

# Post Disaster Relocation Issues: A Case Study of Samasarakanda Landslide in Sri Lanka

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## Abstract

Landslide-induced displacement is an unexpected tragedy as well as a major development constraint which cannot be overcome sustainably unless a well-established mechanism is functionalized. Since the displacement is a life changing event, the attention should be focused to address all aspects of restoration of lives such as building houses, establishing livelihood opportunities, rehabilitation and reintegration in the process of relocation. In order to address the relocation issues and challenges for seeking durable solutions, community based strategies are most welcome in contemporary disaster management plans. In addition to examine the failures of existing relocation programmes, this study has attempted to investigate one of the neglected aspects of restoring displaced lives in the recovery phase of disaster management cycle; post-relocation satisfaction. The methodology has initially been designed based on qualitative approach focusing 72 households selected through judgment sampling from six relocated housing schemes after the massive landslide occurred in 2016 at Aranayaka division in Kegalle District, Sri Lanka. Both quantitative and qualitative techniques have been used for data collection through questionnaires, structural interviews, semi structural interviews and case studies while descriptive data analytical methods applied particularly for case study interpretation. The research results revealed that, this unexpected landslide hazard has created several socio-economic constraints which cause to accelerate the relocation issues. Lack of involvement of the government institutions in finding durable solutions at the recovery phase and the delay of policy implementation are identified as the main interlinked issues in the process of relocation. Due to the lack of community participation in project planning and less cooperation between the authorities and the public, most of the relocation programmes could not achieve the expected project deliverables. Therefore the research paper suggests new strategies to overcome the existing issues and challenges in order to minimize the problems faced by post-landslide relocated communities.

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**Keywords:** Internal Displacement, Post-Landslide, Relocation issues, Durable Solutions

## **INTRODUCTION**

A disaster is a collective result of the combination of hazard, vulnerability, emergency and risk. The term describing a whole range of distress situations, both individual and communal (Moe & Pathranarakul, 2006). Emergency Events Database (EM-DAT) shows that, the number of disasters triggered by the occurrence of natural hazards has accelerated worldwide (Correa, 2011a). Global Report on Internal Displacement in 2016 depicts, there were 19.2 million new displacements associated with disasters in 113 countries across all regions of the world in 2015, brought on by events such as floods, storms, earthquakes, volcanic eruptions, wildfires, landslides and extreme temperatures. Over the past eight years, there have been 203.4 million displacements by disasters (Global Report on Internal Displacement, 2016).

South Asia has become the most prominent by the disaster occurrence recently. In previous years, most of South and East Asian countries were affected from disasters in terms of the highest absolute. As example, in India, the impact of two major flood and storm events were responsible for 81 per cent of the displacement, forcing three million people to flee their homes. Floods, landslides and the impacts of cyclone Komen displaced more than 1.6 million people in Myanmar in July and August, resulting in the fifth highest figure worldwide in absolute terms and the sixth highest in relative terms. Among those disasters, it also revealed that the landslide disaster is also continuously increasing over through decades. The South Asian region has witnessed heavy annual monsoon rains over the past ten years, leading to flooding and landslides. While India and Pakistan have been heavily affected with heavy flooding reported from different parts of these countries, Nepal and Bangladesh have been less so. Many parts of Nepal experienced monsoon related floods and landslides though Bangladesh reported some rain-induced landslides and wall collapses in a few districts. The flooding and landslides across South Asia has resulted in a large loss of lives and property affecting millions of people.

Sri Lanka has been experiencing various type of frequently occurring natural disasters such as drought, flood, landslides etc. Out of the whole land extent of Sri Lanka, nearly about 30% of land area which spread into several districts such as, Badulla, Nuwara Eliya, Kegalle, Ratnapura, Kandy, Matale, Kaluthara, Mathara, Galle and Hambantota is affected by landslide hazards. The recent data shows a sudden increase in the occurrence of landslides during the period from 2003 to 2017 in the landslide history of Sri Lanka. National

