

**ABSTRACT**

Resettlement has been adopted as a flood-preventive strategy to reduce the vulnerability of communities, especially those in flood-prone areas. While providing safe locations, resettlement needs to ensure long-term sustainability and satisfaction in social, economic and cultural aspects of the affected community. This chapter investigates the effectiveness of resettlement as a flood-preventive measure in Sri Lanka by probing into the lived experience of a community before and after resettlement. Accordingly, a case study was conducted for the Kalu River Bank

Resettlement implemented following the 2017 floods in the Kalutara District in Sri Lanka. The findings disclosed that resettlements of communities away from their native lands have both positive and negative consequences. Further, providing culturally and socially sensitive housing, infrastructure and land development was highlighted in the study. The necessity of fulfilling the community expectations through the development of a strategic resettlement policy framework rather than on political favouritism is also reiterated.

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# Resettlement as a flood-preventive measure in Sri Lanka

## Investigation into the socio-economic impacts

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### Introduction

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In the past decade, urban flood events have been on the rise, mainly due to global warming and unplanned urbanization (Kulu & Strauss, 2014). Nofal and van de Lindt (2024) reported in their recent study that flooding has been accepted as the costliest natural disaster that can cause a number of fatalities as well as disruption of a considerable portion of communities' infrastructure. In 2019, for instance, natural disasters had a severe impact on 25 million people around the world, causing US\$17 billion worth of damages to the world's economy, and floods accounted for more than 60% of that figure (Global Humanitarian Assistance [GHA], 2019). Kraemer (2016) stated that the predictions of worst-case scenarios in future flood events have brought the world to realize the importance of flood-preventive measures now more than ever.

Generally, flood-preventive measures can be divided into structural (technological approaches) and non-structural measures (planning approaches) (Meyer et al., 2017). Structural measures mainly focus on standards and the installation of disaster prevention facilities, while non-structural measures are related to urban and architectural planning (Hansson et al., 2008). Flood-preventive resettlements can be identified as one of the best non-structural preventive measures since there is a growing importance of this approach from the socio-economic and

institutional perspectives compared to structural measures (Kang et al., 2014; Moore & Acker 2018). Per the findings by Correa (2011) and Thaler and Fuchs (2020), the resettlement of communities located in high-risk areas can be considered the best option when it is difficult and unfeasible to mitigate the risk factors involved with severe flooding that cannot be controlled. Acknowledging this, Badri et al. (2006) and Schindelegger (2018) asserted that a well-planned resettlement process can provide positive development outcomes such as a more favourable socio-economic environment consisting of new job opportunities and better access to education and health facilities. By appreciating the value of the aforementioned features, most wealthy countries successfully implement resettlement as a flood-preventive measure while addressing community needs and other socio-economic factors (Claudianos, 2014). However, there are many failures in developing countries in establishing resettlement as a flood-preventive measure due to a lack of resources and a lack of understanding of the socio-economic needs of the relocating community (Arnall, 2014; Khalid et al., 2017; Kang et al., 2018).

As an island in the Indian Ocean, Sri Lanka is prone to frequent floods during monsoon rainy seasons (Sri Lanka Disaster Knowledge Network, 2013; Weerasinghe et al., 2018). Although mortality is low, floods annually displace thousands of people across the country, contributing to significant damage to their houses and infrastructure (Earley et al., 2018). For example, from the latest records, due to the floods that struck in May 2017, 2,093 houses were completely damaged, and 11,056 houses were partially damaged, making the establishment of resettlements as a flood-preventive measure a priority (Wanninayake & Rajapakse, 2018).

In their study, Siriwardhana et al. (2021) identified planned resettlement as a key component of vulnerability reduction in areas at risk of flooding in Sri Lanka. Furthermore, community resettlement has become the ultimate choice for communities devastated by floods if there are no other options available. Nevertheless, little is known about the long-term effects of such resettlement programmes on social, cultural, economic and political aspects. There is a dearth of studies that discuss the success of resettlement as a flood-preventive measure that resolves the problems posed by flooding in developing countries like Sri Lanka. Accordingly,

this chapter addresses this gap by presenting a case study on how, and why, the social, cultural and economic activities of the resettled community have changed as a result of resettlement by examining the resettled communities' views on such changes. The case study investigated the recent flood resettlement project implemented following the 2017 floods in the Kalutara District of Sri Lanka when populations living in the Kalu river valleys were moved to areas that are better protected from potential future flooding. As part of this case study, the resettlement policies and procedures in Sri Lanka as a whole were investigated in detail to ascertain how they have impacted the socio-economic factors of the resettled community. The outcomes of the study contribute to the knowledge and practice of resettlement as a flood-preventive measure in developing countries.

