

**AN EVALUATION OF STAKEHOLDER SATISFACTION
IN POST-CONFLICT RESETTLEMENT HOUSING
PROJECTS IN SRI LANKA**

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Degree of Master of Science in Project Management

Department of Building Economics

University of Moratuwa
Sri Lanka

March 2021

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Thesis submitted in partial fulfillment of the requirements for the degree
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Declaration

I declare that this is my own work, and this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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Date

The above candidate has carried out the research for the master thesis under my supervision.

.....

Prof. (Mrs.) Yasangika Sandanayake
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.....

Date

Dedication

To

My beloved family and husband who showed me the path of life.....

Acknowledgement

This project management studies provided me with an opportunity to develop my career path. This research study is the result of generous support of several persons. Therefore, I would like to be grateful to all those who contributed to the success of this project.

First, I would like to express my special thanks of gratitude to my supervisor Prof. Yasangika Sandanayake, Professor in the Department of Building Economics for having guided me through this process under her excellent supervision. Her guidance, comments and supports contributed significantly to the successful completion of this research.

I would also like to thank Ch QS. Indunil Seneviratne, Programme Director of MSc in Project Management for providing this opportunity and Ch QS Vijitha Disaratna, Senior Lecture for his expert comments and support which helped me to complete the research.

I also thank to the academic staff and non-academic staff of the Department of Building Economic for their facilitation in various ways.

Also, I wish to thank to all respondent from the field, who actively participated in the study for without their corporation, this study would have been a success.

I owe a special thanks to my office staff for their help and encouragement throughout this study.

Last, but not least, I like to extend my deepest thanks to my husband and family members for their fullest support and encouragement to complete this study.

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Abstract

The three decade long major internal displacement in the Northern and Eastern Provinces in Sri Lanka caused by conflict came to an end in 2009. This has led to a massive housing reconstruction project drive to recover the affected people. Stakeholder satisfaction is an important criterion for measuring project success. Disaster reconstruction housing projects are of no exception in this regard.

This study aims to evaluate the project stakeholders' satisfaction of post-conflict resettlement housing projects in the Northern Province in Sri Lanka. In order to achieve the aim, the study initially conducted a literature review on the disaster phenomenon, damages and displacements together with a detailed study on post-disaster resettlement housing projects. For empirical investigation, the research employed a mixed method research approach in two stages. In Stage 1, an investigation of stakeholder's expectations and present situation was carried out using a qualitative approach, in where, interviews with stakeholders in 3 projects were conducted. In Stage 2, a quantitative approach through the structured questionnaire survey was carried out with 102 stakeholders to evaluate their level of satisfaction. Gathered data in Stage 1 was analyzed using manual content analysis and Stage 2 was analyzed by using Box Plot technique and Wilcoxon Signed Rank test.

Success of the housing project was determined though fulfilling the Stakeholders' expectation and requirements and this creates an impact on the satisfaction level of the housing project. Especially, previous housing experiences had influence in expectation and satisfaction of the current housing project. Both owner-driven and donor-driven housing project's stakeholders' satisfaction levels were mainly dependent on size of the previous house, materials used in previous houses, quality of construction, and design of the house. The research further revealed that all stakeholders are satisfied with most of the factors of satisfaction in both owner-driven and donor-driven housing projects, especially with the physical condition of the project. Meanwhile, the research also identified that there have been less satisfaction levels with regard to location selection and water and sanitary requirements, as the coordinators have failed to view other elements that are expected by the beneficiaries, which include cultural and social elements in donor driven housing projects.

Keywords: *Post-Disaster Housing, Rehabilitation Housing Projects, Housing Satisfaction Survey, Stakeholder Satisfaction, Owner-Driven & Donor-Driven Housing Project.*

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List of Abbreviations

Abbreviation	Description
ADB	Asian Development Bank
CBO	Community Based Organization
DDRA	Donor driven reconstruction approach
DDRH	Donor driven resettlement house
EC	European Commission
GOSL	Government of Sri Lanka
IDP	Internally Displaced People
INGOs	International Non-Government Organization
NEHRP	North East Housing Reconstruction Programme
NGOs	Non-Government Organization
ODRA	Owner driven reconstruction approach
ODRH	Owner driven resettlement house
PDRH	Post Disaster resettlement Housing Project
UN	United Nation
UN Habitat	United Nations Human Settlement Programme
UNHCR	United Nation High Commissioner for Refugees
UNICEF	United Nations International Children Fund