Building and Research Organization (NBRO) of Sri Lanka has predicted that the landslide may become the most calamitous event which severely affected to the physical and cultural landscapes of uplands in Sri Lanka. Sri Lanka faced two devastating landslides in Ratnapura and Matara districts in 2003. In 2007 there was a sever landslide at Haguranketa region too. Approximately about 22,328 people were displaced in 2003 while about 26,989 and 27,497 people were displaced in 2006 and 2007 respectively. More recently five major landslides were recorded in Sri Lanka; kotapola, Meeriyabedda, aranayaka, bulathkohupitiya, bulathsinhala and nivithigala. These landslides affected communities displaced from their place of origins and force them to be relocated. Since the landslides occur over a wide range of velocities and are usually triggered unexpectedly, giving people less time to evacuate, the displacement of people due to landslides is highly vulnerable. Addressing the long term issues of such displaced should be with a proper relocation plan. As relocation is a complex, multidimensional process that transcends the housing aspect, far more sensitive to the complexities of the relocation process is needed in post disaster relocation. It is not, for example, generally recognized by reconstruction authorities that the consequences of relocation itself may even be more grievous than the impact of the disaster (Smith, 1991). As Badri et al. (2006) highlights, well-planned and managed relocation process can produce positive long-term development outcomes. Conversely, if it is poorly planned, it will create significant adverse impact on affected communities and in some occasions in the host community (Badri et al, 2006). Even though there are several studies on the courses and consequences of landslides in Sri Lanka, relocation issues faced by displaced persons and revisiting their satisfaction have not been studied adequately. In general, most of the socio-economic impact assessments on landslides are limited due to a lack of data (Deheragoda, 2008). Moreover, recent studies have revealed the complexity involved in the quantification of the direct impact that landslides have on socio-economic systems (Mertens et al., 2016). In this background, this paper attempts to analyze the relocation process which differs from other recent studies on the impact of landslides in many ways.

Relocation is one of the long term strategies of any disaster management plan. It does not mean that providing a land and house but helping for rebuilding displaced lives. Reaching any relocation programme to the satisfactory level would be a great challenge in any circumstances. Several issues have been evident with relocation policies implemented by Sri Lankan Government (SLG) for longtime. Muggah (2008) has pointed out that Sri Lanka had been faced several relocation failures in finding durable solutions for development and conflict induced displacement since 1950s. Most of the researches on postwar reconstruction and rehabilitation of Sri Lanka have also highlighted varied issues and challenges in the process of relocation (Dias et

al. 2016, Sangasumana 2010, Cernea 1997, Ruwanpura 2009). Findings of most of the researches show that Sri Lanka has no more experience of implementing new relocation programmes for landslide-induced displaced people.

## RESEARCH PROBLEM

Sri Lanka has experienced severe issues on internal displacement due to all three major causes; development, conflict and natural disasters. Due to the effect of recent climate change, landslide-induced displacement has become fore recent years. Flood and landslide hazards occurred recently; Kotapola in 2003, Hanguranketha and Walapane in 2007, Galahawatta in 2011, Meeriyabedda in 2015, Aranayaka 2016 and Bulathsingala and nivithigala in 2017 had proven that the sequence of disaster induced displacement has been gradually increasing. In the meantime issues and challenges of relocating internally displaced persons (IDPs) has been emerged. The main argument of this research focuses to investigate whether the pre-defined relocation issues identified by different scholars from other scenarios such as development projects, conflict and tsunami etc. are different from those who have been fled from the places of origin because of massive landslides in Sri Lanka. In order to examine this situation the present research selected on of the prominent case studies - a catastrophic landslide occurred in May 2016 at Samasarakanda mountain situated in mountainous Aranayaka Divisional Secretariat Davison (DSD) of Kegalle District in the Sabaragamuwa Province. It was a worst landslide never experienced before by the region which was triggered by unexpected severe rain fall about 300 – 400 mm occurred in the region during 15th to 19th May 2016. This had been resulted from a tropical depression (low pressure area) closely passed through Sri Lanka from the south to the north.



*Fig 1: Location of Samasarakanda Landslide*

Three Villages; Siripura, Elangapitiya and Pallegage in Aranayaka DSD were hit by its worst ever natural disaster caused by samasarakanda landslide on 17 May, 2016 around 4:30 pm, leading to tremendous destruction of settlements and the devastation of human lives and property, as well as severely affecting the environment and economy. Approximately 2000 people displaced, with more than 144 people buried. Due to this tragedy most of the infrastructure of these villages including income sources, telecommunication networks, water and electricity supplies, schools and hospitals were completely malfunctioned.