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## **Post-flood resettlement policies in Sri Lanka**

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The government of Sri Lanka has introduced several resettlement policies focusing on both flood and landslide disasters with the aim of relocating vulnerable communities and thereby rebuilding their lives in secure locations (Fernando, 2018). The policy framework with reference to flood and landslide resettlement in Sri Lanka is discussed in this section.

With regard to resettlement policies, a macro-level policy setting needs to be accompanied by micro-level political engagement since land and property relations are highly contextual and often highly politicized (Weerasinghe, 2014). The policy of land acquisition for resettlement was launched by the government of Sri Lanka to provide three options for the community, as follows.

- 1) Provision of 1.6 million LKR to buy a house with land
- 2) Provision of 0.4 million LKR to buy land and 1.2 million LKR for housing construction
- 3) Provision of land and 1.2 million LKR for housing construction

The policies which are designed for resettlements in new locations include several prerequisites for site selection which should be applicable for both government and identified benefiting sites. According to the National Building Research Organization (NBRO, 2013), the disaster risk factor of the new site for possible hazards, access to social and physical infrastructure, and environmental compatibility of the site are the major criteria that are assessed by NBRO, while the final decision is taken based upon the overall suitability of the site in terms of human settlement. In order to obtain the financial allocations by the government, the relevant information that is required to evaluate the aforementioned criteria should be presented for the lands chosen by the beneficiaries.

Beneficiary selection is a community-driven process that is closely monitored by the local authorities. Communities displaced by floods who are living in temporary shelters are given priority. Per the report of NBRO (2013), beneficiaries who lived in Restricted Zones or Warning Zones of the flood plains will be considered for reconstruction with resilient features, while the beneficiaries located in Prohibited Zones of the flood plains are considered for safer locations through resettlement.

The reconstruction policies for these flood resettlements are mainly focused on Build Back Better (BBB) principles. “BBB is an important concept which incorporates adopting a holistic approach to improve a community’s physical, social, environmental and economic conditions during post-disaster reconstruction and recovery activities to create a resilient community” (Mannakkara & Wilkinson, 2014, p. 338). Per the BBB concept, in the owner-driven approach (where the owners are allowed to make the decisions over their housing constructions), the beneficiaries are provided with several options for accessing sustainable financial protocols in the long term. Technical support is provided by technical staff from divisional secretariats to ensure the application of disaster risk reduction standards developed under the BBB concept. Most importantly, these disaster risk reduction standards not only consider floods but also all potential disasters, such as landslides, tsunamis, storms and so on (Ministry of Disaster Management, 2017).

In addition, according to [NBRO \(2018\)](#), funds are released to the house owners in four instalments. Accordingly, a fixed amount of money is released at each stage of construction. The fund releasing procedure for housing construction is illustrated in [Table 5.1](#).

Instalment	Stage	Amount in LKR
1	Land preparation, excavation and completion of foundation	150,000
2	Completion of walls up to roof level and supply of timber	300,000
3	Completion of roof	450,000
4	Completion of core house – doors and windows, plastering, finishing and painting	300,000
TOTAL		1,200,000

The funds in [Table 5.2](#) were determined considering the standard housing designs (per the design guidelines) through the evaluation of actual market rates of building materials excluding the labour component. Per the policy, the labour component of the construction projects should be covered by the community. Since the market prices of the building materials and labour fluctuate with economic changes in the country, the completion of projects with the allocated funds was somewhat challenging. When it comes to the design, several government authorities jointly designed feasible housing layouts to be chosen by the beneficiaries ([National Council for Disaster Management, 2010](#); [NBRO, 2018](#)). Another option provided is for the beneficiaries to design their own houses following the guidelines and structural standards imposed by the government authorities. Per the guidelines, the housing designs should consist of a minimum floor area of 650 sq. ft., a disaster-resilient foundation and superstructure (with

approval from NBRO), two bedrooms with 100 sq. ft. or one bedroom with floor area of more than 120 sq. ft., with a kitchen, permanent roof, watertight toilet and septic tank (NBRO 2013).