Chapter One: Introduction

1.1. Background

The term of displacement means movement of population from their own place of usual residence to another area (De Sherbinin, Castro and Gemenne, 2010). Further to the authors, this movement can be either internal or international. Persons or groups who have been forced or obliged to flee or leave their homes or places of habitual residence and who have not crossed an internationally recognized state border are known as internal displaced peoples (IDPs) (UN Guiding Principles on Internal Displacement, 1998). According to their report, people who have been displaced or crossed internationally or border of a country are known as refugees. According to the World Bank Report (2010), displacements are caused by three factors, i.e. (a) disaster induced displacement, (b) conflict induced displacement and (c) development induced displacement. Displacement creates specific needs among those affected. Resettlement is one of priority needs for IDPs and Refugees (World Bank Report 2010).

According to Muggah (2008) resettlement is defined as a controlled and planned relocation of populations from the existing place to another. As stated by the World Bank (2011), resettlement remains to be the process of displaced persons to replace their housing, assets, livelihoods, land, access to resources and services as well as to restore their socio-economic and cultural conditions. Ariyaratne (2011) highlights that the term 'resettlement' in the context of Sri Lanka has been used to describe the movements from the transit camps. Luchi (2010) stated that the post disaster resettlement helps to develop the inherent characteristics of the displaced segments. Resettlement programs in the global context have been always implemented through the coordination of the state, various implementing bodies and contractors.

The international experiences of resettlement program reveal that it is difficult to achieve success due to various factors affecting the project or failure of the resettlement program. Expectations and requirements of stakeholder as well as the level of stakeholders' involvements are fundamental for the success of the resettlement projects, whilst users'

dissatisfaction and non-acceptability of the projects are significant risk in resettlement projects (Danquah, et al, 2014).

This study is focused on resettlement projects in Sri Lanka. In Sri Lanka, there are three main causes to be addressed in regards to induced internal displacement such as development, natural disasters and conflicts (Agalya, 2014). The conflict that spanned for more than 3 decades resulted in several waves of displacement, property damages and human losses.

Jayatilaka (2015) stated that according to the joint report of the UN and government reports, there were 516,150 IDPs in the Northern and the Eastern provinces in 2009. At the same time, conflict had led to the destruction or damage of 326,000 housing units in the North and East as well (World Bank report 2012). After the end of the conflict, Sri Lankan Government set providing resettlement for internally displaced people (IDPs) as one of the priorities in their agenda.

According to the Ministry of Resettlement Reports (2009- 2014), Government of Sri Lanka has begun resettlement programs in the Northern Province of Sri Lanka since 2009. Further Sri Lankan Government has now completed the resettlement of majority of the IDPs who were displaced during the conflict.

There were three main objectives in these resettlement and reconstruction programs as follows

- Resettle IDPs as quickly and safely as possible in their places of origin,
- Provide them better facilities than they previously had by improving basic infrastructure, and
- Provide services and livelihood facilities to enable their recovery (Shamini, 2012).

Resettlement programs were carried out by the Government of Sri Lanka and other local government organizations with assistance of the World Bank, UN Agencies (UNHCR, United Nations International Children's Emergency Fund, UN Habitat, United Nations Development Program), other INGOs (United Methodist Committee on Relief, Swiss

Agency for Development and Corporation, Norwegian Refugee Council), Local NGOs (Sri Lanka Red Cross, Sarvodaya, Offer Ceylon) and other foreign Governments (India, Australia, Pakistan, Saudi Arabia). World Bank is a pioneer for funding partner for North East Housing Reconstruction Program (NEHRP). Indian Housing Projects, NEHRP, and Swiss Agency for Development Corporation Housing Program are some other major projects implemented in the Northern Province. Further Owner Driven Approach and Donor Driven Approach are used in the Northern province. There were 152,369 families and 502,957 persons resettled as at 28.02.2014 as well as 163,945 families and 552,010 persons resettled as at 31st, December 2016 in Northern Province of Sri Lanka (Ministry of Resettlement, Reconstruction, 2014 and 2016.; World Bank Report 2012).