IDPs from three villages found refuge in temporary shelters located in different places. They had faced more difficulties when they were living in temporary shelters. As relocation process was delayed, groups of families who lost their homes due to the landslide were sheltered at the several schools and temples of the area such as Hathgampala, Dippitiya, Rahala, Narangamma, Elagapitiya, Godigamuwa under the decision of District Development Committee. It was noted that there were several issues had been emerged during the emergency situation in finding immediate solutions for displaced people. Most probably, the unequal distribution of donations, less support for the education of children, spread of diseases, limited space in temporary huts to large number of families were serious issues. There was a delay in identifying suitable land blocks for relocation sites and consequently selection procedure was also a problematic. There were 20 houses that built in Wasanthapura under the donation of Raino Company and those houses were given to the people who were totally affected from the landslide. Later on all affected communities were relocated in new areas with the aids of government and private companies. Perera et.al. (2018) revealed that the affected region of Aranayaka landslide had been generating approximately US\$ 160,000 annually from their home gardens and plantations (Tea, Rubber and Paddy). The present research focuses how this economy can be reestablished with the new relocation process. In the light of forgoing, the research identifies a gap of analyzing relocation issues particularly related to the landslide hazards while focusing the questions; how the institutional involvement has taken place to the landslide-induced internal displacement?, which relocation failures can be identified and are there any possibilities to overcome such failures? Despite the fact that the rebuilding of permanent houses in newly selected areas was completed, the key problem is whether the relocated families are satisfied with the relocation process and whether the issues are typical in this context than the other. These issues set background to the research problem to be examined on the perspectives related to the relocation issues faced by different stakeholders at the phase of post landslide management.

## **LITERATURE REVIEW**

In reviewing the voluminous on human displacement and relocation, a literature that draws from academic and practitioner-oriented writings on subjects are as diverse as ‘forced migration’, ‘legal framework’, ‘protection and assistance’, ‘return’, ‘resettlement’ and ‘reintegration’ etc. No distinct way has been developed for the seeking of durable solutions to relocation of IDPs. Several concepts, ideas and suggestions are presented by different scholars, institutions as well as the respective governments. Most of these ideas are directed to the three solutions: return, resettlement and reintegration. Return is used to describe the process of going back to one's place of 'habitual residence' while relocation is used to describe the process of starting a new life in any place other than the place of original residence, but still within the same country. UN Guiding Principle 28:1 says that competent authorities have the primary duty and responsibility of establishing conditions, as well as providing the means, which allow internally displaced persons to return voluntarily, in safety and with dignity, to their homes or places of habitual residence, or to resettle voluntarily in another part of the country.

Conflict-induced displacement had become prominent among the other displacements during the past three decades until the government defeated LTTE in May 2009 who had been demanding an independent state in Sri Lanka fighting for a separate state in the north and east. Another type of displacement may occur, under different reasons, which takes place one after the other. This multiple displacement has been experienced by some of the war displaced people in Sri Lanka by Tsunami disaster too. Development induced displacement is commonly seen in Sri Lanka since colonial period, and a significant number of people have been displaced as a result of major reservoir projects. Recently two natural disasters; floods and landslides are effectively causing the displacement of people seasonally.

Even though there are several literature on nature and dynamics of human displacement in Sri Lanka, only few researches related to the post landslide displacement and relocation have carried out in different perspectives and dimensions. Robert Muggah (2008) in his new book challenges the current understandings of displacement and the prevailing resettlement regimes. It is distinctive because he argues for a unitary treatment of forced migration, bringing together diverse, multi-disciplinary approaches. Amirthalingam and Lakshman (2009) have attempted to do a livelihood analysis from an economic perspective using a group of IDPs living in Batticaloa district in eastern Sri Lanka. This study investigates how internal displacement affects the livelihoods of the displaced in relation to the emergence of their impoverishment risk. Same authors produced another research paper on gendering displacement with special reference to how women's and men's displacement experiences differ as well as dramatic changes in women's lives

in forced displacement. Even though multifaceted efforts have been addressing the relocation issues, there is still a big gap between theory and practice mainly because the focus has been primarily on the physical aspects of homelessness and destitution. In addition, most of the studies have confined merely to identify the relocation issues related to limited natural hazards like Tsunami and flood but landslide. Sri Lanka has no more experience in relocation of IDPs affected from landslide disaster compare to the war, development, tsunami etc. Recently few settlement programmes have been implemented for those who lost their places of origin because of massive landslides i.e. Hanguranketha and Walapane landslide relocation programs in 2007, Galahawatta landslide relocation program in 2011 and Meeriyabedda relocation programme 2015 are some of major landslide relocation programs which were implemented in local context (Vijekumara & Karunasena 2016).

