

Title: Drivers of change – regenerating saltmarsh using conservation grazing cattle in an industrialised area.

Name : Damian Smith and Philip James

Address: School of Environment and Life Sciences, Peel Building, University of Salford, M5 4WT, UK.

Key Words: saltmarsh, ecosystem services, local communities, conservation cattle.

Introduction: More ecosystem services are provided by saltmarshes to coastal populations than any other habitat. Ecosystem based management research seeks to recognise drivers of change in ecosystem services and quantify negative or positive effects. Examples of saltmarsh ecosystem services include habitat provision for birds, provision of food through livestock grazing and a regulating service through carbon sequestration in the sediment. Less well known, but obvious, is a cultural value in delivering a natural environment to which local communities have access and the resultant state of well-being which many derive from contact with nature. Drivers of ecosystem change are quantifiable using empirical scientific methods coupled with new models being developed for habitat suitability e.g. for birds. Effects of changes are passed on to policy and decision makers using the ecosystem service concept.

Aims: The current study seeks to recognise and unpick ecosystem services provided by the saltmarsh and to quantify these changes resulting from changes in management practice.

Approach: This study aims to quantify the changes in ecosystem services attributable to re-introducing grazing on an abandoned saltmarsh in Widnes, Cheshire. The saltmarsh lies at the centre of an urban environment with a long chemical industry history. Grazers on saltmarsh have been shown to have various effects on the ecosystem relating to type of grazer and the intensity thereof. This research will also evaluate the cultural value of the saltmarsh by quantifying changes in the local community with management seen as a function of change in cultural service.