of a Scientific Independent Commission to evaluate the process step by step. Those were important points that arose from the intense debate (Association of Municipalities)

It was positive to know the mitigation measures people wanted, what were the expectations of populations because we can learn from this and be more careful about those issues in the next project (IPAMB)

Public participation can improve the project and this is positive. Sometimes people think that it is only the public at large who participate but that isn't so, there are experts, scientists, investigators, environmental associations and these people since they work on this have a capacity to give positive contributions such as mitigation measures and monitoring and this was the case with co-incineration (Environmental NGO)

If this project didn't exist the filters in cement plants or to re-qualify environmentally those areas would never be discussed. People got some victories (Civic Association)

One of the most positive things has been the decision to install filters in all the cement plants. They were not obliged to do so but because of this process, those cement plants accepted that measure. This has been a great benefit for all (Institute of Residues)

If no disagreements exist on the real influence of public involvement in decision making the results of the final decision are polarised in two main views. Technical/scientific rationalities consider it a bad decision, while social rationalities especially from places chosen consider it the only fair decision to be taken. Arguments of national interest such as the willingness to solve a serious problem (Environmental Agency, Evaluation

Commission, developer, consultant) clash with arguments of lack of confidence in the process and procedural justice (groups of citizens, municipalities, parish councils and local associations). National Environmental Associations tried to make the balance between both positions not excluding co-incineration as an end-of-pipe solution but rejecting the entire process since it is based on a strategical vacuum. Perhaps the most relevant impact of the public influence in the decision making process will be projected in the future and is nicely expressed in:

> *The usefulness of public influence in decision making even when we think that a serious problem remains unsolved, was that citizens showed to government and decision makers that things are well done and seriously discussed or they will run the risk to go back because populations and organised groups of the civil society can have a decisive influence* (IPAMB)

10.5.2 Increase environmental awareness and consciousness

At a project level there was a lack of a public program designed with the objective of informing all residents about the project, contribute to the understanding of the issue with targeted publics and involvement of the public in a two-way communication. The way the entire process was conducted was far from the appropriate to increase environmental awareness and consciousness. Lack of information dominated. The debate triggered by the weak model used on the public consultation process was not focused on the legitimate objective of solving the serious situation of increasing hazardous waste without any treatment and the solution at stake. It was rather a debate centred on the imposed solution in which the question of "why us" dominated. As stated by Connor (2000:5): "in an information vacuum people are bound to become emotional". The debate on co-incineration was centred on risks for public health amplified to apocalyptic situations, exploitation of legitimate public concerns, fostered by uncertainties of the scientific community. It was therefore a place for antagonisms to be raised, protagonisms to be presented and political profits to be taken. Even the solution of co-incineration was not treated fairly with a competent debate on benefits, problems and alternatives. Again, the DAD model has proved to impede the openness and trust necessary to a meaningful debate. This kind of model generates immediately antagonism, emotion and the context of debate and information is completely subverted. Moreover, people react to these situations with former perceptions got along their lives and in all the places at stake the experience with environmental problems was very negative. In this process, it was denied the possibility to an informed opinion on the

severe existing waste situation as well as on the necessary responsiveness of the entire society to a problem that belongs to everyone. It is suggested in literature that environmental policies to be successful need the support of citizens; otherwise they are doomed to fail (Renn et al. 1995). It is also recognised that public participation processes should be accompanied with a public education and information programme that summarises the analysis done and the legal institutional issues in an easy and understandable way (Hyman and Stiftel 1988). The debate on the project lacked the educational programme with the objective of getting a societal consensus on the need to find effective environmental policies and strategies to waste management. This would presuppose of course a priori debates at a more strategic level.

On the increase of environmental awareness and consciousness opinions from the interviews are divided from those doubting on the capacity of this process to improve environmental awareness to those thinking that something was got in this respect (see Box 10.3). In spite of these disparities it is unquestionable that the process of co-incineration brought to the public arena the problem of waste management, which had been already slightly tackled in 1995, with the failed process of incineration. Related to this case some more structural issues appeared such as the deficit of environmental education and particularly the lack of dialogue and participation of the scientific community in the public life. As stated by Gonçalves (1999) this is the context of a "closed society and culture" in which the production of science operates in a closed circuit, were issues are not discussed overtly. Universities and scientists did not participate on the formal phase of the consultation process. Issues related to public health were in the forefront of debate. However, health institutions also had no participation (only the Health Department of the centre of the country sent a written comment). Questions related to the techno/scientific side of the project were just raised by environmental associations and some scientists participating as citizens.

In the post decision phase, the debate on the project was enlarged bringing to the public forum, in a reactive way, political, social and scientific issues. Pro-Urbe has got the leadership of the protest organising this symbiosis. The relevance of its leaders in the scientific and political community as well as the strategy adopted brought together the popular revolt, scientific community and representative democracy. This has worked as a true catalyst involving thousands of people. Regional press supported this movement bringing to front pages the co-incineration project. This movement has continued after

the decision from the Parliament (suspension of the project) though with less visibility and participation. However, as stated by one member of this association:

> *"We are preparing with Quercus two fora stressing political and scientific aspects. This is just to say that we are not here just to destroy; we are here to contribute with positive aspects...we are trying to contribute with alternatives"*

Other synergies have been created during and in the aftermath of the decision. Some movements appeared as a consequence of this project in several localities at stake (Cidadãos para a Arrábida, Barreiro Anti-Resíduos, Maceira Saudável). Some of them died after the postponing of decision, some others continued. For instance, Maceira Saudável beginning with a spontaneous movement against co-incineration in Maceira, was transformed in an association that has enlarged its purposes to environmental education of populations as stated by one of its leaders:

> *"We are doing now what had been done many years ago in other countries - actions for environmental education of populations"*

APEA (Associação Portuguesa dos Engenheiros do Ambiente) and SPECO (Sociedade Portuguesa de Ecologia) promoted a debate in Lisbon on waste management and co-incineration with the participation of different views of scientific community and open to the public. Still related to this project and due to the existing debate a parallel fact came to the fore - the situation of hospital incinerators working in dangerous conditions for public health. This argument was much stressed by those defending the project of co-incineration to show what they have named "the hypocrisy" of part of the scientific community claiming on the dangers of co-incineration and never opposed to the real bad situation of hospital incinerators. It was also an argument stressed by environmental associations to condemn the global policy on wastes. The positive aspect was the public awareness created and the need to pressure government as stated in this excerpt:

> "*We had the case of the hospital incinerator, we are negotiating and in 6 months it will be closed. This was a result of this case...there was an organisation of citizens living there, the participation of Quercus and Pro-Urbe and for the first time doctors of the hospital began to look inside...*"(Civic Association)

In a society where traditions of public debate and *fora* are uncommon and where these issues have just been concern of some few experts or public technicians working in the area, the polemics of treatment of hazardous waste brought to the public sphere important aspects.

Box 10.3 Influence of public consultation in increasing environmental consciousness

People didn't perceive that we have a serious problem to solve yet they rather perceived that we want to solve the problem at their expenses; people got the negative idea that we want to impose something, solving things on their expenses (IPAMB)

In a theoretical and methodological point of view public participation processes contribute to raise environmental education but it didn't happen in this case, no, no, no. It wasn't an efficacious process...the way the process was conducted continues to imply non environmental education and continues to favour primary aggression that is not conducing to participative democracy (Evaluation Commission)

I don't think people got better informed; there was demagogy and political manipulation because those are in fact issues with high technical complexity. Obviously, when there is an emotional climate it is not possible to discuss things rationally. On the other hand, lack of information was important and when all the aspects involving risks for public health are treated in an emotional way it doesn't contribute to better awareness. People just want to hear that it won't be located near them, all the other aspects were not important, they didn't hear anything else. (IPAMB)

But if this process made people internalise and have a more responsive attitude I'd say it didn't. There are two aspects: one thing is to know that we produce waste and that there are toxic waste and another one is the possibility of wastes to be treated near us. The bridge wasn't done. It served to make people aware that industrial waste exists but they didn't understand or even believe that toxic waste is out of control, spread out everywhere (Association of Municipalities)

The need to treat wastes was not very clear, people got the idea that there are hazardous waste that is necessary to treat by landfills, co-incineration and so on. I have the idea that people got this message probably by the worst way and may be they will not want to hear about toxic waste anymore. It is a risk that is the result of all this process (Environmental NGO)

Why didn't they do the opposite way? I mean that those issues are related with strategies that have not been used such as campaigns such as: "Do you know what's hazardous waste"? And show images on TV on the situation, "Do you know what are the consequences of the non treatment of wastes? Do you know that your children cannot play safely?" What I mean is a previous awareness of the problem (Municipality)

People became aware of the real dimension of the problem such as what it could implicate at an environmental level and even economically. All these aspects were tackled although the question of how to solve them and where were not, it is a more difficult phase (Civic Association)

Of course the process increased environmental awareness. There are curious things such as people asking me what to do to used batteries and then they say "I will never put batteries on the ground anymore" (Citizens' Association)

The two more positive things about this process were firstly, the increasing of environmental awareness, the knowledge people got on the issue of waste management and secondly to install filters in all the cement plants (Institute of Residues)

10.5.3 Increase more active citizenship

It could be stated that as far as citizenship is concerned the public participation process has presented positive aspects. The passive citizenship characterising Portuguese society was transformed temporarily in active citizenship, even if the reasons were not

in some cases based on accurate information or the methods used by some groups more correct. Traditionally, mechanisms of participative democracy such as petitions, public meetings, signatures, demonstrations, and citizens' group discussions are not commonly used (see also chapter 5). However, in this case many civic groups were formed for this specific project. IPAMB received thousands of signatures during the formal phase (57530 signatures), demonstrations and meetings occurred frequently in the several places at stake (especially in Alhandra, Barreiro and Setúbal). In the post-decision phase, a large civic movement was organised around Souselas and Maceira centred in Coimbra where Pro-Urbe association was the leader supported by local environmental associations, organisations and later, political parties. This impressive protest movement got about 56.500 signatures against the project with support of regional media. More aggressive forms of participation also occurred in the chosen places such as the blockage of roads expressing desperate feelings. However, as stated by Moreira (1999) "The popular revolt in Maceira and Souselas has done more for the environmental discipline in this country than years and years of pompous discourses from the parties and political promises of well intentioned ecologist fights". The main positive aspect referred by the majority of the interviews (see Box 10.4) was the expression of consciousness on environmental rights and quality of life. Those were places where people have lived for a long time in bad environmental conditions. They have been passive in asserting environmental rights accepting the situation by lack of information but especially by economic reasons (employment). Facing the eventuality of being contemplated with hazardous facilities, the fight was for redemption of years of bad life. Contributing in a great part is also the progressive less economical dependence of populations from the cement activity due to changes in social conditions, technological improvements and new management strategies in those plants.

Again, the media and especially television served as an important channel to display citizenship rights (demonstrations were held on prime time news for instance). There is a symbiotic relationship of protestors with the media since protestors "supply a focus that sells news, while media attention is an irresistible and intoxicating enticement to most protestors" (Smith 1993:177). Media have its own agenda and the treatment given to the issue was in many cases simplifying the complex issues at stake giving more attention to the polemical part, showing feelings than promoting real debates of the

process. However, written press also presented columns of opinion by different opinion makers bringing important aspects to the debate.

Box 10.4 Environmental citizenship

The positive aspect was to create in the populations a great concern on their quality of life, especially of their environmental quality (Municipality)

It was positive because through the process of participation populations demanded better quality of life. It was positive because municipalities and the government understood that populations living near industrial plants have been much penalised, that it is necessary to make a specific plan for rehabilitation of these urban areas. Populations lived for decades suffering intense pollution, affecting their health and quality of life. This was the positive aspect populations have demanded. They have said we want more quality of life. This is the great lesson of all this process (Environmental NGO)

Citizens have showed to government and decision makers that things must be well done, things must be discussed seriously, otherwise decision makers must step back...populations, organised groups of civil society and political parties have had a decisive influence on this. (IPAMB)

It was important in increasing citizenship consciousness. People did not know what EIA and public consultation were. Many groups of citizens have been formed with young people with the specific objective of stopping the project. Municipalities have wanted to leader the process, however populations took the lead and became the front-runners of the process. Even in the hottest period of 25 April revolution not so many people came to the streets, it was a manifestation of citizenship (Parish Council)

Civic consciousness in this case and due to a number of factors got a great dynamics through demonstrations in the streets and other actions. However, I don't think it has worked as a seed in people that could now be presented in other types of action, unless they have similar characteristics. (Civic Association)

There were groups of young citizens such as Maceira Saudável and others that perhaps wouldn't appear if this process didn't occur..I think collective consciousness in part got improved. (Consultant)

Citizens because of NIMBY got involved in this process thinking of their quality of life. Sooner or later they will get involved in things which they have never thought about but they have started to think about now (Local Environmental Association)

The question is how to capitalize this important demonstration and the energy of these citizenship movements, which have been successful in their fights, in order to internalise some important environmental issues and got their co-responsiveness on its solution. Among them it is the serious problem of solving the situation of hazardous wastes in Portugal with a non-subject centred approach and "closer to shared values and interests" (Renn and Webler 1995:29).

10.6 The "WHO issues"- Equity and fairness

Who was the public present in the public participation process, what moved people into participation, how organised was the public and the broad issue of representativeness are the main questions addressed in this point according to the analytical framework.

10.6.1 The public

The existing institutional arrangements for public participation in the Portuguese EIA legislation ask for consultation in the review phase after the EIS be presented and accepted by the Evaluation Commission. Mechanisms for public involvement include written comments and public hearings for polemical projects. The process of consultation for this case was publicised through media, Internet, edits in municipalities and parish councils. IPAMB invited formally 200 entities to participate including local authorities, environmental NGO's, professional and other associations, central and regional administration, trade unions and universities. The involvement of citizens was done through the media and local authorities. During 60 days, public consultation was open to the public with the NTS and the EIS available in specific places.

From the 200 entities invited to participate by specific invitations in the consultation process, only 39 (20%) answered through written comments as Fig 10.3 shows. local authorities was the category with more participation, especially parish councils (Fig 10.4). It must be stated that some parish councils and municipalities did participate even without a specific invitation, as well as enterprises, local associations and delegations of local trade unions.

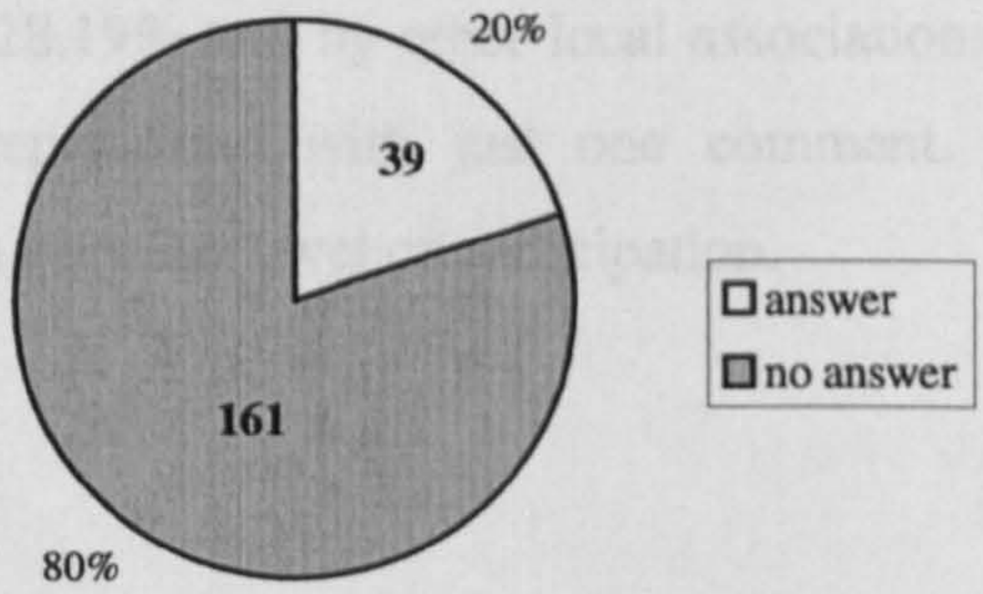

Fig 10.3 Answers from invited entities
Source: Adapted from the report on public consultation IPAMB (1998)

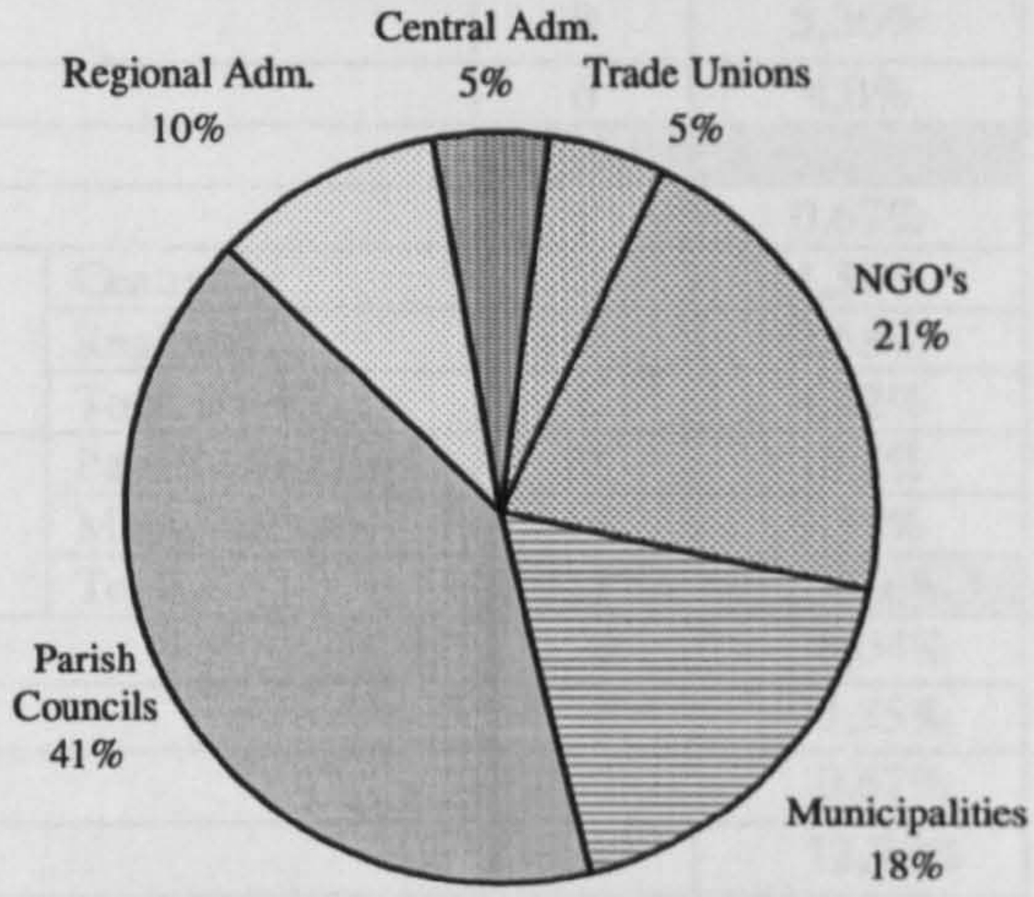

Fig 10.4 Participation of invited entities by category
Source: Adapted from the report on public consultation IPAMB (1998)

The public of written comments

The total of written comments received was 149. The source of these comments by groups is presented on Table 10.3. Many associations were formed for this specific process and its 19 comments include a large amount of signatures such as: 1 comment from Alhandra with 10350 signatures; 1 comment from Outão with 66 signatures; 1 comment from Souselas with 1009 signatures; 1 comment from Barreiro with 66 signatures. There were also comments presented by municipalities and parish councils signed by many people such as: 1 comment approved by the Municipality of Barreiro with 38000 signatures; one comment approved in the Assembly of the Municipality of Barreiro with 475 signatures. The total of signatures in the eleven petitions presented was 57 530. Citizens alone was the category with more participation 33,5%, followed by local authorities with 28,19% and by other local associations 12,75%. Universities was the category less represented with just one comment. Central and regional administration presented a very low level of participation.

Table 10.3 Total of written comments received
Source: Adapted from IPAMB (1998)

Source of comments		**Total**	**%**
Environmental NGO's		8	5,36%
Political parties		6	4,0%
Citizens alone		**50**	**33,5%**
Citizens petitions		1	0,67%
Administration	Central	2	1,34%
	Regional	4	2,68%
	Total	6	4,02%
Local Authorities	Parish councils	28	18,8%
	Municipalities	14	9,39%
	Total	**42**	**28,19%**
Enterprises		9	6,04%
Trade unions		5	3,35%
Universities		1	0,67%
Other associations		19	12,75%
Schools		2	1,34%
Total		149	100%

These results have been compared to the total ones of the same category (Annex I projects) in the period covering through 1990-1997, applying the same clusters used by Observa (1998). Table 10.4 allows the comparison between the recorded data from Observa and the present process of co-incineration.

Table 10.4 Comparison of comments received

	Total (1990-1997)		*Co-incineration Project*		*Difference*
Participants	**Total**	**%**	**Total**	**%**	**%**
Local Authorities	**40**	**19,7**	**42**	**28,19**	+8,49
Central Administration	**41**	**20,2**	2	1,34	**-18,86**
Regional Administration	17	8,4	4	2,68	-5,72
Environmental NGO's	15	7,4	8	5,36	-2,04
Other Associations	27	13,3	35	23,4	+10,1
Citizens alone	39	19,2	**50**	**33,55**	**+14,35**
Political Parties	2	1	6	4,0	+3
Citizens' petitions	20	9,8	1	0,67	-9,13
Universities	2	1	1	0,67	-0,33
Total	203	100	149	100	

The most poignant difference respects the categories of Administration (central and regional) that present an enormous decrease in the project of co-incineration from 28,6% to 4,02%. Conversely, local authorities increases in the co-incineration project from 19,7% to 28,19. Citizens and other associations also present a great disparity with a representative increase in the project of co-incineration. Universities maintain the same pattern of non-participation and political parties show more participation in the co-

incineration project. It is stressed here the localness of the project involving more directly citizens, local associations and local authorities of the host populations for the noxious facilities proposed. Political parties with the exception of the "green party" participated only through their local assemblies. Since this project involved six different places from which, two had already been defined (the Transfer Station of Estarreja and the Pre-Treatment Plant of Barreiro) and the other two to be chosen out of four cement plants, the result on comments by localities is presented in Table 10 5.

Table 10.5 Comments received by localities affected

Participants	Alhandra	Outão	Barreiro	Maceira	Souselas	Estarreja
Citizens	1	**30**	13	**5**		2
Local Authorities	**14**	8	**17**	2	4	1
Local associations	3	5	9	1	2	1
Administration		1				
Enterprises			9			
Trade unions						
Political Parties		1	4		1	
Universities		1				
Total	19	45	53	9	8	4

It could be pointed out that the most participated processes occurred in most industrialised areas of the South of the country with great traditions of association, opposed to more rural areas of Maceira and Souselas. Estarreja is also an industrialised place, however, Estarreja had been chosen in 1985 for the project of incineration with a great support from the President of the municipality. Moreover, Estarreja was proposed for a Transfer Station with fewer perceived negative impacts. There was also the perception from the beginning that Alhandra and Outão were the preferential places to locate co-incineration. This opinion had already been expressed by the developer and only the projects for Alhandra and Outão were completed. Moreover, the choice of Barreiro for the location of the Pre-Treatment plant without alternatives, was perceived by the public because of its proximity to Alhandra and Outão.

Sense of written comments

Out of the total 149 comments received one can count 136 against the project of co-incineration or again the specific locations, which had been foreseen. Five comments ask for the reformulation of the EIS and the project (3 environmental NGO's). Six comments are in favour or at least not against. Out of the latter group four comments

came from the Administration, one came from a local environmental association and one from one citizen. Four of the comments in favour however, stress the need for implementation of mitigation measures, monitoring and the creation of independent commissions to follow the process. Table 10.6 presents the sense of the comments.

Table 10.6 Sense of the comments received

Participants	In favour	Against	Against specific sites	EIA reformulation	Other considerations	Total
Environmental NGO's	1	1	3	3		8
Citizens	1		**47**	1	1	50
Administration	4		1		1	6
Local Authorities			**42**			42
Other associations		2	**17**			19
Universities			1			1
Political parties		1	4	1		6
Enterprises			9			9
Citizens' petitions			1			1
Schools			2			2
Trade unions			5			5
Total	6	4	**132**	5	2	149

The great majority of comments are against co-incineration in specific locations those representing the host community responding. The analysis of comments will show the main reasons for participation and for the rejection of the project.

The public of the hearings

Public hearings are formally organised in two main parts in the Portuguese EIA procedures. The first one is performed by the panel composed by IPAMB and the competent environmental authority as facilitators of the process; the proponent and the EIA consultants as authors, who explain the project, its likely impacts and mitigation measures foreseen. In the second part of the hearing the public presents comments and asks questions to be answered by the panel.

According to Craveiro (1996), in a study done on the analysis of public hearings in Portugal, the inequality of time in favour of the panel is a reality imposed by the own dynamics of the audience, which is characterised by the primacy of scientific/technical language. The panel not only entirely performs the first part of the public hearing but also answers the questions raised by the public.

However, in this project the situation was reversed. In many of the public hearings held, the usual organisation was changed. The panel could not perform the first part; IPAMB could not explain the objectives of the process; the proponent and consultants could not present the project and conclusions of Impact Assessment. A great emotional climate dominated the hearings impeding any dialogue. The public raised questions but there was no intention of getting answers from the developer or from the Environmental Agency. No defined phases existed in the majority of the hearings and social rationalities dominated as it expressed in this excerpt:

> *"There was a first part but we didn't let it to continue...we said: "you are going to hear our concerns and answer them. We are not interested in what you have prepared because you are here to sell a product so, you will not say that it is not good"* (Citizen's association)

As explained by Hyman and Styftel (1988:68) "the character inherently adversarial of hearings tends to polarise views than foster consensus". Webler and Renn (1995) argue that recent experience shows that "citizens commonly used the public hearings to embarrass their opponents, to issue symbolic messages and to make a show of power". "Intimidating" (Connor 1997), "disempowering", "unfair" and "non-democratic" (Webler and Renn 1995) are some of the adjectives used in literature to qualify public hearings. The hearings held in the co-incineration case can be seen as a paradox if one considers the disempowering character attributed to them in literature. However, the "show of power" from the public as expressed on Box 10.5 is just the expression of a utter impotence to contribute meaningfully to the decision making process. The failures described by Hadden (1989) cited by Webler and Renn (1995:24) seem to fit the situation of co-incineration hearings. Those failures are:

- They are usually held late in the process when public impact can be at best minimal
- Only a very small proportion of the population has an opportunity to speak at the hearing
- The structure of the event reveals its implicit communicative bias as experts stands on a stage above the citizens
- Hearings are held primarily to satisfy legal requirements, rather than really promote public input

Box 10.5 Climate of public hearings

Positions were so radicalised that often the developer couldn't talk to explain the project, people clearly said we don't want to be informed; we don't want this here, period. The situation was really explosive and the representatives of Local Authorities found it difficult to control the situation (IPAMB)

Populations did not want the developer to talk, neither the IPAMB to present the process; population asked questions and when the panel began to answer people said you are not here to talk, we don't want your explanations. It clearly was a parade of questions and performances, people had already defined their position and the position was "we don't want this project, we don't want to hear anything about it" (National Environmental NGO)

The climate of protest was very much exacerbated, temperature raised enormously and there were no conditions with rooms where there were more than thousand people in one side and two or three on the other, the microphone was 95% of the time dedicated to the repetition of slogans such as "don't kill our sons, don't kill our mothers, don't ruin our land" and this was repeated till the exhaustion" (Developer)

The public hearings were tenebrous things, everybody shouted, nobody listened, it was a pandemonium conversation..Actually what I saw were the black flags with cranes (Evaluation Commission)

The hearing finished at 5 o'clock in the morning. If the president of the local parish weren't such a respected person by the public it would have finished in a ground battle (Local Association)

Public hearings have been conducted against everything that is desirable...people go to the hearings just to express their anger by being chosen for the waste treatment project and then they put their values which many times are the values expressed by experts organised to communicate their own doubts, their own feelings and their own protagonisms. I remember an hearing in Maceira where there were 800 or 900 persons and the capacity of the room was for 100 persons. On the first row if a test of alcohol were to be carried out it would show a great level. The light was suddenly switched off so, any expert who goes there to express his opinion on the work he did, may run into unnecessary risks (Consultant)

I think public hearings have perhaps worsened the situation, it was more the personal satisfaction of people who goes there than a necessity of information (IPAMB)

When the registration was opened in Setúbal, 70 people invaded and surrounded the chair person (Association of Municipalities)

As well as with written comments citizens were the main actors of public hearings with a great distance from other participants (see Table 10.7).

Table 10.7 The actors of the public hearings
Source: IPAMB (1998)

	Alhandra		Estarreja		Souselas		Maceira		Barreiro		Setúbal	
Environmental NGO's	1	3,3%	**4**	44,4%	2	15,3%	1	5,2%	3	6,9%	7	18%
Citizens	**24**	76,6%	**4**	44,4%	**7**	53,8%	**15**	78,9%	**27**	61,3%	**24**	61,5%
Other associations	2	6,7%			1	7,7%	1	5,2%	4	9,1%	2	5,1%
Municipalities	1	6,7%	1	11,2%			1	5,2%	3	6,9%	4	10,2%
Parish Councils	2	6,7%			3	23%	1	5,2%	2	4,5%		
Political parties									5	11,3%	2	5,1%
Total	30	100%	9	100%	13	100%	19	100%	44	100%	39	100%

The discrepancy between the public present and the public speaking is expressed in Fig 10.5. Public hearings ask for the identification of people who want to speak, who must

stand up, use the microphone, and know that their intervention is being taped. During the period (1990-1997) out of a total of 7149 people in public hearings only 779, about 10,9%, participated orally assuming an active role (Observa 1998). In the case of the co-incineration and considering the total of the 6 hearings this number decreases to 5,6%.

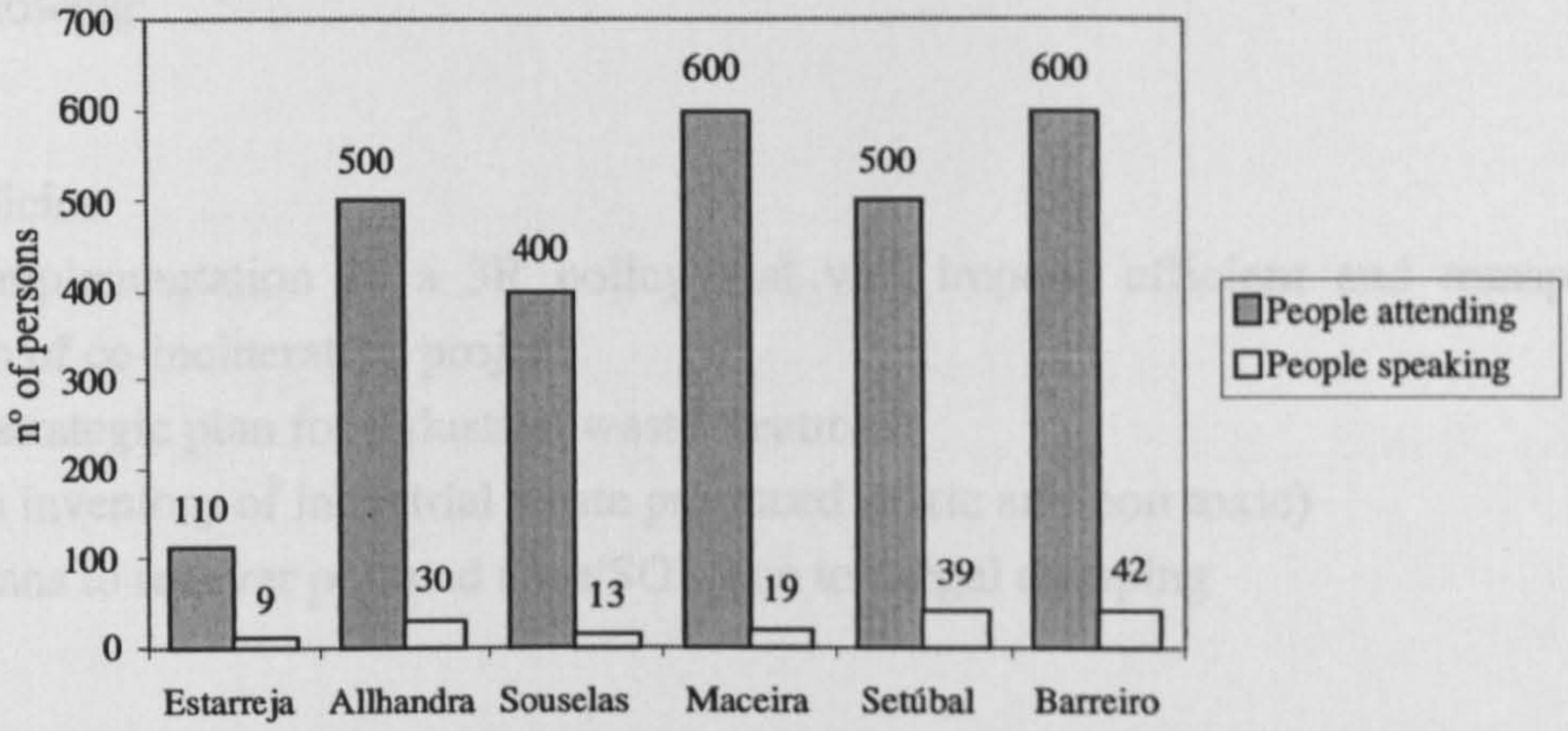

Fig 10.5 People attending and people participating orally
Source: adapted from IPAMB (1998)

10.6.2 Reasons for participation

Content analysis of written comments

In order to analyse the 149 written comments an attempt was done to form clusters of issues according to dimensions considered important. The analysis done was thematic meaning that a guide of categories was produced on comments (Bardin 1977). Themes elected were not chosen from the beginning but were constructed from the similarities of the comments. Generally, final categories came from the progressive clustering of small categories with a weak general character (Bardin 1977:119). This analysis does not deal with the original comments produced by the public through written comments and public hearings. The analysis was applied to the previous treatment of data from IPAMB, which is part of the report of the consultation process made public. The content of the IPAMB report on written comments has been earlier explained in chapter 8. It was not considered relevant for this type of analysis to deal with original comments since the dynamics or organisation of discourses is not at stake, just the frequency of themes. Moreover it is also a matter of better using limited resources especially concerning time. A re-composition was done several times in order to get more

objectivity in the clustering. However, since some degree of ambiguity cannot be excluded, the principle of exclusion (Bardin 1977) was applied meaning that the same reference could not be included in more than one category. The same categories were applied to both written and oral comments[66]. It must be stated that the majority of the comments (in the IPAMB report) point out several of the categories considered, which are the following:

Global policies:
Lack of implementation of a 3R policy that will impede efficient and transparent application of co-incineration project
Lack of a strategic plan for industrial waste treatment
Lack of an inventory of industrial waste produced (toxic and non toxic)
Lack of plans to recover polluted sites/SOS line to illegal dumping

The project:
Lack of alternatives to Barreiro and Estarreja
Lack of projects for the waste not to be co-incinerated
Lack of accurate data on quantities and type of waste to be co-incinerated
Lack of confidence in the project and proponent
Lack of confidence in Administration to control the entire project

The EIS:
Lack of confidence in the EIS since presented by the proponent
Technical gaps in several areas (air quality, risk analysis, social-economic impacts, ecological impacts and specific local conditions referred in the EIS)
Lack of conclusions on the four alternatives to cement plants (conclusions on sites)
Non conclusive data on problems and impacts related to co-incineration

Risks and impacts:
Risks of transportation of toxic waste
Risks for public health and environment
Risk of accidents on cement plants
Impacts on social-economics (devaluation of property, tourism, quality of life)
Impacts on ecosystems
Risks on the cement produced

[66] That is why the category lack of confidence in proponent/project and confidence in Administration to control the project were included without almost no references in written comments, although with relevance in hearings.