Several issues have been identified by different researches in relation to relocation process. Much of those directly involve to the newly built houses such as house design, delay of legal transfer process and issuing deeds, poor housing standards, inadequate of financial compensation, keeping all authority of authorities instead of transferring responsibilities to the victims, poor selection of proper locations for housing etc. (Ruwanpura 2009, Steinberg 2007, Buckle and Marsh 2002). The quality of constructed houses and infrastructure during relocation process will influence vulnerability to the next disaster. Therefore, adopted relocation process can totally affect the success or failure of a relocation program. Without considering those important factors relocation procedure can't be succeeded (Hidayat, 2010). Zaman (2002) has stated that several factors were commonly identified as reasons for failure of relocation projects such as lack of adequate baseline information, inadequate relocation planning, lack of consultation and participation of the affected people, budgetary shortfalls for timely compensation payments, insufficient technical expertise and inadequate institutional capacity and weak monitoring program etc. Citing experience from Kothmale development project of Sri Lanka, Takesda, et al. (2008) has revealed that relocated people had an opportunity to select whether they settle near to the previous location with less land plot or settle in newly develop Mahaweli areas with more larger lands. However in Mahaweli area the settlers' income was less stable unlike previous location. But they received better social and physical infrastructure facilities. It has concluded that IDPs who settled Mahaweli area recorded more negative results than those who settled closer to the places of origin. Similarly as per the findings of the assessment made by Kuruppu, et al (2005) on Southern Highway relocation project, state that "many displaced persons continued to stay in the same location even if this meant living in cramped".

One of the main relocation failures rightly identified by researchers is considering the physical structures only rather than addressing the emotional and psychological requirements of the disaster affected communities in the process of resettlement (Perera, et al. 2013, Kenady, et al. 2008). The satisfaction of relocated people has widely discussed in recent literature with special reference to new housing projects. Similarly, the community participation in the relocation process has much appreciated by various researches (Dias, et al. 2016, Ophiyandri 2011, Takesada et al. 2008, Davidson, et al. 2007). Further, some researches pointed out the way in which the community satisfaction is sustained in the process of relocation. In a broad sense security of all aspect such as physical, food, livelihood etc. has become one of the prominent indicators of IDPs satisfaction. Furthermore, integration of five interwoven themes enables community satisfaction such as; materials used in post disaster housing, maintaining the relevant housing standards in housing construction, community participation, house design and provision of grants. Karunasena and Rameezdeen (2010) made an argument that owner-driven housing reconstruction projects are more successful than donor-driven housing reconstruction. They have reviled that relocated people who received houses from the owner-driven approach show a higher satisfaction score compared to the donor-driven approach. Disaster relocation is a part of the disaster cycle, which falls under the phase of recovery. Therefore, relocation that take place in the recovery phase after a disaster is a key for mitigation and preparedness for next disaster by applying structural and non-structural measures. Relocation after a disaster should be taken place where there is better accessibility to infrastructure, free from disaster and access to community services and social network. The quality of constructed houses and infrastructure during relocation process will influence vulnerability to the next disaster (Hidayat, 2010).

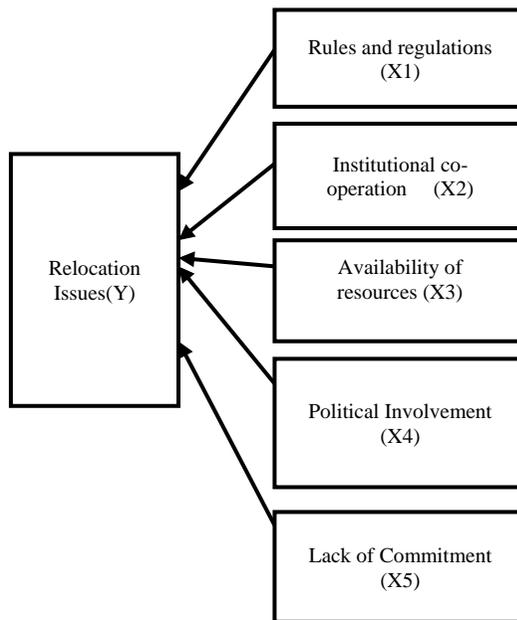
Some argues that relocation process must also be development oriented and planning should focus to the social and physical infrastructure, school and health services, access to employment opportunities, and housing plot allotments and dwellings will meet expanded needs (Smith, 2001). Post landslide relocation also can be preventive or post disaster relocation. In order to reestablish the displaced lives and protect the vulnerable communities living in risk areas, the landslide management should be either as a preventive or post disaster relocation. Hence, the relocation planning should be more specific in landslide disaster relocation to achieve durable solutions (Sherbinin et al. 2011).