According to the Housing Policy, communities are not allowed to build or occupy houses in flood-prone areas (National Housing Authority, 2010). Therefore, in order to avoid the migration of a community back to previous flood-prone areas, water and electricity facilities are disconnected by the government and beneficiaries are asked to tear down their previous houses in order to receive the financial allocations.

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## **Kalu Riverbank resettlement: empirical investigation**

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An empirical investigation was conducted using a case study based upon the resettlement project in which the community that originally lived in the Kalu river valley in Kalutara District, Sri Lanka was moved to an area that is better protected from future flooding (Case of Kalu River Bank Resettlement). The data collection was undertaken by conducting semi-structured interviews with 15 beneficiaries of this specific resettlement project. The respondent sample consisted of representatives from several social groups including local leaders, retired officers, housewives and daily workers. The respondent profile is presented in Table 5.2. The purpose was to gather meaningful insights on post-flood resettlement programmes and their success from the end-users' perspective and thereby evaluate any factors that hindered the progress with regard to the social, cultural, economic and political aspects. To this end, the interview guideline covered aspects relating to the respondents' pre- and post- resettlement living conditions and their family composition, livelihoods, land ownerships and social interactions. Content analysis was undertaken for the study since the researchers wanted to become more familiar with the data set and the data gathered from the interviews were manageable to analyse.

Table 5.2 Respondent profile
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Code	Gender	Occupation
R1	Male	Local leader of the resettled village
R2	Male	Retired government officer
R3	Female	Housewife
R4	Female	Housewife
R5	Male	Government servant
R6	Male	Labourer
R7	Male	Carpenter
R8	Female	Student
R9	Male	Labourer
R10	Female	Office worker
R11	Female	Housewife
R12	Female	Labourer (garment factory)
R13	Male	Village elder
R14	Male	Retired army officer
R15	Male	Government officer

Per the respondent profile, representatives of several community groups were selected for the data collection process in order to gather distinct experiences according to their social, cultural and economic perceptions.

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### **Background to the case of the Kalu Riverbank resettlement**

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According to the NBRO guidelines, the Kalu Riverbank resettlement project belongs to the third option of land acquisition, whereby residents construct their own houses with allocated finances on land provided by the government. Therefore, the infrastructure facilities were supplied by the



government, while LKR 1.2 million was provided for each housing construction per the estimations of NBRO based upon the market prices of building materials at the time of policy development.

The beneficiaries who lived in the Kalu Riverbank were given priority for this particular project. Since there were some dissimilarities between the size of the land slots, a lottery system was conducted to select the lands for the beneficiaries.

With regard to the house designs, some beneficiaries selected the design options provided by NBRO, while some designed their own housing layout with the aid of a consultation provided by the technical officers in the divisional secretariat. However, those who selected the second option were required to obtain the necessary approvals for their designs by adhering to the design standards of the NBRO. These NBRO guidelines were issued to ensure the minimum requirements for a disaster-resilient house.

The construction process was conducted by the beneficiaries under the close supervision of technical officers. The fixed amount was released in four instalments (Table 5.1) with the purpose of ensuring productive utilization of the finances for the construction process. Beneficiaries were given the freedom to select building materials and construction technologies as long as they adhered to the quality requirements introduced by the authorities. Furthermore, a few training programmes were conducted focusing on the carpenters, masons and labourers among the beneficiaries to educate them about the choice of cost-effective materials and construction methods and the incorporation of disaster-resilient features.

After the community was resettled, several workshops were conducted under the Grama Shakthi programme by the divisional secretariat to encourage the residents to find self-employment opportunities in the resettled area. Accordingly, home gardening competitions were arranged to promote gardening as one such earning opportunity for housewives while staying at home.

In order to enhance social interaction, a community hall was constructed on the site which can be occupied by the beneficiaries for their social events.

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## **Socio-economic impacts of the Kalu Riverbank resettlement**

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### **The lived experience of the community on the original Kalu Riverbank area**

Flooding has become a frequent phenomenon for those who live near the Kalu Riverbank. The lived experience of the respondents with regard to their original location is presented in this section in order to evaluate the necessity for resettlement.