Ethical reasons:
Severe existing pollution. Areas that have already been extremely penalised due to cement plants work or/and with a past characterised by pollution from heavy industry
Areas already contributing for the treatment of national waste
Jeopardising developmental plans foreseen or approved for those areas or efforts done to re-qualify them
Counterparts to populations

Improving the project:
Install chimney filters in all the cement plants
Creation of independent commissions to follow and control the process
Implementation of mitigation measures and monitoring programs
Protocol between the Minister of Environment and the cement plants to stop the process if harmful conditions are verified

Local constraints[67]:
Areas in National Parks like Outão either closed or integrated in protected natural reserves such as the reserve for the protection of Sado estuary or Tagus estuary (Alhandra)
Areas with high density of population (Alhandra, Barreiro, Souselas and Estarreja)
Areas far from the Pre-Treatment plant of Barreiro implying aggravated risks of transportation (Souselas and Maceira)
Dimensions and conditions of operation of some cement plants (Souselas and Maceira)
Specific local geo-physical conditions (seismic risk, dominant winds, permeability of soils, sewage without treatment); Already treating waste (Alhandra with the incinerator for urban solid waste, Barreiro with chemical treatment in the Quimiparque, Maceira burning tires of all the country)

Analysis

Results of this content analysis are presented on Table 10.8 and partial results by places in Annex II, Tables AII.1 to AII.7. The main category focused on written comments is risks and impacts particularly on environment and public health, followed by social economic impacts and risks with transportation. The perceived risk dominated the reasons to oppose to the project. The weight of this category is presented in all groups of participants except for national environmental associations. By localities, however,

[67] This category should be read separately because it overlaps mainly two already existing categories, ethical reasons and risks and impacts. It is always associated to them in order to justify the opinion against the project in specific places. This category is presented just to stress the importance of local conditions in the arguments against the project used in the discourse of all groups except national environmental associations.

the perceived risk is not consensual. It prevails in Souselas, Outão and Barreiro but not in Maceira, Estarreja and Alhandra where ethical factors dominate.

The second category most referred is global policies particularly lack of strategies using the 3 Rs principles. With almost the same comments is the category of ethical factors especially the sufferance with pollution from industrial activities, as well as the idea that this project will jeopardise efforts done to re-qualify those places and objectives for future development expressed in existing land-use plans. Curiously ethical factors is one of the categories less referred by Outão (just one reference). This is perhaps justified by the fact that the cement plant of Outão is located in a natural park with less population around. It is also in Outão that impacts in ecosystems got a high result closed to social economic impacts, especially the potential negative effect on tourism.

Project and measures to improve the project are the less referred categories except for environmental associations, which dominate the technical/scientific complexity of co-incineration and techniques and arrangements for waste management related to the entire project. However, the EIS deserved some comments from other groups especially related to technical gaps, lack of confidence in information and lack of conclusive data on impacts of co-incineration.

As far as groups participating are concerned, they vary from place to place also demonstrating how the process of participation was organised and lived in each place. Barreiro is the place with more diversity of groups participating, the only place were enterprises sent comments as well as schools. However, no one comment from Barreiro presents references on measures to improve the project, perhaps because the rejection was very strong. Several associations presented comments with one with 38000 signatures. This refers to a motion against location in Barreiro approved by Barreiro Municipality and the Municipal Assembly that received this number of signatures. IPAMB in the report of public consultation considers it just as one comment, and the category in which it is included is local association. Citizens participating alone in Alhandra is just one but they participated through associations such as one with 10350 signatures and another with 125 signatures from trade associations. Estarreja was the place with less associations involved just citizens, municipalities and a local environmental association. It was also the place with less written comments.

There are 26 comments just saying no to specific locations not presenting any reasons: In Outão, 15 comments from citizens; one from the municipality and one comment from an association with 66 signatures. In Barreiro: one comment from one municipality, 2 from citizens, 3 from enterprises, one from a trade union expressing indignation to the choice of Barreiro and 2 comments with 66 signatures and one comment with 38000 signatures earlier referred.

The citizens express above all the residents' point of view. The rejection of the project is in the great majority of cases based on local factors. Some comments just state against without expressing reasons. The main dimension of citizens' comments is risks and impacts, especially risks for environment and public health. The high expression got in social economic impacts and impacts in ecosystems came dominantly from citizens of Outão, stressing the need to preserve the natural park of Arrábida and stressing negative impacts on tourism. Global policies using the 3 Rs philosophy is also dominated by comments from citizens of Outão (12 references in 14). Ethical factors are presented in seven references. References on the project, EIS and improvements to the project are the less stated in comments. Curiously, there is just one reference stating that EIA information is not accessible to lay public. Individual comments dominated in Outão were there is also a petition with 8 signatures against co-incineration there. In Souselas citizens did not send comments and in Alhandra there is just one comment from one citizen. However in these places and also in Barreiro and Estarreja more organised institutions and associations collected thousands of signatures from citizens.

Environmental associations stress the strategic vacuum of the project by the lack of global policies for waste management. Co-incineration is not completely rejected but considered an end-of-pipe solution only possible if equated within a broad strategy using 3 Rs philosophy. It is pointed out that without a strategic plan for industrial waste and accurate data on waste produced, co-incineration could be rather an incentive to waste production. Environmental associations demonstrate a scientific/technical knowledge, which permits them to criticise the project based on detected discrepancies (lack of associated projects for waste not to be co-incinerated, quantities of waste to be co-incinerated) and especially gaps in the EIS. The latter is especially related to the assessment of air quality impacts and recommendations proposed in the EIS. Several comments are done in order to improve the project, detailed mitigation measures and

specific monitoring as well as assessment of risks. Three associations (one local and two national) ask for the reformulation of the EIS. One of them, Geota also asks for the reformulation of the entire project and the EIA process. One national association, Quercus takes the opportunity to express the need for an agreement between government and cement plants in order to improve environmental conditions of areas around cement plants through the adoption of filters in all the plants, and also asks for the review of air legislation. With the exception of Geota asking for the exclusion of Outão from the project since it is a national park the other national associations do not refer local factors. However, local associations stress negative local factors as arguments against specific sites. Impacts and risks of co-incineration are only present in comments from one association. Only eight environmental associations (registered in IPAMB) sent comments, three of them national and five local in each of the places at stake with exception of Barreiro.

Comments by local authorities (parish councils and municipalities) are very much related to local reasons to oppose the project. All the comments are opposed to location in their sites by several reasons. The main dimension referred is risks and impacts, especially risks for environment and public health and risks with transportation. Ethical factors have also got important expression. In all the places at stake, except for Outão, local authorities argue on the evidence of still existing pollution from industrial plants. In Alhandra, Maceira and Estarreja ethical factors dominated. The project is considered unfair to the host communities. It is also stressed that these places already contribute to the treatment of wastes. Local authorities presented more participation in Alhandra, Outão and Barreiro. References to the project are very few just coming from Barreiro and Estarreja were no alternatives were foreseen for Treatment plants. References to the EIS came only from Alhandra and Barreiro related to the lack of confidence in the information since it is the proponent's responsibility and to the EIS results by considering the evaluation non conclusive. Improvements to the project just received two references. Local factors are referred in all the comments: Outão stresses the negative impact on tourism and employment as well as the irrelevance and nonsense of co-incineration in a National Park. They add that the cement plant is also near the Reserve of Sado Estuary, another protected area. Souselas stresses that it is the farthest place from Barreiro Pre-Treatment plant and this aggravates risks with transportation. Barreiro stresses that the location of the Pre-Treatment plant will be in an area of high

urban density, close to the hospital, schools, football fields and commerce; they already treat 40000 tones of industrial waste; there will be traffic problems crossing the city. Maceira points out that the cement plant has no conditions to co-incineration due to its small capacity. Alhandra stresses that the cement plant is near the special area of Tagus Estuary protection and the cement plant is in a very populated place with six parish councils around, with 70000 inhabitants. It is moreover a place with the highest seismic risk. Estarreja stresses that it is one of the most polluted areas of the country due to chemical industry and that in Estarreja soils are very permeable.

Central and regional administration showed a very weak participation. Out of the 19 institutions invited to participate from central and regional administration only 6 have sent written comments on the project, four being from the regional administration and two from the central one. The latter comprises a comment from the Institute of Geology and Mining stating that no problems exist for co-incineration from their point of view. It also includes a comment from the National Railway Company asking why railway transportation of toxic waste has not been considered in the project since it is safer and they are prepared for it. The four other comments came from the regional administration, the Institute of Patrimony of Lisbon and Coimbra, the Regional Health Administration of the centre of the country and the Regional Department of Tourism of Setúbal. Three of them are in favour of the project stressing the importance of implementation of mitigation measures, monitoring and independent commissions to follow the process. The comment against came from Tourism of Setúbal focusing the negative impacts for tourism and employment.

As far as political parties are concerned, the ecologist party presents the most complete comment against co-incineration stressing several dimensions of the problem, such as: lack of broad policies for waste management and strategic measures to reduce waste; lack of accurate data on quantities and type of waste produced; co-incineration is just a way to transfer pollution from the soil to the air; the bad results of cement plants in environmental terms with the minimum respect for residents; impacts on tourism in Outão since it is in a National Park; Alhandra has a high urban density; co-incineration could perpetuate cement plants and the quarries associated in places where they should never be. Four other comments came from local and regional sections of political parties in Barreiro and are against Barreiro Pre-Treatment plant presenting local reasons, lack

of alternatives in the project and gaps in EIA. Risks and impacts is the dimension with more comments followed by lack of global policies for waste management.

Trade unions presented 4 comments. Two of them came from ceramics and cement trade unions, one against co-incineration in Maceira and the other against location in Souselas. Railway workers of Barreiro declared against location in that area. The trade union of tourism and restaurants of Outão is against the project there. The Confederation of Trade Unions (local section of Vila Franca) is against Alhandra location. Risks and impacts and ethical factors are the main dimensions referred. All the comments are at a local level, against sites.

Local associations including five anonymous ones, showing that they have been formed for this particular situation, sent nineteen written comments. Barreiro is the area with more participation from local associations. All the comments received from associations are against specific locations. Risks and impacts of the process are referred for each location in 16 comments. It is the main category followed by ethical reasons especially related to the existing pollution in the areas chosen. In seven comments received there are references to the lack of global policies for waste treatment using the 3 R principles. There are no references to improvements to the project since their radical opposition to it. Four references exist to the lack of confidence in the EIA information, two references state technical gaps and one refers the lack of conclusive data in co-incineration.

Two schools from Barreiro presented comments against the Pre-treatment plant. They refer the lack of alternatives, ethical reasons, the high levels of pollution already existing in that area. Local reasons are also stated as the proximity of schools and the high density of urban occupation of the area. Pre-Treatment plant in Barreiro is seen as jeopardising the efforts done to re-qualify the area.

Three comments from enterprises just express a protest for the choice of Barreiro for the Pre-Treatment Plant. One of them is signed by 7 enterprises from Barreiro.

Table 10.8 Dimensions of written comments discourse (total of places)

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles			2	4	8	1	14	2	2					33
	Lack of strategical plan for industrial waste			1	1		2		1						5
	Lack of an inventory of industrial wastes			1	3				2	1					7
	Plan for recover polluted sites/emergency line			1						1					2
	Co-incineration a bad solution			1	2	1		1	2	1					8
	Total			6	10	9	3	15	7	5					55
Project	Lack of alternatives			1	1	1	1	1	2	1				1	9
	Lack of projects for waste not to be co-incinerated			1											1
	Lack of accurate data on waste to be co-incinerated			3					1						4
	Lack of confidence in the project/proponent			1	2		1			1					5
	Lack of confidence in the Administration to control														
	Total			6	3	1	2	1	3	2				1	19
EIS	Lack of confidence in the EIS				1	4			1	1					7
	Technical gaps			3	2			4	2	2				1	14
	Lack of conclusions on alternatives			1											1
	Non conclusive date on co-incineration					4	1		1						6
	Total			4	3	8	1	4	4	3				1	28
Risks and impacts	Risks with transportation					7	3	3	4			2			19
	Risks for environment and public health				2	11	3	16	6	2		3		1	44
	Risks on accidents in plants					1			3						4
	Impacts on social economics		1			4	2	14	2	2		2		1	28
	Impacts on ecosystems		1		2	1		13	1	1			1		20
	Risks on cement produced					1									1
	Total		2		4	25	8	46	16	57		7	1	2	116
Ethical factors	Severe existing pollution				2	9	5	5	4			2		1	28
	Already contributing for waste treatment					3	4	1	1						9
	Jeopardising developmental plans					6	4	1	2	1				1	15
	Counterparts to populations				2										2
	Total				4	18	13	7	7	1		2		2	54
Improving project	Install chimney filters in all cement plants			1	1			1							3
	Creation of independent commissions			1	2	1		2							6
	Mitigation and monitoring		1	2	2		1	3							9
	Protocol to stop the process		3		1										4
	Total		4	4	6	1	1	6							22
Local factors	Barreiro					4	4	5	11	1	3			2	30
	Estarreja				1		1	1							3
	Maceira						2	2				1			5
	Alhandra				1	9	2	1	1	1		1			16
	Souselas				1	2			2			1			6
	Outão		1	1	2	5	4	28	5	2		1	1		50
	Total		1	1	5	20	13	37	19	4	3	4	1	2	110
	Other questions	2	2	3		2	2	3	2					1	17
	Against the project without expressing reasons						2	17	3		4	1			27

Public hearings content analysis

From the analysis of comments produced in public hearings (Table 10.9 and partial results in Annex II, Tables AII.8 to AII.14) there is a change on categories privileged when compared with written comments. One can state that ethical factors, particularly the sufferance from decades of industrial pollution is the main dimension stated. All the participants of public hearings stress this dimension. Global policies is the second most referred dimension, particularly lack of policies using 3 Rs principles, followed by co-incineration not a good solution. Criticisms to the project occupy the third position with particular relevance for the lack of confidence in the project and developer stated in 25 references. Criticisms to the EIS received also several references particularly lack of confidence in the information and technical gaps.

This stress on criticisms to the project and the EIS can be explained since the public in the hearings has the opportunity to confront the developer, the EIA experts and the environmental competent authority conversely to written comments where no feedback exist on questions raised.

Time is another distinct factor between public hearings and written comments. This leads to the use of a discourse in hearings oriented to more pragmatic and emotional statements where procedural justice takes the forehead. This is not to be applied to environmental NGO's, especially to the national ones, which conversely as in the same line of written comments stress the area of policies since they have a different responsibility and a pedagogical role to perform. In the comments of local environmental NGO's, technical gaps of the EIS and the project dominate but local factors are present with significative expression. The less referred category is improvements to the project almost non referred except the need to install filters in all the cement plants by citizens. This expresses the frontal rejection of the project. Citizens followed by representatives of associations dominated the debate in all the places except for Alhandra where local authorities took the place of associations and citizens.[68]

[68] Other questions raised deal mainly with the need to stick together against the project and define new forms of fighting. Several questions ask about responsibilities if problems occur with the implementation of the project. Some others were about the performance of local authorities in the process and about divergences among environmental associations.

Table 10.9 Dimensions of hearings comments discourse (total of places)

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Municí								
Global policies	Lack of policies using the 3 R principles			2	3		1	9	3	1					19
	Lack of strategical plan for industrial waste			4	2			3							9
	Lack of an inventory of industrial wastes			2	1			4	1						8
	Plan for recover polluted sites/emergency line			3	1										4
	Co-incineration a bad solution			3				6	5	1					15
	Total			14	7		1	22	9	2					55
Project	Lack of alternatives			1	2		2	6		1					12
	Lack of projects for waste not to be co-incinerated				2		1	2	1						6
	Lack of accurate data on waste to be co-incinerated				1										1
	Lack of confidence in the project/proponent				1	2		19	3						25
	Lack of confidence in the Administration to control			1				4							5
	Total			2	6	2	3	31	4	1					49
EIS	Lack of confidence in the EIS				2	1	3	13	1						20
	Technical gaps			1	1	2	2	12	4	2					24
	Lack of conclusions on alternatives							1							1
	Non conclusive date on co-incineration							1							1
	Total			1	3	3	5	27	5	2					46
Risks and impacts	Risks with transportation					1		1	1						3
	Risks for environment and public health				1	2	2	12	2	3				1	23
	Risks on accidents in plants							1							1
	Impacts on social economics				1		1	2	1						5
	Impacts on ecosystems							1	1						2
	Risks on cement produced							4	1						5
	Total				2	3	3	21	6	3				1	39
Ethical factors	Severe existing pollution				1	2	1	31	3	1					39
	Already contributing for waste treatment					1	2	2							5
	Jeopardising developmental plans				1		2	13	4	2				1	23
	Counterparts to populations					1	1								2
	Total				2	4	6	46	7	3				1	69
Improving project	Install chimney filters in all cement plants							3							3
	Creation of independent commissions								1						1
	Mitigation and monitoring				2										2
	Protocol to stop the process														
	Total				2			3	1						6

Local factors	Barreiro				2	2	2	21	2	4				1	34
	Estarreja				2			3							5
	Maceira						1	8							9
	Alhandra					2	1	17	2						22
	Souselas				1	2		5							8
	Outão				1		3	17	4	1					26
	Total				6	6	7	71	8	5				1	104
	Other questions					1	4	22	2	1					30
	Against the project without expressing reasons														

10.6.3. Organisation of the public

The organisation of the public was different from place to place depending on local synergies, interests at stake, traditions of participation and the degree of perceived threat.

In Alhandra, Barreiro and Outão participation was greater in the formal phase of the process. In those places perceived threat was also greater. There was an assumed preference from the developer in Alhandra and Outão. For Barreiro no alternatives have been considered. Moreover, those are places with a strong tradition of associative movements as this excerpt points out:

> *"The population in Alhandra is very informed with a great associative background. The theatre, the museum, the market place and existing associations, all these initiatives are from citizens"* (Parish Council)

Local authorities in Alhandra and Barreiro have worked as an umbrella for citizens' protest. They brought together political parties, local associations and citizens. They co-ordinated the process of information, the debate and the initiatives to oppose to the project. Several actions were proposed after the public positions taken by the local authorities. Alhandra issued public declarations and statements: 98/10/16- Declaration of Alhandra; 98/11/11 Statement on the project by the Parish Council of Alhandra; 98/11/11 Statement on the EIS by Municipality of Alhandra; 98/11/13 Statement on the EIA by the Environmental Commission of Alhandra; 98/11/13 Declaration to the press.

They also proposed actions to be performed at an institutional level such as: meeting of the Municipal Assembly (98/10/10); meeting of Parish Councils Assembly (98/13/11) Delivery of comments to government (98/10/13), approval of a motion by the entire county. Propaganda actions were also proposed and actions to involve the population such as collection of signatures, delivery of information, a day of protest (98/10/24) and a protest march between Alhandra and Vila Franca (98/11/21).

In Barreiro, the Municipal Assembly produced an announcement to the population very early in the process, in 98/9/28 invoking the reasons for not accepting the project and appealing to the involvement of population in the hearing to be held on 98/10/23 and in collecting signatures against the project. Several actions of protest were also co-ordinated by local authorities such as: 98/11/20 deliver of signatures against the project to the Prime minister; 98/11/12 invitation to the local commerce to close doors and join

demonstrations. Other movements performed the protest in Barreiro such a juvenile movement (Barreiro-Anti-Resíduos) and NIIB promoting debates and demonstrations.

Local Authorities didn't have so much visibility in other places. In Setúbal (Outão) civic and environmental associations performed the leadership of the protest. Some divergences and the lack of a defined strategy from the municipality and parish councils by political reasons were at stake. Moreover environmental associations have a great clout:

> *"Great part of the environmentalists is from Setúbal. Environmental NGO's have a great clout in Setúbal" (Civic Association)*

Populations in Setúbal are more used to EIA since they have had some polemical projects. This awareness is expressed in this excerpt:

> *"When the first news about co-incineration appeared here in Setúbal, people immediately formed associations to oppose to it, and why? Because people have a great problem with the cement plant in Arrábida, they expect the plant to close doors"* (Association of Municipalities).

Cidadãos para a Arrábida, Caprosado and citizens committees were the leaders of protest, later supported by elements of local authorities.

In Maceira, local authorities had less visibility at the beginning but they have worked with a citizens' movement formed to oppose the project. More informed residents (local doctors, environmentalists) began the protest and this initial movement gave place to an association -Maceira Saudável. A representative of this movement explains how this has worked:

> *"There was the public hearing here and immediately and spontaneously population joined the protest, all this movement happened spontaneously. Just after the hearing, the decision from the Minister was taken and then population revolted".*

The President of the Municipality in the public hearing criticised the EIA process stating that there was no information available to population and it was too late to give any explanations on effects to public health and on other consequences of the project.

In Souselas, local authorities were divided. The municipality of Coimbra has not been involved in the process directly neither promoted the publicity of the EIA process. Political issues were the main reasons to this performance as well as the preference for

other forms of affecting decisions by direct action as stated in this excerpt: *"...municipality has never get involved...but has always tried to negotiate this directly with central power"* (Civic Association). However, Souselas Parish Council as well as a local environmental association were the main catalysts for the protest involving populations around the cement plant.

Estarreja was the place with less participation in the formal and in the post decision phase. Local authorities had no consensual positions to the project. Moreover, Estarreja was the place chosen to install a Transfer station with less perceived risks. In addition, Estarreja had already been chosen for the failed project of incineration with the approval of the municipality. Especially local environmental associations and citizens performed the opposition to the project.

Environmental associations especially the national ones were not the main catalysts for protest. However, they give continuity to a movement raised with the project of incineration and participated in many meetings in the places at stake to give residents information as stated in this excerpt:

> *"As soon as we saw a population's movement against this project we tried to contact people there and furnish the information we got. We talked to them to state our position on the issue of waste management. All those contacts have been done and we had meetings and debates in all those places"* (Local Environmental Association)

Environmental NGO's sent written comments, participated in some public hearings and promoted meetings with populations but they revealed fragilities in participation due to intrinsic factors such as the lack of environmental militancy and resources, but also other aspects related to this particular project. One the associations with more clout in society –Quercus, faced problems along the process. The position defined at a national level of accepting co-incineration as an end-of-pipe solution and only if framed by strategic policies was criticised by some local branches, even publicly. A difficult situation was also created to Quercus by the position taken by one of its ex-leaders defending the project and being one of the SCORECO consultants and author of a volume of the EIS. In spite of its resignation it was considered that he was used to give credibility to the project as expressed by a representative of Quercus:

> *"He has created a terrible problem mixing Quercus to Scoreco...he undermined the space of intervention of Quercus in a certain way because people began to see us in a different way. Quercus felt a need of not going to the forefront because it was created a bad situation"*

However, Quercus through its Centre of Information on Waste, has been doing an important work on waste management policies recognised by all. The role of the associations in this process is well defined in this excerpt:

> *"In Setúbal I'm not so sure but in the other cases clearly environmental associations were not the leaders of the process, they were companions with technical support to the populations' movements".*

A process of public participation is not static neither are the positions of groups. They can change over time and concentrate in new issues and create new synergies. In the post-decision phase new dynamics were created. Pro-Urbe was the great catalyst for protest in the places chosen for the co-incineration project (Souselas and Maceira). The *ethos* of its leaders, the strategy adopted involving Coimbra Academy, popular movements, regional media, several associations was decisive for the prominence of the protest. However, some parts of public opinion and especially defenders of the project saw their lack of involvement in the formal phase of the process as performing the worst part of the NYMBY syndrome. This is recognised by one of its representatives although stating also some reasons for this and the bad publicity of the process:

> *"It is also questionable why they became involved so late. Actually there is a tendency to let things going and think that it would never be sited here in our backyard. Moreover there was the idea that the prestige and strength of certain local elite from Coimbra would have influence...the webs"* (Civic Association)

As far as organisation of participation is concerned there are some evidence of the relevant power of representative democracy. Local authorities have had a decisive influence in public participation in the publicity of processes and in involving the populations. However this has depended very much on the technical preparation of its representatives as well as on their own interests. The fragility of participative democracy came to the forefront with this project showing also a lack of awareness on EIA and its mechanisms. The commitment to the process from government had been weak; direct interests at stake were the great factors to the involvement and the scientific community proved to be an outsider in public life. Cliental practices and direct influences were still privileged forms of action in many places. It also proved the

importance of the *ethos* of the leaders in communication. According to Covello (1992) in a survey done, the public regard as more credible firstly:

> "...physicians and other health or safety professional; academics especially from respected local universities; local citizens who are perceived to be neutral and well informed; non profit voluntary organisations; non-management employees". In the second place are "the media and environmental groups" and in the last position "industry officers; government officials; environmental consultants from profit-making firms" (in Petts and Edulgee 1994:100).

In spite of different forms of organisation and participation where local authorities, local citizens and environmental and civic associations had an important role in triggering the process it is much accepted that populations in the places at stake were the main actors and had not been controlled by political forces in spite of attempts done.

10.6.4 What moved people into participation – the NIMBY syndrome

The NIMBY syndrome respects the "fervent local citizens opposition to siting proposals or land use activities with potential adverse impacts" (Webler and Renn 1995:27 quoting Rosa 1988). NIMBYism has been receiving in last times a great attention in the literature[69] and great efforts from researchers to its better understanding. Consensus has been created both on the complexity of the NIMBY syndrome, which involves psychological, cultural and social factors working in an interrelated way as well as on the need to more studies in order to better deal with it. This is because resource managers face an insurmountable obstacle in effective waste management since associated to it is usually a lack of accurate data and results, fear, risk and uncertainty, increasing awareness of problems, which lead to NIMBY attitudes (Smith 1993).

Some people especially technicians and experts involved in waste management plans see the NIMBYism as a lack of rationality and selfishness of populations. Conversely, many others see NIMBYism as a demonstration of the unfairness of distribution of costs and benefits associated to a project. Lack of confidence by the public in scientists ability to diagnose relevant risks in an accurate way (Kunreuther 1995), lack of unbiased information, lack of confidence and trust in regulatory agencies to manage the

[69] For instance, Slovic et al (1980); Fishhoff et al (1981); Slovic 1986); Morgan et al (1992); Petts and Edulgee (1994); Covello and Allen (1992), Kasperson (1986).

processes, and flawed decision making processes are also pointed out to be on the basis of the NYMBY syndrome.

Distrust in science and technology is considered symptomatic of a crisis in modern democracy (Renn et al.1995). Beck (1992:58) in the broad frame of risk society states specifically in this respect:

> The non acceptance of the scientific definition of risks is not something to be reproached as 'irrationality in the population' but quite on the contrary it indicates that the cultural premises of acceptability contained in scientific and technical statements on risks are wrong. The technical risk experts are mistaken in the empirical accuracy of their implicit value premises specifically in their assumptions of what appears acceptable to the population. Concluding: (...) the engineering sciences claim to a monopoly on rationality in risk perception is equivalent to the claim to infallibility of a Pope who has converted to lutheranism.

Science cannot give certainties on risk associated with waste treatment technologies. The physical, chemical and biological process on the basis of dissemination of residuals in the environment is still not quite understandable (Ortolano 1984)[70]. Risk perceptions have been evolving being "more and more extended in the social consciousness to encompass threats to future generations, to quality of life, the culture of a community, the beauty of a landscape and the planetary ecosystem" (Gadomska 1984, in Rahm-Crites 1998:207). Recent experience on perceived risk from citizens, state that the basic conceptualisation of risk from lay people is much richer than the one of experts and reflects legitimate concerns that are typically omitted from expert risk assessment (Rahm-Crites 1998). Experts evaluate unidimensionally risks based on a probability of occurrence of an accident, though people use a multidimensional definition and put more weight on consequences (Lima 1995 based on Slovic and Fishoff). Based on a review of literature on risk perception Petts and Edulgee (1994:390) present a common set of features on perceived risks:

- The risk perception must be seen as being valid on their own right and not as irrational or illogical

[70] Ortolano adds "...even when the underlying processes are understood well enough to provide a useful forecast in procedure, field data are generally needed to calibrate the procedure for local circumstances. Sometimes the cost of gathering and processing the required data is prohibitively high". The result of this complexity and uncertainty is that "the level of frequency of risk is incorrectly determined and the scientific basis for judgement becomes suspect" (Suter et al 1987, cited by Smith 1993).

- That perceptions are shaped by a wide range of psychological, social and cultural factors
- That there is no such a thing as 'the public' or 'public perception'. Rather there are many groups (including experts) in any society each with differing risk perceptions and with distinctive interests or stakes in any issue.
- That perceptions are related more to hazard or technology than to risk
- That any distinction between actual and perceived risk is misconceived because fundamentally both involve human interpretation and judgement.

In the same line Lima (1995) argues that scientific studies have proved that evaluations of risk from lay people (conversely to opinions stating that perceived risk is irrational and emotional) are structured, predictable and based on information and values though different from information used by experts. This multidimensional character of risk perceptions often clashes with the one dimensional character of those used by experts. Some examples could be pointed out: risks regarded as voluntary, are also regarded as controllable and understandable, while imposed risks are usually regarded as potentially catastrophic and threats to future generations (Slovic in Petts and Edulgee 1994 and Lima 1995). Well known risks with immediate effects are better accepted than new risks badly known, with non immediate effects, and new technologies with invisible consequences without a consensus of scientific community increase risk perceptions (Lima 1995). At the same time "people process new information within the context of their existing beliefs" (Morgan et al. in Rahm-Crites 1998). The proximity is also a factor determining people's attitudes. Armour (1991) in Petts and Edulgee (1994:392) concluded based on empirical evidence that people's 'comfort zone' varies by type of facility and its perceived 'externality field' and the latter is considerably extended by waste collection and transport activities.

The problem of perceived inequity is also a relevant one in the development of NIMBY attitudes. It is an ethical issue related to the difference between benefits for all and drawbacks just for few (Kunreuther 1995:282). He puts it in such terms: "the siting of noxious facilities is an intrinsically difficult problem because the host region or community perceives that it absorbs most of the costs and risks while other accrue the benefits" (ibid). Among the drawbacks are also economic dimensions related to feared loss of property values and lack of compensation. Connor (1997b:73) argues that if there are mechanisms to compensate the land needed to install a new facility, no compensation exist to the adjacent areas and neighbourhood that will be affected in its

value by the proximity to those facilities. Beck (1992:39) names it ecological expropriation meaning that there is a "social and economic expropriation while legal ownership continues".

Lack of trust and confidence is also a basic reason for the NYMBY syndrome (Smith 1993; Petts and Edulgee 1994; Renn et al. 1995). Selman (1996:78) considers NIMBYism understandable since "it often refers quite legitimate concerns of imbalanced power relations between central authority and local aspirations". The lack of confidence in industry and in the State or in the regulatory agency is named by Hirschorn (1984) as "the confidence gap". He claims that only "by restoration of public confidence in regulations and management programs and on industry's commitment to safe operation" problems could be solved (in Petts and Edulgee 1994:392/393). Contributing to this 'confidence gap' is the way decisions are made often involved in secrecy, key issues such as 'needs' for a facility technology chosen for waste management and choice of sites already decided without any involvement of those affected. This flawed–top-down siting process (Petts and Edulgee 1994:396) contributes to increase distrust and promote speculations on what is behind the decision particularly when private developers are involved.

The involvement of citizens in decision-making of projects affecting them is a fundamental condition to eradication of NIMBYism though not a sufficient one. It is relevant that the process used be "fair" and "competent", to get the desired co-responsiveness of citizens in decisions. A process-oriented approach implying public co-operation has been suggested to substitute product-oriented approach emphasising technical criteria (Smith 1993). The sensitivity of problems related to waste facilities siting implies also a great commitment from the Administration and the use of appropriate means as an investment of human and economic resources and time allotted to the process. Moreover, communities affected by waste facilities need to be sure that the benefits will outweigh the costs or are great than the existing status quo. However, compensation measures are not enough if it is not guaranteed that safety standards are satisfied (Kunreuther 1995).

The project for co-incineration in cement plants reveals an enormous expression of NIMBYism. Out of the 149 comments received in the formal phase (which included 57500) signatures), 132 were against specific site facilities foreseen in the project.

Those comments were mainly the expression of residents' point of view (citizens, local authorities and local associations). All those comments reject the siting waste facilities in their areas. The majority does not argue against co-incineration as a way to treat industrial wastes, they argue especially against locations. In the reasons present in written and oral comments from the public consultation process analysed earlier, confirmed with interviews carried out to stakeholders, perceived risk and perceived inequity dominated, followed by lack of trust and confidence due in part to the lack of coherent global policies to treat waste management. The two former dimensions will be analysed next and the latter will be dealt with in the "Which" issues (10.5).

The perceived risks of the project

Many factors contributed to the relevance of risk perception in this project and are according to literature on risks. First of all the project was an imposed activity to populations since they have not been involved in previous decisions leading to the choice of co-incineration. Risks resulting from imposed activities are considered less controllable and understandable than those, resulting from voluntary activities (Slovic et al. 1980; Slovic 1992). The characteristics of wastes to be treated – industrial toxic waste- put stress on the fear of accidents, "fear of long-term health impacts from emissions and particular concerns about risks to children"(Petts and Edulgee 1994:390). Well known risks to which people is familiarised to and with immediate effects are better acceptable than new risks with unknown and poorly publicised technologies and with invisible and long time consequences (Lima 1995 based on Fishoff et al. 1987). Moreover, the majority of sites at stake were areas with high density of populations and proximity is a factor aggravating risk perception (Armour 1991, cited in Petts and Edulgee 1994).

Despite the EIA information being responsibility of the developer, which has been a fact leading to discredit, there were no conclusive data on effects of co-incineration. All the places are considered at the same level in the evaluation of impacts and conclusions on sites. The high technical complexity of the project with no subsequent information from the developer and the competent authority increased suspicion. A great stress is put by the EIS, the report from the Evaluation Commission and the Minister decision in the mitigation measures and monitoring systems to control harmful impacts. However, control is exactly something that has revealed to be very weak in the environmental

agency performance. Moreover as stated by Vaughaam (1995) "risk behaviours and attitudes evolve within and are framed in reference to broader socio-cultural variables". The negative experience of those populations with episodes of pollution is very high as well as confidence in authorities to control and solve such problems. The level of acceptance of risks from populations can change though occurring in a predictable way and in function of some variables of the situation (Lima 1995). However it can be aggravated when for instance mistakes are detected in the decision making process such as lack of transparency. A lack of trust on expert opinions stated in criticisms to the EIS is commonly presented on comments because it is not considered reliable since it is the proponent's responsibility. Some gaps detected in the EIS especially related to the absence of treatment of some local conditions known by residents led to increasing distrust. Lack of alternatives to Barreiro and Estarreja was considered a proof that economic criteria overrode the environmental ones, discrepancies on the amount of waste to co-incinerate and the fact that the duration of the project was 20 years increased perceived risks.