However, resettlement and reconstruction programs had many challenges to Sri Lanka. Especially, challenges arose from limited state capacity and endemic governance weaknesses. Further, resettlement and reconstruction require the participation and coordination of many stakeholders such as Governmental, Non-Governmental, private institutions and people. Moreover, quality and outcome of the project depends on how well the different stakeholders work together (Clinton, 2006). This had an impact on the level of satisfaction of different level of stakeholder of resettlement projects in Sri Lanka.

1.2. Research Problem

Many houses have been severely damaged in the Northern Province during the period of 1983-2009 (World Bank report, 2012). Resettlement and Housing reconstruction plays a key role in the rehabilitation projects (Brun and Lund, 2008). In Sri Lanka, there are two distinct approaches that have been used in rehabilitation projects (Agalya, 2014), which include the approaches of owner-driven and donor-driven in housing schemes (Barakath et al 2008).

Many post disaster resettlement housing related literatures often emphasize the limitations or the problems associated with the donor driven approaches or housing schemes (Barakath et al 2008.; Hayles, 2008.; Brun and Lund, 2008). However, there are no distinct differences that have been spotted clearly in the scholarly discussions that

point-out the exact weaknesses and strengths of these different post-conflict resettlement housing schemes.

Success factor of post-disaster and post-conflict houses depend on the degree to which the stakeholder needs are met (Danquah et al, 2014). Further, stakeholder satisfaction and coordination play a key role in these projects, where conflicting needs of different stakeholders are identified to be a major problem in the attainment of satisfaction. According to Hayles (2008) there are instances where beneficiaries themselves have conflicting needs. As pointed out by Barakat (2003), although certain needs of beneficiaries are able to be met by the project implementers, there are certain aspects that are left without consideration, which lead to failure factor of the post-conflict houses (Hayles, 2008.; Miyata & Manutangee, 2004). Such failures often result in poor satisfaction among the stakeholders. Therefore, there is a need to investigate whether the resettled housing projects have yielded effective results for stakeholder satisfaction.

1.3. Aim of the Study

The aim of this study is to evaluate the project stakeholders' satisfaction of post-conflict resettlement housing projects in Northern Province in Sri Lanka.

1.4. Objective of the Study

The objectives of this study are to:

1. Critically review the literature on resettlement housing projects and stakeholder satisfaction in disaster reconstruction process.
2. Investigate stakeholder requirements and expectations in resettlement housing projects.
3. Examine the level of stakeholders' satisfaction in resettlement projects.

1.5. Outline of Research Methodology

The research methodology includes literature survey, research approach, data collection and data analysis.

1.5.1. Literature review

A comprehensive literature review was carried out to evaluate the project stakeholders' satisfaction of resettlement housing. Literature review was extended on the problem and causes related to the success of housing projects, who are the stakeholders in housing projects and stakeholders' perceptions about housing projects in Sri Lanka and other countries by referring books, journals, conference articles and past research articles both published and unpublished.

1.5.2. Data collection and analysis

This research employed mixed method research approach in two stages.

Stage 1: In-depth Interviews with Stakeholders in 3 Projects

In Stage 1, an investigation of stakeholder's expectations and present situation was carried out using qualitative approach, where, face to face interviews with stakeholders in 3 projects were conducted. Those stakeholders include beneficiaries, donors, implementing partners and government bodies. The sample includes 74 respondents in total, which include the members of 6 house-hold beneficiaries, 2 implementing partners, 3 donors, and 2 government bodies. The interview guidelines are given in Appendices B, C, D and E. The qualitative data gathered in Stage 1 from interviews were manually analyzed by extracting views from the guidelines. Hence, manual content analysis was used for Stage 1 data analysis.

Stage 2: Questionnaire Survey

In Stage 2, a quantitative approach through a structured questionnaire survey was carried out with 102 stakeholders to evaluate their level of satisfaction. 4 different questionnaires were used to collect the data for each of four respondent groups. The questionnaire survey instruments are annexed in Appendices F, G, H and I.

Quantitative data gathered from structured questionnaires in Stage 2 were analyzed through SPSS using techniques such as box plots, Wilcoxon, and Sign Rank Tests. Stakeholder satisfaction levels were studied through these quantitative techniques.

1.6. Scope and Limitations

Data collection of this study was limited to the Northern Province of Sri Lanka and it was further confined for three districts (Jaffna, Kilinochchi, Mullaitivu) in the Northern Province, which are vastly affected by the conflict. This study only looks into the conflict-induced resettlement housing projects. The views included into this study are limited four main stakeholders covering beneficiaries, donors, implementing partners, and the government bodies. Further, the research findings are limited to analysis of post-conflict housing project and cover the period from 2009 to 2018.