The majority of the participants have seen flooding as an annual event rather than a rare event, and thus they have had plenty of flood experiences connected with their original location. One of the government servants (R2) expressed that generally, they receive flood warnings. The respondent further expressed that “Aside from the warnings, everyone is aware that when the monsoons begin in May, with constant rain, the water level in the river rises, potentially causing flooding”. R6 recounted his experience, stating that during the monsoon season, they move their transportable properties to safer places, while non-movable items such as furniture are tied down with ropes to avoid them being washed away by water. R5 and R6 explained how they acted when they became aware of impending floods. According to R5, “we were always awake at midnight, and from time to time we checked the water levels. We were ready to be evacuated from our homes at any time”. R6 claimed that after each flood, they had to clear up debris and rubbish, clean the furniture and return to their usual living conditions, which took around three months and cost them a significant amount of money. Each year, as a result of this recurring phenomenon, the community faced long-term difficulties such as property destruction, loss of livelihood owing to the disruption of routine lives and, most significantly, psychological anxiety. In addition, floods have become more severe in recent years, with some homes being completely destroyed, leaving people homeless. R9, who is such a flood victim, expressed his experience as

“the floods of 2017 took everything away from us. We never expected this because the regular floods aren’t quite as severe as this”.

Per the opinions of the respondents, the community has clearly suffered a great deal as a result of flooding in the original location. They are also able to understand the force of an extreme event as opposed to a normal event because of the recent 2017 flooding. However, when the respondents were questioned regarding whether they needed to be relocated due to severe floods in the original location, their responses were twofold. One part of their responses depicts that, despite the severity of the flood damage, leaving the original location was not preferred for a variety of reasons. A number of the respondents (R1, R2, R5, R14, R15, R10, R11) expressed this opinion, offering different justifications. R1 and R2 stated that living conditions were good in the original location, with easy access to public services such as hospitals, schools, banks and government offices. Additionally, the respondents were quite concerned about their social status. The majority of the respondents stated that the government’s financial provisions are insufficient to build a house that conforms to their social status. Therefore, they felt that it was better to live in the original house and undertake regular repairs rather than living in a small house that does not fulfil their requirements. Furthermore, some of the respondents were reluctant to change their comfortable environment and friendly neighbourhood. In addition, R14, who was a government servant, elaborated that the community has become accustomed to the annual floods and was confident in handling the situation.

On the other hand, some of the respondents were of the opinion that resettlement is the only option to overcome the recurring flood hazard. R7, whose house was completely damaged by the floods, stated, “we were hesitant to build the new residences in the original area because we didn’t want to go through the same difficulties again”. Furthermore, R9 considered that receiving decent dwellings in a safer area was an opportunity, as they used to live in slum dwellings.

## **Community perspective on the Kalu Riverbank resettlement**

The beneficiaries had different viewpoints about the policies and procedures adopted in the resettlement programme in terms of site selection, beneficiary selection and design and construction of the resettlement project.

### **Resettlement**

In terms of the new location, the community placed a high priority on primary facilities in order to maintain their daily routines. The site was located in a hilly area, which caused many lifestyle difficulties. For example, R5 stated that “Traveling for our day-to-day activities is quite tough because the community do not have their own vehicles. The topography of the resettlement in a hilly area has further worsened it”. Since the primary facilities such as hospitals, pharmacies, schools and supermarkets were in the town that were far from the site, the community faced many challenges. R6, who was a student, explained that his school was near his original location, while now it is exhausting to travel daily from the new site. Due to this reason, his parents are trying to change his school. The problem with transportation facilities became more serious as the community struggled to go to their usual jobs. R10, who is a labourer, explained that “If we travel for our old job which was nearby the previous site, two-thirds of our daily income would be spent on travel causing plenty of financial problems”. As a result, the majority of the daily income earners gave up their previous employment and engaged in alternative jobs with less income than the previous jobs. Additionally, R12, who is a female worker in a textile factory, shared her experience as “Previously there was a staff transport service running by our original location. But now since there is no such system, I am forced to get up early and walk to work alone in the dark”. Due to this difficulty, one of her friends (R3) who worked at the same factory had to quit her job and became a housewife. R3 commented that “Although there are many economic difficulties, we are helpless with these limited facilities”.