Box 10.6 Perceived risks

The message we got was that it was dangerous, that was harmful and bad and we want to bring up our children, we want them to grow up healthy and happy. I think those feelings entered inside people (Local Association)

Even if populations reveal completely irrational and subjective behaviours, we cannot impose solutions. If things are imposed they will have exactly the opposite results. (Evaluation Commission)

I have been in debates about co-incineration with experts from one side saying that dioxins will be destroyed and experts from the other side saying that dioxins will be formed again in the cool down. There are no absolute certainties and if we consider that in the inventories done in Europe cement plants have been considered the second source of dioxins after hospital incinerators this is something to thing about (National Environmental NGO)

There were terror demonstrations with gas masks from the second world war with all that psychological charge which was absolutely disproportionate compared to what was being discussed (...) it is normal that a citizen who doesn't have a scientific knowledge feels threatened by something unknown and in relation to which it adheres immediately to the thesis of danger. (Developer)

Between 1981 and 1993 in this place one out of five people died with cancer and we cannot forget the bad environmental past of about 65 years, (Citizens' Association)

The lack of consensus on risks is very complicated. It is not possible to a credible expert to assert that there are no risks at al (IPAMB)

People participated in this process because they felt that their health and quality of life were menaced. It was clearly the risk felt by the public (Local Environmental Association)

The perceived inequity of the co-incineration project

Perceived inequity is the cornerstone of the majority of comments against the project (especially in public hearings) and they present two main vectors interacting. One is the common problem always associated to siting hazardous facilities: benefits for all and drawbacks for some few- the host community. This vector interacts with another one that is considered a main inequity: the places at stake for siting hazardous facilities have been for decades affected by severe problems of pollution, due to the heavy chemical industry (Barreiro, Estarreja) or due to cement plants working (Souselas, Maceira, Outão, Alhandra). Cement plants are located in urban areas and they have had several facilities such as location near traffic roads, near sources of raw materials but they had any concerns during a long period, in order to improve the harmful conditions they have created. They are seen as powerful enemies that have degraded surrounding landscapes, increased air pollution, affected public health and destroyed local agriculture. Moreover the NTS states "the filters will decrease the level of dust from the existing 50 mg/m3 N to about 15 mg/m3 N with positive impacts in air quality in relation to the current situation" (SCORECO 1998). It was considered by populations that there was a way of improving environmental conditions around cement plants that has not been taken by industry nor proposed by government. The choice of Barreiro without alternatives is seen as following economic criteria sacrificing interests of populations as stated in this position of the municipality:

> *Barreiro has sacrificed generations to the industrial model based on heavy chemical industry, and because of this Barreiro has suffered the stigma of polluted area with a lack of attraction and competitiveness ...if the model was perverse because when it was abandoned left only unemployment and a degraded image it is not fair nor acceptable by residents that once again Barreiro is chosen.*

Residents have felt a kind of perversion when they read on the EIS that those places already present high levels of noise and air pollution, which are characteristic of industrial places. So the increase due to the built of these waste facilities will not provoke "relevant significative impacts that could represent an augmentation considered as significative negative impact" (SCORECO- EIS 1998).

On the other hand, it is considered that nothing credible is offered to the host populations as compensation. According to Kunreuther (1995) one of the conditions to accept hazardous facilities is the recognition from population that the benefits are

greater than the status quo. The comments in this case demonstrate the opposite. Communities express that waste facilities in their areas represent a step back on the efforts done by local authorities and residents to reverse and re-qualify the area and strategies to implement development that is more balanced. The proposed filters and proposals for re-qualify the places at stake were considered as a non acceptable bribery since those measures should have been implemented without co-incineration. It is also referred by data from Barreiro, Alhandra and Maceira that those communities have already been contributing to national waste treatment through landfills and other waste facilities.

Box 10.7 The perceived inequity

Alhandra up to six years ago was a land where grand parents could not follow the upbringing of their grandchildren because young people used to leave their homeland. Soeiro the native author, celebrated Alhandra as the land where descendent had never been children. Nowadays Alhandra is the land of the grandparents who never had grandchildren. The very own generation, which didn't have the chance to enjoy its childhood and adolescence does not have the right to rear grandchildren. (Parish Council)

We washed window panes, we hung the clothes out to dry, we washed out the porches and when we turned around everything was dirty once again...people seem that they have got used to wear grey clothes, since the land itself so demands it (Local Association)

Some years ago this was completely grey. There were coats of cement dust everywhere...people have spent 100 years breathing cement dust and all of a sudden they have to deal with co-incineration, it was the straw that broke the camels back (Municipality)

The largest landfill of the country is in the county of Vila Franca. We have already treated the waste of all the country but we could not go on doing that because we are not the garbage bin of Portugal (Parish Council)

Anyway people revolt against something they consider unfair, that has not been explained in which they have not participated (Consultant)

How can be justified that this could not go to Outão because of the birds and the plants but can come to Maceira with its so bad environmental past (Citizens' Association)

The paint of my car doesn't last 6 or 7 years just 2 or 3 because pollution eats it up more rapidly. The value of my backyard is less than other one which is not near the industrial plant (Parish Council)

Barreiro was during many years a place were no one could live (Association of Municipalities)

A great deal of times people use these opportunities to make visible the revolt they have against many situations, which came from a bad past. This shows that technology already existed to reduce pollution and it was not implemented and people say: they are kidding because we could have had less pollution and only when they want to put co-incineration here they say they will install filters (Local Environmental Association)

It is noticeable the lack of negative comments done by residents (local authorities, citizens and local associations) on the minimalist or "tokenist" approach to public consultation in this process, which is foreseen in Portuguese legislation. The late involvement of stakeholders, the lack of accessible information, the lack of two-way flow of communication or dialogue and negotiation mechanisms are not referred on comments with just two exceptions. One from one citizen stating that more dialogue and communication was needed and another one from a school stating the difficulty for lay people to understand the language of the EIS. A national environmental association –Geota has proposed the reformulation of the public consultation process.

Lack of knowledge of the EIA process, lack of traditions of participation in decision making should have been weighing in this position of not contesting the process. Moreover, it could be seen as a weak position as stated in this excerpt: "*I think it was not in the objectives of those who went there to protest because if they say that they were not informed, it will weaken the position of contestation* (IPAMB)

Referring to public hearings Webler and Renn (1995:25) state: "The fact that citizens often must resort unconventional means (such as protest or legal action) to win these reversals is a sign that the public hearing process does not satisfactorily integrate public concerns in decision making". People are conscious that the debate does not only occur within the poor mechanisms of formal consultation. Other strategies seem much more powerful because they have more visibility:

> *Actually parallel mechanisms are more efficacious, such as demonstrations and other actions on the street or more visible attitudes sometimes with some demagogy..I think there is all the space for people to protest, write in newspapers and use all the ways to influence decision makers and in many cases this completely overcomes the EIA process...*(IPAMB)

A great opportunity has been lost in terms of citizenry, especially from local authorities with more responsibility. The latter by not contesting the minimalist approach to negotiation and involvement of the stakeholders put itself in a position that weakened their role in the process. However, as argued in this statement:

> *"Authoritarian culture is still dominant... to introduce mechanisms of participative democracy after 25 years of a weak democratic culture creates a confusion in many people's head"* (Civic association)

One can conclude that participation of citizens, local authorities, local associations in this case was essentially moved by the perceived risk and the perceived inequity with an intrinsic lack of confidence in the entire process. Arguments based on the lack of global policies for waste management and the 3R principles were stated in many comments as providing the broad context for opposing the project and reinforcement of lack of confidence. Environmental associations especially the national ones centred the discourse in the lack of broad and adequate policies to waste management and the use of scientific and technical rationality to contest the project and the EIS demonstrating by a great knowledge on scientific and institutional aspects the fragility of the project.

It is also intriguing to state that the central and regional administration have had a very low level of participation conversely to what had been the average participation of these institutions in projects of Annex I. The complexity of the process that need a great effort on information or the feeling that it is a very controversial issue, in which local authorities are more concerned, could be on the basis of this attitude.

10.6.5 Representativeness

No one can conclude that this process was representative of all the interests at stake and different arguments support this view. Firstly, no representativeness existed until the project was presented in the EIA review phase. To make a process representative implies that the affected groups and interested parties would be involved early during the project preparation. That is the main way to get representativeness, the only way to clarify misconceptions, integrate public inputs and contributes to social acceptability of the project. IPAMB identified relevant groups, sent 200 invitations and promoted the publicity of the process. However, this is participation as a therapy since the main decisions have already been taken.

Defenders of the project argued that the formal process of public consultation was not representative of the interests at stake because they didn't have the chance to explain the "rightness" of the project, the good intentions it had and the benefits for the country and for local environmental conditions. Actually, the attempts done failed completely; they had almost no voice in the hearings. However, this just reflects the inequality of representativeness of this project in the planning phase before it is presented to the public as a consummate fact.

Moreover, the representativeness of a process must also be reflected in the decision making. However only technical and scientific arguments (even those without a open debate) were presented to its approval by the Evaluation Commission and the Minister in spite of the IPAMB report advise: "questions raised by the public should be considered". The opinion of the public was considered as non data. There was a missing link in the decision – the incorporation of public values and concerns.

10.7 The "When" and the "How" issues -efficiency and appropriateness of the entire process

According to the model defined phases of involvement, design and management of the project and mechanisms for public consultation and resources used will be analysed.

10.7.1 Phases of involvement

It is increasingly advised that public involvement must be done in earlier phases of the EIA process and ideally in earliest stages of project design and planning. This is in order to enhance benefits of public input, take into account public views and expectations, reducing communication gaps between experts and the lay public and generate a climate of co-responsiveness on the project. In the EIA process a scoping phase is commonly used to address these issues be it just institutional or opened to the general public. This means a proactive approach to identify main issues at stake and assess the level of public interest and concern with the project.

Public consultation in this project was carried out to inform the public and get their views on a project in which main decisions have already been made, such as: The use of co-incineration to treat hazardous industrial waste; deliver the treatment of industrial waste to a consortium of cement plants; use of two defined places to site the stations for waste treatment; choice of two of the four cement plants for co-incineration. The decision to co-incinerate in cement plants had been approved by the government. The project and the EIS appeared completely defined and no scoping phase existed (not foreseen in Portuguese legislation) nor any kind of informal contacts had been done with main stakeholders during the design and planning of the project. This kind of approach typical of the DAD model has proved to be a source of conflict and radicalisation of positions. Armour (1991, in Petts and Edulgee 1995:395) nicely defines this situation:

Faced with a proposed change in their life circunstance that they neither initiated nor requested, local residents understandably resist. The top down nature of facility siting naturally evokes a "why us" reaction. From that point on, the style of interaction between proponent and local residents cannot be anything but confrontational as one tries to persuade the other to give away.

10.7.2 The design and management of the entire process

The design and management of a public participation process should be according to characteristics of the project, phases of the project, characteristics of the public affected. The usual model of Portuguese participation is clearly not tailored for projects like this one. Some characteristics of the present project, which should have led to a careful approach, can be pointed out as:

- A negative precedent with a similar project –the incinerator project in 1995 that led to great protest of the communities involved
- Co-incineration is a technological process never used in Portugal before and negative reactions to new technologies increase especially when divergences from the scientific community exist
- Main decisions were taken without public involvement; representative democracy was involved but the deficit of awareness on public and political issues in the Portuguese society is high
- The situation of hazardous waste was not clear nor internalised by the general public
- Lack of credibility of the developer -cement plants
- Lack of environmental consciousness is high in Portuguese society. People can oppose to co-incineration arguing it is dangerous for health though not realising that throwing garbage into the rivers or burning all kind of waste by their own is also dangerous
- Siting hazardous facilities is always a complex process with high levels of potential conflict. Trust and confidence are central to debate

Literature on public involvement processes at a normative and procedural levels, has been receiving much attention in last years. Risk assessment and risk communication are promising investigation areas. If no recipes exist for a successful public consultation programme (any case is a special case) consensual points of view exist especially that

time commitment and resources are needed; a careful planning should exist from the outset, flexible enough to be changed according to its development through a continuing monitoring process; the importance of two-way communication mechanisms at several points of the process; the creation of a climate of mutual trust and credibility, where win-win solutions can be found; choice of a blend of mechanisms for information, communication and feedback. Summing up the characteristics of such a programme Renn et al. (1995) state two meta criteria fairness and competence. Fairness is related to the capacities of the affected public to influence the agenda and process rules, to be represented in the discourse. Competence deals with the capacity of a process to provide procedural tools for making the best possible action. According to Fiorino (1995:230/231):

> A fair process allows the parts not only to protect their individual interests but also to shape the development of a collective will. A competent process permits access to relevant knowledge and interpretations and allows participants to use the best possible procedures to resolving disputes about them.

All the stakeholders interviewed agree that the process of consultation was neither "fair" nor "competent". The extracts presented in Box 10.8 portrayed some main gaps of the process and the lack of conditions for a fruitful and meaningful debate, which can lead to informed decision making. The failure of the project is attributed in a great part to the process used. However, the responsibility for the minimalist process undertaken is not assumed by those with direct interests in the project or in the process. Lack of political commitment to EIA and public participation from government, a belief that the pattern of low public participation of Portuguese society will be maintained, the conviction that the weight of the institutional power and technical/scientific arguments will prevail, the bureaucratic lethargy still dominating in public institutions abiding by the minimum of the law are some of the reasons given to justify the model used. A conspiracy theory has also been raised arguing that the passive methodology was employed in order to the abortion of the project by political reasons. No evidence of it was found in this work.

What can be concluded is that government, institutions and developers still do not understand that the political component of these projects is increasing and there are no more "neutral institutions" (Fiorino 1995) that can apply the rational model even based on strong scientific reasons without considering social acceptability. It can also be

concluded that public participation is still not considered a priority in getting better decision making and reinforcing democracy.

Box 10.8 The process

I completely doubt this process and the validity of such consultation because it was completely badly organised...it is not enough at all to apply this model...the worst thing was the way the process was conducted...we cannot solve the problem of hazardous waste imposing premeditated, pre-fabricated solutions, which had not at all been discussed (Evaluation Commission)

The process was totally badly conducted from the very beginning. So, when the processes are so badly conducted it is very difficult that they finish well. (IPAMB)

The process of co-incineration was a complete disaster at both the political point of view and the process of public consultation. Projects related to siting noxious facilities need to begin at another previous level. We need to involve the public a priori in the planning process, in choosing criteria and locations..After doing the study it is necessary to think on how to inform the public before the formal process begins (National Environmental NGO)

The process didn't achieve its objectives. It should exist with the objective of informing the public and provide for their participation in the debate. However, the way this process occurred was the worst possible way, the methodology used was very bad, firstly because it didn't give voice to everybody who should have a say on the issue.(Developer)

Our public authorities have a very bad fault, they should have known that when they present a project to the public, even the best project in the world, if it is already done, defined, concluded people couldn't understand where it came from and this leads to an immediate lack of confidence. People are invited to participate when everything is already done, decided, studied and this can be seen as a testimony of people's incapacity (Association of Municipalities)

Everything was already decided in the cabinets when the public was consulted (Local Association)

The entire public participation process especially the public hearings were very bad. The Ministry of the Environment demonstrates great incapacities in reviewing their processes. I would say public administration and the Ministry of Environment in particular are great "neards" they didn't learn literally anything with the precedent process of incineration (Consultant)

The mechanisms for participation were not enough at all (Citizens' Group)

If we consider the way those situations have already happened in other countries, many years ago and the way they have evolved with great involvement of populations I think we still are in the pre-history. I think that it has been a great lesson for government in order to improve the processes (Civic Association)

*There has been clearly, despise and arrogance in this process as far as citizens are concerned. (...) There have been no attempts to promote dialogue due to the great arrogance from the developer; he was convinced that co-incineration would be better accepted than incineration because cement plants were already there, and some environmentalists were supporting this solution (*Local Environmental Association)

10.7.3 Information and communication - the gap of dialogue

Information about the project and its likely impacts was delivered through the EIS and the NTS made publicly available. The standard process used had also foreseen explanations on the project in the public hearings. As it is stated in the announcement of public hearings for this project "public hearings will be held with the objective of promoting a better knowledge of the project, environmental impacts and mitigation measures through information on questions and presentation of suggestions and claims" (IPAMB Oficio circular nº 4060). However, due to the polemics created and the emotive climate of the hearings held, little or none information from the developer, EIA consultants and even the IPAMB has been possible and a clarifying debate had no conditions to happen. As Hyman and Stiftel (1988) put it: "participants will know when they are being asked their opinions only to justify decisions already been made and they will resent it".

In spite of this being the usual procedure foreseen in Portuguese EIA legislation and in the internal procedures of the environmental agency there have been some recent experiences done out of the formal process in order to provide information and communication with different sectors of the public. Cases like the motorway to Algarve, Valorsul incinerator for solid urban waste and High Voltage Cables of Alqueva were some innovative approaches in considered polemical cases. The former was an initiative of IPAMB using open houses, the latter were initiatives from the developers with support of IPAMB. Those experiences proved some successful results. However, in the case of co-incineration the environmental agency and the proponent stuck to the standard minimalist model. Any initiative has been publicly taken to informal phases of information or communication with central, regional or local administration, environmental associations or citizens' groups. The developer still tried some contacts with local publics, but with null efficacy as stated by the IPAMB representative:

> *"There were some efforts from the developer when it became clear that the situation was out of control, but it was too late".*

The information gap

Deficient information and communication have been pointed out in literature as some of the main reasons for increasing NIMBY attitudes. To get access to information simply is not enough, the relevance of facts needs to be presented by people competent to do it

(Webler 1995:65). At a procedural level competence of a process implies that access to knowledge and interpretations is provided and offers good procedures to resolve disputes about knowledge and interpretations (Hadden 1995:241). In this case the proponent and the Environmental Agency discarded the management of information and access to knowledge. Without a two-way communication process with established, accepted rules for dialogue and debate and mechanisms to promote communication, polarised views on technical scientific aspects versus social views intensified, opening a broad field for different types of protagonists toappear. It was up to the public, local authorities and environmental associations the interpretation of the information delivered through the EIS and the NTS. Several difficulties in grasping the information were found as Box 10.9 shows.

Box 10.9 Handling the information

Lay people could not understand the risks of the project, contradictory information exists, scientific community never agrees (Association of Municipalities)

There should be someone with capacity with a practical language to talk to people because to deal with 9 volumes needs knowledge. One cannot open a volume and read for one or two hours, people do not waste time with such technical things and what they are reading they cannot understand, that's why it didn't have any result (Local Association)

The EIA and the NTS are not easily available in the parish councils and municipalities and if you want you should pay for the copies. Moreover all the NTS are usually very bad and what should be a very well done synthesis with a different language is many times done with less care and the objective-to give information - doesn't work at all (Consultant)

These were technical studies, very big and complex, and populations do not have time or capacity to understand all the implications. Many times the contact people have with a project is through a chat with someone who read the NTS and got a broad idea and when they go to the hearings just with hearsay or some information from the newspaper they go there just to protest without knowing anything about the project. This makes one think that it is not a problem of the public but this is a problem of how projects reach the public (Environmental NGO)

There should have been an obligation from the Environmental Agency and from the developer to make a divulgence of the information in order to have conscious participation. It has not been possible to inform people about the project. There is a difficulty of using the same language with such heterogeneous public. The inefficacy of the public consultation process was due to a lack of the more basic information (Evaluation Commission)

A lot of misinformation existed and this has created enormous anxiety and fear in populations without no real basis (Consultant)

Who can go to a municipality to read the study or to the parish council which is opened 5 hours a day to consult the NTS? People do not have time and we must pay the copies. I've got the volume of Public Health because the municipality gave me the chance to take copies in order to study (Citizens' Association)

Facing the complexity of the project, local authorities, associations and civic groups in some places organised themselves in order to interpret information:

> *We began to study and look for experts. We found teachers and students to co-operate with us. We were worried with finding a language with no political connotations. We created some initiatives, press conferences, meetings, it was so correct and so interesting the involvement created that even the church took a position...the municipality asked us to organise everything, we created the Commission of Environment, we enlarged it to all the bodies of this county. We created an executive Commission, with representatives of the parish councils and elements from the main political forces. We used to meet here to discuss, to collect contributions from different people, students and teachers, and we created a file with all the documentation. There was an Assembly of the Municipality just to discuss the problem* (Parish Council)

People got information from many sources as media, interest groups network, neighbourhood and many times this information is biased, non accurate in an intentional way or not. The adversarial character of the DAD process leads from the outset to polarised views and search for arguments to defend the interests of localities from the perceived threat. Without techniques that give participants an equal chance to affect decisions, to get access to knowledge and interpretations the entire participation process was conducted in a "subject centred approach" (Renn et al. 1995). Lack of mechanisms that give opportunities to get access to information and knowledge and possibilities to debate different views open the way for protagonists and political profits. As stated by Renn et al. (1995:6/7): "Since the interests of participants are nearly always diverse it was always possible to produce a negative evaluation by orienting the evaluation around the interests of the participant who lost".

Box 10.10 Controversial information

There was an enormous emotional charge related to risk that was never explained and this got the consultation process absolutely non effective (Evaluation Commission)

I went to a doctor and he alarmed me a lot ...there was here a student of medicine who told in the assembly terrible things about co-incineration (Group of Citizens)

Some scientists told in the prime time of TV that co-incineration was harmful to pregnant women, to human health to the occurrence of cancers...there was no room to discuss scientifically whatever it was...violence was explored to its maximum. It is interesting to state that these phenomena when triggered it is only the mass psychology that works. One that wants to catch the train of the political profit must catch the first car of popular protest. There was no room to discuss scientifically anything. (Developer)

Suddenly there are informal experts to whom the community attributes the status of experts and sometimes such persons wear four different hats with four different postures. Some teachers from the university walk on the stage to make their comments and when they are confronted personally "did you read the work? "They admitted they have never read the study but they had the courage to go to the stage as if they were inside the work and this ethically is unacceptable. They use citations to corroborate their views and when we ask the source they say I don't know, I was expecting you to give it to me (Consultant)

Then, politicians became involved, media were involved, also ghosts of our political life, nothing was innocent (Evaluation Commission)

There were main roles from both sides. One side trying to minimise the impact of dioxins (...) others warning in the opposite side arguing on the dangers of dioxins and using cases that happened in other countries such as the contamination of mother's milk near the cement plants (Civic Association)

10.7.4 Efficiency - A cosmetic exercise

It is recognised in literature that in processes dealing with siting hazardous facilities scientific knowledge though important is not the core issue at stake (Renn et al. 1995). Confidence, mutual awareness of each other's expectations is central as well as the question of values. However, developer and decision makers try to argue in terms of science to justify the option reducing everything to expertise and knowledge. The public tries to argue on the same line rationalising their reasons that are above all value concerns, which cannot be reduced just to facts. The result expressed by Renn et al. (1995:357): "Unfortunately, this is often misunderstood by experts as irrationality on the part of the public. Frustrated the public retreats to due process and routinization of the process, abscising it of substance and departs with disillusion and distrust of the system".

Many experiences have been done in the area of public involvement related to risk. Institutional arrangements can substantially limit mechanisms to more meaningful processes especially legislation. However it is the political commitment and will the most important to change as well as demands from civil society. No recipes exist for good processes. Several experiences done in the practice and theoretical studies on public involvement can be learned. In an attempt to systematise types of conflict and methods for participation Renn et al. (1995:360/361) present a comprehensive assessment of methods alternative to public hearings such as Mediation, Citizens Juries, Planning Cells, Citizens Advisory Committees. Referring environmental problems in which the question of trust is the central core they state that trust is promoted when:

- There is a likelihood that the participants will meet again in a similar setting
- Interaction takes place face to face in regular meetings over a reasonable period of time and people have a chance to get know each other
- Participants are able to secure independent expert advice; participants are free to question the sincerity of the involved parties; citizens are involved early on the decision making process; all available information is made freely accessible to all involved; the process of selection options based on preferences is logical and transparent; the decision making body seriously considers and endorses the outcome of the participation process
- Citizens are giving some control at the format of discourse (agenda, rules, moderation and decision making procedure)

These would be the ideal conditions for a "fair" and "competent" process in which trust is a core issue. In the case of co-incineration conversely, public participation has been a once-off exercise with a reactive approach; citizens were involved in a late phase, criteria for locations chosen were not transparent or even discussed; consideration of citizen's arguments was not clearly incorporated in decision making and public participation process has been the standard bureaucratic process always followed where people has no say in the agenda and rules for debate.

This excerpt portray quite well the situation:

> *I think authorities did what is legally established in the law. They assumed that what is in the legislation is what is necessary but it was necessary to do much more than what is in the legislation* (Representative of municipality)

10.8 The "Which issues" Transparency, reliability and coherence

According to the model proposed the "Which" issues respect transparency and reliability and coherence of public consultation in the EIA system in order to achieve better planning and sound decision making. Transparency and reliability are linked to perceived attitudes of stakeholders on the existing system; Coherence with the adequacy between legislation and implementation and integration in the wide legislative and political context in order to address sustainable goals.

10.8.1. Transparency and reliability of the process

The case of co-incineration is paradigmatic as far as transparency and reliability are concerned because it is a case related to siting disputes and because it enhances in a relevant way the political/social context of environmental decision making. Processes of siting hazardous facilities are primarily based upon issues of trust and credibility (Renn

et al. 1995; Petts and Edulgee 1994; Smith 1993). An attempt was done by Renn et al. (1995) to systematise the specificity of environmental conflicts focusing similarities and differences in order to assess the focus for participation mechanisms. Based on Functowicz and Ravetz (1985) classification of risk conflict they adapted it to the discursive theory. The taxonomy obtained is presented in Fig 10.6.[71]

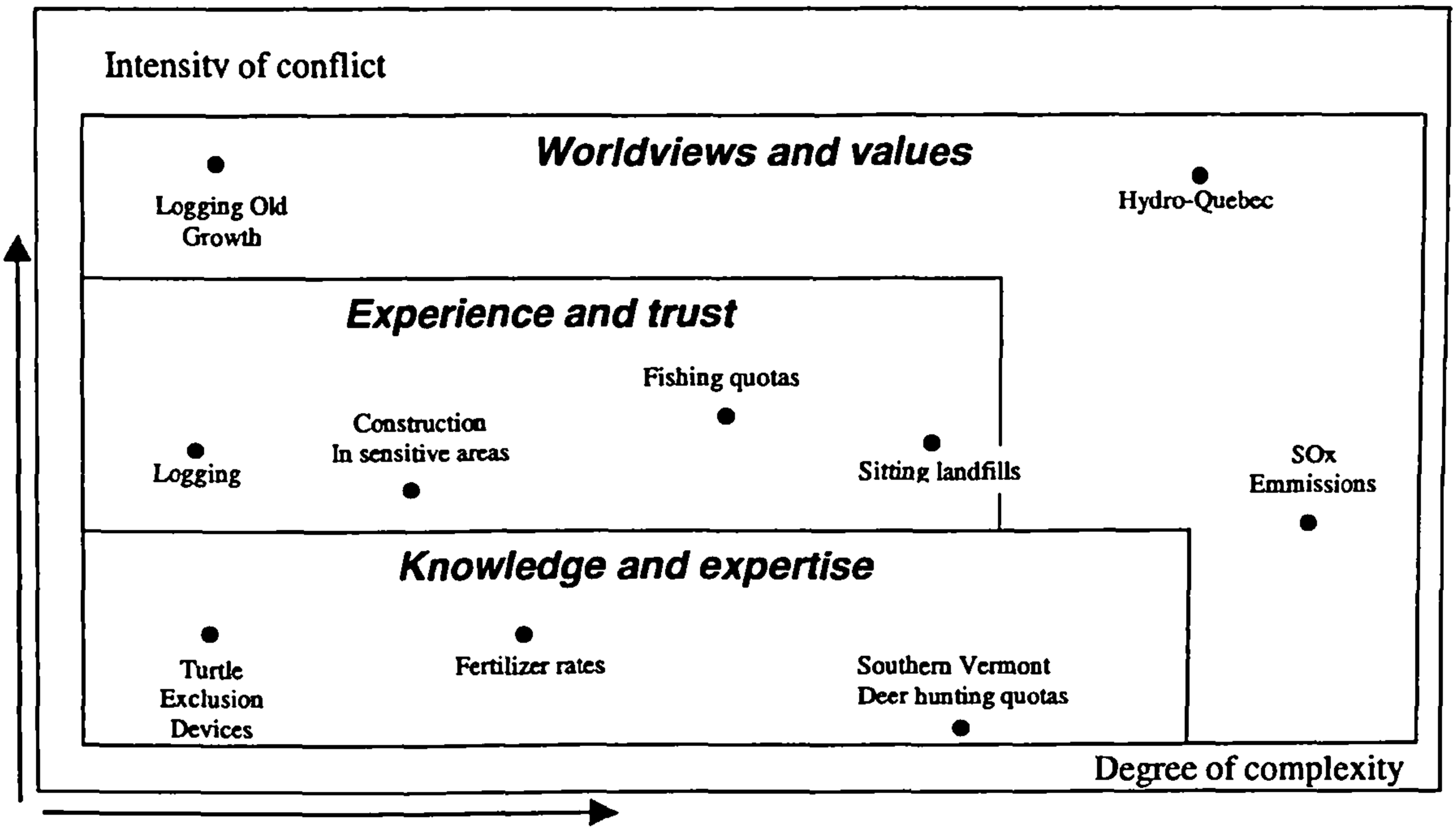

Fig 10.6 Taxonomy of environmental conflicts
Source: Renn *et al*,. (1995:356)

The first level (represented with examples such as fertilizer rates) is primarily characterised by factual debate where knowledge and expertise are relevant including local knowledge and personal experience. The debate is centred on facts and solutions most driven by experience. The second level (sitting landfills or fishing quotas) considered more controversial, respects firstly public confidence in institutions to deal with environmental threats (Renn et al. 1995:355). The focus moved from facts and expertise to confidence and trust. The debate on this kind of conflict is centred primarily on "achieving mutual awareness of each others expectations and a commitment to the principle of reciprocity" (ibid:355). The third level is centred on world views, social values and cultural lifestyles. Technical expertise or institutional competence are not adequate conditions to deal with it[72].

[71] This taxonomy is considered an hypothesis and not the result of a factor analysis dominated by a kind of debate (Renn et al 1995).
[72]Renn et al give also in this level the example of nuclear power plants in Sweden that led to a national referendum.

The project of co-incineration is basically placed at the second level. However, it also belongs to the first one, since it is also linked to basic options and strategies for waste treatment with strong political implications. In spite of the clarification of health risk uncertainties and factual misunderstandings being important the core focus is confidence and trust in institutions to deal with environmental problems. Renn et al. (1995:356) state: "problems of this kind are troublesome for decision making bodies because they cannot be solved merely through the application of expertise. They require the support of members of public".

Lack of confidence in authorities and industry is not only a characteristic of Portuguese society, it happens everywhere. However, it is particularly acute in Portuguese society by reasons explained in Chapter 5 related to semiperipheric character of society (discrepancy between the law in books and law in the practice, cliental system and practices, authoritarianism of the State with great inefficiency). Respondents in an inquiry (Lima et al. 1996:215) considered that trade and industry are the main responsible for environmental degradation and political power is its accomplice (87%). The distrust in government to deal with environmental situation is so high that 73% of the respondents think that an environmental agency should be in charge of environmental national policy and 83% think that the State should contribute with money for it (Lima et al. 1996:215, see also chapter 5). About confidence in environmental information the State appears after the environmental associations (46%), scientists (37,1%), and the media (23,5%). Even less reliable than the State is trade and industry. The context of trust and confidence in the State and its institutions particularly related with the environmental problematic is illustrated in Box 10.11. Those opinions confirm the existing deficit of credibility and trust.

Box 10.11 Confidence in the State and Administration

The entire political system has a reasonable degree of lack of credibility and this is something to worry about. The lay citizen does neither trust the government nor the Administration this is a basic point. As far as environmental inspection is concerned they have lots of reasons for it; people presented dramatic cases of pollution in the cement plants and nothing has been done. They opened inquiries and that's all. People presented claims but the Ministry of Environment never answered or when answering nothing was done. So, with what confidence people can accept this, and expect that this will work now and that everything will be under control (IPAMB)

Institutions do not have credibility and they do almost nothing to have it. Our power has nothing of transparency, even the economy and technology (Evaluation Commission)

People have fear, discredit, people have a great distrust in the State and its representatives..people have reasons to be distrustful. Often, industries present a very bad environmental past. The State must give the example and as far as the example is concerned the State has been giving very bad examples from radioactive minerals to power plants, even the Ministry of Environment and local authorities have also done so (Consultant)

There is a great climate of mistrust and I must say that there are strong reasons for this because we don't have any environmental control (IPAMB)

The processes are never transparent, so people disbelief everything (Association of Municipalities)

The discredit is enormous. There are no credible complementary measures that can help us to have a more open position...there is a lack of control, a lack of expertise and a lack of performance (Parish Council)

The reason why co-incineration had this result, especially here in Alhandra is because we have lost confidence. People do not believe the Ministry because they have been saying for a long time that they will take measures but they didn't take any. (Local Environmental NGO)

The question of confidence here is essential. The entire process was not transparent so, there was no confidence at all (Civic Association)

Nobody can say that this project was clear and transparent. It wasn't clear in its genesis, in its fundamentation and it is not clear in the way it faces the control of the process (Citizens' Association)

Credibility is very low from the beginning and credibility completely disappears when there is no transparency. People even say that there is a "scheme" when trying to implement something that populations see as terrible. At times people are right, sometimes they aren't but there are strong reasons for this to happen.. It is exactly the lack of transparency, lack of serious participation with all the information available (Local Environmental Association)

People have little confidence in the capacity of public administration to enforce the law in the practice (Institute of Residues)

A volume with a psychosocial analysis is part of the EIS. Based on inquiries done to populations living near the four cement plants affected by this project, confidence in industry and in cement plants was assessed. Results presented in Annex II (Fig. AII.1 and AII.2) show a high level of disbelief in industry at large and in the cement plants at stake even if the environmental performance of the latter has been recognised as improving. However, it is considered in all the four places a very polluting activity that causes worries to local people, being considered threatening in some places and presenting a high degree of insecurity in others. Armour (1991) in Petts and Edulgee (1994:393) states:

> "lack of confidence in the proponent and in authorities, which accumulates over times decreases the willingness of the public to assess risks and evaluate proposals for new policies on their own merits and in the light of improving design and control opportunities".

In this project this has been especially important since a core issue of the co-incineration process was the stress on monitoring systems to control the entire process. Proposed in the EIS, more defined by the Evaluation Commission and stated in the final decision monitoring of the process has been further negotiated by the Minister of Environment with the municipalities affected. A special Decree was issued to establish the competence and composition of Scientific Commissions to control the process, with scientists from the University, representatives of municipalities and local citizens. Notwithstanding, Portuguese EIA system does not have a monitoring or auditing phase this being a relevant factor in its discredit. Moreover the control of emissions from the process of co-incineration is very sophisticated, high technology is needed for this purpose. The existing practice of lack of control, lack of application of pollution pay principles, lack of information on results of industry performance has contributed in a great part to a discredit of proposed monitoring conditions (see Box 10.12).

Box 10.12 Confidence in mitigation measures and monitoring

Once again no one gave guarantees that control will be done by an independent and competent authority, because there are no such qualities in Portugal. They cannot measure the levels of dioxins. There is no institution in Portugal which is able to do this....how can you guarantee the quality of monitoring if there are no experts in Coimbra able to do so, this is a question of confidence (Civic Association)

They approve a project because of the mitigation measures and then a great part of those measures are not implemented in practice (Association of Municipalities)

People do not believe in control or monitoring in Portugal in terms of environment, since this has been the practice, this is part of our past. The accompaniment in EIA doesn't exist, we don't have commissions to follow the project, they need to be appointed by the Minister (IPAMB)

Technical failures could happen and no one is responsible for them (Local Environmental Association)

The credit of all this process is null, nobody believes it because the daily practice doesn't exist and the practice also makes the law and the interpretation of the law (Civic Association)

It is important to measure the emissions but they are not measuring all the pollution that is expelled through the chimneys because the number of chemical products with co-incineration is about a hundred milliard. We must have the notion of the limits of technology.(...) It is a problem of sampling (...) To measure once in a month something that varies in hours is something with less credit. If you know that cement plants can change the values of emissions putting or not residues with chloride because of the level of dioxins... we need to have a notion of the limits of those things (Local Environmental Association)

Contributing to the lack of confidence in the project is the credibility of information presented. Independently of the quality of the EIS the fact that it is responsibility of the developer generates a climate of suspicion difficult to overcome. In this case some gaps

were found by the Evaluation Commission, which asked for an independent report on air impacts and risk assessment and a better definition of quantities of waste to be co-incinerated. Institutional actors, technicians from different specific areas of Administration compose the Evaluation Commission, and sometimes the Administration is also the developer and the licensing authority. This overlap of constituencies works to the public as less clear since no independent mechanisms for EIA review exist in parallel. Moreover, there is an enormous weight of technical and scientific rationalities in the composition of the Commission. This has been clear in the process of co-incineration in the final comment from the Evaluation Commission (MAa 1998):

> "There are no technical questions that could impede the siting of any of the project components...The technical issues posed by different locations and diverse components of the project...are passable of being technically handled with sufficient environmental efficacy once adopted the solutions that reflect the state of the art and the adoption of legal procedures and conditions stated in this report"

Nothing has been said about social rationalities and issues posed by public consultation process. The existence of a scoping phase and independent review mechanisms seems indispensable to give the EIA process more confidence. Box 10.13 reveals the importance of regaining confidence in EIA information also felt by the developer and EIA consultants.