Based on this literature review, it can be concluded that adopted relocation process can totally affect the success or failure of a relocation program and the success of relocation process does not only depend on the

physical and economical improvements but also the social factors including the level of satisfaction of relocated communities which play a significant role.

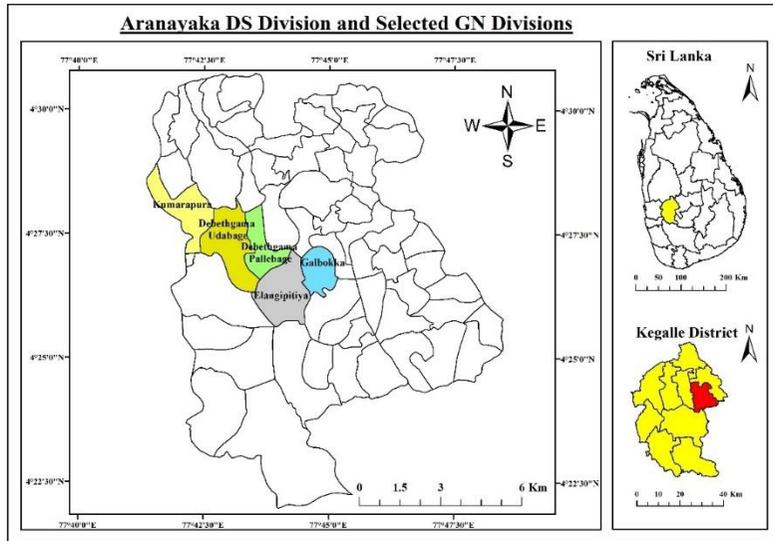
## METHODOLOGY

The present research focuses to identify the relocation issues with special reference to community perspective based on five parameters in the context of post landslide disaster management. The dependent variable (Y) has been set as relocation issues of landslide induced displacement in Aranayake DSD while five independent variables ( $X_i$ - $X_n$ ); rules and regulations, institutional co-operation, availability of resources, political involvement and lack of commitment were identified as shown in Figure 2.



*Fig 2: Dependent variable and assumed independent variables*

Aranayaka DSD is located a mountainous region in the wet zone of Sri Lanka. It experiences heavy average rainfall (2500-3000mm) during the period of May-September\_Southwest monsoon. Approximately 200 families displaced from their places of origin in three villages due to the massive landslide. Most of the families relocated in five new relocation sites as shown in figure 3.



*Fig 3: Location of the Research Sites*

*Table 1: Sample selection*

<b>Relocated Area</b>	<b>Sample</b>
Wasanthagama	05
Ruwandeniya	10
Narammana	10
Kalugala	10
Erabadupitiya	15
<b>Total</b>	<b>50</b>

The methodology demands qualitative measures of those parameters affecting the satisfaction of relocated people, Semi structured formal discussions and group discussions were used as the main data collection techniques. Formal semi-structured interviews were conducted with officers from government and non-government organizations to understand the involvement of the institutions and their capacity for supporting IDPs in the process of relocation. Then ten group discussions were conducted with 50 families selected by purposive judgment sampling as shown in Table 1. The interviewees from relocated families were carefully selected so that represent different viewpoints. In addition, Data regarding to causes of the relocation issues and possibilities of durable solutions were collected mainly through observation and interviews. In addition, the reports, maps and relevant documents published by the Disaster Management Centre (DMC), National Building and Research Organization (NBRO), Kegalle District

Secretariat and Aranayake Divisional Secretariat were collected as the secondary data appropriately. As the most of the collected data and information regarding to the relocation failures are eventually qualitative, the data analysis was mainly undertaken with content and narrative analysis. In presenting the results, a descriptive method was also used focusing the diversity of data and information.

**RESULTS AND DISCUSSION**

***INVOLVEMENT OF THE INSTITUTIONS AND THEIR CAPACITY IN SUPPORTING IDPs***

Involvement of the government and non-governmental institutions is very important in the long term recovery process of disaster management cycle. DMC, NBRO, Ministry of Disaster Management, Kegalle District Secretariat and Aranayake Divisional Secretariat had directly involved to the relocation process of displaced people from Aranayaka landslide as successive government institutions while some other NGOs were playing an active role with the support of security forces and general public. Table 2 presents the opinion of relocated families against the supportive mechanism given by the government institutions at different phases of the disaster Management cycle. Conclusion of narrative analysis on this matter highlights that the involvement of GOs at pre-disaster management phase is very poor as such not given any red notice before the landslide hazard. They believed that they would have safe with their valuable things if there was a proper awareness programme conducted by any of the above institution.