With reference to the environment of the new site, the majority admired the natural environment, which is calm and quiet compared to the original location. In terms of social environment, as the community was all from the same original location, there was good social interaction from the start per the view of R10. However, there were some troublesome scenarios such as having the same neighbours, who were rivals, from the previous location. In addition, one of the retired officers stated that the host community expressed their opposition to this resettlement, initially believing that immoral acts may increase through the resettled community. Additionally, freedom is felt to be limited in the new location due to its high density of housing (with houses very close to each other). This was expressed by R10 as “Previously, we had enough room to call our own. However, we are now all living extremely near to one another which has a negative impact on our freedom and privacy”.

### **Beneficiary selection and ownership**

All the respondents accepted that the government had successfully engaged in the beneficiary selection process. Per their opinion, everyone relocated under the programme deserved a home since they were truly suffering from floods as a result of living in a flood-prone region. R1, who is a local leader, expressed this as “The grama niladharis (village officers) with the support of divisional secretariat conducted a thorough screening process for selecting beneficiaries while no political involvement was observed”. The lottery system which was performed for selecting the land slots for the beneficiaries was also praised by the respondents, stating it “minimises the conflicts and enhances the social interaction and the equality”. Furthermore, the ownership policy was successfully implemented whereby land deeds were provided to the beneficiaries after they were resettled in the new house.

### **Preventing the community from returning to the original location**

Another extensively debated policy among the beneficiaries was the one adopted to prevent the community from returning to their original location. The majority criticized the disconnection of

water and electricity facilities of the previous houses, while R10 argued, “it is so unfair to implement such a policy because new settlements do not offer the required services. Now we can’t go back to our previous house, and we can’t live here with these poor facilities either”. However, from the authorities’ perspective, they implement this as a policy to prevent the community from moving back to their original houses, which, in turn, would increase their vulnerability to future floods; avoiding this is the major objective of resettlement.

### **“House for a House” policy**

People who lived within extended families at the original location were severely impacted by the introduction of the “House for a House” policy. R4, who lived with her daughter’s family, claimed that the offered residence does not have sufficient space for two families to live in comfortably. Supporting this, R12 stated, “it would be preferable if each family was provided with a separate house, or if there was enough space for multiple families to live in a single house as before”.

### **Design and construction policies**

With regard to the design and construction policies, the majority appreciated the fact that the community was allowed to create their own homes with financial assistance. Furthermore, they indicated that giving multiple design alternatives or allowing users to design their own layout was quite beneficial. Accordingly, five of the respondents designed their own layout, while others opted for a choice from a list of 12 options. R5 and R10, who designed their own layout, explained that the design options were not compatible with their family background and social status. R10 further commented, “this allowed us to design our own home as per our expectations taking architectural and astrological considerations into account”. Other respondents, on the other hand, who had chosen one of the government design options, accepted that, although there were some financial challenges, having multiple options from which to choose and not having to worry about receiving approval was a fantastic opportunity.

The majority appreciated the enhanced community participation in the construction policies. Nonetheless, since the government provided a standard guideline to be followed for beneficiaries in the design and construction phases, R2 stated “it is hard to balance the required conditions with the limited financial allocation”. Adding to this, R3 and R4 criticized the inclusion of disaster-resilient features under the BBB concept: “It is good to have those features, but they were cost consuming and government allocations were not enough”. Furthermore, the majority thought that building columns and beams with reinforcement, which increases their strength against disasters, was a useless additional cost. However, R7 and R12 appreciated being allowed to use materials such as doors and window frames from previously damaged houses, if these were of the necessary standard, which reduced their overall cost. Furthermore, they appreciated the technical guidance provided by the authorities throughout the process. In the main, the overall opinion about the reconstructions was satisfactory because beneficiaries were able to design and construct their houses to meet their own expectations.

### **Community recovery processes**

The gardening programmes that were conducted by the government aimed at economic recovery were appreciated by the community. Nonetheless, R3 and R4 emphasized that “we don’t have good practice over gardening and it is expected to have more space in our lands to successfully conduct gardening as an additional source of income”. Furthermore, R3, who quit her job due to the resettlement, suggested that it would be very helpful if sewing machines could be provided to housewives with the necessary training in order to start self-employment on their own.