As far as technical and scientific information are concerned it seems relevant that credibility be reinforced by independent review mechanisms. Petts and Edulgee (1994:373) state: "the use of independent consultants to review the ESs has been more evident largely, it appears, because of the nature of the social and technical issues involved". They state that the Institute of Environmental Assessment has stressed the value of scoping and formal review being undertaken by independent bodies.

Box 10.13 Credibility of EIA information

The EIS appeared all done, complete with some orientation and indication that Alhandra and Outão will be preferable. (Parish Council)

Who did the study is the one who will benefit from the process and will benefit also in the economical point of view. The study seemed oriented to one solution, it was not a neutral study, we could understand what was wanted (Municipality)

EIS's have a bad reputation, the developer chooses the team and pays them, and this is the main problem. There is also a discredit in the EIS because they usually serve to justify the

projects. It is done on a project already finished and then approved under certain mitigation measures, but at least half of those measures are not implemented (Association of Municipalities)

It is a complicated question; the developer is the responsible and when it is like that when someone wants to complicate the public consultation process can always do it saying that the proponent paid the study to the consultant's team to obtain the results he wants. This EIA showed a clear intention to choose Alhandra and Outão because they have less costs of transportation since the Pre-treatment plant is in Barreiro (Environmental NGO)

The fact that EIS being done by developers leads to a great availability to contest and not to trust... The Evaluation Commission is composed of institutional actors and sometimes these people have a direct or indirect participation in the EISs done by hired teams. I don't' know but a process like this is from the beginning condemned because the legitimacy and the capacity to criticise such a procedure is lesser and the fragility it has is enormous and visible (Civic Association)

One of the problems is that the consultancy done is asked by the developer and this for many people generates suspicion. (Consultant)

We have the right to make our own study but an independent authority should do the one that is on the basis for public discussion. This is now the scenario with the Scientific Commission of experts and we will not pay them. Someone else but us should do the EIS and this should be compulsory. (Developer)

The decision was already taken and then let's find a justification for it. I think that the Evaluation Commissions have done a negative role on this that contributes to increase distrust. There is a coverage of technical and scientific reasons; I will name it an instrumentalisation of science because they use a scientific form for decisions that are political (Local Environmental Association)

The EIS was done to legitimise the co-incineration project (Citizens' Association)

10.8.2 Coherence

The project for elimination of industrial waste in cement plants has been presented in a policy vacuum. This was perhaps the main factor leading to its failure. The policy vacuum means the lack of a national coherent policy for wastes at a strategic level. The necessity to handle the problem of hazardous industrial waste has been felt by the Portuguese governments since 1985. However, successive projects have been rejected. A common trend in all these failed projects (Sines, incineration and co-incineration) has been the sectoral approach undertaken, which has never been integrated in broad policies that coherently with sustainable development objectives put the stress on prevention and integration.

Since the 1980s waste production has been considered an anti social activity rather than the mere result of the consumer society (Petts and Edulgee 1994). This is a consequence of the increasing perception that waste management involves risk, that all the methods

used have both pros and cons, that scientific uncertainty on consequences is permanent and that many places of earth have been contaminated by waste. Since the 1950s landfills have been considered the predominant solution for waste. From the mid 1970s with the energy crisis incineration became increasingly advocated. Waste could be used as alternative fuel, also permitting the reduction of waste up to 90% of its volume (Smith 1993). However high economic costs, high toxic air pollutants (dioxin and furan) as well as the high toxicity of residuals increased polemics. In spite of these models as well as physical-chemical treatment being used by different countries the idea of the 3Rs philosophy became a major goal for waste management. BPEO (Best Practicable Environmental Option) implies a stress on prevention, through changes in the origin of wastes at production, then reuse and recycling and finally the treatment of residual waste. As stated by Maclaren (1991) in Smith (1993), the 3Rs philosophy is "designed to generate less waste, conserve more raw material resources, save money, energy and create fewer environmental impacts".

This is also the philosophy adopted by EU expressed in the strategy for waste management CEC (1989) establishing the hierarchy of reduction, reuse and recycle. Those principles however, imply a wider framework at a national and regional level with a high degree of co-ordination of actions and strategies across industry and trade, incentive to the use of clean technologies and recycling. Moreover, it needs to be based on a large debate in order to get the indispensable public support. Those are of course long term objectives and policies but without their definition and acceptance sectoral approaches lack consistence and credibility.

Once again a project appears with the intention of solving an acute problem without being integrated in a larger policy framework without parallel and priority strategies to use 3Rs philosophy. Rather several contradictions appeared between the project and those strategies since no accurate data existed on quantities of hazardous waste produced and quantities going for co-incineration nor even on possibilities of reduction in the future (the project is foreseen to last for 20 years). Very much criticised especially by environmental associations was the inclusion of used oils and solvents since alternatives for recycling already exist in other countries. The argument was that government should incentive also those practices in Portugal. Another relevant argument in this debate was the lack and non-coordination of policies for waste

management since co-incineration would only solve about 10% or 15% of the existing toxic waste and no solutions were presented for the remaining part.

The approach taken with this project was considered to be building the house beginning by the roof. Melo (1998) stresses that this approach is taken without a framework at the level of integrated pollution control, the symptoms are fought without investigating the causes, the plans appeared without support of global policies. This is not to say that the situation of hazardous waste is not one requiring great preoccupation and priority measures although not internalised by society due to lack of information on the real situation and the adversarial character of the model used. The project presented lacks however, the fundamental policy support to make it robust and coherent.

Problems of need and alternatives are relevant issues when siting hazardous facilities. As put by Petts and Edulgee (1994:53) "it is at the more fundamental level of need and siting of waste treatment and disposal facilities that a public debate is most often demanded, and the case for waste management industry can be best articulated".

EIA at the operational level is not adequate to tackle these issues but the extension of EIA to plans, programmes or policies (SEA) is the ideal level to address those basic concerns. It is also the only level that permits the articulation with different sectoral areas involved and several sectoral institutions at stake. The involvement of the public at this level seems also indispensable. Many doubts, questions and reasons to reject the project derived in a great part from the lack of coherence felt in the project based on broad fundamental decisions already taken at a superior level without public debate. The reason to suspend the project was strictly linked to the lack of strategical issues. The National Plan for Hazardous Waste was required, a complete inventory of existing hazardous waste asked and an assessment of alternatives for toxic waste treatment including co-incineration was requested.

Curiously, some of the opponents of the project didn't reject co-incineration as a transitory alternative to be further considered. The majority of them recognise benefits of co-incineration over the incineration in the present state of art of waste management techniques. They were against the fact that co-incineration, considered an end of pipe solution, will last for 20 years in this project.

Project level

EIA has been considered the adequate process to deal with waste management issues (Smith 1993, Petts and Edulgee 1994). However, some EIA conditions are required. First is the need for a scoping phase to integrate from the beginning the main issues at stake recognised by experts and by the lay public. Even the integration of the 3Rs policy defined already at a strategic level finds in scoping the adequate phase to be re-considered. The incorporation of EIA in design phases (pre feasibility or feasibility) is also argued as more effective, avoiding delays, incorporating from the beginning mitigation measures.

The other issue interlinked is the importance of social acceptability more and more in pair with the technological imperative. Smith (1993) states in this respect "particularly at the evaluative phase of Impact assessment social acceptability can be expected to increase in significance as a central criterion to waste management projects". Siting waste facilities is no more just a technical exercise that can be tackled just with the rational model of problem solving. It is getting more and more weight in a political debate brought to the public sphere, since communities are becoming increasingly risk adverse. Based on studies of Mazmanian and Morell (1990) and Portney (1991) Smith concludes that these studies "highlight the need for EIA to take interest representation into explicit account on the design of procedures...IA must account for the stakeholders in any issue, accommodate their goals and utilise approaches that empower communities within decision making".

This does not ignore the importance of technical and scientific information and risk assessment techniques. They are increasingly needed. The core issue however is that they are not enough if social acceptability is not considered as an equal important factor.

Box 10.14 Lack of strategic policies

We cannot implement co-incineration without concluding the strategic plan for industrial waste, the reduction plan for industrial waste, without discussing several alternatives and frame the process of co-incineration in a broad waste management one. (National Environmental NGO)

The process could have worked differently if conducted in a different way with a different framework related to the levels of decision making. This means not to get decisions on specific projects without previously getting decisions on the options and criteria for siting. This decision should be taken in the most participative and consensual way. Opportunities to aware people would have been greater. If we were discussing options of waste treatment without specifying places people would have a bigger willingness to discuss the real environmental health and risk problems (IPAMB)

This was clearly to put the cart before the horses. They want to solve quickly all the problems that should have been thought before. We must study the problem of hazardous waste at a national level and how would it be done? We must reflect, define a correct methodology, know how to move on, define what studies are necessary, who will do them; if there were the involvement and contribution of people related to environmental associations, civic associations, municipalities, the process would be much richer (Civic Association)

There wasn't an explanation on the needs of the process, on the existing solutions and why was this solution adopted. Of course people should have been consulted in the choice of the decision "are we going to incinerate, to co-incinerate, to export", all these hypotheses and the pros and cons should have been discussed (IPAMB)

We have a complete lack of strategic vision, and the proof is that the legislation we have is never implemented in the practice (Parish Council)

Co-incineration was not an assumption of the country. What municipalities were involved? This gives the idea of the lack of national consciousness of the strategy, lack of involvement of the country in this process. It would be good to find a consensus and an acceptability at a national level, through parties, parish councils and municipalities (Association of Municipalities)

The EIS should not be this one. It should be a previous EIA, previous to the decision of the ministers to co-incineration in cement plants. For that decision an EIA should have been prepared and then the government could take a decision after a public consultation process. This was the great mistake. (Civic Association)

*The question is that government needs to assume that the situation of waste is a tragedy, the public is still eyes shut in this aspect, because the public is not informed. If people were told from the beginning on the quantity of hazardous waste and what the consequences were perhaps they would reflect on the idea.(*Evaluation Commission)

There is a lack of a global policy, a lack of interest and competence in thinking on issues with a long-term perspective (Local Environmental Association)

10.9 Conclusions on case study

This case and its interpretation through the material gathered (especially interviews to stakeholders many of them with 30 pages length) reveal a great variety of dimensions, interactions, synergies that could be explored from several different perspectives. I am convinced that its richness will give place to important investigation in sociological areas. However, for the purpose of this thesis and time available I tried to stick to an analysis framed by defined boundaries – public consultation in the Portuguese EIA system. At a more structural level and as far as the context in which participation takes place is concerned, this case provides evidence of the character of a society of intermediate development expressed in the theoretical frame:

- Public participation and consultation is still not considered a priority in framing decision making even when involving relevant public issues. The authoritarian culture still reveals preponderance as the choice of the DAD model has showed.

Main decisions at stake (the need for the project, the technology chosen and the choice of sites) were taken without any public debate. This performs the very strict role attributed to public involvement in decisions – legitimising decisions already taken. It also shows an inadequacy from the government, institutions and developers in understanding new trends of society in late modernity. Environmental conflicts, especially those involving risks, such as co-incineration usually bring to the forefront social/political aspects and cannot be solved just by rational technical/scientific reductionism. This case reinforces existing signs in the Portuguese society proving that the usual passive citizenship can give place to a more active one that can ruin projects, cause delays, postpone decisions and discredit the administration. Signs also exist that lay citizens increasingly feel that they must have a word to say in decisions affecting their lives and that their positions should be taken into consideration.

- Environmental issues still are not a priority in Portuguese society. This project has shown the lack of robust policies for environment where further strategies could operate as well as a commitment to them. It reveals particularly the lack of investment in acquiring baseline date (on the situation of hazardous waste, quantities produced) on environmental existing conditions (data on air quality, emissions from industries) and lack of mechanisms to control industrial activities (monitoring and auditing). This case shows the lack of strategic thinking and strategic policies the only level at which those issues can been addressed since they imply co-ordination of different sectoral levels (land-use planning, industry). It was this strategic policy vacuum, which has led in a great part to the failure of the project.

- Secrecy still prevails in society from government, administration and industry. A large public debate about the situation of wastes, on benefits and problems of co-incineration and on alternatives to treat wastes was missing. The "collective well being" advocated in this project was not understood by populations and by the existing information vacuum got a limited consensus and co-responsiveness from the civil society. Meaningful information on the needs for the project clashed with contradictory information (i.e. the quantity and type of materials to be treated by co-incineration, existing gaps on the industrial waste not to be co-incinerated).

The *ethos* of the developer overwhelmed the information given impeding any dialogue. Institutions in charge of the process revealed incapacity to promote a debate among the stakeholders. The scientific community proved not to be used to participate actively in the public life.

As far as EIA is concerned:

- The case shows clearly the importance to extend EIA to the more strategic level of plans, programmes and policies. The problem of needs and alternatives has crossed the debate especially stressed by environmental associations with a contagious effect in the discourse of other participants who used it to give more coherence to a discourse based on perceived risks and inequities. Moreover a comment from the Counsellor of Justice to the government (recommending the suspension of the entire project) states specifically that it was the choice of co-incineration that should have been subjected to a consultation process before the project was done. The link of the project to strategies of integrated pollution control, application of the 3Rs policy was relevant in the assessment of the project done by society.

- This EIA process proved the importance of a scoping phase, which is essential for transparency, credibility and efficacy of the process. Lack of involvement of several interests of society from the beginning in the definition of areas of study, methods to be used in the assessment, areas of concern for the public led to suspicion on the EIS. Moreover, some gaps detected contributed to the lack of credibility felt in this case. No scoping phase is provided in the Portuguese EIA system however advised by the EU Directive. It has been proposed in the recent review of legislation. If scientists, environmental associations, representatives of local authorities and the public had been called during a scoping phase the result could have been quite different.

- The case shows that the rehabilitation of EIA as a fundamental tool for resource management and sustainability is urgent in the Portuguese society. This project has proved its lack of credibilisation. Information being developer's responsibility was a much stressed argument leading to suspicion. Developers and EIA consultants also felt that it has led to a more fragile position. However, this is the

law and the practice under the EIA Directive. Independent mechanisms of review on EIA information would have been a good way to overcome this situation as well as the existence of a scoping phase.

- This case shows the importance of considering both citizens'values and facts from scientific information in order to create public acceptability of the project. Decision making needs to work in an integrative way where processes used are at least as important as the results obtained and this was something absent in this process. EIA has a especial vocation for this integrative process since EIA should be cyclical, holistic and participative especially in this particular case where issues of trust and confidence were core issues.

- This case shows clearly that ex-post evaluation of EIA is relevant. There was in this case a great stress on the need for monitoring and control of the process proposed by the developer and decision makers. However, those mechanisms are not commonly used in Portugal and EIA follow-up does not exist in the Portuguese legislation. This fact has led to the idea felt by the public that mitigation and monitoring just exist to make the projects approved. This case shows that there is a great need to invest in EIA ex-post evaluation and implement it in the practice with efficacy. Not only they give credibility to EIA and contribute to a better EIA culture but they also are the best way to work in contexts of high complexity with no consensus from science.

As far as public consultation and participation is concerned:

This EIA process shows with particular accuracy the need to review the mechanisms used to promote public involvement. The minimalist model used (foreseen in the legislation) proved its total inadequacy in:

- Publicity of the project – the project reaches municipalities and parish councils but this is not a guarantee that it reaches the interested public. It will depend on particular political interests of local authorities as well as their managerial skills the involvement of lay people. In some places such as Barreiro and Alhandra as well as Maceira, local authorities have promoted a great divulgence and have worked as catalysts for public involvement. In other places especially Estarreja

and Souselas this hasn't work in the same way. In Souselas parish councils mobilised populations around but Coimbra municipality did not.

- Access to knowledge –if the access to information was difficult (get copies of the EIS and NTS) the interpretation of this information was much more complicated, since no mechanisms were foreseen from the developer and the environmental agency in order to promote it. Different "publics" were in this case addressed as a homogeneous and abstract category.

- Two-way communication – the communication with the public was reduced to the public hearings. It is consensual that hearings are not likely to promote fair communication. It is increasingly advised that a blend of methods should be used since no one method can provide for the needs of public involvement (Renn et al. 1995; Glasson et al. 1994; Hyman and Styftel 1988, among many others). It will depend on the objectives of participation, phases of the project and characteristics of the public involved. A special attention should be given to the design of such processes were confidence and trust are at the core. Conditions to promote confidence were essential in the co-incineration case and they imply early involvement and a say from the affected public in the agenda and rules for debate. There was a need to stress a process oriented approach than the product oriented approach followed. The identification of key people and interests, take a proactive approach, using an ongoing process in an interactive way, which are relevant conditions to get informed opinions and co-responsiveness on decisions, were not used in this case.

- This case shows that more investment is needed in public participation both in resources and in investigation. EIA is not very known in Portuguese society yet. However, these polemical projects give EIA more visibility and it could be expected that they would work as precedents to more awareness on such mechanisms.

The process of public consultation of the co-incineration project infirmed from the main 5 common mistakes stated by Sloan (1993, in Petts and Edulgee 1994): "Use of 'hard-

sell'; attempting to redefine the public agenda; approaching the public too late; leaning to heavily on the facts; failing to tailor the information to the audience.

No projects until now have been well succeeded in Portugal as far as hazardous waste management is concerned. According to CNADS (1998) in the origin of this failure, is above all the way the processes have been conducted without the necessary transparency and reserves on technical accuracy in environmental terms. No acceptance from the public exist due in part to the lack of accurate information and knowledge on the projects, lack of confidence in authorities involved and lack of credibility in environmental policies announced.

However, it could be stated that this process, despite its awkwardness in getting meaningful participation, has contributed to the increase of public awareness in both environmental problems and risks and in decision making processes. In spite of being considered by some sectors a disaster impeding an urgent solution for an acute problem Portuguese society faces, this process conversely, should be considered important to evaluate public participation in the Portuguese EIA system. It can give a powerful contribution to ameliorate participatory processes by showing that consultation and participation if asked to the public must work with transparency through meaningful mechanisms for involvement to get co-responsiveness of society in solving problems. A great commitment is need in risk information and communication as well as in creative methods to promote debate and dialogue from the beginning and not only when main decisions were already taken in cabinets. It cannot be taken for granted anymore that the institutional weight of those processes and the willingness to implement new policies (even with the best intention) are sufficient for passive acceptance from society. Without meaningful involvement of the public, the best environmental policy is doomed to fail. All the efforts should be put in the creation of a climate of trust and confidence through transparency of processes. This is a very key issue in Portuguese society where there is a permanent distrust in the State and its administration.

Part V THE CONCLUDING PART

11 SUMMARY

11.1 Introduction

This investigation has been focused on public involvement in the Portuguese EIA system, in order to get a better understanding of a still recent practice. The approach taken has been mainly holistic and qualitative. There has been from the beginning an understanding about the complexity of the theme in which context is indispensable for getting insights on the phenomenon. A great part of this research has been dealt with framing the issue- public participation in the context of Portuguese society as well as in the broad context of late modernity. Concepts respecting environmental management are now also addressing a global dimension dealing with social phenomena at a broad scale and consequences of actions at a planetary level. This has been the reason to combine at a conceptual level EIA culture- the focus of this investigation; cultural contexts- the background; and sustainable development- the objective to be achieved by any environmental management policy. They have worked interactively during the entire investigation.

The concluding part tries to make a synthesis of all the study dealing with the evaluation of the work done, which also implies an appraisal of the institutional system and implementation in the practice of EIA public participation in the Portuguese reality. It begins with a brief review of main theoretical concepts involved in public participation, considered relevant for the purpose of this study, to focus the attention on the main questions raised in the introductory part. Strengths and weaknesses of public participation process in the Portuguese EIA system will be addressed and some avenues have been explored related to context and practice of public involvement and to the challenge sustainable development poses to societies of "intermediate development".

11.2 Environmental management and public involvement

11.2.1 From antagonism to cooperation

The story of public involvement in environmental management begins with the relevance environmental issues have got since the 1960's and the way perception on them has been evolving. They have been considered in last times permanent issues in political agendas at national and international levels being also part of daily concerns of

scientists, media and the public. Environmental problems have jolted the foundations of modern societies revealing the failure of the absolute supremacy of science/technology approach to solve problems and shape balanced futures. They have also revealed the lack of adequacy of institutional traditional powers of bureaucracies and the classic technocratic model of "rational decision making".

The severity environmental problems have got in present times, the threat they represent for life in earth including public health have led humanity to equate new pathways for development. The environmental movement, whose rebirth has been traced back to the end of the 1960's, has suffered a great evolution in national and global contexts. From a strong opposition and antagonism to political systems it turned to beliefs in the importance and urgency to find solutions by co-operation and coalitions involving the entire society.

The early 1970's saw the rebirth of the environmental movement as a mass movement with increasing number of supporters claiming against development of industrialised nations based on economic efficiency and science based technology (Hajer 1995; Garner 1996). The adverse effects of those models had become apparent through ecological disasters due to unsuspected effects of technological innovation, deterioration of quality of environment and imbalances in development throughout the world (Caldwell 1998; Ortolano 1994). Dominating the debate on environmentalism in the 1970's was the common accepted assumption that economic growth and environmental protection were incompatible and linked in opposite ways. Important criticisms to industrialised societies addressed in publications such as *Silent Spring*, *The Tragedy of Commons* and particularly *Limits to Growth*, *Small is Beautiful* and *Blueprint for Survival* worked as catalysts for public consciousness. Also relevant in the awareness of human dependence on nature were the NASA photos from the outer space revealing the fragility of the planet Earth (Hajer 1995).

Governments of industrialised countries tried to cope with problems of mass pollution and environmental degradation. The creation of Ministries of environment, the production of massive sectoral legislation and the use of ex post remedial measures were some solutions adopted, which proved to be inadequate. At the same time international environmental agencies became involved in the environmental debate

trying to find common grounds and pathways for solving the increasing ecological crisis.

The 1980's saw a new orientation of the environmental discourse due to the increasing awareness of the complexity of environmental problems, development and credit ecology gained, appearance of new global problems (such as ozone depletion and climate change) and the efforts of Academia and experts to find concrete solutions. The commitment of international organisations, such as UNEP, UNCED, UECD, the conferences and debates held culminated in the WCS (1980) and more decisively in the Brundtland report (1987).

11.2.2 The new environmental discourse: sustainable development

The new environmental discourse claiming on urgent changes in society tried to reconcile environmental care with economic development and through this gaining social credibility. The 1980's brought about a shift on the radical posture of the 1970's where ecocentric views dominated, rooted in deep ecology principles, advocating zero growth policies. Between "deep greenness" based on deep ecology and "dry greenness" rooted in scientism and technocentrism (O'Riordan 1995) a common ground for fruitful discussion was found where new solutions and pathways would be outlined. *Our Common Future* in the late 1980's was the main catalyst for this relevant shift presenting as key issues concepts of sustainable development already tackled in WCS though in the latter with dominance of ecological principles. The great message was that environment and development are inextricably linked though not being incompatible. Sustainable development was the concept to bridge the gap between environmental protection and economic growth.

Moreover, sustainable development was no more a concern with environment but above all it would imply concepts of social justice and democracy as well as intergenerational and intragenerational responsibility. Social, cultural, ecological dimensions as well as economics were all implicated since growth should be regulated by both ecological and equity criteria. Sustainable development puts also a great stress in political systems, which can assure effective citizenship participation in decision making. The concept of global citizenry is enhanced meaning that citizens are stewardships of resources and

implicated in decisions about its management. Co-operation at national and international level was advocated and intensified.

Based on principles of sustainable development, ecological modernisation appears to be the most accepted policy in the environmental debate. A managerial approach to deal with environment was thought to be more fruitful over a confrontational approach. Ecological modernisation recognises the structural character of environmental problems but considers that they can be managed in political, economic and social institutions (Hajer 1995). A new role for science is proposed. Recognising the implications of science/technology in the environmental crisis, they are nevertheless considered essential in contributing for its solution. Industry began to work with environmental scientists using new tools such as Risk assessment, Life-cycle Analysis, Cost-benefit and EIA. On the other side science has become more involved in the world of politics, commerce and social change. Nature is seen not as a free good but a resource in need of conserving and being managed. The problem of non-renewables has been considered a first order problem leading to recycling, stimulating technological innovations as the use of clean technologies. New environmental regulations emphasised prevention and anticipatory solutions to remedial ones, encompassing the polluter pays principle, the precautionary principle and the internalisation of costs of pollution. Ecological modernisation also advocates a shift in traditional mechanisms of decision making. New actors are recognised in the political scene such as environmental NGO's, communities and new procedures such as negotiation and mediation have been increasingly advised.

The specificity of environmental problems, their correlation with developmental policies, the role of science/technology, the emergence of environmentalism in its several tendencies completely changed the public scene triggering a movement for public participation. Several political and social/cultural conditions contributed to demands for a more participative democracy. The public consciousness on problems posed by technological development, driven by economic considerations, the expansion of information through media, and the bureaucratic character of decision making were some of them. The environmental movement performed a great role in demanding more public involvement in decision making, asking for the enlargement of politics beyond the liberal distinction State and civil society. The NSM's in which the environmental movement was included were seen as logical consequences of "demystification of

sciences", "demonopolisation of sciences" and "scienticisation of protest" occurring in face of environmental degradation and global risks, previously excluded from debate. Renn et al. (1995) relying on Beck's *Risk society* corroborate the ideas that organising principles of societies have changed from the distribution of wealth in the early 20th century, distribution of power in the 1960's, to distribution of risks in late modernity. A major conflict deals with tolerability of risks for present and future generations and this shift implies new forms of collective decision making and conflict resolution (Renn et al 1995).

At the same time that the environmental and social debate were taking place fast, political decision making, especially in the environmental area, was slowly being adapted to increasing demands and pressures for participation. One of the first most influent instruments asking for public involvement was NEPA in 1970. Many other pieces of legislation and recommendations at both national and international levels advised increasingly public participation in decision making such as: Our Common Future (1987); the EC Directive 85/337/EEC; Agenda 21 (UNCED 1992); the Aarhus Convention (1998), World Bank Directives. Public involvement became a core issue to sustainable development when proposing new forms of social organisation, new roles for institutions and citizens in decision making. Citizenship throughout times has been a process of continuous enlargement of rights evolving from civic, political and social rights to rights of quality of life and patrimony of societies. This has been dealt in chapter 3 where the role citizens have to play in sustainable development has been addressed since there is a conviction that any policy for change can only be successful with public support. Public participation is seen as a way of trying to bridge the gap between representative and participative democracy. In the context of sustainable development public participation is seen as a means and an end of more developed democracy.

11.2.3 Principles underpinning public involvement

Philosophical, pedagogical and pragmatic principles for public involvement have been stressed through literature concerning environmental decision making. Philosophical principles are based on the beliefs of democracy that people have the right to be informed, consulted and involved in issues respecting their lives. Key concepts of sustainable development such as empowerment of local people, self-reliance and social

justice emphasise this rationale. Relevant is also the concept of environmental rights/responsiveness extended to lay citizens. Within the context of sustainable development the involvement and commitment of all the stakeholders in finding solutions for common problems and in the definition of more balanced future is a basic condition.

Pedagogical principles are related to the interactive process of public participatory processes, which allows a continuous form of education not only in environmental issues but also in the entire political process in which decisions are made. The iterative relationship established through each process with the appearance of different views from different interveners creates the conditions for a more comprehensive and broad acknowledgement as well as to the development of grounds of shared common values. Public participation might contribute to a better informed and conscious citizen as well as better informed decisions about problems raised from different points of view.

Pragmatic principles are related to the incapacity of plans and decisions to address correctly public preferences leading many times to dissatisfaction and problems with the implementation of actions. Often, values of experts do not coincide with values and expectations of populations. Experts can assess risks but they cannot establish which risks are acceptable or not by those who will suffer them. To define problems more effectively, to have access to local knowledge, contribute to the choice of alternatives, check the accuracy of predictions, solve conflicts carrying delays and ruining projects are also some of the arguments implicated in the pragmatic rationale.

In spite of getting increasing consensus in democratic societies, public participation is a complex process provoking controversial debates. The amount of power sharing, the representativeness of participants, the difficult articulation of techno/scientific rationalities of experts with social rationalities of the affected public, antagonism and mistrust in governments and institutions are permanent problems. Lack of transparency, poor information, late phase of public involvement, lack of integration of value laden opinions in decisions, lack of articulation to other planning and decision making activities, minimalist approaches without two-way flow of communication, are on the other side, reasons for the failure of many participatory processes conducting to its discredit.

11.2.4 Public involvement in EIA

EIA has been the first institutionalised instrument asking for broad public involvement in environmental management and has greatly shaped public involvement in other areas. Since EIA is the focus of this investigation chapter 4 presents a review of EIA origins, evolution, principles, procedures and methods. Main shortcomings of EIA implementation and trends to the future have also been addressed with a special focus on public involvement.

One of the main reasons for EIA survival and development along 30 years and also explaining its worldwide expansion is its inherent philosophy stressing on prevention, holism, interaction and participation within a dynamic and flexible framework. This has permitted EIA to be used in different political and social contexts and to be adapted to the evolution and needs of societies throughout times. The main challenge of EIA in last times has been the adoption of sustainable development as its overarching goal and framework. For the accomplishment of such objective EIA needs to address three main aspects. The first is its expansion to a more strategic level, the only one that could incorporate adequately sustainable objectives; the second is its work in a consistent network with other planning and decision making instruments. The last is the reinforcement of EIA participative character, since the entire society has a part to play in the shaping of more balanced future. EIA at a project level and increasingly at a strategic level has been called to play an important role in the context of sustainable development since EIA working as an instrument for more sound decisions can bring together both technical/scientific and social rationalities in an iterative process.

EIA is, however, a particular sensitive instrument of environmental management since affected by the cultural background of societies. Political commitment to EIA, public participation more or less valued in society, environmental awareness and consciousness, attitudes to science and technology, ethical standards and societal forms of organisation are some factors influencing the effectiveness of EIA systems. Different jurisdictions have applied EIA differently adapting its principles and procedures to specific political systems, values of societies and organisational cultures. Some countries have adopted EIA as a necessity felt to better integrate environmental and social concerns into planning and decision making. Some others, have been compelled

by their membership in international organisations and institutions. However, the degree of discretion and flexibility of many international recommendations and Directives is akin to produce different institutional frameworks. An example of this discretion is the EU Directives on EIA to be adapted to specific contexts.

11.2.5 The Portuguese EIA system and the context of participation

Portugal joined the European Union in 1986, one year after the enactment of the EC Directive 85/337/EEC on EIA, mandatory to all member states. Environmental problems until the 1980's had not been a great concern of Portuguese society. Quality of environment had been maintained by default, due to a lack of industrialisation and great stress on rural values. The first consistent legislation on environment was approved in 1987 by way of the Portuguese Environmental Bill, Law 11/87. This law has performed an important role in environmental policy and has also worked as the legal internal basis for EIA further development. The transposition of the EC Directive on EIA to the Portuguese legislation was a slow and complex process. In 1990, two years after the deadline given by the European Community to member states, legislation on EIA was approved through the Decree Law 186/90 and the Regulatory Decree 38/90. The literal transcription of the Directive (not adapted to the Portuguese reality) and the delay in its enactment has suggested a certain reluctance from political and administrative bodies in adopting a law with perceived important consequences at environmental, social and economic levels (Observa 1998). A review of EIA legislation came to force in 1997 (Decree Law 278/97 and the Regulatory Decree 42/97) by the imposition of the EU in order to correct the transposition of the Annex II of the EC Directive (projects to be submitted under further conditions). As a result of the 1997 EC review on EIA, a review of Portuguese Law occurred in May 2000, through the Decree Law 69/2000, May 3.

The Portuguese lived for nearly 40 years (1936-1974) under a repressive dictatorship, isolated from the flow of ideas of other Western countries. The 1974 April revolution leading to a democratic political system brought with it fundamental changes. The construction of democracy and the integration in the European Community have been the main transformations in Portuguese society. These transformations have been accompanied by: increasing deruralisation with desertification of the interior of the country; urbanisation with strong development pressure in cities of the coastal area, emancipation with a rapid expansion of the educational system and with effects in the

social recomposition of the population typified by women's access to the work force and an universal access to mass communication.

Despite the changes in the Portuguese society taking place in a short period of time, some authors consider that under the formal and overt institutional modifications, some pre-revolutionary practices are still prevalent; other authors insist on highlighting the profound changes in the fabric of the Portuguese society.

In the extensive existing literature related to cultural contexts three approaches seemed to fit the purpose of this study in linking a phenomenon with its context. One is Hofstede's framework defining dimensions of culture and its relationships across 40 countries including Portugal; another one is the application of the Douglas model of cultural diversity by Yearley et al. (1994) to peripheral countries in order to assess the implementation of EU environmental policies. Santos (1991, 1993; 1994) and his collaborators present a comprehensive framework for the analysis and understanding of Portuguese society through the theory of "semi-peripheral countries" or "societies of intermediate development". Santos concluded that Portugal has both indicators of developed countries such as low rates of population growth, progressive legislation and patterns of consumerism and indicators of developing countries such as weak structures for collective action and low levels of industrial development. Within Santos framework characteristics of Portuguese society relevant for public participation are:

- Centralisation of the state with great distance between representatives and represented
- Clientelism and bureaucracy
- Great discrepancy between "the law in the books" and "the law in the practice"
- Heterogeneous society in social, political, economic and cultural terms
- Weak Welfare State and strong 'Welfare Society" which tries to compensate deficiencies of the State
- Weak and non autonomous civil society when compared to developed countries due to the absence of organised representation of specific social interests
- Citizenship not considered a priority
- Small cultural elite remote from the general public.

These three theoretical approaches to cultural contexts present several common points and proved to be very useful in enlightening the analysis and interpretation of empirical work.

11.3 Findings

11.3.1 Questions asked and reframed through the analytical framework

At the end of the thesis this section returns to the questions raised at the beginning with the objective of presenting some answers and pathways for further development. The broad question put in a tentative way was: What is happening in the process of public participation in the Portuguese EIA system? Sub-divided in the following:

- How do people with a specific culture labelled as non participative behave with this instrument of environmental planning and management?
- Which are the main themes, categories and patterns in the participants' meaning structures? What are their interactions as well as the participants' structural significance?
- How does it work in the practice, what has been its effectiveness and what has been the interaction created in society by its functioning?

The evolution of the research work through the literature review and the empirical work carried out, led to the conception of an analytical framework where those initial questions would be reframed. This tool has been designed to guide data gathering and analysis working interactively with theories on cultural contexts enlightening the specificity of the Portuguese society. Chapter 7 addresses the principles underpinning this model and the way it works in the practice. Initial questions have been reframed in key issues. Key issues considered were:- the "Why" issues addressing criteria of usefulness with the objective of influence and impact of public involvement in decision making. The "Who" issues addressing criteria of equity and fairness with the objective of assuring all stakeholders the same opportunities and conditions for participation. The "When" and the "How" issues addressing the efficiency of the processes related to its appropriateness to meaningful participation in specific contexts. The "Which" issues respect criteria of coherence, transparency and reliability with the objective of achieving sustainable goals.

The use of this framework helped to construct a broad picture and brought into light various problems of participation in the Portuguese EIA system and the way it has been conceptualised in Portuguese society. This generic profile or broad picture got some clearer aspects by the use of the in-depth case study of the co-incineration project also using the same analytical framework. This case as worked as a kind of zoom enhancing relevant features of the context of public involvement in the Portuguese EIA system.

11.3.2 A broad picture of public involvement in the Portuguese EIA system

Public participation in planning and decision making still is a recent concept in the Portuguese society. Due to several contextual reasons, decision making processes have never been open to the public until very recently. The shift to more open processes has been due essentially to pressures from international community, especially EU legislation. Gradual internal pressures have accompanied these external pressures though still timidly.