*Table 2: Involvement of the Government Institutions to Disaster Management*

<b>Phase</b>	<b>High</b>	<b>Moderate</b>	<b>Low</b>
Pre Disaster Management			
During the Disaster			
Post Disaster Management			

Authorities claimed that those people had been informed several times about the vulnerability of unstable lands and had sent red notice for evacuation. According to the displaced voice, “only DMC sent a message through the Grama Niladhari Officers about the risk of living in these vulnerable regions long ago. There were no any recent programme to inform people on the landslide risk in this areas neighboring Aranayake site”. However residents recalled a landslide occurring in the 1980s in an area nearby. According to the majority of victims, relevant institutions had not given them any prior warning of a possible landslide. Therefore, it can be identified that, intervention of the government institution in the pre disaster management activities were very poor in Aranayake landslide. Contrary at the emergency phase, institutional assistance was at very satisfactory but post disaster management. It was

reported that Government institutions had given the maximum support to the displaced at the emergency situation. Instantly they have activated to rescue the people from the affected areas and relocated in the temporary welfare centers established in the schools, temples and community centers in the areas. Moreover, they had fulfilled enough requirements of the victims such as foods, cloths, shelters and other sanitary facilities with the support of tri forces and volunteers. Accordingly they have given high response to rescue and recover the people during the emergency situation.

At the post disaster management procedure, intervention of the NGOs were highlighted than the GOs such as IMO, World Vision and HelpAge Sri Lanka. IOM distributed immediate NFI kits (essential non-food items such as cooking and cleaning utensils and hygiene packs) for immediate relief to the affected community by landslide. Immediate relief was initially provided in evacuation centers in the form of temporary shelters (tents) and NFI kits. A total of 300 temporary shelters and 600 shelter kits along with 1700 NFI kits were handed out in Kegalle District. Subsequently, in coordination with the government, 286 transitional shelters were handed over to families providing the community with a permanent and safe place to live.

After the temporary camping process, again there was less involvement from the government authorities was identified. Those were located at the school premises of the Hathgampala, Dippitiya, Rahala, Narangamma, Elagapitiya, Godigamuwa. In addition, Ussapitiya ground was also selected as the temporary camping center. Due to the less intervention of the government authorities, victims had been living for a long time in the camps. There were some conflicts occurred among the people due to the less intervention of the GOs. Government provided 1300.00 Rs for twice a week for fulfilling the basic needs of victims until they relocated. Later on government had granted 400,000.00 Rs for buying a land. A sum of 1,600,000.00 Rs granted to build a house. The residents complained about the financial assistant as those were not equally distributed. However, among the three phases, involvement of the government is highly captured at the stage of during the disaster than the other two phases.

Furthermore, involvement of community organization also one of the major influencing factors under the post disaster management procedure. Due to that, it was easy to handle the rescue process with the combination of Security forces, GOs and NGOs. As mentioned by the officers, there were some issues also due to community involvement. Basically this situation was occurred in the aids distribution processes. However, there are negative and positive effects can be identified regarding to the community involvement in disaster management procedure.

**SATISFACTION AGAINST RELOCATION PROCESS**

Failures of the relocation process are identified in the present study based on three parameters; a) satisfaction of the beneficiaries, b) capacity and commitment of institutions and d) constraints of project planning. As explained in the methodology, conclusions are made according to the five variables (X<sub>1</sub>-X<sub>5</sub>). Parameters such as long delay in project implementation, failures of land selection, issues in designing and construction of new houses, lack of livelihood opportunities, affected by other natural hazards especially high wind, low quality of housing etc. are explained in relation to relocation issues. Table 3 highlights the satisfaction of relocated people on four parameters in relation to three environmental conditions such as physical, economic and social environment.

*Table 3: Satisfaction against physical measures*

Physical measures	Satisfaction						Reason
	Previous			Present			
	H	M	L	H	M	L	
Land Selection							Bureaucracy & natural barriers
Land Tenure							No proper tenure system
Land Extent							Unequal distribution of lands
House Design							No community Involvement

Satisfaction of relocated people against the physical environment is very less comparing with the previous situation. At the place of origin they had had adequate lands, non-problematic land tenure and self-determined house designing according to their willingness. Even though some displaced people had been given a portion of land for building a new house, those who were given a concession to buy a land was not adequate for buying a land. The land selection procedure in the relocation programme was questioned by most of the displaced people due to the bios selection. It was reported that some allocated lands for relocation suffers high wind hazard time to time. Even though there are some families who had been warned to evacuate from their places of origin due to the high risk of landslides, when they claimed new lands, authorities had later on claimed that previous lands were safe to return. Therefore, there is a complex situation related to the physical environment of the relocation in Aranayaka landslide.