Moreover, the community hall which was constructed to enhance social interaction was not frequently used by the beneficiaries.

A summary of the opinions of the community regarding resettlement is presented in [Table 5.3](#).

<b>Table 5.3</b> Summary of the community’s opinions regarding the Kalu Riverbank resettlement
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	materials from previous house																		
	Add additional cost for resilient features																		
Community recovery processes	The necessity of a community hall did not emerge																		
	Need more space and training for conducting gardening																		
	Require sewing machines to initiate self-employment																		

Per the findings, [Figure 5.1](#) illustrates the overall summary of the opinions of the community regarding resettlement.

The cognitive map shown in [Figure 5.1](#) has been divided into three levels (refer to the legend). Level 1 denotes the main resettlement policies that are implemented in the flood resettlement project. In the second level, the sub-themes are presented with regard to each policy. The opinions of beneficiaries under each sub-theme are presented in the third level of the map. Furthermore, the impact of each resettlement policy on the social, cultural, political and

economic perspectives is demonstrated through the external level by connecting the respective opinions to each aspect.

Per the opinions of beneficiaries in [Figure 5.1](#), it is evident that resettlement policies have affected the social, cultural, economic and political aspects of the community which determine the success level of the overall resettlement.

### **Social aspects**

A consideration of the social aspects is very important for the success of post-disaster resettlement, especially for settlements that have been permanently relocated. Accordingly, the enhancement of social interaction among the community, minimizing social conflicts and the social status of each community groups were considered satisfactory by the community, although some viewpoints expressed that some of these actions have been unsuccessful. As an example, a community hall was constructed as an initiative to enhance social interaction, but it is currently useless to this particular community, as no initiatives have been taken to encourage the community to organize social gatherings. Social conflicts were successfully minimized by giving equal treatment to everyone in the beneficiary selection and the land slot selections. This resulted in creating trust among the community with regard to the authorities, which is typically lacking in most of the policy implementation scenarios in Sri Lanka.

The maintenance of social status is a desired human characteristic, and it affects the overall social standing of a community. Through the findings, the community can be categorized into a middle-income community and low-income community who depend on daily wages. It can be observed that there is a clear difference in social status between these two groups. It appears that the policies were successful in balancing the requirements of these social groups in many instances. For example, allowing beneficiaries to design and construct their houses as one option was mostly appreciated by the middle-income community, as they had the opportunity to have designs compatible with their social status by adding preferred architectural and aesthetic features. On the other hand, the provision of common design options was appreciated by the low-

income community since the designs were compatible with their own social level. However, resettlement policies with regard to site selection were not successful in terms of social wellbeing because the site location created many difficulties in terms of accessing primary services such as supermarkets, hospitals and schools, and this negatively affected social living conditions.

### **Economic aspects**

It is evident from [Figure 5.1](#) that the economic aspects of the community were severely affected by the resettlement, where most of the policies were unsuccessful in fulfilling economic wellbeing. The major reason for this was that the resettled site was far away from the community's livelihoods, and daily access to work was challenging due to the insufficient transportation system. This issue, to a certain degree, caused a downward trend in the day-to-day economy of low-income families who were unable to spend a considerable amount on travelling compared with their daily income. However, the middle-income community successfully engaged in their livelihoods, as they had private vehicles. This indicates that the resettlement placed the poor community in more severe conditions economically, as no successful livelihood opportunities were provided by the policies within the resettled area. In addition, it is worth mentioning the introduction of gardening as an additional income generation opportunity for the community; this was unsuccessful due to the practical issue of space limitations. However, the community believes that rather than gardening, there are plenty of other self-employment opportunities that can be implemented within the area if the necessary resources are provided, such as sewing machines.

Another major challenge was the insufficiency of financial allocations for constructions. The construction policies include several criteria that are required to be followed, which were expensive. Therefore, the community on certain occasions had to bear the additional cost themselves in order to complete the construction. This financial insufficiency caused the community to have misconceptions about the disaster-resilient features (that were compulsory to be included) and to view them as worthless. However, the ownership policy was of economic

benefit for the beneficiaries. As there were no issues concerning the land deeds, which were delivered timely, beneficiaries were able to keep them as collateral to acquire financial loans from banks. For many, this provided relief, as they were then able to have further economic assistance.