As far as Portuguese environmental planning legislation is concerned several laws and regulations exist stating the importance of public involvement and co-responsiveness of citizens and the entire society in solving environmental problems. The main example is the Portuguese Constitution of 1976 and the Environmental Bill of 1987. At this level the discrepancy between the law and its implementation in the practice has been notorious. It is only in the 1990's that many of the broad principles enshrined in those main laws have been regulated in the practice such as the right of participation (Law 133/95), the right of action (Law 43/90 and Law 5/93), the right to judicial action (Law 83/95). There are also a number of specific regulations stating that public consultation through public inquiries should occur as for instance in land-use plans, regional plans, coastal plans. However, the approach to public involvement in planning and environmental decision making has been very weak, done in a top down manner and hampered by the following factors:

- Secrecy, centralisation and bureaucracy of Portuguese society
- Lack of structures and institutional arrangements allowing effective participation
- Lack of strong organised groups of interests
- Lack of internalisation of citizenship and traditions of participation
- Lack of environmental awareness and consciousness

It is especially within EIA of projects, since 1990, that public participation although with a minimalist approach, has been more institutionalised and regularly applied in the practice. Reasons for this when compared to other Portuguese planning regulations are related to the mandatory character of the EC Directive on EIA, to the type of issues raised by EIA projects, more focused on immediate problems, but have also been influenced by the development of an EIA culture and the commitment from some institutions like IPAMB.

Within the existing environmental planning legislation EIA has been the most recognised process for direct public involvement. It has been getting roots in the Portuguese society in spite of its weaknesses in terms of legislation and implementation. Due to increasing environmental and resource management problems, the visibility given to them by media, more information available, public participation has been increasing in society at large though many times in less organised ways or taking less profit of existing legal instruments. Society has been internalising citizenship rights although in a very slow way due to a lack of strong organised groups of interests working as real pressures for change, as well as a lack of proactive forms of involvement.

Usefulness

EIA and its inherent public involvement have contributed to positive changes in attitudes of the main actors in environmental decision making. Traditionally, science has not been the prime basis for decision making nor a culture of opening decision to public scrutiny existed. EIA has implied the consideration of technical/scientific issues in decision making. EIA has also implied the consideration of social values, the latter though less valued. There has been a new dimension created by EIA due to existing public information and more visibility of processes translated in:

- Developers and consultants who became aware that projects are now at the public domain and they should present the burden of proof on their environmental sound basis
- Decision makers knowing that decisions have more visibility and need public justifications
- Competent authorities in EIA who need to cope with public views and integrate them in the evaluation reports.

- The public in general knowing that there is an opportunity to influence decisions in the legal framework

The level of influence of public involvement in EIA decision making lacks empirical accurate data. Data from Observa (1998) shows the level of acceptance of projects in the period 1990-1997. In Annex I, 7,9% of projects submitted received non favourable comments; 16,8% asked for EIS reformulation and 68,3% were approved under the application of mitigation measures. The same pattern occurs with Annex III projects except for non favourable comments that increased to 10,7%. It is not possible to state what was the real contribution of public participation in these decisions. On the one hand, there have been projects rejected or asking for a reformulation due to issues raised by the public in the formal consultation process. On the other hand there have been some polemical projects refused or suspended due to public controversy triggered by EIA process although final comments on EIA by decision makers had been positive (Wavebreakers of Douro river; Co-incineration). They are however exceptions in the overall panorama. What can be suggested by data interpretation is that the reactive approach taken to EIA in the Portuguese system where public participation processes are a once-off exercise in a late phase of decisions, usually imply that only minor changes in the projects and introduction of mitigation measures could be taken.

EIA still is a recent process in the Portuguese society. Effective empirical data on the knowledge the public has on EIA is lacking. In spite of a dominant perception from stakeholders interviewed that public participation has been increasing this does not correspond to statistical data on participation got by Observa (1998). This suggests that there is an increasing awareness of the existence of EIA procedures, though its use being according to the degree of threat of the project and the dynamics created in local or regional contexts. The amount of consultation processes done which has been enlarged to more projects of Annex III (1997 legislation review and the recent 2000 review), associated with the great controversy that some projects brought to the public sphere (especially waste management projects) are leading to increasing awareness of EIA. This awareness, however, goes in pair with increasing knowledge of EIA weaknesses, contributing to lack of confidence in processes. Parallel mechanisms such as demonstrations and boycotts especially with the media publicity have proved to work in a more decisive way, due to the influence of media in politics.

It is concluded that usefulness of public participation in the Portuguese EIA system is hampered by:

- The reactive approach taken to EIA and public participation with late phases of involvement
- Lack of recognition from society and especially from Administration and developers of the benefits of public involvement, translated in little investment in the area
- Lack of investment in environmental awareness and consciousness. Public participation can provide excellent opportunities for citizenship development. This would imply, however, methods that help the public to address environmental local issues in more global contexts and transform individual interests in common shared values.

Equity and fairness

Participation in EIA projects is weak projecting the general pattern of Portuguese society "weak and non autonomous" (Santos 1994) without structures in civil society organised for active participation in public life. Analysis of statistical existing data and evolution through times prove this (Gil and Martins 1996; Observa 1998; Valadas 1998; Rosmaninho (2000). Valadas (1998) refers that many projects did not have any public interest stating that in 1997, 21% of the projects did not receive any comment, 60% received up to five comments; 25% had between five to ten comments and only 15% achieved more than ten comments. Data from IPAMB (Rosmaninho 2000) respecting the year of 1999 show that only 6% of the projects received more than twenty comments; and 56% received between five to ten comments and 16% received between three and four. In 1998 there were 6% of the projects without any comments though in 1999 there were no projects without comments. The degree of participation depends on the type of projects and the perceived influence they have in participants' lives. There are projects with almost no participation (afforestation, industrial plants, small dams) and projects with very high levels of participation such as projects related to risk, especially waste management facilities. There are other projects ranging between with an intermediate degree of participation (motorways and large dams).

This is linked to reasons for participation and the way different "publics" conceptualise participation in the existing institutional framework and in the context of the Portuguese

society. Varying from project to project it is possible to state some main actors in the processes: central and regional administration; local administration (municipalities and parish councils); professional associations; environmental associations; citizens (especially residents in areas affected by the projects) alone or organised in groups and associations.

Central and regional administration present regularly written comments on projects related to their respective sectoral areas. Invitations are addressed by IPAMB to several departments of administration. It is the institutional consultation although occurring at the same time and using same mechanisms of consultation of the public in general. Professional associations (especially biologists) have also contributed to participation linked to their areas.

As far as local administration is concerned municipalities perform an important role in those processes by usually sending written comments and participating in public hearings. Often, the municipality provides the place for holding the hearings. It is also in municipalities that the EIS and the NTS are available for consultation. Municipalities are often involved previously in informal consultation with developers. They can also be important catalysts for public involvement. The co-incineration case revealed how municipalities and parish councils can involve the public depending on interests in the project. In some places they worked as an umbrella for public participation; in others they were somewhat apart trying to negotiate directly with the political power. Representative democracy has created strong roots in Portugal and often does not cope well with mechanisms for participative democracy. A great deal of times municipalities privilege direct forms of negotiation with central power and developers through strong webs of contacts and personal relationships (Ruivo 1993), excluding channels of dialogue with people they represent. Farinha (1996:27) based on an inquiry related to Agenda 21 done to all the 305 existing municipalities concluded that channels of communication "were mainly one way from the municipality to the citizen". Other important aspect is the dominant character of policies adopted by municipalities where "think and act locally" is still the dominant rule governing local action (Farinha 1996:27). There are, however, honourable exceptions of municipalities promoting true dialogue with citizens' interests and considering environmental issues as crossing all areas of their administration, as Évora municipality shows. Recently some others have

elected environmental issues as prior issues though even dominating top down models of dialogue with citizens.

Parish councils are closer to the citizens. The importance of parish councils in the involvement of local populations has been recognised by IPAMB inviting them to participate in all the projects (legislation just considered in the definition of "the interested public" parish councils in Annex I projects). They present, however, several constraints related to lack of resources especially lack of staff with technical and managerial skills as well as material resources. There is often, also, a difficult co-ordination with municipalities.

Environmental associations represent an important group in EIA consultation processes, though not in quantitative terms. They have been accused of being far from populations and just concerned "with flora and birds". However, if a more conservationist position had been taken at the beginning of these processes (even persisting in some smaller associations) it would have evolved to a more integrative one concerned with global environmental management. They are the group presenting more variety of comments from legislative aspects, decisional dimension to social, ecological impacts and also the group often "monopolising the time in hearings" (Craveiro 1996). The role of these associations in the EIA processes has been recognised as well as its activity in increasing environmental awareness of populations. The process of co-incineration revealed that they were those more informed, addressing questions at a more strategic level and giving populations information and arguments in more encompassing ways. In spite of being often accused of 'desired protagonist role' some environmental associations (e.g. Quercus) have been doing a reliable work and contributing to important improvements and suggestions in the area of waste management. It must also be referred that GEOTA, another environmental association, presented to the government a program for public participation related to waste management. They also are the most credible source of information in environmental issues for populations (Lima et al. 1996, based in Gallup enquiries). They face however important difficulties especially related to the very low degree of ecological militancy, one of the lowest in Europe. This lack of human resources leads to the choice of just EIA emblematic processes with a degree of example and efficacy.

Citizens participate alone or in organised groups, depending on local synergies developed and concerns on projects. Two main factors leading to public involvement have been emphasised in literature as the factor of residence and the factor of risk. Those are important catalysts for participation. In projects related to risk perception (incinerator of hazardous waste, incinerator of solid urban wastes, co-incineration and landfills) participation from residents has been great. Lima et al. (1996) in a study done to Portuguese environmental values concluded that the ecological sensitivity of people is stressed by an element of fear directly linked to health.

The dimension of social impacts is the most referred by citizens in written comments (Gil and Martins 1996) and in public hearings (Craveiro 1996). The perception transmitted by stakeholders in the interviews carried out reveal that citizens just participate when their direct interests are at stake, especially in questions related to their own patrimony and immediate concerns with quality of life. The portrait of environmental values of the Portuguese people reveals a society with great concerns with environmental problems though with a great lack of responsiveness in their solution (Lima et al. 1996). Contributing to this is above all the environmental awareness deficit, since 92% of people interviewed considered the phrase "people nor knowing what to do to protect environment" the most important cause of environmental problems (Lima et al. 1996:227). On the other side is the chronic deficit of active citizenship where a lack of participatory mechanisms is combined with strong hierarchical relations between the Administration and the public. Pureza (1996) analysing the profile of environmental litigation in Portugal concluded that there is a deficit of mobilisation in society to the rights of third generation and a great concern with economical and social rights compared to post-materialist values associated to environment. However, as stated by Beck "nature is society and society is nature" in the late modernity. In EIA the enlargement of environment to interlink bio-geophysical and social/cultural aspects is being undisputed. Problems posed to quality of life of populations have been increasing and they are a catalyst for participation. Depending on the way processes are conducted, more global issues could be addressed conducting people to create an encompassing and common understanding of problems to find acceptable solutions. As Oakley (1991) states: "if contextual change is a prerequisite for meaningful participation, it could also be argued that the dynamic created through processes of participation can bring about contextual change".

Representativeness is considered a key issue in public participation. Representativeness requires not only the identification of all the "publics" concerned but also conditions to ensure their involvement. Stakeholders in environmental and planning issues represent not only different interests and values but also huge disparity of resources (technical, financial and organisational) and a balance of this inequality is needed in order to get equity. Analysing public consultation in the Portuguese EIA system in this respect it must be considered that a great effort has been done by IPAMB since 1994, in order to enlarge the concept of "interested public" and the "encompassed region" defined in legislation.

However, representativeness of the process is far from being achieved. It is hampered by factors related to the structural context of Portuguese society and by the very procedures of the EIA system and institutional arrangements for participation. Related to the context is the fact that it is a society where participative democracy still is in its infancy, where strong mechanisms of representative democracy give preference to direct negotiation and cliental practices.

Related to the EIA system the model used to promote consultation also obstructs representativeness of the processes. The minimalist and reactive approach taken, a once-off exercise, with elitist procedures (written comments and hearings) is not conducing to fairness in participation. All the different "publics" are treated in the same way. In the model promoted there are no "publics". It still is the conception of the public in general as an abstract entity that dominates. No proactive measures are taken in the processes to adapt mechanisms for information and dialogue to the differences of "publics". Moreover the co-incineration case reflects sharply the inequality of representativeness of this process in the planning phase before its presentation to the public as a consummated fact. In spite of this there was also a missing link in the final decision related to representativeness – the lack of incorporation of public values expressed through consultation.

Efficiency

The late phase in which participation occurs reinforces the idea that this very process only serves as a means to legitimise decisions transforming participation in just a "cosmetic" exercise. It is increasingly advised in literature (about EIA effectiveness and

for instance in the Aahrus Convention) that participation should take place in earlier phases of the EIA process. This is in order to enhance benefits of public input, taken into account public views and expectations, reduce communication gaps between experts and lay public and generate a climate of co-responsiveness in projects. In the EIA process, a scoping phase is commonly used to address those issues, be it public or institutional, formal or informal. This means a proactive approach to identify relevant aspects at stake and assess public interest and concern about the project. The approach to public involvement in a late phase is one of the most negative aspects of the Portuguese EIA system, contributing to its discredit. A common view among stakeholders is the fact that a formal scoping phase with public consultation should exist in legislation for large projects in order to achieve a better quality of the EIA process.

Facing the discretion of legislation, IPAMB introduced a standard model for consultation, which is applied to all the projects being they small dams, or toxic waste facilities. Comments can be sent to IPAMB during the process for all the projects. Hearings are held for polemical projects. There has been since 1995 an increasing of public hearings recommended to all Annex I projects. The formula used by IPAMB has proved to work bureaucratically, favouring participation as a legal formality and even going far beyond the requisites of law. However, it does not favour meaningful participation as such aspects show:

- There is some evidence that dissemination of information about the process does not reach all the potentially interested stakeholders. Mechanisms used for publicity (news in the media, edits on municipalities and wards) do not seem to reach all levels of the public. The use of Internet though important is still selective for the majority of population.
- The EIS and the NTS are available for consultation in municipalities and the NTS is also available in parish councils but several difficulties exist in getting access to them. It is very much dependent on municipalities and parish councils the publicity of processes but lack of technical and managerial expertise, lack of resources hampers in many cases the access to information. Moreover, it often depends on the interests of local power to make or not a huge publicity on processes.
- Portuguese system does not provide for efficient two-way communication. Considering the fact that it is difficult in many cases to get documentation in EIA

it is still even more complicated the problem of interpretation of information. People can make written comments and ask for information in IPAMB, though this being ineffective. Public hearings use oral discourse but are a once-off exercise, formal, intimidating and dominated by a technical/scientific discourse.

- Three main deficiencies are presented in the interviews as common pitfalls of EIA information: Abuse of technical language in the NTS; lack of consideration of social impacts; lack of credibility of EIA information

Lack of credibility of EIA information is a very polemical fact, which is aggravated in cases related to risk. Accreditation of consulting teams; public bids for EIA projects; more responsibility of the co-ordinator of the EIS are some suggestions advised in interviews in order to promote credibility. A scoping phase with public consultation, with definition of terms of reference would be an important step in this aspect. Structural factors contributing to difficulties in elaborating EIS are the lack of consistent and systematic baseline data, and monitoring data. It has been recognised however that the intensive practice with EIA projects has contributed to increasing quality of EIA information.

The Evaluation Commission in charge of the review process is composed of representatives from sectoral administration areas. There are sometimes overlapping interests since administration can be both the developer and the authority responsible for the approval of the project. No guidance and review criteria are published. It is also considered that there is a dominance of technical/scientific rationalities and no criteria exist for the integration of public comments. However, it is considered that for polemical projects there is a great weight of political factors in the justification of final comments. Co-incineration case showed that technical/scientific reasons were not accurately addressed since it has been recognised a lack of information in the project and the EIS and decisions on places were not proved to be based on scientific arguments. Moreover, the Independent Scientific Commission in charge of a new appraisal of the project concluded on a different place to install co-incineration, just maintaining the other. It has been advised by stakeholders interviewed that it will be important to get independent comments asked to experts; participation of independent bodies as observers in the review process or independent parallel mechanisms of review.

Coherence, transparency and reliability

The overarching goal of EIA is helping to achieve sustainable development. This implies however its enlargement to a more strategic level the only one which can address long term objectives and articulation among sectoral areas. It is relevant for sustainable objectives the question of "needs" and alternatives. Not assessing this is a reductive approach. However, this does not happen in EIA of projects where projects at stake have been based on decisions taken previously mainly by political or economic reasons. Institutional practices only allow for participation when main options are decided and projects prepared. It is a reductive and unfair approach, considered by Mostert (1996) a great dilemma only solved by the enlargement of EIA to plans, programs and policies.

EIA applied to plans, programmes or policies can provide opportunities to abandon environmentally unsound concepts before being translated into projects (Ortolano and Shepherd 1995). Moreover, public involvement operating at strict project level leads often to conflicts that cannot be solved and leads the public to more distant positions discrediting the system. It happens frequently that questions addressed by the public are related to more strategic and normative issues already defined without public debate or information. This is particularly true with projects respecting roads, dams and it is dramatically felt with projects respecting hazardous facilities. Paradigmatic of the lack of articulation and coherence of broad policies and projects are the three failed projects related to the treatment of hazardous industrial waste in Portugal. Common to all of them has been the strategic policy vacuum in which they have been taken isolated from the broad principles of waste management considered and advocated in the existing legislation- the 3R principles. Questions of "need and alternatives" have been at the core of the public debate in the co-incineration project in 1998. This project has been suspended by the Parliament asking for the presentation of the strategic plan for industrial waste, a strategic plan for prevention of industrial waste, accurate information on quantities of existing wastes and alternatives to co-incineration. The most recent case of Sabor dam has also been suspended with recommendations to address alternatives to the objective of the project - to produce energy, not design alternatives (there were about 13).

Portuguese environmental Bill, law 11/87 considers that EIA should be applied to plans and programmes though never implemented in the practice. The debate at a broad level would facilitate decision making at a more operational one. The enlargement of EIA to a more strategic level is however not foreseen in the short term. Lack of priority given to environment as a broad concept, lack of long term objectives definition, lack of co-ordination between sectoral areas, a weak planning system and the "lethargic bureaucracy of peripheral countries" (Pridham 1994) are some of the reasons for not being considered a prior issue.

Attitudes from the public to the EIA process and public participation reveal that EIA needs credibilisation. Main factors contributing to this are:
Lack of transparency and debate on decisions where top down models dominate
Lack of credibility on EIA information and review mechanisms
Lack of credibility of processes since there is any EIA follow-up. In the Portuguese EIA system there is no monitoring related to the implementation of mitigation measures, monitoring of forecasted impacts or auditing. This is indispensable for regaining public confidence in the process.

11.3.3 A more vivid picture

The co-incineration case by its enormous polemics and public debate brought to the forum, with great accuracy, fragilities of the Portuguese EIA system and public participation processes. The standard model used in the consultation process, with great institutional weight that seemed to fit a passive society, proved to be far from adequate to deal with polemical cases and especially with processes involving risk or processes where confidence is a key issue. The lack of credibility of EIA clearly appeared through perceived attitudes of secrecy and lack of transparency from the Administration and developers since major decisions were taken without public knowledge or involvement.

The context of "peripheral countries" (Yearley et al 1994) or the context of "society of intermediate development" as defined by Santos (1991; 1993; 1994) was enhanced by this case. On the one hand the authoritarian culture of the State showed up with the choice of the DAD model. Main decisions at stake (the need for the project, the technology chosen, the choice of places for co-incineration and especially the storage

and pre-treatment plants) were taken without any public debate, performing the strict role attributed to participation – legitimisation of decisions already taken. It also showed the inadequacy from the Administration and developers in understanding new trends in society in late modernity. The co-incineration case has also showed that the authoritarian culture with great centralisation goes in pair with great ineffectiveness. The fragility of the environmental administration showed up. Environmental issues are privileged areas to reveal such aspects since they encompass multiple dimensions linked to sectoral areas from land planning to industry. They imply the use of mechanisms of control and great expertise. No accurate data existed on industrial waste production. Inventories on waste, mandatory to industry did not produce accurate results in the practice. There were no strategic plans using the 3 R principles enshrined in legislation to which this project could be articulated with. The project worked in a policy vacuum that was also one of the great reasons for its public rejection. Lack of investment in environment was enhanced by the lack of data on existing pollution from the cement plants as well as mechanisms of monitoring emissions in areas around them. Studies on population health have never been done. The stress on monitoring by decision makers was not credible for populations since monitoring is not a usual practice of environmental policies in Portugal.

Secrecy still prevails from government to industries. A large public debate on the situation of wastes, benefits and disadvantages of co-incineration, on alternatives for waste treatment was missing before the project appeared to public scrutiny. The "collective well-being" advocated was not understood by populations and by the information vacuum, the lack of credible environmental strategic policy got a limited acceptance. Institutions in charge of the process revealed a great incapacity to promote information and dialogue due also to lack of recognition of the importance and influence of public involvement.

On the other hand it also revealed a society not very concerned with political life with a great lack of information and responsiveness in public issues; It showed a reactive society that is mobilised just when their immediate interests are affected. This lack of concern and involvement in public life is also extended to institutions, organisations and the scientific community, which proved to work in a closed circuit far from public debates and concerns. Scientific community has contributed later to the public debate

but in a reactive approach. The absence of consistent structures for civic participation in public life appeared clearly in this case through a lack of participatory mechanisms in society and traditional hierarquical relations with the Administration.

Lack of information, flawed decisions, increased lack of confidence in the State also extended to administration and industry characterised the process. This lack of confidence was one of the main story lines crossing this case enhanced by the minimalist and reactive approach taken, late phase of public involvement, bad environmental past of cement plants, and lack of understanding of the objectives of the project.

One of the few common shared views by all stakeholders in favour or against this project was that the process of public involvement completely failed its objectives in giving information, promoting dialogue and debate and helping to address common shared values. Consultation and participation when asked to the public must work with transparency and through processes that should be "fair and competent" to get the co-responsiveness of the public in solving problems and finding ways to compensate those affected by decisions. This case has proved that without meaningful involvement any project (even well intentioned) is doomed to fail.

There are reasons to believe that this case triggered different perceptions in public involvement in the Portuguese society with further implications in future EIA processes as well as in attitudes of decision makers, developers and Administration. The case has also contributed to open to public debate relationships between science and politics. Moreover, it has also contributed to an increasing awareness on environmental conditions especially in the places at stake as well as on perceptions from the public on decision mechanisms.

12 CONCLUSIONS AND RECOMMENDATIONS

12.1 Considerations on the Portuguese case

Environmental problems arrived late to Portuguese scene compared to other industrialised countries of Europe. Environmental issues have not been yet a priority in a society worried with economic development. Portugal is at the moment facing a pressure by EU to implement more sustainable environmental policies and at the same time pressured to perform better economically. The ecological modernisation that aims at articulation of both dimensions is still very far due to lack of awareness, expertise and investment in global integrative policies, incentives to industry, and other productive sectors. Following this trend, there has been a lack of investment in environmental education, environmental baseline data and monitoring of environmental conditions. EIA was at the beginning introduced in the Portuguese EIA system as an obligation by being a UE member state and less as a necessity felt to better deal with environmental management and equity associated. It has been a society where secrecy dominates, where decisions were usually taken in cabinets mainly based on political reasons and where scientific and technical knowledge as well as social acceptability had never been its fundamental basis. Public involvement in decision making has never been a feature of the Portuguese society and yet is not a flourishing practice in EIA. In environmental management and planning, top down approaches dominate. It is recognised that in last times technical/scientific issues have been giving more importance though the link to social values and concerns still is undervalued. In spite of existing mandatory requirements for public participation the approach taken has been typically reactive than proactive with poor mechanisms, not encouraging participation from citizens, neither getting relevant inputs from public knowledge, nor developing citizen competence and responsiveness.

Main reasons for this are complex and related to contextual reasons, which interact and reflect in strategies used for public involvement. This investigation confirms in a great part the character of intermediate development of Portuguese society as defined in Santos framework as well as results of Yearley et al (1994) on the implementation of environmental EU policies in considered "peripheral countries" of EU.

As far as EIA is concerned findings show the reactive approach taken where EIA is just confined to projects, limiting its capacity of working as a tool to address sustainable objectives. Public participation is also reactive transformed many times in a pro-forma to be accomplished. The commitment from IPAMB allowed the use of a standard model applied equally to all situations that works bureaucratically, accomplish schedules though not capable of meaningful participation yet. Public participation is hampered from the beginning by a restrictive frame that promotes a once-off participatory exercise using minimalist methods. Relevant for the Portuguese society is the absence of two-way mechanisms, which can provide transformation of information into knowledge, individual values in common shared values and individual concerns in co-responsiveness in solutions. Methods used do not recognise also the differences in "publics" and the great imbalance of their resources.

Findings have provided evidence that despite the reactive approach taken to EIA, the minimalist process used and the cosmetic consultation promoted, EIA has contributed in broad terms to better decision making and above all to a change in public perceptions and in attitudes of developers and the Administration. The fact that EIA promotes public information about the projects and decisions done is a relevant aspect. Ten years of EIA practice have also contributed to the assessment of its performance by society and the conclusion is that there is a great need to work in its credibility especially:

- Enlarging EIA to a more strategic level open to public debate. This debate could be done by multiple forms (formal or informal) with representatives of main interests
- A scoping phase seems indispensable to get better EIA information, address main issues (especially the social ones) give more transparency and credibility to the process
- Monitoring and control mechanisms are fundamental
- The standard model used for public involvement needs to be improved to promote more meaningful participation. It must be flexible to be adapted to different characteristics of projects and publics.
- Mechanisms for publicity of processes should be ameliorated
- Mechanisms helping to transform information into knowledge encouraging more conscious participation are needed

- Public participation processes need to be adapted to Portuguese society where levels of operational literacy are low. Oral debate seems relevant in Portuguese society as well as more informal mechanisms. This is also linked to an effort need to environmental education recognised in Portuguese society that needs to be addressed in several fields. Active problem solving strategies are excellent ways of improving environmental education as advised in Tbilisi Declaration (in O'Riordan and Turner 1983:391) "(...) environmental education must look outward to the community. It should involve the individual in an active problem solving process within the context of specific realities (...)

12.1.1 Benefits of the new legislation

During the writing up of this thesis new legislation in EIA, the Decree Law 69/2000 was enacted (see also Annex I). The review of legislation though incorporating the 1997 EC Directive and the Espoo Convention was also based on a process of consultation that involved developers, NGO's and Administration. The MARN group review (MARN 1996) got main views on the EIA process and incorporated them in legislation. Some of them will contribute undoubtedly to an improvement of EIA.

An important aspect is that EIA results are now binding to the licensing process. This is a recognition of the importance of environmental issues in development. A scoping phase and a post evaluation phase are the main contributions as far as credibility and effectiveness of EIA are concerned. EIA effectiveness relies on a great part in taking environmental and social considerations from the beginning of projects by detecting areas of controversy and expectancies of the "publics" affected. However, scoping is voluntary in the new legislation depending on the willingness of developers. Moreover, legislation states that public consultation in a scoping phase is dependent on developer willingness by proposing it to the authority in EIA. A scoping phase presents benefits for developers since its initial proposal will be translated in terms of reference by the Administration, but it could exist without public involvement. The question to be addressed is how developers will react to more openness of processes and if they have already internalised and accepted the importance of public involvement in this earlier phase. It seems that public involvement has getting more interest in society from developers to Administration. This is related in part to the controversy of some projects

(delayed, postponed), to developmental changes in society and development of EIA practice. However, would they be sensitive to public consultation in an early phase and ask for public involvement at this stage?

Post evaluation is indispensable to credibility of the EIA system. During ten years projects have been approved and a great deal of them because of proposed mitigation measures but without any follow-up to control or monitor its application in the practice. This has contributed to a public perception that rules are not to abide by in the practice and also to place EIA in the same context of other laws in the Portuguese society –they exist but are not to be implemented ("the country of make believe"). Moreover, the efficacy of mitigation measures could only be done through systematic monitoring and auditing in the practice. Money can be spent without need when projects are approved due to mitigation measures that do not work effectively. Auditing proposed in the new legislation can also benefit the forecasting of impacts, improving project outcomes. The approved legislation will imply a great effort from the Administration to manage these new mechanisms. It is a challenge for the Portuguese society where restrictions to public administration are severe, where articulation of several areas involved has been less effective and where control mechanisms are usually very weak.

Another important point related to EIA information, is the possibility foreseen in law to have external consultants in the review process chosen by the degree of expertise in the area of the project. This is an important point to assure that main technical/scientific reasons are incorporated in decisions, contributing to the credibility of the Evaluation Commissions. However, Evaluation Commissions and the authority in EIA need to establish a better link to value-laden opinions also incorporating them in the processes.

As far as public consultation is concerned there are now possibilities of participation in the phases of scoping (depending on the proponent), review and post evaluation. IPAMB is given more flexibility to manage processes of consultation. Since February 2000, IPAMB has experienced a new model for participatory processes including meetings with local power with the presence of developers and EIA consultants; meetings with associations and universities; for the public they have created a temporary office in the region encompassed by the project at stake for individual attendance of the public where information on projects can be given. In some cases

there still are held public hearings. This model presents benefits compared to the old mechanisms where only written comments and public hearings worked as mechanisms for participation. One can say that they can provide more information. However, the proactive character of consultation is still lacking. Answering individual questions from the public in an office does not promote any opportunities for raising environmental consciousness; this process cannot develop individual concerns into public positions; private concerns from the public cannot be understood in terms of broader social relations that can enhance the pedagogical role of participation.

As characterised by Santos (1991; 1993; 1994) in his theory of "societies of intermediate development" there is a great difference between the law in books and the law in the practice. Political commitment to this new legislation is the next step and should involve the entire society. As stated in Pridham (1994) implementation of sustainable environmental policies in peripheral countries is more akin to take place when the pressure by the EU goes in pair with internal pressures from society. Environmental problems have become increasingly relevant in Portugal due to important changes in society and development models followed, which have implied apparent social/ecological disruption. Signs exist now that the usual passive citizenship can give place to a more active one that can ruin projects, cause delays and discredit Administration, especially in projects where perceived risk is involved. Signs also exist that the lay public increasingly feels that they want to have a say in decisions affecting their lives. It is a challenge for the entire society and particularly to bureaucratic institutions that have been particularly inadequate in adopting principles of sustainable development.

12.1.2 Considerations for future participatory programs and areas of further research

Throughout the development of this investigation some systemic factors of Portuguese society have been identified as having great influence in participatory programs. They should be addressed carefully if meaningful participation is to be achieved and objectives of sustainable development addressed. These systemic factors are: lack of traditions in participation, lack of confidence in the State and Administration and lack of environmental consciousness.

Lack of traditions in participation hampers public participation. Participatory practices are less valued in a society that has learned and assimilated mechanisms of representative democracy, but still is far from coping well with a participative one. There is a lack of structures in civil society with organised interests that could present themselves as strong partners in decisions. It is important that EIA participatory processes take proactive approaches rather than reactive ones and use strategies for an active involvement of stakeholders, particularly common citizens. In a reactive society reactive mechanisms do not contribute to promote desirable change.

Public scepticism and lack of confidence in the State and Administration. Old contextual reasons (tackled in chapter 5) have contributed to this. It is fundamental that this lack of confidence be reversed. It is a difficult task that would imply contextual change. However, some factors identified through this study could be implemented if there is political will in order to increase credibility of EIA and public involvement processes. Some relevant ones are: early involvement of the public in decision making, large publicity of all relevant information, choice of mechanisms to build up consensus or at least informed consent, give to the public and their representatives a word to say in the agenda for public participation and on ways results will be incorporated in decision making and abide by the established rules. Still related to confidence/scepticism is the character of secrecy still dominating in administration, organisations and industry as far as environmental information is concerned. On the one hand it will be important an investment in environmental base data (air and water pollution, emissions from industries). On the other hand it is relevant to make this information publicly available. It is not acceptable if ecological modernisation is the pathway to pursue that environmental secrecy exists. This is an extreme important point to develop confidence and remove barriers due to lack of information. As far as EIA processes are concerned some conditions have already been considered. The accomplishment in the practice of the new legislation as far as scoping and EIA follow up are concerned will represent steps to increase confidence.

Lack of environmental consciousness – Capacity building through education and training is a relevant issue in the path for sustainable development. In spite of the efforts needed from the entire society namely investment in schools it seems important training and informing as well as sensitising all stakeholders implicated in environmental

management such as developers, decision makers, professional associations, NGO's and citizens. On the other hand, EIA participatory processes can be excellent opportunities to raise environmental consciousness. It would be fundamental that debate be promoted through the involvement of the public and representatives of the scientific knowledge inviting experts on issues to be discussed and linking local concerns to more global ones. It is often considered in the Portuguese society and was clearly revealed in the co-incineration case the named "irrationality" of the public due to lack of information. This thesis shares the view that "the old pair of the 'ignorant layman' and the 'omniscient expert' no longer encompass reality" (Hajer 1995) especially with environmental issues. It takes up from Renn et al. (1998:168) the idea that "The central tenet to keep in mind with public participation projects is that the public is in principle capable and wise in making prudent decisions. Public input depends, however, on the procedure of involvement. Provided citizens are given a conducive and supportive structure for discourse, they are capable to understand and process risk-related information and articulate well balanced recommendations". The level of debate would rise when analysed from different points of view and new and innovative solutions, never thought, could even appear. Co-responsiveness in decisions is also essential to implement sound policies, programs, plans and projects.

Related to this a great investment in capacity building is needed especially of those related to the public, such as public officials. It is relevant in order to strengthen public institutions, co-ordinate and integrate public inputs. Municipalities, parish councils and NGO's are important pillars of participatory EIA programs in Portugal. As stated earlier several aspects can impede their more active role as catalysts for participation. Apart political contextual reasons harder to change their lack of technical and managerial skills has been considered relevant. Training in participatory practices, EIA included, would be indispensable for a better performance.

The negative experience with previous projects especially related to waste management indicates that mechanisms used for consultation in pair with the DAD model have failed. Industrial waste landfills are considered essential to be implemented in Portugal (just 10 or 15% of industrial waste can go to co-incineration if this process were to be applied). Solutions for industrial landfills could not be postponed anymore due to public controversy. It is necessary that careful planning of further participatory processes will

be done with points of review and monitoring of processes. It is important to consider: that the public should be involved from the beginning; all relevant information should be displayed involving independent experts in its review; the identification of relevant "publics"; promotion from the very beginning a climate of confidence and trust; use a blend of mechanisms to promote two-way communication; give the public a say in the agenda of the process; choose relevant experts in communication to deal with mass media and different actors of processes. Sustainable goals make participation an implicit objective. They imply however, a shift from an adversarial paradigm to a collaborative one where the public is catalysed to co-operate in collective interests and have responsibilities in decisions.

Public consultation and participation in the Portuguese society needs more research efforts and investment. A number of issues have been identified in this study focused on EIA:

- It would be useful to assess the knowledge Portuguese society has on EIA public participation, through statistical inquiries. This work has never been done and will be relevant in order to design further instruments for knowledge and publicity of its importance to civil society. In the same inquiry it could also be assessed the importance attributed to this process and how people see its working as a mechanism to influence decisions

- It would be important in the assessment of public involvement in EIA to have a more clear idea through empirical research of how decision making has been affected in reality by public participation. This has been an important question crossing the development of this investigation. However, resources especially time were not available to a deep study on this. It could be done through the analysis of EIA processes in the IPAMB database. Processes could be scrutinised in categories related to projects rejected, approved with mitigation measures, projects where alternatives were at stake, projects further rejected or postponed though receiving favourable comments in the formal EIA process. For each category comments from the public through written comments or public hearings would be analysed against decisions taken. It would give a more clear picture of the weight participation has having in EIA decision making process. Through the analysis of data carried out in this investigation, the broad idea is that the

influence of participation in decision making is just marginal for the great majority of projects translated in some mitigation measures or in the choice of small alternatives (especially in road projects). It would also be relevant to apply the same analysis to further processes occurring under the new legislation as well as to projects with and without scoping.