Some relocation issues can be observed in relation to the Socio-economic progress of relocated people in new areas particularly in Ruwandeniya, Narammana and Erabadupitiya. One of the main economic issues commonly they faced is inability to adapt to the new socio-economic environment. This has led to increase the anxiety and hopelessness in seeking new livelihood opportunities. As table 4 highlights, relocation failures can be identified three main economic measures such as livelihood support, new employment opportunities and social development. In analyzing the reasons behind these issues, it was observed that lacking of problem oriented approach

for promoting new livelihood means and adapting to the new environment had caused to accelerate relocation issues.

Table 4: Satisfaction against economic measures

Economic Measures	Satisfaction						Reason
	Previous			Present			
	H	M	L	H	M	L	
Livelihood Support		■				■	No durable solution
New Employment Opportunities	■				■		No access to other jobs
Community development		■				■	Constraints for reintegration

Since the most of the relocated people have engaged in cultivating rubber, tea, cloves and cinnamon at their place of origin, they are not in a position to engage in any other employment opportunities. But it has been noted that there were several opportunities for establishing new economic opportunities by using available labourforce. This can be met through different community development programmes.

Table 5: Satisfaction against socio-cultural measures

socio-cultural measures	Satisfaction						Causal factors
	Previous			Present			
	H	M	L	H	M	L	
Reputation and Social Relationships	■					■	Separation of relatives and previous neighbours
Education Opportunities and Facilities	■				■		Exceeding reasonable distance to previous schools
Political Empowerment		■				■	Excluding decision making process and new registration issues
Conflicts with the host			■		■		Living with mixed groups and limited resources and opportunities

Over 86 percent of relocated people had satisfied about their pervious socio-cultural environment in terms of commensality, wealth sharing, strong kingship, religious freedom and cultural identity. In this paper it is focused four parameters that can be used to evaluate the satisfaction of new socio-cultural landscape where they have been newly settled down (Figure 5). Only few months later, it was reported that there were different conflicts had emerged between the newly relocated people and the host community in terms of utilizing common resources such as roads, water canals, springs, natural vegetation etc. According to the displaceds’ view they have no any power to decision making even at the local political context. Since they had to settle down at the areas where far away from the previous schools, access to the education is very poor in compare to the previous life. Separation of relatives

and neighbours who had been living over few decades due to the landslide and not considered such social relations in the process of relocation are the main reasons for their less-satisfaction against the new social life. This is most probably seen in the families who have lost their family members and relatives due to the landslide. As they are new to the relocated places, some people from the host community get some advantages from the relocated people by cheating. The social relationship and commitment is disturbed by the result of relocated in several areas without considering the social environment. Accordingly, people have less satisfaction on the socio-cultural environment.

**POSSIBILITIES OF DURABLE SOLUTIONS**

In order to address the major issue in relocation process – long delay of project implementation, it is recommended that decentralize the responsibilities among the respective institutions. It would help to minimize the delay of legal process, selection of relocation sites and accelerating building housing schemes. In addition, some areas of concern such as socio cultural and economic setup of relocated communities have not yet been properly investigated. Therefore, it is recommended to conduct multidisciplinary studies before making policy decisions as well as implementing new projects (Table 6).

*Table 6: Cause-Effect analysis for durable solutions*

<b>Effect</b>	<b>Cause</b>	<b>Suggestion</b>
Long delay in project implementation	Lack of responsibility and accountability Poor Cooperation	Revisiting the role of each institution and address the legal constraints
Issues in land selection, House designing and construction	Lack of policy makers with interdisciplinary knowledge Lack of Community participation	Recruiting a multidisciplinary team Encourage community based decision making than ethnocentric
Increasing abandonment of newly build houses by resettlers.	Lack of livelihood opportunities Inadequacy of space	Promoting employment opportunities before the relocation
Unexpected adversities like natural hazards, project stuck etc.	Add hoc decision making without a feasibility study	Making compulsory EIA and feasibility study with community participation
Less satisfaction about project bearable	Ignorance of community involvement in house designing	Enhancing the community participation in decision making process
Less satisfaction on social relationship and commitments.	No awareness of social integration	Implementation of well-accepted social integration methods before the relocation