## Cultural aspects

Culture covers such aspects as the way of life of a group, the specific way of behaving, and a set of strategies adopted for existence linked to the ecological setting (Boen & Jigyasu, 2005). Cultural considerations were taken into account to a satisfactory extent within the design and construction policies. Since the policies mostly promoted an owner-driven approach, beneficiaries were allowed to design and construct their houses per their own cultural requirements. For example, beneficiaries were able to include astrological features per their beliefs and utilize conventional building materials with user-friendly construction methods per their preference. Since the beneficiaries were able to include their own cultural requirements, the policies were highly appreciated from the cultural perspective.

However, resettlement policies had both successful and unsuccessful outcomes in cultural aspects. First, the resettlement of the community (who had similar cultural preferences) from the same original location together minimized many conflicts with satisfactory outcomes. On the other hand, the community was accustomed to the culture that was prevalent within the surroundings of the river banks at their original site, with close proximity to primary services and livelihoods. Some members of the community engaged in land cultivation at the original site to earn an extra income, which added further value to the aspect of proximity to livelihoods. Furthermore, there was an independent lifestyle with increased privacy. However, the resettlement caused a complete change from the original cultural background to one where primary services and livelihoods were difficult to achieve, alongside limited space for cultivation and limited freedom and privacy. Therefore, the community suffered long-term consequences as a result of this cultural difference, which they had to adjust to over time.

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With regard to the extended family culture, the “House for a House” policy was a serious challenge to extended families due to significant space limitations. This suggests that when designing policies, it is necessary to develop alternatives for these exceptional scenarios in order to successfully implement flood resettlement policies.

### Political aspects

It is a common belief that political involvement in any type of resettlement project cannot be avoided. Even though there might be political involvement when developing policies and changing them from time to time, in this case, the authorities were able to avoid political involvement at the implementation stage, and this is a factor which should be appreciated. Per the findings, the authorities stuck to the policies which kept illegal activities at a minimum level, resulting a corruption-free resettlement programme.

Therefore, it can be deduced that these flood-resettlement policies impacted the community, resulting in both negative and positive outcomes in terms of social, economic, cultural and political aspects.

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Alt text: Flow chart showing the socio-economic impacts of resettlement

**Figure 5.1** Socio-economic impacts of resettlement

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## Conclusion and recommendations

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Resettlement of communities away from flood zones can be identified as one of the most successful non-structural flood-preventive measures that can keep a community away from vulnerable areas while building up their living standards in a safer location. However, in order to successfully implement resettlement as a flood-preventive measure, it is necessary to fulfil the



social, economic and cultural aspects of the community through the development of a strategic resettlement policy framework devoid of any political favouritism.

In the Sri Lankan context, as flooding has become more intense and frequent, flood resettlement has been given satisfactory consideration with the development of flood resettlement policy frameworks. Resettlement policies have been introduced for site selection, land acquisition, ownership, housing design and construction and community recovery. It is noteworthy that these policies have both positive and negative impacts upon a community in terms of social, economic, cultural and political perspectives. However, the success of these policy implementations is not at an adequate level in terms of the community's perspective. Improper policy implementation without proper strategic plans has led to a number of long-term issues for beneficiaries that may result in resettlement failures. Therefore, future resettlement policies should pay more attention to practical implementation, taking on board the community's expectations.

Multiple recommendations can be suggested, which have been deduced through this study, to overcome the existing challenges. In order to minimize social issues within the resettled zone, it is highly recommended to develop infrastructure facilities (such as roads, water, electricity and other amenity schemes), even in rural areas, followed by proper land development. Furthermore, an alternative option that can be suggested to resolve the issue of land scarcity is construction of multi-storied housing complexes and letting the community choose such complexes according to their preference. Moreover, it is highly recommended to enhance the bottom-up approach in policy development, whereby community proposals can be put forward to create a more sensible policy framework. In addition, the development of policy guidelines per funding availability, undertaking fundraising programmes locally and internationally focusing on these types of resettlements and supporting the uneducated within the community on financial management in the owner-driven approach are some of the recommendations to enhance the economic aspects of policies. Furthermore, it is essential to provide training and awareness programmes which target different community groups to

encourage and educate them on the importance and means of community empowerment and recovery.

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