- It would also be interesting to address in a specific study attitudes of developers to participation in EIA, its commitment to the process its perception of benefits of participation and if the idea of public participation as a "hurdle to be jumped" has been substantially changed. This acquires more relevance since by the new legislation both the scoping phase and public participation in that phase is voluntarily asked by proponents and could only be done by their willingness.

- It seems relevant in the context of the Portuguese society that new methods and mechanisms for public involvement be addressed. It still is more relevant since the new EIA legislation gives IPAMB more flexibility in finding adequate mechanisms for participation. Action research could be an interesting approach using creative instruments for some processes considered more polemical. Literature on public involvement in environmental management presents a source of useful experiences stressing cases related to risk communication[69], proving that new mechanisms for decision making are necessary to cope with environmental issues in late modernity. It is crucial that new methods should be applied and evaluated in practice. It is also stressed in literature that no ideal solutions exist for participation related to methods to be used. However, experiences and methods that proved to work successfully should be tailored to particular contexts and creativity should be increased. It is also recognised in literature that Portuguese society presents a strong tradition of solving problems and conflicts in more informal ways. Unfortunately there have been no attempts and experiences in Portugal to use consistent mechanisms of negotiation and mediation or round table processes. Other mechanisms such as citizens' panels, citizens' juries, advisory committees considered as promoting more meaningful participation, should be tried. It is very important that mechanisms used stress the

[69] See for instance Connor, 1987, 1989, 2000; Renn et al 1995; Renn et al 1998, Smith 1993.

information/communication role involving the public and experts from several areas related to the project that could promote transformation of information into knowledge and contribute to the development of awareness and consciousness.

- There is a recognised gap in the Portuguese society between environmental concerns and responsiveness in action to solve them. This suggests that the approach taken to environmental information has not been the most adequate. More active problem solving strategies through the direct involvement of citizens, rather than traditional reactive information seems to be more useful. Not only public interest could increase but also sense of ownership and usefulness would be promoted. Consumerism is now an increasing factor in Portuguese society hampering environmental protection. However, some experiences have demonstrated that when informed and meaningfully involved the public can adhere to more sound environmental practices (for example the campaign for recycling wastes). This is the proactive role participatory programs should have.

12.2 Considerations at a broad level

12.2.1 Considerations of the analytical framework

This research has dealt in part with framing the issue of public participation focused on EIA. To answer the questions posed at the beginning of the investigation in a tentative way, a large review of literature has been carried out to assess the state of art of public participation in environmental management and trends to the future. This review has been relevant for the construction of an analytical framework to guide the analysis and interpretation of empirical data. The framework as described earlier (chapter 7, Table 7.1) tried to systematise key issues in public participation in EIA such as criteria, objectives and contents to be addressed.

The framework (used both in the broad picture and in the case study) has proved to work in the practice in the sense that it allowed the analysis of a broad complex reality by conceptualising it into issues of more tractability. An evaluation of this analytical framework at the end of the work reveals some aspects that from a pure conceptual point of view could seem less structured. The first one is inherent to any model related to the division of a whole into pieces, separating issues and concepts intimately linked,

partially overlapping and working interactively in a process. Solutions for this could be found in the intention of always maintain an interactive approach stressing relations between parts. It would be desirable that the categories expressed in this framework would be further developed with a great defined articulation at a conceptual level. From its appliance in the practice it could be concluded that the "When" and the "How" issues, efficiency, since they deal with the implementation of public involvement, are those presenting more iterative links. It is the design and implementation of participatory practices that can provide conditions for the achievement of usefulness, equity and fairness as well as coherence, reliability and transparency. Fig 12.1 is an attempt to present this articulation.

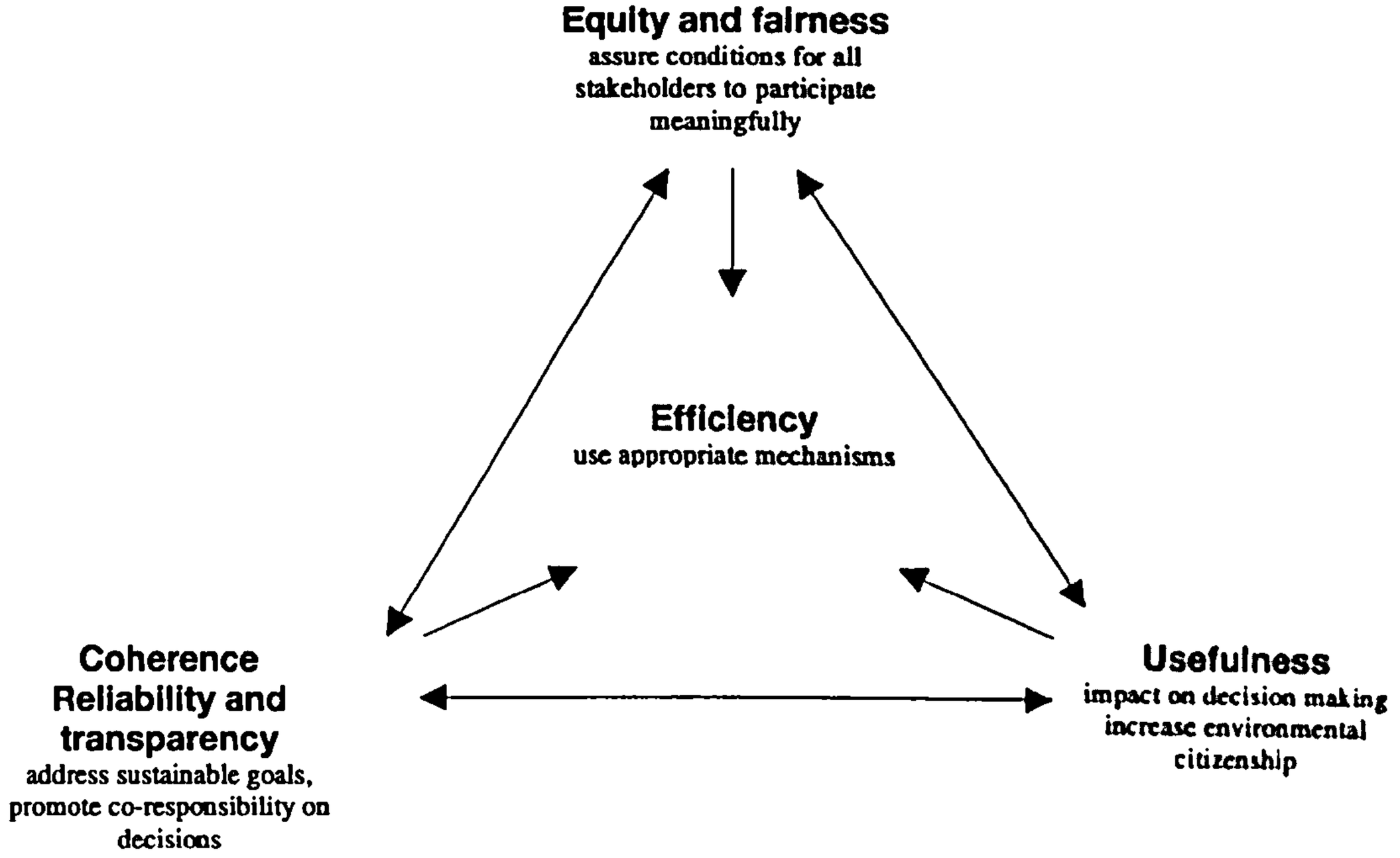

Fig 12.1 Articulation of dimensions in the analytical framework

The second one deals with the category of the "Which" issues, respecting criteria of coherence, transparency and reliability. The objective of this category has been defined as to address sustainable goals, stressing the relevance of sustainable development to be pursued as the main development objective in EIA and public involvement. This implies on the one hand that EIA of projects is not enough or the more adequate phase to integrate those issues. It is increasingly felt by societies the question of "needs" of any development action especially if risk is involved. Coherence was then defined by the translation of sustainable principles and objectives into policies, plans, programs and projects and its necessary articulation.

It could be argued that other aspects included in the "Which" issues such as transparency and reliability will be better placed on the "Who" issues, equity and fairness. It is considered that the latter also addresses aspects related to attitudes of stakeholders. For instance, lack of transparency and reliability can impede people to participate and discredit the system. However, the idea of this separation was taken deliberately in order to enhance what participation means in the broader context of sustainable development. Transparency and reliability in this model deal in a great part with consistency of decision making perceived by the public leading or not to co-responsiveness in decisions through participatory processes. Participation is more than a bureaucratic process to get agreements on decisions already taken. Sustainable development implies the abandon of the adversarial paradigm that polarises actors of the process. Conversely, it promotes a collaborative approach. Environmental planning and resource management imply a permanent bargaining process with all the stakeholders affected. Their involvement can only occur meaningfully if there is transparency in decisions and reliability in processes.

As stated in chapter 7 this framework has not been constructed to work as an evaluative tool for public participation in EIA. It has been rather constructed to allow the analysis of a much complex reality by identifying through literature key issues, objectives and criteria based on consensus and perceived trends to the future that could shape a frame for effectiveness of public participation. Table 12.1 is a synthesis of this framework where the "ideal" and "consensual" principles have been incorporated as references or guiding principles. It has been designed to work interactively with the political/social context of Portuguese society (as presented in fig. 7.1) which has been the focus of this study. It could however be enlarged and used in any other context by anyone interested in the analysis of a public participation programme, project or EIA system.

Table 12.1 Framework for analysis of public participation in EIA

Criteria	Objectives	Content	"Ideal" and "consensual" principles
Equity and fairness	Assure conditions for all stakeholders to participate in a meaningful way	• The public • Reasons for participation • Organisation • Representativeness of processes	• Promote identification of the "publics" affected • Use mechanisms to balance influence of stakeholders • Positive discrimination measures if necessary to promote representativeness of all the interests at stake • Consider funding for participation • Use methods of information/communication adapted to different "publics"
Usefulness	Have an influence in decision making Increase environmental citizenship	• Perceived benefits • Legislative conditions • Environmental awareness and consciousness	• Public participation mandatory in legislation with enforceable institutional arrangements • Existence of guidance on rights and procedures for participation • Public participation should go in pair with efforts to develop environmental awareness and consciousness as well as more active citizenship • It is important to develop capacity building of public officials, NGO's, institutions and organisations and the public •
Efficiency	Use appropriate mechanisms and methods	• Phases of involvement • Design/management • Degree of public involvement • Information/communication • Methods and mechanisms • Resources and monitoring	• Participation should begin early in the planning process • Participatory processes should be carefully planned with points of review and monitoring • Design of processes should be flexible to be adapted to different projects, phases of participation, "publics" involved • Mechanisms used should combine a blend of methods for wide dissemination of information, promotion of two-way flow of communication and debate, transform information into knowledge, promote feedback on information • Give participants a say in the agenda of processes • Clear definition of objectives, assurance that rules are known and accepted • Use training staff to conduct processes • Consider efficiency of resources (time, money and human)
Coherence **Reliability and transparency**	Address sustainable goals Promote co-responsibility in decisions	• Articulation of EIA with policies for sustainability • Adequacy between legislation and implementation • Attitudes of stakeholders	• EIA and public participation should be extended to a strategic level where sustainable objectives could be addressed • EIA should be coordinated with other planning tools and policies • Political commitment to objectives of EIA is indispensable • Lack of secrecy in information • Decisions must be made public as well as reasons how public consultation results have influenced decisions • Creation of a climate of trust, respect and openness • Use reliable mechanisms for EIA follow up (monitoring and auditing)

12.2.2 Final considerations and recommendations

There is an increasing awareness about the complexity of environmental decision making, which is a consequence of the uncertainty of implications, lack of sufficient scientific knowledge, interconnectedness of issues and existing conflicts of interests. The failure of traditional models just based on science centred approach and economic efficiency is undisputed. It is increasingly recognised that in "reflexive modernity" new forms of decision making and conflict resolution are necessary to shape a better future which imply considerations on both social and techno/scientific rationalities (Beck 1992; Hajer 1995; Renn et al. 1995). Philosophical principles underpinning democracy stress the importance of listening to citizens in decisions affecting their lives. Pragmatic principles show that without meaningful involvement developmental policies, plans, programs and projects can be delayed and obstructed. Pedagogical principles show that public involvement in decision making is an important way of raising environmental awareness and get co-responsiveness of society.

What seems an irreversible trend in late modernity and an objective of sustainable development is not a clean neat issue in the practice since it represents a shift in traditional ways of bureaucracies and established practices. Relevant questions can be asked such as: Is representative democracy menaced by public participative practices? Can the involvement of citizens contribute to better decision making? Are scientific opinions lacking importance in decision making? Until what point should citizens' opinions be incorporated in decisions? How can consensus be achieved when environmental issues present high levels of conflict? What mechanisms and methods are indicated to meaningful participation? A theoretical review carried out in this investigation has addressed those issues and has also tried to address trends for the future. Consensus seems to exist that public participation in environmental management is useful to strengthen democracy and an irreversible path to sustainable development though much effort should be put on the issue in theory and practice. There is also undisputed agreement that sustainable development remains a broad accepted concept in order to promote social equity and preservation of life on earth for present and future generations. Undisputed is also the idea that sustainable development is a "learning by doing process" involving the entire society though will remain a vague objective if public involvement were not to be promoted.

EIA, the first institutionalised tool to provide for citizen's involvement in environmental decision making has elected sustainable development as its key goal and framework. New trends in EIA suggest that it should be enlarged at a more encompassing level, promote better linkages with other planning tools and reinforce participation also extended to a strategic level. Public involvement in EIA presents different approaches to specific contextual realities. This thesis puts a great stress on this aspect since social/political and cultural contexts interact inextricably with institutional arrangements and procedures for implementation. Participative culture, environmental consciousness, perspectives on science, strategic thinking with long term objectives, political culture more or less open are important identified contextual factors affecting EIA and public participation. Societies, however, are not static but open to ideas and trends (sometimes imposed by adherence to international membership). In spite of non-existence of universal recipes for public involvement in environmental management or EIA, it is possible to find in literature pieces of consensus on broad principles for meaningful participation. This investigation has tried to put together such principles based on existing theory and examples of good practice.

Sustainable development presupposes different forms of societal decision making where all stakolders have to play a role in benefits of development as well as on responsiveness on environment. This implies more involvement of science, citizens, developers, governments, institutions and NGO's. Science is determinant and increasingly need, though it has been proved that science cannot tell the truth to the power (Jasanoff 1993). That is why all decisions are political but should be based on the best scientific knowledge as well as on the values of people concerned. This has been from the beginning a message from NEPA – EIA is both a science and an art.

This study has addressed the specific situation of Portuguese EIA public involvement fostering the social, political and cultural context in which it takes place. In spite of great variations of political/social structures of countries reflected also in variations of institutional arrangements there nevertheless exist many common problems and tensions crossing implementation of EIA participative practices and sustainable policies. This work expects to give some contribution to the research debate on the issue. Is it possible to enlarge findings of this work to other contexts? As far as the Portuguese case is concerned such degree of generalisation is not straightforward. What is possible is to

look for systemic common factors and conditions in similar contexts, hypothesise and through further empirical work conclude and enlarge findings. When considering the context of Portuguese society three frameworks have been used including different countries. Those frameworks revealed many similarities. There are recognised deficiencies in the Portuguese EIA system and participative practices as well as in the implementation of sustainable policies. These deficiencies have much in common to other considered "peripheral countries" of the EU (Yearley et al 1994: Pridham 1994). Some of these factors are related to the great centralisation of the State, with an overwhelming role; a great concern with economic development which also leads to the absence of environmental policy strategy; lack of investment and expertise in the environmental area; secrecy of Administration. On the other side lack of traditions for participation in society, lack of strong organised groups of interests such as environmental and civic NGO's; lack of environmental awareness; representative democracy giving more value to direct and individual mechanisms of negotiation than to participative mechanisms.

There is much literature on EIA systems stressing both legislative and procedural aspects though not much literature exists in relating them to specific cultural contexts. A cross comparison on EIA implementation and participatory practices in similar countries as done by Yearley et al (1994) when analysing the implementation of environmental EU policies could be of interest. Cross comparison of different countries in contextual aspects, through case studies, would also be important contributes. Research on experiences of participatory practices in similar/different contexts would be of much interest for knowledge transfer.

EU policy has been a great pressure to governments to adopt policies and procedures more sustainable going in pair with pressures from other international organisations, Conventions (f. e: The Aahrus Convention). However those pressures will only be effective when internalised by the entire society. If we take into consideration the context of Beck's *Risk society* environmental and technological problems are increasingly being considered global issues affecting all; it seems credible that more external pressures from international institutions go in pair with internal pressures from citizens who feel increasing insecurity and will ask for adoption of more sustainable paths. This work provides evidence that even in a country with low levels of

environmental literacy and lack of participatory practices in society, it is possible to observe signs of change, not only in increasing demands for participation in the legal framework but more significantly through direct action in the form of demonstrations, riots and boycotts when risk is at stake. Formal minimalist procedures for participation have revealed not being adequate. That is why development of capacity building is crucial and must be a priority. EU environmental policy has been a catalyst for change and a real pressure to EU "peripheral countries" (Pridham 1994) for the consideration of environmental sustainable policies and practices. It would be desirable that EU also contributes to capacity building necessary to change. Implementation of sustainable development in the periphery faces more problems than in the core due to several structural difficulties presented earlier (see chapter 5). One of them more linked to participatory practices is lack of environmental management expertise. Sustainable environmental policies and plans require high levels of competence and also require different approaches to decision making that stress communication, negotiation between all actors in society from experts, to professionals and to lay people. The provision for specialised training in those skills and participatory practices at local and central level would be much valuable in fostering objectives of sustainable development.

The feeling that public participation is far from expectations is also common to other countries belonging to "the core" reflected in NYMBY attitudes. They are based on a lack of confidence in experts and technologies, and in a lack of trust in decision making processes. Traditional adversarial practices and tokenist processes have proved inadequate as well as traditional practices of bureaucratic institutions. Even in mature EIA systems public involvement has suffered problems leading to less credibility. One of the problems identified is the late involvement of the public in decisions. The trend has been to enlarge participation to the stage of "what ought to be done" meaning policies, plans, programs. Another problem relies on the mechanisms used that do not promote meaningful participation, because the public has usually no say in the agenda of participatory programs, does not possess all the relevant information and has no say in the rules for decision. It is recognised that sustainable development could only be achieved with citizen's collaboration. It is then necessary to provide for meaningful mechanisms.

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Annex I

The new EIA legislation: The Decree Law 69/2000

Introduction

During the writing up of this thesis new EIA legislation has been enacted, the Decree Law 69/2000, May 3. This new legislation was issued in order to incorporate the Directive 97/11/CE, March 3, which reviews the Directive 85/ 337 CEE. This new legislation also incorporates the Decree 59/ 99, December 17 –the Espoo Convention on EIA in a transboundary context (UNECE 1991), which identifies principles and provisions for EIA of projects and activities with transboundary effects. With the enactment of the Decree Law 69/2000 old laws and regulations on EIA have been banished. Ten years after the transposition of the EU legislation on EIA in the Portuguese jurisdiction legislation finally changed. Main changes introduced in this new legislation will be analysed next respecting regulations competences and procedural aspects.

General aspects

The Decree Law 69/2000 is much clear in stating objectives, concepts and procedures for EIA. It is composed by seven chapters and includes three Annexes: Annex I and II respecting projects to be submitted and Annex III explaining the minimum content of the EIS. There is a more encompassing and accurate definition of EIA concepts such as: sensitive areas; protected areas; auditing; licensing authority; EIA; public consultation; DIA (Declaration on Impact Assessment); scoping; impact assessment; interested public; monitoring, post evaluation; NTS; project and developer. There is also a better definition of authorities and respective competences related to the EIA process, defined in chapter III as: licensing authority; authority in EIA (DGA for Annex I projects) and (DRA) (regional environmental authority) for projects of Annex II; IPAMB; Evaluation Commission; entity for EIA co-ordination and technical support. Arts. 6, 7, 8, 9 and 10 state competences for each of them within the EIA process. Components of EIA are defined in Chapter III as screening; scoping; EIS elaboration; technical review; public consultation; final comment and DIA proposal. DIA (Declaration for Impact Assessment) is a new concept that summarises the results of EIA review and establishes conditions for the implementation of the project and further monitoring.

Fig 1 presents the EIA process according to changes introduced by the new legislation.

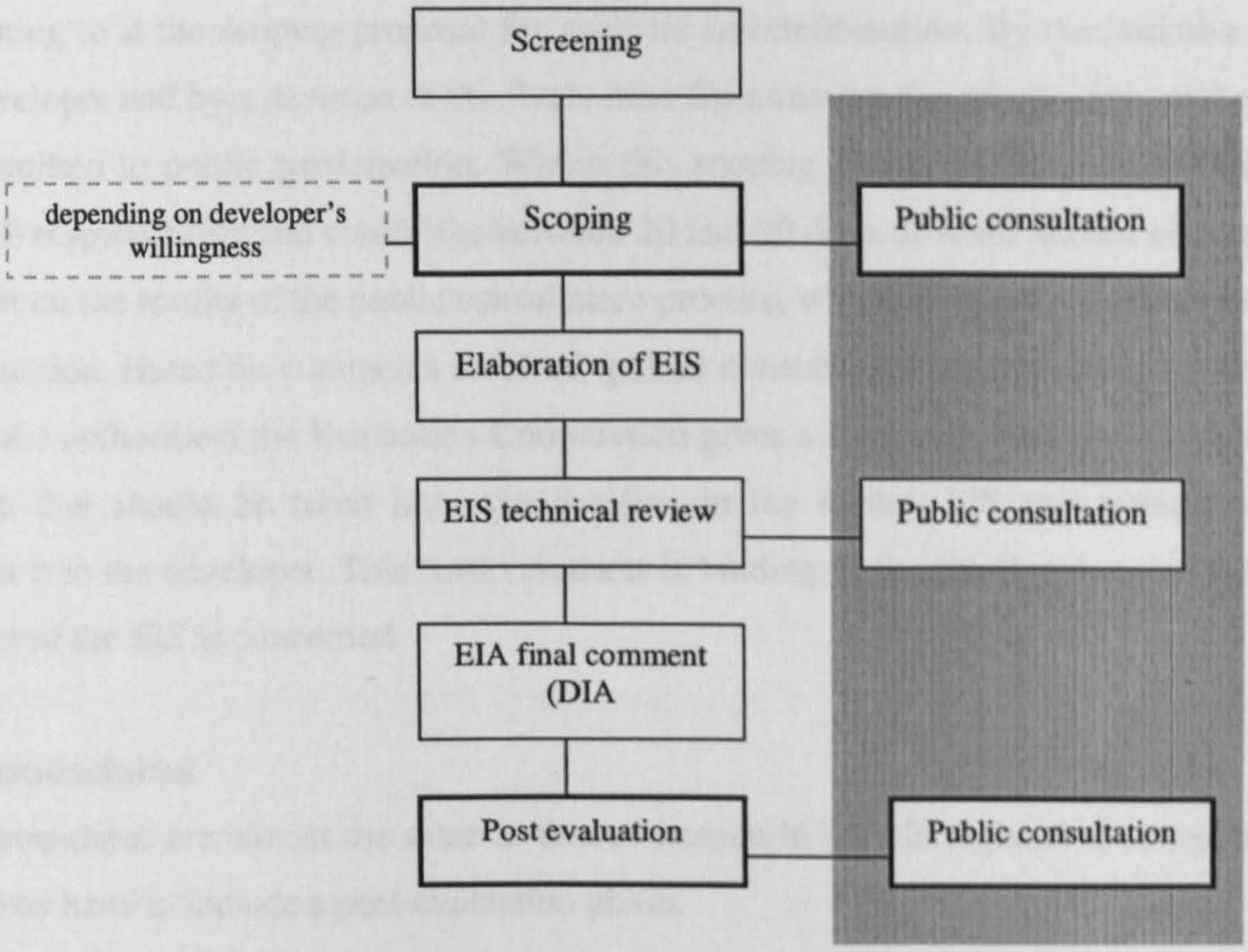


Fig AI.1 The EIA process according to the Decree Law 69/2000 (by phases)

Source: Adapted from Partidário (2000)

Screening is done by positive lists of projects presented in Annex I and II. Typologies of both projects of Annex I and II have been enlarged. Thresholds have been established for considered sensitive areas. Those areas correspond to protected areas (Decree Law 19/93 and Decree Law 227/98); Natura 2000 and classified areas (Decree Law 140/99 and 79/409/CEE and 92/43/CEE) and areas for protection of national monuments (Law 13/85).

A scoping phase is provided though not mandatory. It just occurs in the EIA process if asked by the developer. Art.11 states the procedures for this voluntary phase. The developer is responsible for presenting to the authority of EIA a proposal for a scoping phase, which should contain a statement on the type, characteristics and location of the project as well as a declaration of intents to do it. The authority in EIA asks comments on this proposal to public entities with competence in the area of the project, in a schedule of five days. The EIA authority also nominates the Evaluation Commission,

submitting to it the scoping proposal for analysis and deliberation. By the initiative of the developer and by a decision of the Evaluation Commission the scoping proposal can be submitted to public participation. Within this scoping phase, public consultation is IPAMB responsibility and could take between 20 and 30 days. IPAMB should elaborate a report on the results of the public consultation process, which is send to the Evaluation Commission. Based on comments received (public consultation report, comments done by public authorities) the Evaluation Commission gives a final comment explaining the aspects that should be taken into consideration in the further EIS and immediately present it to the developer. This final comment is binding to the developer as far as the content of the EIS is concerned.

EIA procedures

EIA procedures are almost the same as those foreseen in the old legislation except that now they have to include a post-evaluation phase.

The developer presents all the relevant EIA information to the licensing authority that sends it to the authority in EIA. The authority in EIA nominates the Evaluation Commission to make a technical review of the EIS. The schedule for comments on EIS adequacy is 20 days. The Evaluation Commission can ask the developer for further information and even for the reformulation of the NTS. If the Evaluation Commission recognises that the EIS is not adequate this recognition should be justified and determines the end of the EIA process. If the information is considered adequate public consultation is triggered. The management of the public consultation processes is IPAMB responsibility. At the same time the Evaluation Commission promotes the institutional consultation asking comments about the EIS to public entities related to the project. It is also considered that the Evaluation Commission can ask comments to external experts when it is considered necessary (Art. 9 5c).

The final comment from the Evaluation Commission should be based on the technical report, comments received from the institutional consultation and the report of the public consultation process. The schedule for the final comment from the Evaluation Commission is twenty-five days after receiving the report on public consultation.

The final comment is sent to the authority in EIA who elaborates a proposal of DIA (Declaration of Impact Assessment) to present to the Ministry of Environment and Territorial Planning. The latter in a fifteen-day schedule after receiving the DIA proposal from the authority in EIA rectifies the DIA and informs the licensing authority and the developer on it. DIA could be favourable, favourable conditioned and not favourable. In the latter case reasons should be given. Favourable DIA specifies conditions, in which the process could be accepted and contains mandatory mitigation measures for the negative impacts forecasted, which should be taken into consideration by the developer in the execution of the project. DIA should also mention suggestions done by the public through the public consultation process, which have not been considered and reasons for not being considering when it is the case.

The management of public consultation and participation processes

Public consultation and participation should occur, by the new legislation, in the review stage and also in the post evaluation phase. As stated earlier it can also occur in the scoping phase, depending on developer willingness.

Public consultation procedures are stated in Art.14. IPAMB has fifteen days to promote the publicity of the EIA process. The period for public consultation ranges from 30 to 50 days for Annex I projects and 20 to 30 days for Annex II projects.

The interested public is defined in Art.2, § k, which states "citizens with main or secondary residence in the district or around districts encompassed by the project, as well as citizens' representatives, associations, NGO's or any other entities whose attributions justify participation except if already consulted in the institutional process".

It is given to IPAMB the possibility of choosing the model for consultation depending on the complexity of the project, its likely impacts and degree of conflict. The law states that the model used can include public hearings or any adequate form of consultation of the interested public (§ 4, Art.14).

In spite of more flexibility given to IPAMB in the management of processes and choice of methods and procedures, the law does not give any ideas for the process. However, public hearings are object of a specific reference in Art.15. This article states that

IPAMB must be in charge of management of the hearings. Representatives of the Evaluation Commission, developer and EIA consultants should also participate in hearings. IPAMB should register in a minute the identification and opinions of each participant.

Related to public consultation in the post evaluation phase, Art.30 states that the interested public, when identified, can transmit to IPAMB through written comments any information or relevant data about negative environmental impacts caused by the implementation of the project. IPAMB should send these comments to the authority in EIA and send back to the interested public answers about the measures already adopted respecting those specific comments.

Post Evaluation

Post evaluation is defined in Art. 27. The authority in EIA should manage the phase of post evaluation with the following objectives: assess the adequacy of the execution project with the respective DIA namely the accomplishment of terms and conditions of DIA; determine the efficacy of the proposed mitigation measures to avoid, minimise, compensate negative impacts and enhance positive or if necessary adoption of new measures; Assess the efficacy of the EIA process done.

Art.29 states that monitoring is developer's responsibility and should be carried out according to the terms established in respective DIA or the EIS. The developer should submit a proposal on monitoring to the EIA authority and the latter can impose to the developer the adoption of measures considered adequate to minimise or compensate significative negative effects not foreseen, which can occur during the construction, functioning, exploitation of the project. This must be reported to the licensing authority.

Other aspects

Chapter four (Arts. 32, 33, 34 and 35) is dedicated to processes with transboundary implications. In projects with transboundary impacts consultation should be carried out by the Portuguese government to other states potentially affected by projects, on environmental impacts and measures to avoid, mitigate and compensate such effects. The Portuguese government should also give such information when consulted by other member states. The authority in EIA is in charge of the management of these

procedures. Available information should be given to other member states if they wish to participate in those EIA processes. The Evaluation Commission when making the final comment on the EIA process should take the results of such consultation into consideration. If the reverse occurs, IPAMB should provide for information to the public and all the authorities with interest in the project. Comments could be addressed to IPAMB about this information and results of such processes should be transmitted to competent authorities of the member states.

Other innovations should be referred. The composition of the Evaluation Commission, which can include besides representatives of the EIA authority, IPAMB, regional environmental departments and ICVN or IPPAR or IPA, experts on the area of the project, not less than two, for Annex I projects. The EIA authority (Art. 99) nominates these experts. There is also a possibility of nomination of an independent expert with relevant expertise in the area of the project in question to co-ordinate the EIA process. This could be done by proposal of the EIA authority to the Minister of Environment and Territorial Planning.

It has been noticed that Annexes of the new legislation are now according to European Directive Annexes. So the Portuguese legislation presents three Annexes to the legislation: Annex I states the projects with likely broad environmental consequences; Annex II presents a list of projects more at a regional level or likely to have less environmental effects and Annex III presents the minimum content of the EIS. It has been noticed that in this new legislation the word population is included when stating what effects should be assessed in the EIS.

Benefits of the new legislation

- Introduction of DIA (Declaration of Impact Assessment) binding to licensing processes. This works as a recognisance of environmental implications of development projects.
- EIA follow-up implying a programme undertaken by the developer and followed by the EIA authority. Auditing is also recognised as a relevant mechanism for EIA control practice.

- Enlargement of the number of projects to be submitted to EIA with specification in Annex II of thresholds for sensitive areas
- A voluntary scoping phase depending on the developer willingness
- More flexibility given to IPAMB to manage public consultation processes on choosing the methods and procedures for both publicity of processes and mechanisms for public consultation. IPAMB should answer in a defined schedule of 30 days, information requests by the public
- Incorporation of at least two experts in the Evaluation Commission and possibility of asking comments to experts on projects and respective EISs.

Important aspects however have not been contemplated in this review of legislation such as extend EIA to a more strategic level of plans, programs and policies. This is not yet addressed in the EU Directive on EIA, though several proposals have already been discussed and different kinds of SEA have also been applied in the practice by member states and in other countries of the world.