**CONCLUSION**

Landslide disaster has become the seasonal event producing thousands of people displaced followed by the two events; armed conflict and Tsunami

in the history of Sri Lanka. This paper highlights the significance of a holistic approach that should be used to address the long-term issues of relocation process in relation to landslide induced displacement. The case of *Samasarakanda* landslide 2016 has been a pool of research that could be undertaken from different perspectives, particularly relocation issues. Based on the qualitative data analysis, this paper has tested five broad factors directly affected to emerging relocation issues. Results reveal that poor institutional cooperation and lack of commitment have become the most prominent factors behind the relocation failures those could be identified in every measures of post-landslide disaster management such as land selection, new house design and construction, livelihood support, political empowerment, community participation and decision making. In addition, there are some cause-effect relationships not yet adequately addressed by researches in seeking durable solutions for post-landslide relocation.

### References:

1. Buckle, P., Marsh, G. and Smale, S. (2002). Reframing Risk, Hazards, Disasters and Daily Life, *International Journal of Mass Emergencies and Disasters*, Vol. 20:3, 309-324pp.
2. Cernea, M. (1997), The risks and reconstruction model for resettling displaced populations, *World Development*, Vol. 25:10, 1569-1587 pp.
3. Davidson, C.H., et al. (2007). Truths and myths about community participation in post-disaster housing projects, *Habitat International*, Vol. 31: 1, 100-115 pp.
4. Dias, N. T. et al. (2016). Long-term satisfaction of post disaster relocated communities: The case of post tsunami – Sri Lanka, *Disaster Prevention and Management: An International Journal*, 581 – 594pp.
5. Karunasena, G. and Rameezdeen, R. (2010), Post-disaster housing reconstruction: comparative study of donor s owner-driven approaches, *International Journal of Disaster Resilience in the Built Environment*, Vol. 1:2, 173-191 pp.
6. Kennedy, J. et al. (2008). The meaning of ‘build back better’: evidence from post-tsunami Aceh and Sri Lanka, *Journal of Contingencies and Crisis Management*, Vol. 16:1, 24-36 pp.
7. Kurruppu, S. and Ganepola, V. (2005). “Whose Right of Way? Development Induced Displacement”, CEPA Working Paper Series, Center for Poverty Analysis, Colombo.
8. Moe, T. L. & Pathranarakul, P. (2006). An Integrated Approach to Natural Disaster Management: Public Project Management and Its Critical Success Factors. *Disaster Prevention and Management*, 15, pp 396-413.

9. Ophiyandri, T. (2011). Community-based post-disaster housing reconstruction: examples from Indonesia, In: Amarathunga, D. and Haigh, R. (Eds), Post-Disaster Reconstruction of the Built Environment: Rebuilding for Resilience, available at: <http://onlinelibrary.wiley.com>.
10. Perera, T. et al. (2013). An evaluation of success and failures in Hambantota, Siribopura resettlement housing program: lessons learned, *Sri Lanka Journal of Real Estate*, No. 6, 1-15 pp.
11. Robert M. (2008). Relocation Failures in Sri Lanka: A Short History of Internal Displacement and Relocation, *Social Change*, Vol 38: 4, 772-775 pp.
12. Ruwanpura, K.N. (2009). Putting houses in place: rebuilding communities in post-tsunami Sri Lanka, *Disasters*, Vol. 33:3, 436-456 pp.
13. Smith A.O. (2001). Displacement, Resistance and the Critique of Development: From the grass root to the Global, Oxford University Press, London.
14. Steinberg, F. (2007). Housing reconstruction and rehabilitation in Aceh and Nias, Indonesia – rebuilding lives, *Habitat International*, Vol. 31: 1, 100-115 pp.
15. Takesada, N., Manatunge, J. and Herath, I.L. (2008). Resettler choices and long-term consequences of involuntary resettlement caused by construction of Kotmale Dam in Sri Lanka, *Lakes & Reservoirs: Research & Management*, Vol. 13: 3, 245-254 pp.
16. Vijekumara P.A. (2018). A Review on Donor Driven Housing Constructions in Post Disaster Reconstruction Projects - A Case Study on Kegalle Relocation Programme, Sri Lanka.
17. Vijrkumara, P.A & Karunasena G. (2016). Analysis on Relocation Process: Landslide Disasters in Sri Lanka (Conference Paper), Available at; <http://dl.lib.mrt.ac.lk/handle/123/12771>.
18. Zaman, M. (2002). Relocation and Development in Indonesia, *Journal of Contemporary Asia*, Vol. 32:2, 255-266pp.