Annex II

Co-incineration case

Table AII.1 Categories of written comments discourse – National associations, Central and Regional Administration, Political parties and other associations

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles			2						1					3
	Lack of strategical plan for industrial waste			1											1
	Lack of an inventory of industrial wastes			1					1	1					3
	Plan for recover polluted sites/emergency line			1						1					2
	Co-incineration a bad solution			1					1	1					3
	Total			6					2	4					12
Project	Lack of alternatives			1											1
	Lack of projects for waste not to be co-incinerated			1											1
	Lack of accurate data on waste to be co-incinerated			3											3
	Lack of confidence in the project/proponent			1						1					2
	Lack of confidence in the Administration to control														
	Total			6						1					7
EIS	Lack of confidence in the EIS														
	Technical gaps			3											3
	Lack of conclusions on alternatives			1											1
	Non conclusive date on co-incineration														
	Total			4											4
Risks and impacts	Risks with transportation														
	Risks for environment and public health								1						1
	Risks on accidents in plants														
	Impacts on social economics		1							1					2
	Impacts on ecosystems		1												1
	Risks on cement produced														
	Total		2						1	1					4
Ethical factors	Severe existing pollution														
	Already contributing for waste treatment														
	Jeopardising developmental plans														
	Counterparts to populations														
	Total														
Improving project	Install chimney filters in all cement plants			1											1
	Creation of independent commissions		1	1											2
	Mitigation and monitoring		3	1											4
	Protocol to stop the process			2											2
	Total		4	5											9
Local factors	Barreiro								1						1
	Estarreja														
	Maceira														
	Alhandra									1					1
	Souselas														
	Outão		1	1					1	1					4
	Total		1	1					2	2					6
	Other questions	2													2
	Against the project without expressing reasons			3											3

Table AII.2 Categories of written comments discourse - Alhandra

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles					4									4
	Lack of strategical plan for industrial waste														
	Lack of an inventory of industrial wastes														
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution														
	Total					4									4
Project	Lack of alternatives														
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent														
	Lack of confidence in the Administration to control														
	Total														
EIS	Lack of confidence in the EIS					3			1						4
	Technical gaps				1			1							2
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration					4	1		1						6
	Total				1	7	1	1	2						12
Risks and impacts	Risks with transportation							1							1
	Risks for environment and public health														
	Risks on accidents in plants														
	Impacts on social economics														
	Impacts on ecosystems														
	Risks on cement produced														
	Total							1							1
Ethical factors	Severe existing pollution					6	1		2						9
	Already contributing for waste treatment					3	1								4
	Jeopardising developmental plans					4	1								5
	Counterparts to populations				1										1
	Total				1	13	3		2						19
Improving project	Install chimney filters in all cement plants				1			1							2
	Creation of independent commissions				1										1
	Mitigation and monitoring				1		1	1							3
	Protocol to stop the process														
	Total				3		1	2							6
Local factors	Barreiro														
	Estarreja														
	Maceira														
	Alhandra				1	9	2	1	1			1			15
	Souselas														
	Outão														
	Total				1	9	2	1	1			1			15
	Other questions							1							1
	Against the project without expressing reasons														

Table AII.3 Categories of written comments discourse - Maceira

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles				1			1							2
	Lack of strategical plan for industrial waste														
	Lack of an inventory of industrial wastes														
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution					1		1							2
	Total				1	1		2							4
Project	Lack of alternatives														
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent				1		1								2
	Lack of confidence in the Administration to control														
	Total				1		1								2
EIS	Lack of confidence in the EIS														
	Technical gaps							1							1
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total							1							1
Risks and impacts	Risks with transportation						1	1				1			3
	Risks for environment and public health							1				1			2
	Risks on accidents in plants														
	Impacts on social economics														
	Impacts on ecosystems														
	Risks on cement produced														
	Total						1	2				2			5
Ethical factors	Severe existing pollution						2					1			3
	Already contributing for waste treatment						2	1							3
	Jeopardising developmental plans														
	Counterparts to populations				1										1
	Total				1		4	1				1			7
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions				1			1							2
	Mitigation and monitoring				1			1							2
	Protocol to stop the process				1										1
	Total				3			2							5
Local factors	Barreiro														
	Estarreja														
	Maceira						2	2				1			5
	Alhandra														
	Souselas														
	Outão														
	Total						2	2				1			5
	Other questions							2							2
	Against the project without expressing reasons														

Table AII.4 Categories of written comments discourse - Outão

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Municí								
Global policies	Lack of policies using the 3 R principles				2	1	1	12	2						18
	Lack of strategical plan for industrial waste								1						1
	Lack of an inventory of industrial wastes				2				1						3
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution				1				1						2
	Total				5	1	1	12	5						24
Project	Lack of alternatives														
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent				1										1
	Lack of confidence in the Administration to control														
	Total				1										1
EIS	Lack of confidence in the EIS				1										1
	Technical gaps				1				1						2
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total				2				1						3
Risks and impacts	Risks with transportation					2		1	1						4
	Risks for environment and public health				1	2	1	12	1	1					18
	Risks on accidents in plants								2						2
	Impacts on social economics					3	1	13	1	1		1			20
	Impacts on ecosystems				1			13	1	1			1		17
	Risks on cement produced														
	Total				2	7	2	39	6	3		1	1		61
Ethical factors	Severe existing pollution														
	Already contributing for waste treatment														
	Jeopardising developmental plans							1							1
	Counterparts to populations														
	Total							1							1
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions							1							1
	Mitigation and monitoring							1							1
	Protocol to stop the process														
	Total							2							2
Local factors	Barreiro														
	Estarreja														
	Maceira														
	Alhandra														
	Souselas														
	Outão				2	4	2	28	4	1		1	1		43
	Total				2	4	2	28	4	1		1	1		43
	Other questions														
	Against the project without expressing reasons						1	15	1						17

Table AII.5 Categories of written comments discourse - Souselas

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles														
	Lack of strategical plan for industrial waste				1										1
	Lack of an inventory of industrial wastes				1										1
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution				1	1									2
	Total				3	1									4
Project	Lack of alternatives														
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent														
	Lack of confidence in the Administration to control														
	Total														
EIS	Lack of confidence in the EIS														
	Technical gaps														
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total														
Risks and impacts	Risks with transportation					1			2			1			4
	Risks for environment and public health				1	2			2			1			6
	Risks on accidents in plants														
	Impacts on social economics					1			1						2
	Impacts on ecosystems				1	1									2
	Risks on cement produced					1									1
	Total				2	6			5			2			15
Ethical factors	Severe existing pollution				1	2			1			1			5
	Already contributing for waste treatment														
	Jeopardising developmental plans														
	Counterparts to populations														
	Total				1	2			1			1			5
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions					1									1
	Mitigation and monitoring														
	Protocol to stop the process														
	Total					1									1
Local factors	Barreiro														
	Estarreja														
	Maceira														
	Alhandra														
	Souselas				1	2			2			1			6
	Outão														
	Total				1	2			2			1			6
	Other questions					1									1
	Against the project without expressing reasons														

Table AII.6 Categories of written comments discourse - Estarreja

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Municip								
Global policies	Lack of policies using the 3 R principles				1			1							2
	Lack of strategical plan for industrial waste														
	Lack of an inventory of industrial wastes														
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution														
	Total				1			1							2
Project	Lack of alternatives				1		1	1							3
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent														
	Lack of confidence in the Administration to control														
	Total				1		1	1							3
EIS	Lack of confidence in the EIS														
	Technical gaps														
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total														
Risks and impacts	Risks with transportation														
	Risks for environment and public health						1	1							2
	Risks on accidents in plants														
	Impacts on social economics														
	Impacts on ecosystems														
	Risks on cement produced														
	Total						1	1							2
Ethical factors	Severe existing pollution				1		1	2							4
	Already contributing for waste treatment														
	Jeopardising developmental plans						1								1
	Counterparts to populations														
	Total				1		2	2							5
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions														
	Mitigation and monitoring														
	Protocol to stop the process														
	Total														

Local factors	Barreiro														
	Estarreja				1		1	1							3
	Maceira														
	Alhandra														
	Souselas														
	Outão														
	Total				1		1	1							3
	Other questions														
	Against the project without expressing reasons														

Table AII.7 Categories of written comments discourse - Barreiro

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles					3				1					4
	Lack of strategical plan for industrial waste						2								2
	Lack of an inventory of industrial wastes														
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution														
	Total					3	2			1					6
Project	Lack of alternatives					1			2	1				1	5
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated								1						1
	Lack of confidence in the project/proponent														
	Lack of confidence in the Administration to control														
	Total					1			3	1				1	6
EIS	Lack of confidence in the EIS					1				1					2
	Technical gaps							2	1	2				1	6
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total					1		2	1	3				1	8
Risks and impacts	Risks with transportation					4	2		1						7
	Risks for environment and public health					7	1	2	2	1		1		1	15
	Risks on accidents in plants					1			1						2
	Impacts on social economics						1	1				1		1	4
	Impacts on ecosystems														
	Risks on cement produced														
	Total					12	4	3	4	1		2		2	28
Ethical factors	Severe existing pollution					1	1	3	1					1	7
	Already contributing for waste treatment						1		1						2
	Jeopardising developmental plans					2	2		2	1				1	8
	Counterparts to populations														
	Total					3	4	3	4	1				2	17
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions														
	Mitigation and monitoring														
	Protocol to stop the process														
	Total														
Local factors	Barreiro					4	4	5	10	1	3			2	29
	Estarreja														
	Maceira														
	Alhandra														
	Souselas														
	Outão					1	2								3
	Total					5	6	5	10	1	3			2	32
	Other questions					1	2	1	1					1	6
	Against the project without expressing reasons						1	2	2	1					9

Table AII.8 Dimensions of hearing comments discourse - Alhandra

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles							1							1
	Lack of strategical plan for industrial waste														
	Lack of an inventory of industrial wastes														
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution														
	Total							1							1
Project	Lack of alternatives														
	Lack of projects for waste not to be co-incinerated							2							2
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent					1		7	1						9
	Lack of confidence in the Administration to control							1	1						2
	Total					1		10	2						13
EIS	Lack of confidence in the EIS					1		1							2
	Technical gaps					2		5							7
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total					3		6							9
Risks and impacts	Risks with transportation														
	Risks for environment and public health					1	1	3							5
	Risks on accidents in plants														
	Impacts on social economics							1							1
	Impacts on ecosystems														
	Risks on cement produced							3							3
	Total					1	1	7							9
Ethical factors	Severe existing pollution					1		10							11
	Already contributing for waste treatment					1	1								2
	Jeopardising developmental plans							2							2
	Counterparts to populations					1									1
	Total					3	1	12							16
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions							2							2
	Mitigation and monitoring														
	Protocol to stop the process														
	Total							2							2
Local factors	Barreiro														
	Estarreja														
	Maceira														
	Alhandra					2	1	17	2						22
	Souselas														
	Outão														
	Total					2	1	17	2						22
	Other questions					1	1	5	1						8
	Against the project without expressing reasons														

Table AII.9 Dimensions of hearing comments discourse - Maceira

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Munici								
Global policies	Lack of policies using the 3 R principles							1							1
	Lack of strategical plan for industrial waste			1											1
	Lack of an inventory of industrial wastes														
	Plan for recover polluted sites/emergency line			1											1
	Co-incineration a bad solution			1				2							3
	Total			3				3							6
Project	Lack of alternatives														
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent							5							5
	Lack of confidence in the Administration to control							1							1
	Total							6							6
EIS	Lack of confidence in the EIS				1			1							2
	Technical gaps							1							1
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total				1			2							3
Risks and impacts	Risks with transportation														
	Risks for environment and public health							3							3
	Risks on accidents in plants														
	Impacts on social economics														
	Impacts on ecosystems														
	Risks on cement produced							1							1
	Total							4							4
Ethical factors	Severe existing pollution						1	5							6
	Already contributing for waste treatment						1	2							3
	Jeopardising developmental plans														
	Counterparts to populations														
	Total						2	7							9
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions														
	Mitigation and monitoring														
	Protocol to stop the process														
	Total														
Local factors	Barreiro														
	Estarreja														
	Maceira						1	8							9
	Alhandra														
	Souselas														
	Outão														
	Total						1	8							9
	Other questions						1	3							4
	Against the project without expressing reasons														

Table AII.10 Dimensions of hearing comments discourse - Outão

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Municí								
Global policies	Lack of policies using the 3 R principles			1			1	4	1	1					8
	Lack of strategical plan for industrial waste			1				2							3
	Lack of an inventory of industrial wastes			1				2	1						4
	Plan for recover polluted sites/emergency line			1											1
	Co-incineration a bad solution			1	1			1	3						6
	Total			5	1		1	9	5	1					22
Project	Lack of alternatives							1							1
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent							3	2						5
	Lack of confidence in the Administration to control							2							2
	Total							6	2						8
EIS	Lack of confidence in the EIS						1	8							9
	Technical gaps				1		1	2	2						6
	Lack of conclusions on alternatives							1							1
	Non conclusive date on co-incineration							1							1
	Total				1		2	12	2						17
Risks and impacts	Risks with transportation							1	1						2
	Risks for environment and public health							4	2	1					7
	Risks on accidents in plants														
	Impacts on social economics							1	1						2
	Impacts on ecosystems							1	1						2
	Risks on cement produced								1						1
	Total							7	6	1					14
Ethical factors	Severe existing pollution							2	1						3
	Already contributing for waste treatment														
	Jeopardising developmental plans						1	7	2	2					12
	Counterparts to populations														
	Total						1	9	3	2					15
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions							1							1
	Mitigation and monitoring														
	Protocol to stop the process														
	Total							1							1
Local factors	Barreiro														
	Estarreja														
	Maceira														
	Alhandra														
	Souselas														
	Outão				1		3	16	4	1					25
	Total				1		3	16	4	1					25
	Other questions							10	1	1					12
	Against the project without expressing reasons														

Table AII.11 Dimensions of hearing comments discourse - Souselas

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Municip								
Global policies	Lack of policies using the 3 R principles							1	1						2
	Lack of strategical plan for industrial waste			1				1							2
	Lack of an inventory of industrial wastes														
	Plan for recover polluted sites/emergency line			1											1
	Co-incineration a bad solution			1				1	1						3
	Total			3				3	2						8
Project	Lack of alternatives														
	Lack of projects for waste not to be co-incinerated								1						1
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent							1							1
	Lack of confidence in the Administration to control														
	Total							1	1						2
EIS	Lack of confidence in the EIS							1	1						2
	Technical gaps							1	1						2
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total							2	2						4
Risks and impacts	Risks with transportation														
	Risks for environment and public health							2							2
	Risks on accidents in plants							1							1
	Impacts on social economics														
	Impacts on ecosystems														
	Risks on cement produced														
	Total							3							3
Ethical factors	Severe existing pollution					1		2							3
	Already contributing for waste treatment														
	Jeopardising developmental plans														
	Counterparts to populations														
	Total					1		2							3
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions														
	Mitigation and monitoring														
	Protocol to stop the process														
	Total														
Local factors	Barreiro														
	Estarreja														
	Maceira														
	Alhandra														
	Souselas				1	2		5							8
	Outão														
	Total				1	2		5							8
	Other questions							3							3
	Against the project without expressing reasons														

Table AII.12 Dimensions of hearing comments discourse - Estarreja

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Municí								
Global policies	Lack of policies using the 3 R principles				3										3
	Lack of strategical plan for industrial waste				2										2
	Lack of an inventory of industrial wastes				1										1
	Plan for recover polluted sites/emergency line				1										1
	Co-incineration a bad solution														
	Total				7										7
Project	Lack of alternatives				2		1	2							5
	Lack of projects for waste not to be co-incinerated				2		1								3
	Lack of accurate data on waste to be co-incinerated				1										1
	Lack of confidence in the project/proponent				1										1
	Lack of confidence in the Administration to control														
	Total				6		2	2							10
EIS	Lack of confidence in the EIS				1										1
	Technical gaps														
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total				1										1
Risks and impacts	Risks with transportation														
	Risks for environment and public health														
	Risks on accidents in plants														
	Impacts on social economics														
	Impacts on ecosystems														
	Risks on cement produced														
	Total														
Ethical factors	Severe existing pollution				1										1
	Already contributing for waste treatment														
	Jeopardising developmental plans				1										1
	Counterparts to populations						1								1
	Total				2		1								3
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions				2										2
	Mitigation and monitoring														
	Protocol to stop the process														
	Total				2										2
Local factors	Barreiro														
	Estarreja				2			3							5
	Maceira														
	Alhandra														
	Souselas														
	Outão														
	Total				2			3							5
	Other questions				1		1								2
	Against the project without expressing reasons														

Table AII.13 Dimensions of hearing comments discourse - Barreiro

	Dimensions analysed	Administration		Env. NGO's		Local Power		Citizens	Other Assoc	Pol. parties	Enterprises	Trade unions	Universities	Schools	Total
		Central	Regional	National	Local	P.Councils	Municí								
Global policies	Lack of policies using the 3 R principles							2	1						3
	Lack of strategical plan for industrial waste			1											1
	Lack of an inventory of industrial wastes			1				2							3
	Plan for recover polluted sites/emergency line														
	Co-incineration a bad solution							1		1					2
	Total			2				5	1	1					9
Project	Lack of alternatives			1			1	3		1					6
	Lack of projects for waste not to be co-incinerated														
	Lack of accurate data on waste to be co-incinerated														
	Lack of confidence in the project/proponent							3							3
	Lack of confidence in the Administration to control			1											1
	Total			2			1	6		1					10
EIS	Lack of confidence in the EIS						2	3							5
	Technical gaps			1			1	8	1	2					13
	Lack of conclusions on alternatives														
	Non conclusive date on co-incineration														
	Total			1			3	11	1	2					18
Risks and impacts	Risks with transportation					1									1
	Risks for environment and public health				1	1	1			2					5
	Risks on accidents in plants														
	Impacts on social economics				1		1								2
	Impacts on ecosystems													1	1
	Risks on cement produced														
	Total				2	2	2			2				1	9
Ethical factors	Severe existing pollution							12	2	1					15
	Already contributing for waste treatment														
	Jeopardising developmental plans						1	4	2					1	8
	Counterparts to populations														
	Total						1	16	4	1				1	23
Improving project	Install chimney filters in all cement plants														
	Creation of independent commissions														
	Mitigation and monitoring														
	Protocol to stop the process														
	Total														

Local factors	Barreiro				2	2	2	21	2	4				1	34
	Estarreja														
	Maceira														
	Alhandra														
	Souselas														
	Outão							1							1
	Total				2	2	2	22	2	4				1	35
	Other questions						1			1					2
	Against the project without expressing reasons														

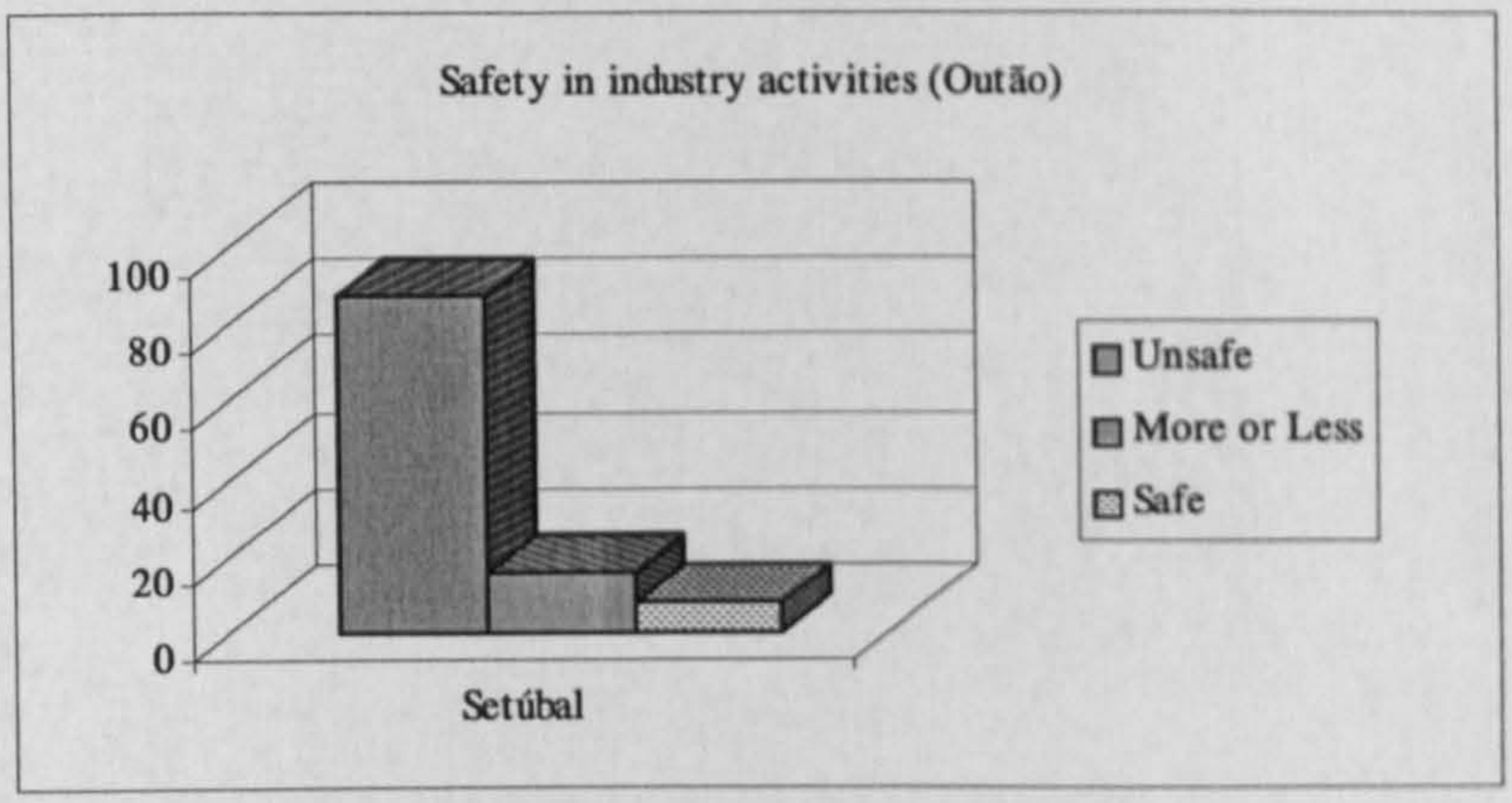
Table AII.14 National Press review about co-incineration

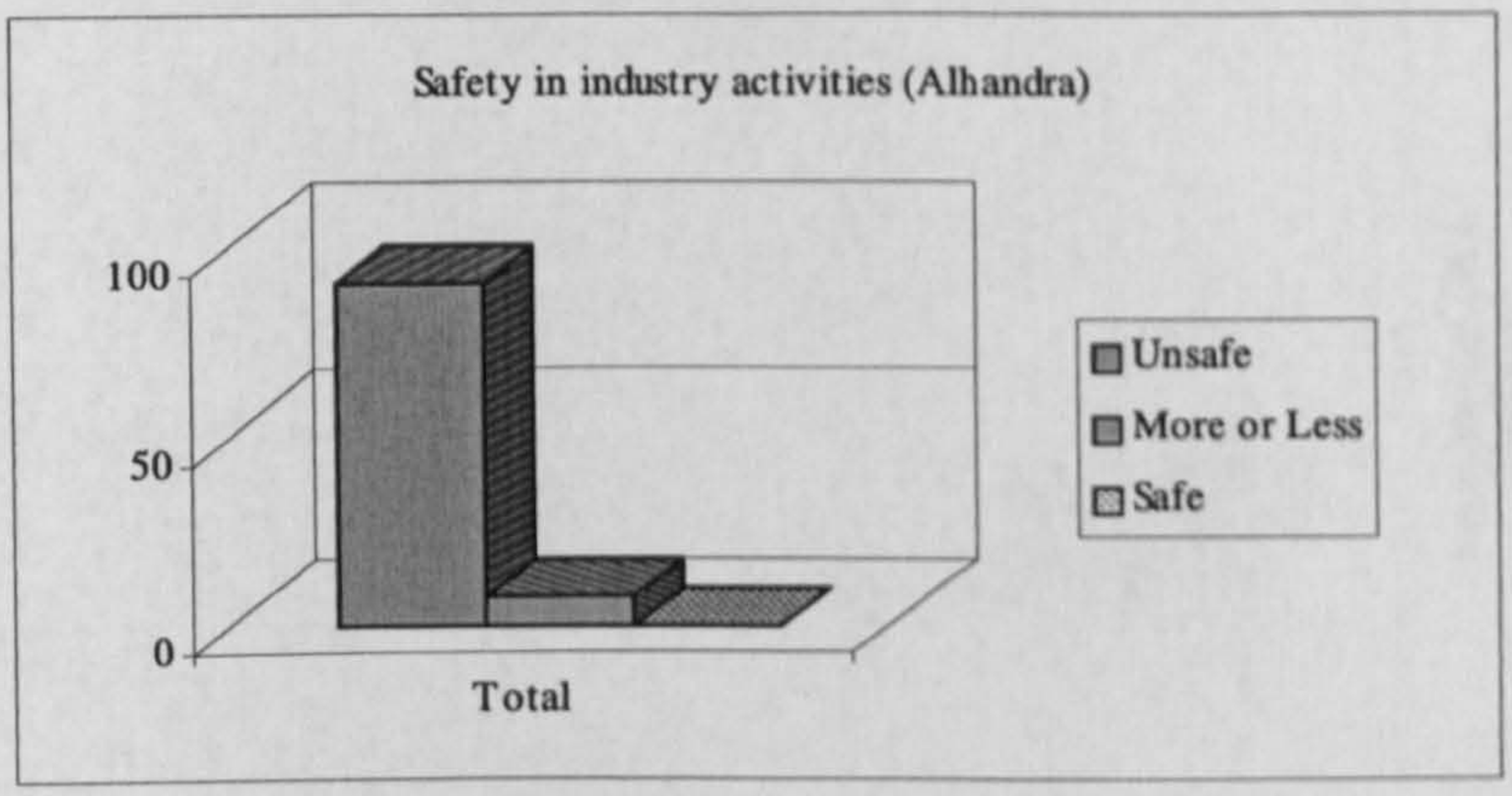
Date	Newspaper	Title	Author
98/8/25	Expresso	Resíduos perigosos incinerados nas cimenteiras: Alhandra e Leiria são hipóteses	Almeida, P.Vieira
98/8/31	Correio da Manhã	Cimenteiras na mira do negócio da incineração de resíduos	
98/8/31	Correio da Manhã	Lixo perigoso a ser queimado em cimenteiras	
98/9/12	Jornal de Notícias	Estação de resíduos perigosos preocupa Barreiro	
98/9/15	Correio da Manhã	Tratamento de lixos preocupa Barreiro	
98/9/15	Público	Incineração contestada na Arrábida	Bonixe, Luís
98/9/16	Jornal de Notícias	Alhandra está unida contra a co-incineração	Lopes, Olga
98/9/17	Sem Mais	Incineração preocupa Barreiro	Baía, Etelvina
98/9/19	Jornal de Notícias	Associação ambiental afirma-se contra estação na Quimiparque	
98/9/27	Jornal de Notícias	Barreiro vai recusar tratamento de resíduos	Roque, Telma
98/9/29	Jornal de Notícias	Tratamento de resíduos é obrigação da indústria	
98/9/30	Público	Alhandra prepara protestos contra contra a queima de resíduos tóxicos	Talixa, Jorge
98/9/30	Jornal de Notícias	Câmara do Barreiro diz não ao tratamento de resíduos	Roque, Telma
98/10/1	Público	Autarcas e população juntos nos protestos: Barreiro contesta estação de resíduos	Bonixe, Luís
98/10/1	Correio da Manhã	Barreiro rejeita tratar lixo tóxico	
98/10/1	Jornal de Nottícias	ETAR no Barreiro custa 6 milhões	Roque, Telma
98/10/2	Jornal de Notícias	PS do Barreiro rejeita estação de resíduos	Roque, Telma
98/10/8	Avante	Barreiro diz não aos resíduos industriais	
98/10/9	Jornal de Notícias	Delegados de saúde avaliam efeito de resíduos em cidades	
98/10/9	Correio da Manhã	Barreiro unido contra resíduos	
98/10/11	Jornal de Notícias	Resíduos industriais tratados para o ano: cimenteiras acenam com vantagem ambiental para um negócio que também lhes vai render muito dinheiro	Periera, Gina
98/10/11	Correio da Manhã	Ninguém quer tratar resíduos industriais	Fernandes, Denise
98/10/13	Correio da Manhã	Lavradio quer esclarecimentos	
98/10/14	Jornal de Notícias	Assembleia Municipal do Barreiro vai debater resíduos	Roque, Telma
98/10/17	Diário de Notícias	Barreiro recusa tratar mais resíduos industriais	Lopes, Vanda
98/10/18	Público	Promotores da co-incineração de resíduos perigosos apresentam as suas razões: "Não somos poluidores, somos despoluidores"	Cerejo, José
98/10/18	Público	Populações saturadas de pó	Leonardo, João Paulo
98/10/18	Correio da Manhã	Vila Franca e Barreiro continuam luta anti-lixo	
98/10/18	Jornal de Notícias	Cidade do Barreiro acordou para os resíduos industriais: recolhidas 8000 assinaturas numa semana, ninguém está disposto a desmobilizar: "Nem que venha o exército"	Roque, Telma
98/10/19	24 Horas	Resíduos industriais perigosos: Barreiro ameaça "vingar-se" não votando no referendo; uma lixeira com vista para a Expo	Coelho, Rute
98/10/19	24 horas	SCORECO defende-se: Barreiro a única opção	

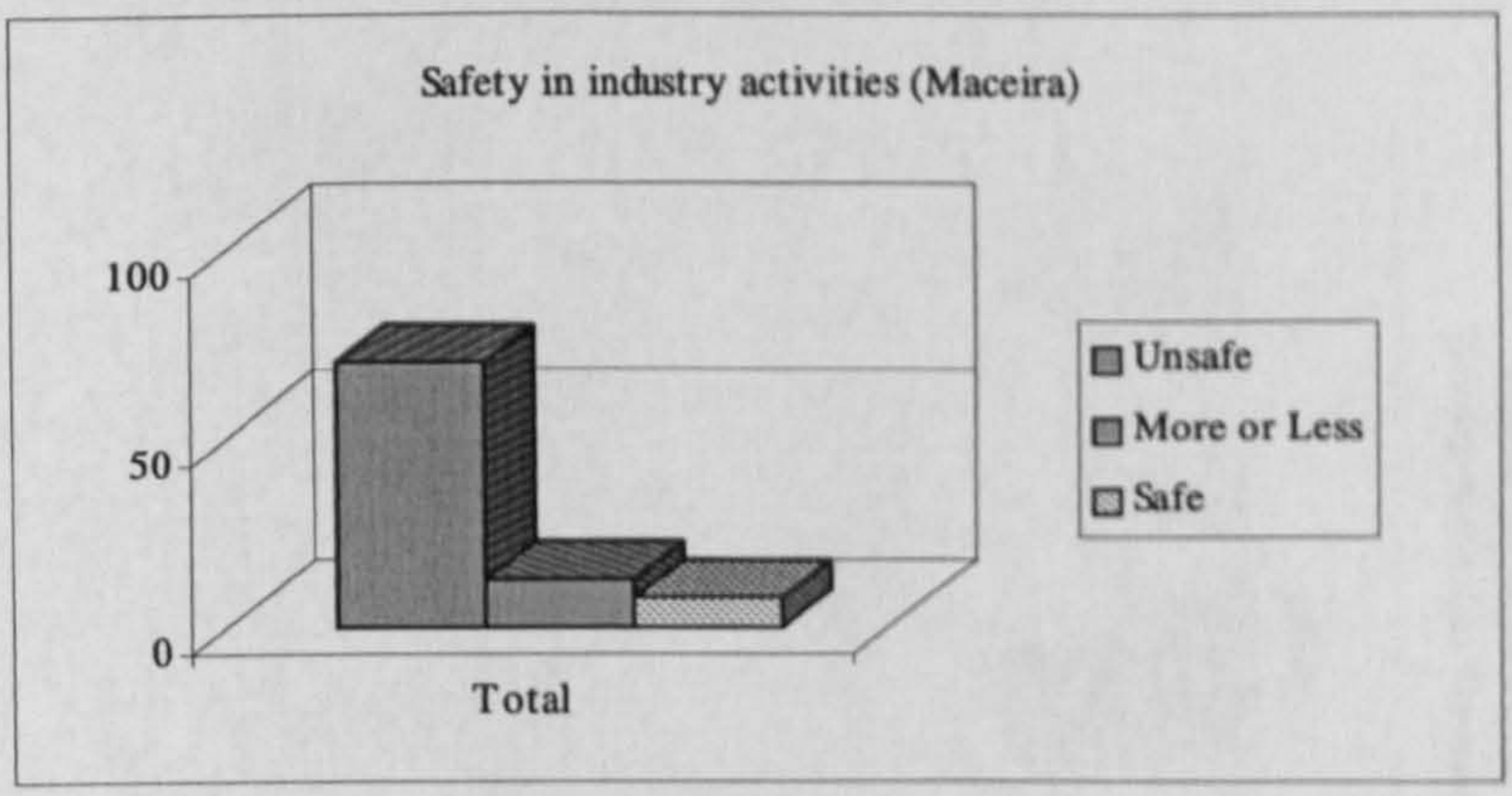
98/11/19	Sem Mais	Luta contra a co-incineração põe distrito ao rubro	Baia, Etelvina
98/11/20	Jornal de Notícias	Barreiro protesta em Lisboa contra estação de tratamento: abaixo assinado subscrito por 35000 pessoas exprime a Guterres protesto dos autarcas e da população	
98/11/20	Diário de Notícias	Co-incineração em discussão pública: Barreiro em S. Bento contra contra lixos perigosos	Lopes, Vanda
98/11/20	Diário de Notícias	Ministra garante coragem	Vasconcelos, H.
99/1/12	Correio da Manhã	Coimbra fala em ameaça para a saúde, Verdes dizem que é negócio	
99/1/11	Público	Um dilema moral	Ferreira, A. Mega
99/1/14	Público	A pior hipótese	Silva, A. Santos
99/1/12	Público	Ambiente fosco	Moreira, Vital
99/1/14	Público	Co-incineração: os factos e a democracia	Santos, B. Sousa
99/1/15	Diário de Notícias	Veto ou justiça, diz Barreiro: entrevista a Pedro Canário	Silva, João Céu
99/1/15	Correio da Manhã	Barreiro planta sobreiro "Elísio"	M.P.
99/1/15	Correio da Manhã	Barreiro na rua promete dar luta	Fida, Vanessa
99/1/15	Correio da Manhã	Co-incineração vai arder	Sousa, Lurdes
99/1/15	Capital	Governo deve assumir redução	Perira, Micael
99/1/16	Diário de Notícias	Cimenteiras vão poupar 25%	Silva, João Céu
99/1/17	Correio da Manhã	Petição popular contra a queima de lixos	
99/1/19	Correio da Mnhã	Incinerar junto de povoações é "insensato"	
99/1/19	Jornal de Notícias	Laboratórios vão vigiar a origem dos lixos: material a valorizar ou eliminar passará por apertado dispositivo de controle antes de chegar aos fornos das cimenteiras	
99/1/19	Jornal de Notícias	Como vai Souselas queimar resíduos	
99/1/19	Jornal de Notícias	Co-incineração deverá ser temporária	
99/1/20	Público	Quercus pede à Ministra que espere pelos planos: industriais têm de dizer que lixo produzem	Fernandes, Ana
99/1/21	Público	Oposição e 9 socialistas aprovam projecto dos Verdes: Parlamento dá luz vermelha à co-incineração	Fernandes, Ana
99/1/21	Jornal de Notícias	Oposição mostra cartão vermelho: PSD, PCP, PP e alguns deputados socialistas aprovaram projecto dos Verdes que prevê a revogação de Souselas e maceira	
99/1/21	Diário de Notícias	Co-incineração: a polémica das localizações; cartão vermelho tem apoio rosa	Correia, Pedro
99/1/21	Visão	Onde está o lixo tóxico	
99/1/21	Avante	Estação de resíduos perigosos: um Não! Aos milhares nas ruas do Barreiro	
99/1/21	Avante	Estação no Barreiro comporta sérios riscos	
99/1/21	Correio da Manhã	Co-incineração rejeitada no Parlamento	Sousa, Lurdes
99/1/22	Tal e Qual	Resíduos tóxicos? Não obrigado	
99/1/22	Diário de Notícias	Ambiente explosivo no ambiente	
99/1/ 22	Jornal de Notícias	O ambiente deve começar dentro de casa	Tenreiro, Fernando
99/1/ 22	Diário de Notícias	Deputados em vias de incineração	
99/1/23	Expresso	Cimento da co-incineração aumenta doenças de pele	Almeida, P. Vieira
99/1/23	Expresso	Abaixo a co-incineração se for no meu quintal	Mendonça, Pedro

98/11/19	Sem Mais	Luta contra a co-incineração pôe distrito ao rubro	Baía, Etelvina
98/11/20	**Jornal de Notícias**	**Barreiro protesta em Lisboa contra estação de tratamento: abaixo assinado subscrito por 35000 pessoas exprime a Guterres protesto dos autarcas e da população**	
98/11/20	Diário de Notícias	Co-incineração em discussão pública: Barreiro em S. Bento contra contra lixos perigosos	Lopes, Vanda
98/11/20	Diário de Notícias	Ministra garante coragem	Vasconcelos, H.
99/1/12	Correio da Manhã	Coimbra fala em ameaça para a saúde, Verdes dizem que é negócio	
99/1/11	Público	Um dilema moral	Ferreira, A. Mega
99/1/14	Público	A pior hipótese	Silva, A. Santos
99/1/12	Público	Ambiente fosco	Moreira, Vital
99/1/14	Público	Co-incineração: os factos e a democracia	Santos, B. Sousa
99/1/15	Diário de Notícias	Veto ou justiça, diz Barreiro: entrevista a Pedro Canário	Silva, João Céu
99/1/15	Correio da Manhã	Barreiro planta sobreiro "Elísio"	M.P.
99/1/15	Correio da Manhã	Barreiro na rua promete dar luta	Fida, Vanessa
99/1/15	Correio da Manhã	Co-incineração vai arder	Sousa, Lurdes
99/1/15	Capital	Governo deve assumir redução	Perira, Micael
99/1/16	Diário de Notícias	Cimenteiras vão poupar 25%	Silva, João Céu
99/1/17	Correio da Manhã	Petição popular contra a queima de lixos	
99/1/19	Correio da Mnhã	Incinerar junto de povoações é "insensato"	
99/1/19	Jornal de Notícias	Laboratórios vão vigiar a origem dos lixos: material a valorizar ou eliminar passará por apertado dispositivo de controle antes de chegar aos fornos das cimenteiras	
99/1/19	Jornal de Notícias	Como vai Souselas queimar resíduos	
99/1/19	Jornal de Notícias	Co-incineração deverá ser temporária	
99/1/20	Público	Quercus pede à Ministra que espere pelos planos: industriais têm de dizer que lixo produzem	Fernandes, Ana
99/1/21	Público	Oposição e 9 socialistas aprovam projecto dos Verdes: Parlamento dá luz vermelha à co-incineração	Fernandes, Ana
99/1/21	Jornal de Notícias	Oposição mostra cartão vermelho: PSD, PCP, PP e alguns deputados socialistas aprovaram projecto dos Verdes que prevê a revogação de Souselas e maceira	
99/1/21	Diário de Notícias	Co-incineração: a polémica das localizações; cartão vermelho tem apoio rosa	Correia, Pedro
99/1/21	Visão	Onde está o lixo tóxico	
99/1/21	Avante	Estação de resíduos perigosos: um Não! Aos milhares nas ruas do Barreiro	
99/1/21	Avante	Estação no Barreiro comporta sérios riscos	
99/1/21	Correio da Manhã	Co-incineração rejeitada no Parlamento	Sousa, Lurdes
99/1/22	Tal e Qual	Resíduos tóxicos? Não obrigado	
99/1/22	Diário de Notícias	Ambiente explosivo no ambiente	
99/1/ 22	Jornal de Notícias	O ambiente deve começar dentro de casa	Tenreiro, Fernando
99/1/ 22	Diário de Notícias	Deputados em vias de incineração	
99/1/23	Expresso	Cimento da co-incineração aumenta doenças de pele	Almeida, P. Vieira
99/1/23	Expresso	Abaixo a co-incineração se for no meu quintal	Mendonça, Pedro

98/11/19	Sem Mais	Luta contra a co-incineração pôe distrito ao rubro	Baía, Etelvina
98/11/20	Jornal de Notícias	Barreiro protesta em Lisboa contra estação de tratamento: abaixo assinado subscrito por 35000 pessoas exprime a Guterres protesto dos autarcas e da população	
98/11/20	Diário de Notícias	Co-incineração em discussão pública: Barreiro em S. Bento contra contra lixos perigosos	Lopes, Vanda
98/11/20	Diário de Notícias	Ministra garante coragem	Vasconcelos, H.
99/1/12	Correio da Manhã	Coimbra fala em ameaça para a saúde, Verdes dizem que é negócio	
99/1/11	Público	Um dilema moral	Ferreira, A. Mega
99/1/14	Público	A pior hipótese	Silva, A. Santos
99/1/12	Público	Ambiente fosco	Moreira, Vital
99/1/14	Público	Co-incineração: os factos e a democracia	Santos, B. Sousa
99/1/15	Diário de Notícias	Veto ou justiça, diz Barreiro: entrevista a Pedro Canário	Silva, João Céu
99/1/15	Correio da Manhã	Barreiro planta sobreiro "Elísio"	M.P.
99/1/15	Correio da Manhã	Barreiro na rua promete dar luta	Fida, Vanessa
99/1/15	Correio da Manhã	Co-incineração vai arder	Sousa, Lurdes
99/1/15	Capital	Governo deve assumir redução	Perira, Micael
99/1/16	Diário de Notícias	Cimenteiras vão poupar 25%	Silva, João Céu
99/1/17	Correio da Manhã	Petição popular contra a queima de lixos	
99/1/19	Correio da Mnhã	Incinerar junto de povoações é "insensato"	
99/1/19	Jornal de Notícias	Laboratórios vão vigiar a origem dos lixos: material a valorizar ou eliminar passará por apertado dispositivo de controle antes de chegar aos fornos das cimenteiras	
99/1/19	Jornal de Notícias	Como vai Souselas queimar resíduos	
99/1/19	Jornal de Notícias	Co-incineração deverá ser temporária	
99/1/20	Público	Quercus pede à Ministra que espere pelos planos: industriais têm de dizer que lixo produzem	Fernandes, Ana
99/1/21	Público	Oposição e 9 socialistas aprovam projecto dos Verdes: Parlamento dá luz vermelha à co-incineração	Fernandes, Ana
99/1/21	Jornal de Notícias	Oposição mostra cartão vermelho: PSD, PCP, PP e alguns deputados socialistas aprovaram projecto dos Verdes que prevê a revogação de Souselas e maceira	
99/1/21	Diário de Notícias	Co-incineração: a polémica das localizações; cartão vermelho tem apoio rosa	Correia, Pedro
99/1/21	Visão	Onde está o lixo tóxico	
99/1/21	Avante	Estação de resíduos perigosos: um Não! Aos milhares nas ruas do Barreiro	
99/1/21	Avante	Estação no Barreiro comporta sérios riscos	
99/1/21	Correio da Manhã	Co-incineração rejeitada no Parlamento	Sousa, Lurdes
99/1/22	Tal e Qual	Resíduos tóxicos? Não obrigado	
99/1/22	Diário de Notícias	Ambiente explosivo no ambiente	
99/1/ 22	Jornal de Notícias	O ambiente deve começar dentro de casa	Tenreiro, Fernando
99/1/ 22	Diário de Notícias	Deputados em vias de incineração	
99/1/23	Expresso	Cimento da co-incineração aumenta doenças de pele	Almeida, P. Vieira
99/1/23	Expresso	Abaixo a co-incineração se for no meu quintal	Mendonça, Pedro







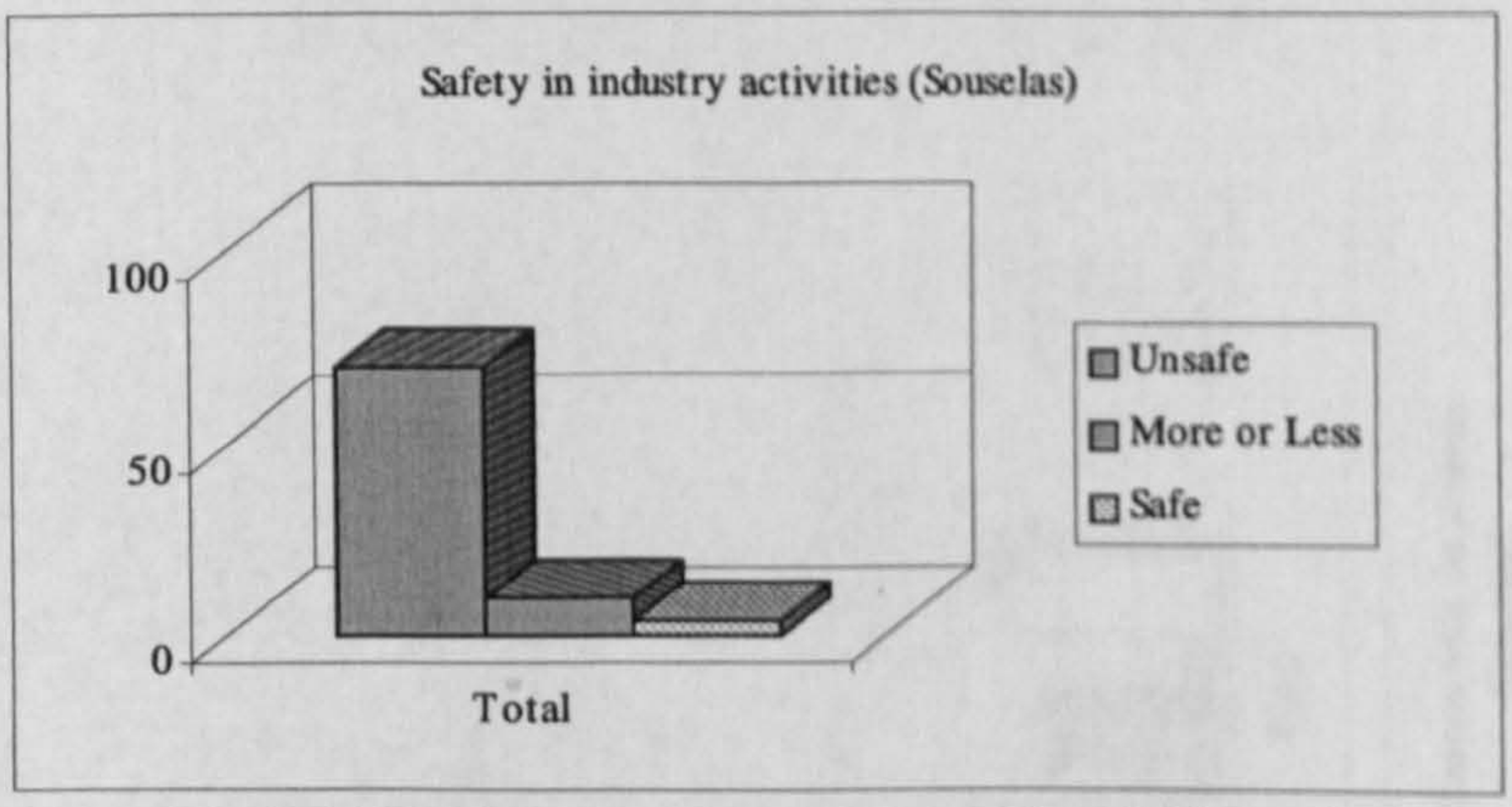
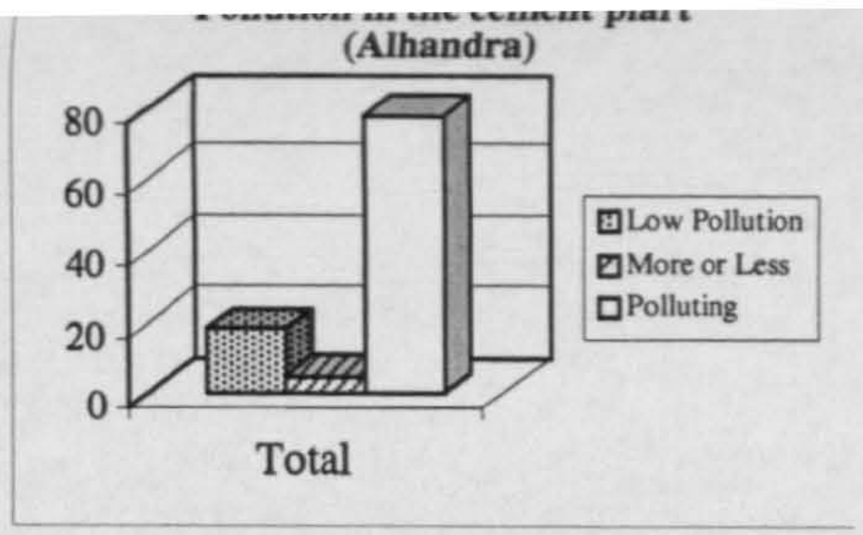
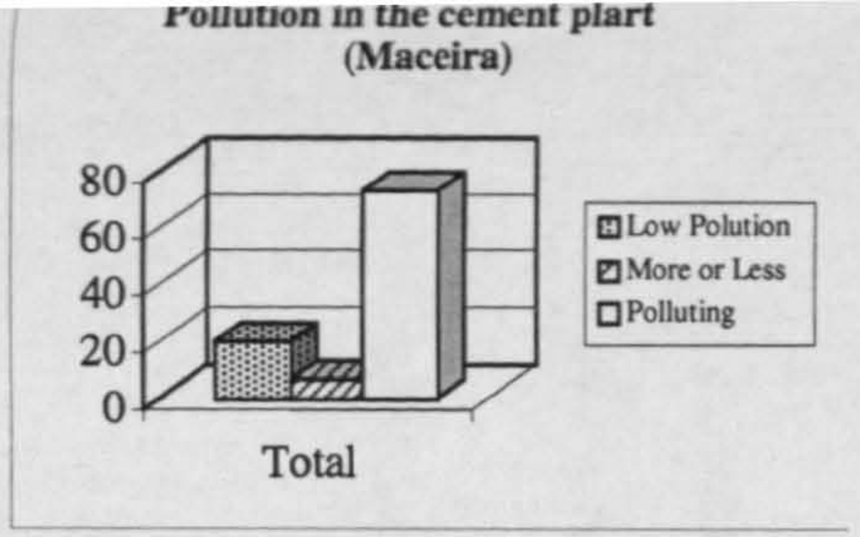
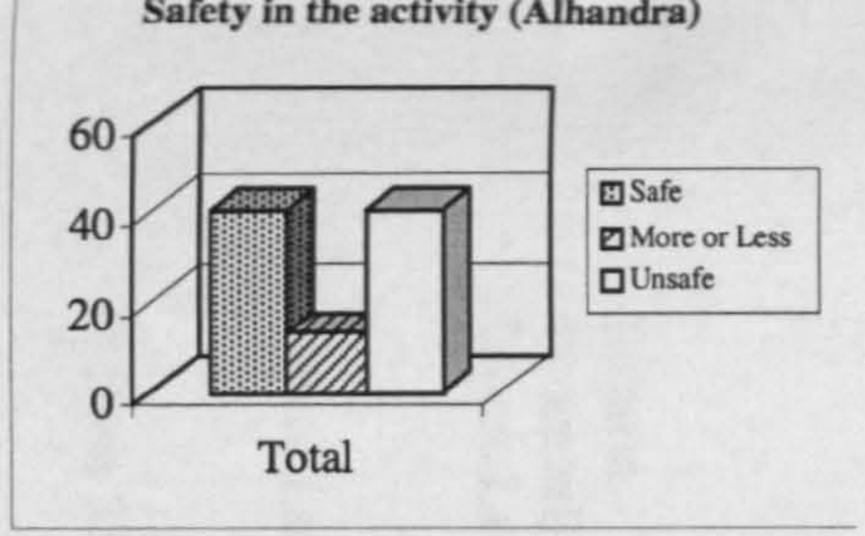
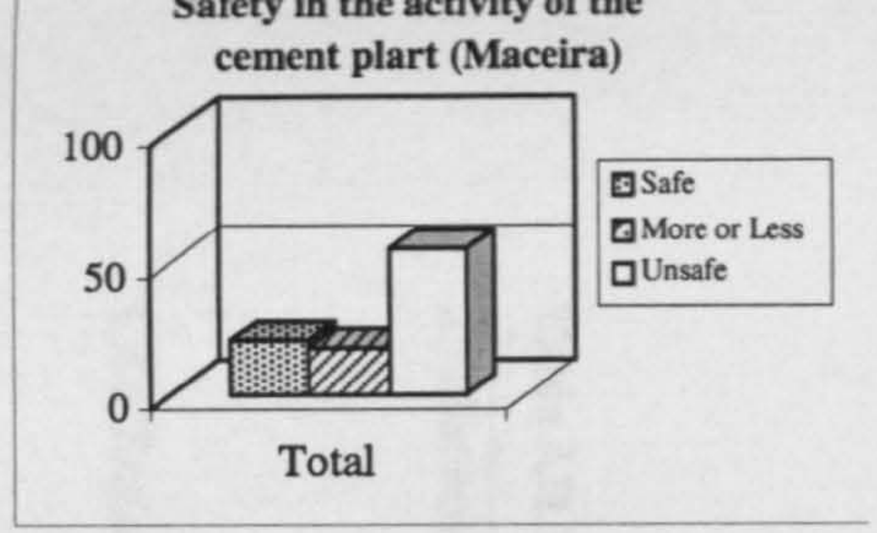


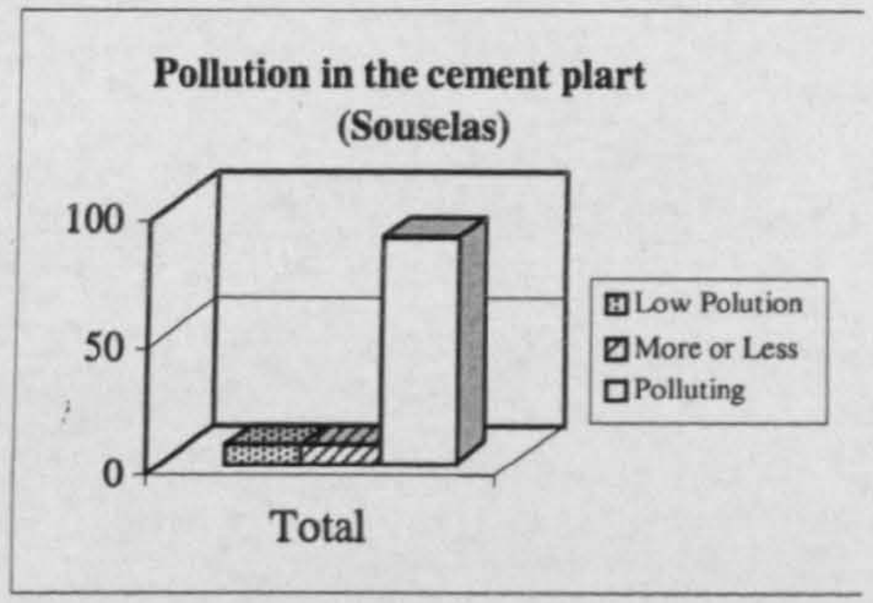
Fig AII.1 Public perception on industrial activities safety
Source: Scoreco (Psyco-social analysis)

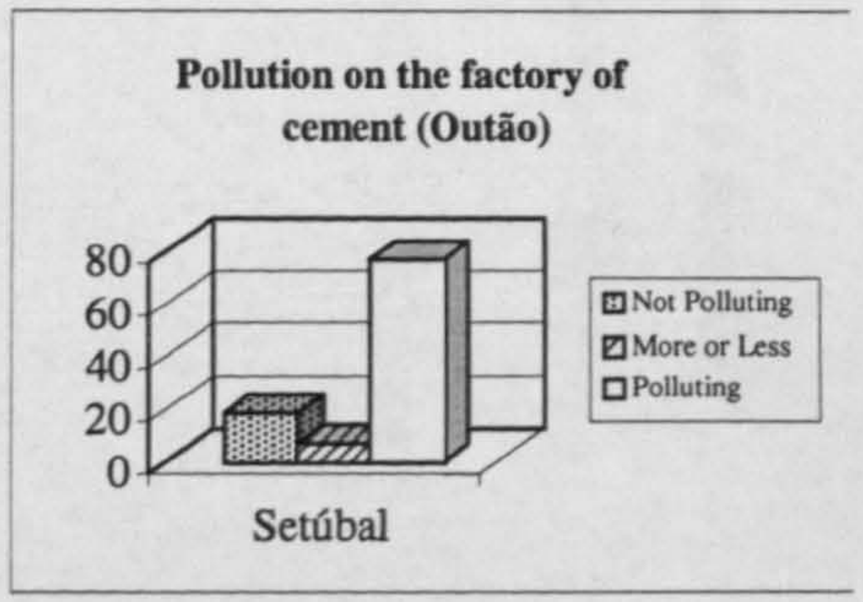


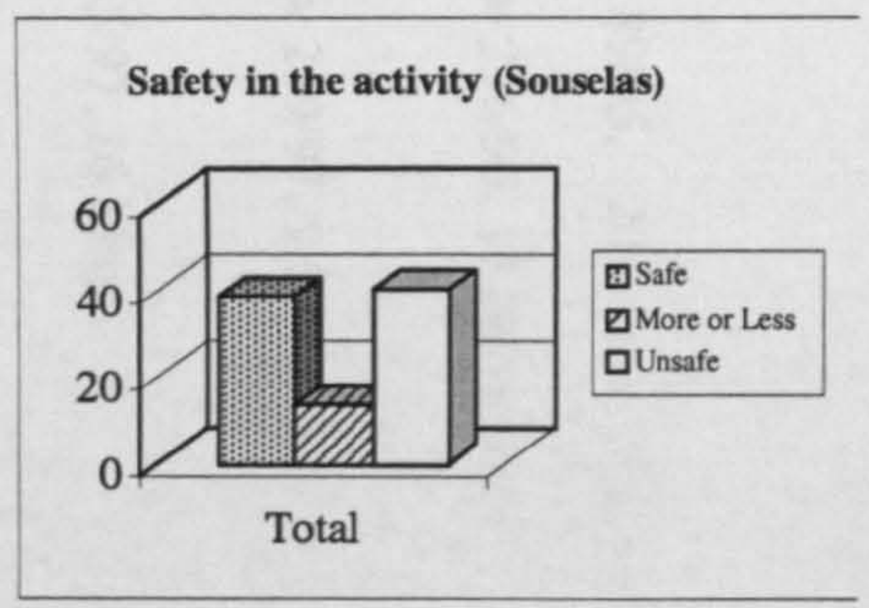


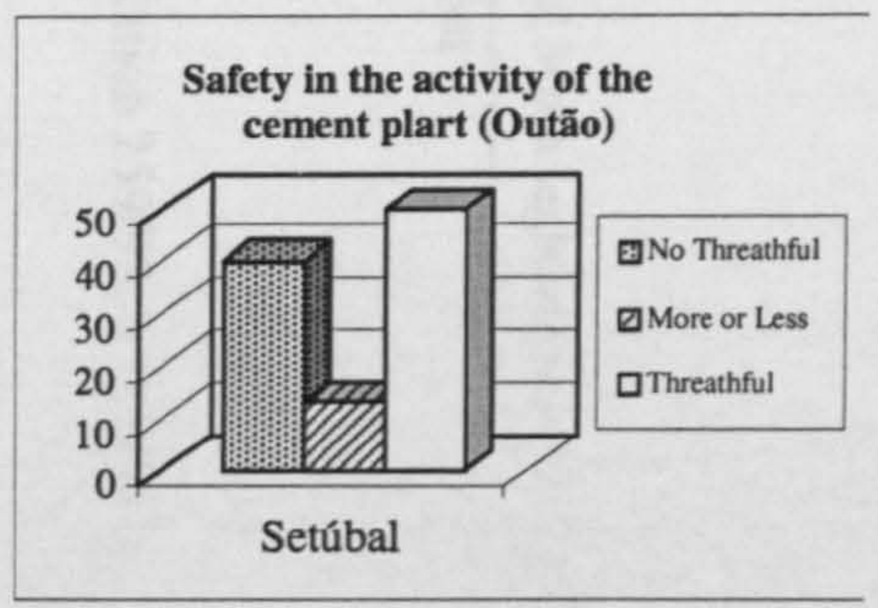






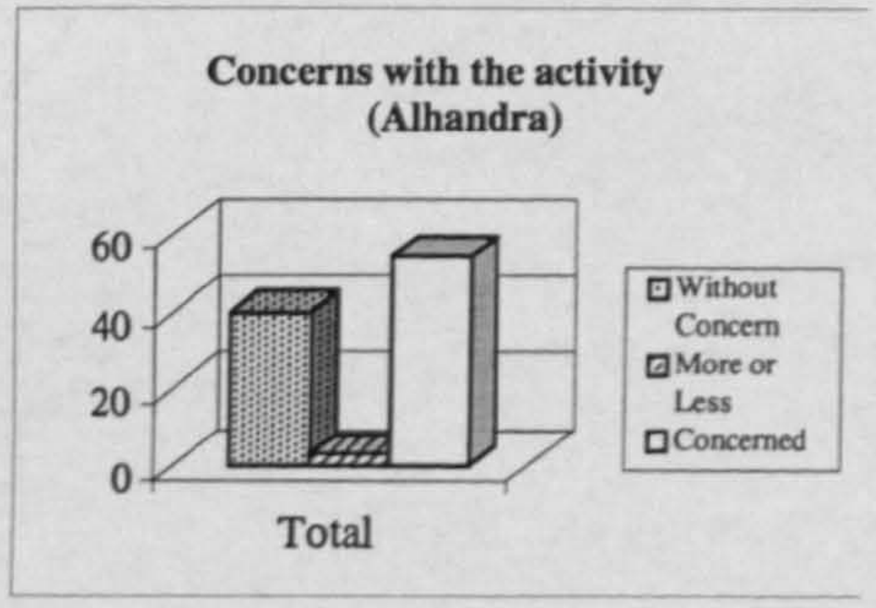


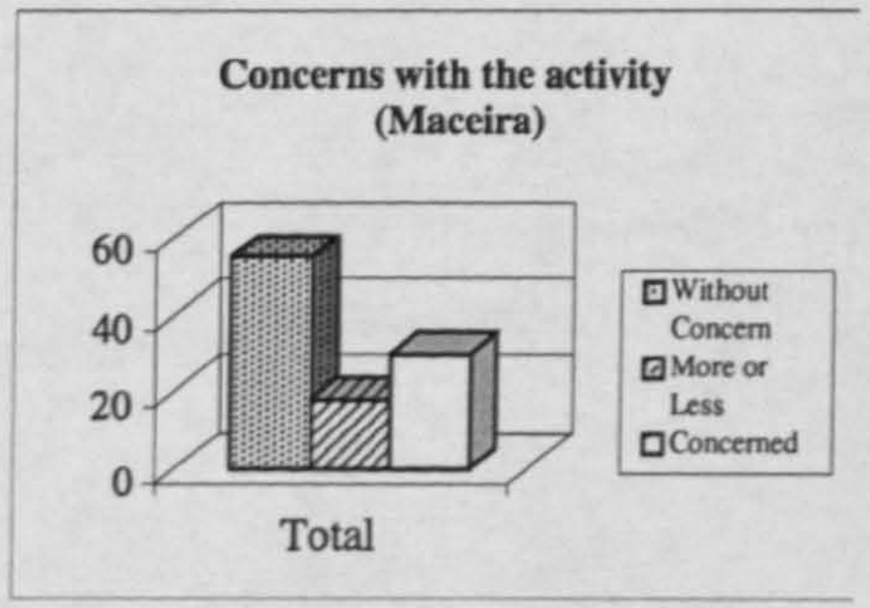


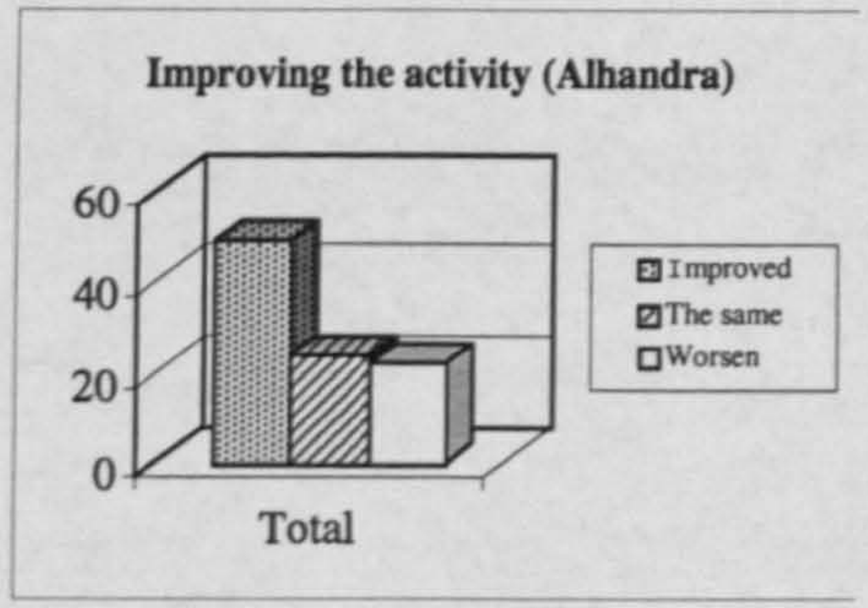


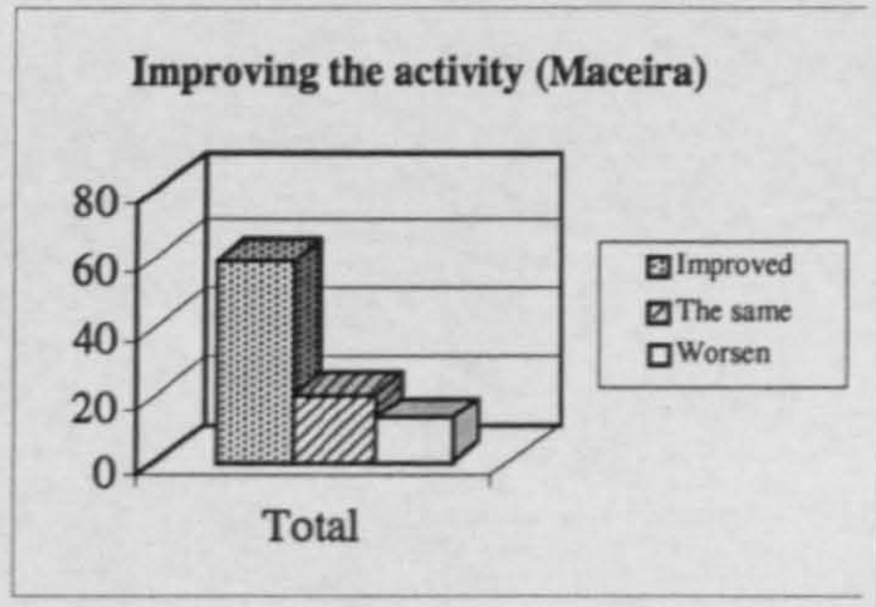
Concerns

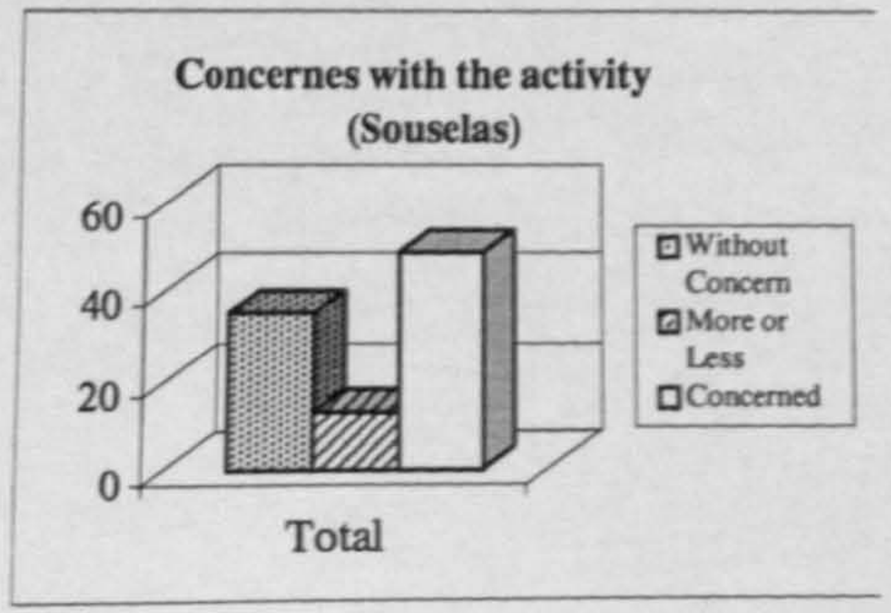
Improvements done

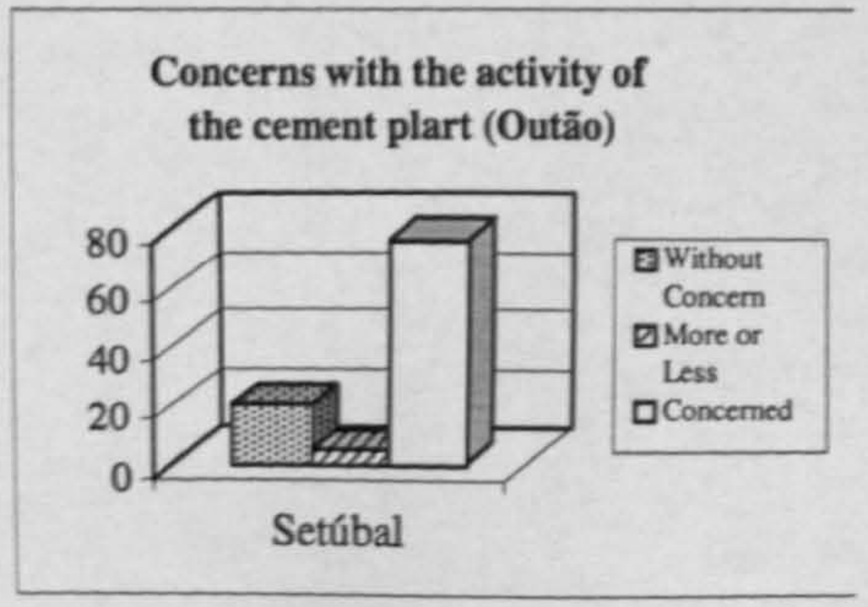


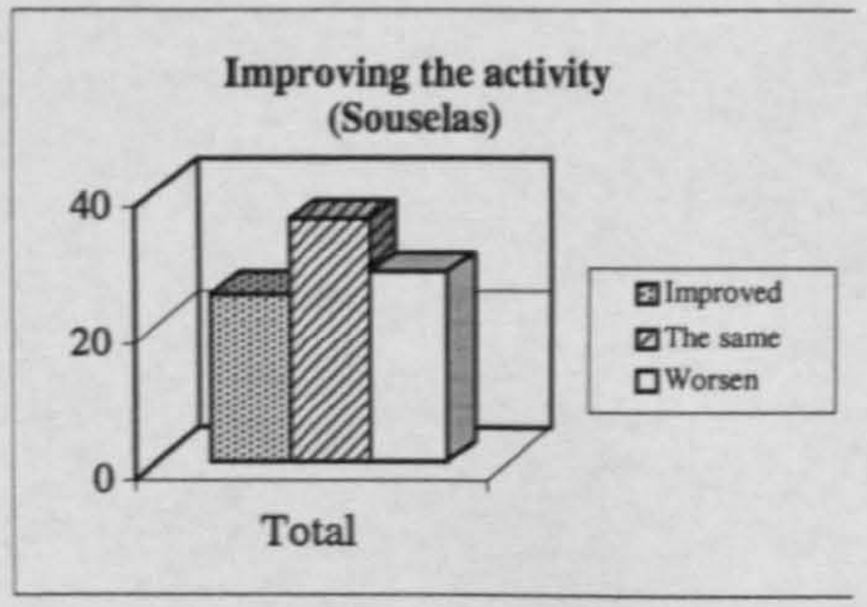












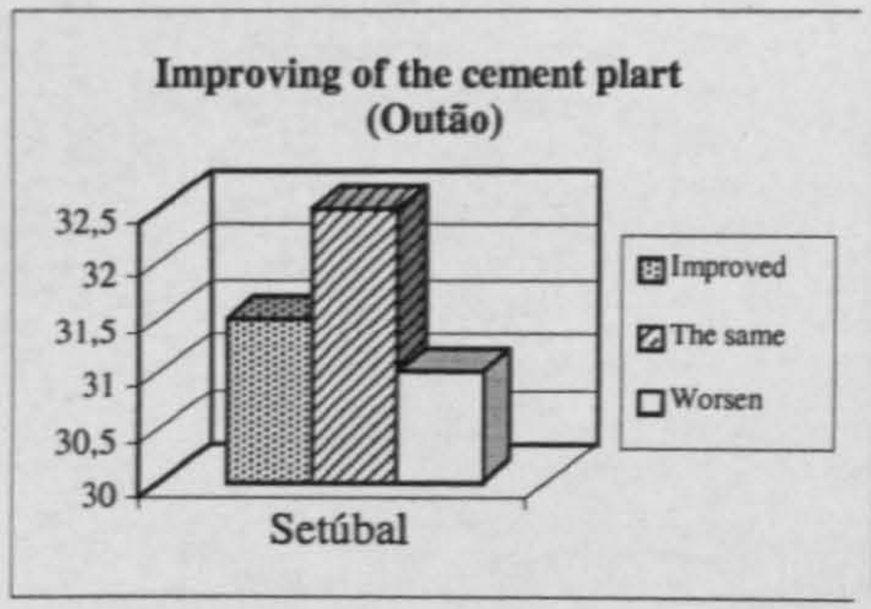


Fig. AII.2 Evaluation of cement plants performance by localities

Table AII.15 Main legislation on waste management

25 November	• Defines waste management as a priority policy strategy; foster necessity of less waste industrial production, Decree Law 488/85, development of technological processes to recycle
CEE Regulation 259/93, 1 February	• Control of transfrontier waste movements, application of the proximity principle, self sufficiency at a community level and national level. Forbid exportation of industrial waste to countries not belonging to EU or EFTA
Portaria 189/95, 20 June (further revocated)	• Rules for an inventory of industrial waste
Decree Law 296/95, 17 November	• Specifies some obligations established in CEE 259/93
Decree Law 239/97, 9 September	• Establishes norms for waste management, clarified by the Portaria 961/98, 10 November
Portaria 335/97, 16 May	• Rules for internal transportation of hazardous waste
Resolution 98/97, 25 June	• A new strategy for industrial waste management ; approves co-incineration in cement plants
Portaria 818/97, 5 September	• Approval of European waste catalogue
Portaria 792/98, 22 September	• Approves new models for waste inventory, revocates Portaria 189/95
Decree Law 273/98, 2 September	• Approves rules and norms for incineration and co-incineration of hazardous waste