1.7. Chapter Breakdown

The chapter breakdown of this dissertation is explained below.

Chapter 1

First chapter comprises the brief introduction to the topic which deals with background of the topic, research problem, aim and objectives of the study, and scope and limitations. It also focuses on the research methodology to be adopted for the study.

Chapter 2

This Chapter presents the theoretical literature about the research topic. It also explains various studies and articles done previously on the topic.

Chapter 3

Chapter three contains the methodology adapted for the study. This includes the analysis and interpretation of the data collected from the respondents and also Statistical Analysis Methods adopted for this research.

Chapter 4

Chapter four describes findings of qualitative data analysis. This finding mainly focuses on stakeholders' expectations related to the resettlement housing projects in the Northern Province.

Chapter 5

This chapter presents main findings and discussions of Quantitative analysis, which are inferred from the collected data through tables, Charts, graphs and various pictures. Findings mainly on the significant problem and causes behind the identified problems and satisfaction level of different stakeholders related to the resettlement and reconstruction housing projects in Sri Lanka.

Chapter 6

Chapter six provides conclusions of the study. It also gives recommendations for successful resettlement and reconstruction housing projects in the Northern Province of Sri Lanka.

1.8. Summary

This research is conducted to evaluate the project stakeholders' satisfaction of post conflict resettlement housing projects in the Northern Province in Sri Lanka. In order to achieve this aim, four objectives are listed as; Critically review the literature on resettlement housing projects and stakeholder satisfaction in disaster reconstruction process, Identify stakeholder requirements in resettlement housing projects, Investigate and examine the level of stakeholders' satisfaction in resettlement projects. Mix method approach was used to evaluate the satisfaction level of stakeholders. Structured questionnaires, interviews and documentary analysis were used to collect the data to achieve objectives. The scope of the research is limited to evaluate the stakeholders' satisfaction based on housing features, facilities and other institutional aspects in the Northern Province in Sri Lanka.

Chapter Two: Literature Review

2.1. Introduction

Literature review of a research accomplishes several objectives. It helps the researcher to get an idea about similar types of studies undertaken previously. Considerable research has been done on various aspects of resettlement housing projects in the Northern Province of Sri Lanka. However, there is lack of literature on the stakeholder satisfaction of resettlement housing projects in Sri Lanka. Therefore, in order to completely understanding the various aspects of resettlement housing projects fully, it is necessary to examine the research which has already done.

This chapter reviews the context of disaster, disaster reconstruction process, displacement, resettlement, resettlement housing projects, details of implementing agencies involving in housing projects in the Northern Province of Sri Lanka, stakeholders of housing project, stakeholder expectation and their requirements and stakeholder satisfaction in both local and global contexts. Therefore, this chapter gives a broader knowledge on displacement and resettlement aspects in Sri Lanka and in other countries.

2.2. An Introduction to Disaster

Disaster is an exceptional event which suddenly kills or injures large number of people while causing major economic loses (World Disaster Report, 2003). The United Nations defines disaster as a sudden or major misfortune event that disturbs the basic structure and functioning of the society, causing human, material and environmental damages (United Nations International Strategy for Disaster Reduction, 2009).

The Federal Emergency Management Agency (2017) stated that a disaster can only happen if an extreme event exceeds a community's ability to cope up with that event. Further, disaster impacts include physical and social impacts. The physical impacts can be both lethal and nonlethal, and property damages and there can be other impacts such

as psychosocial trauma, demographic, economic, and political impacts, these impacts develop over a long period of time and can be difficult to assess when they occur.

McDermott et al. (2014) stated that disasters cause significant impacts on developing countries. They have long-term impacts on physical, social and economic sectors due to the destruction of infrastructure and displacement of population. Having considered aforementioned definitions disaster can be defined an unexpected disruption event which causes great negative impacts on physical, social, economic and environmental systems and human suffering. Thereby necessitating external assistance for recovery and mitigate the damages from disasters.

2.2.1. Types of Disasters

Disaster can be categories into two types as follows (Khanna 2005):

1. Natural disasters: *Disaster which occurs from natural phenomena. Examples for natural disaster are cyclones, tsunamis, earthquake, landslides, floods, drought and fires World Bank report (2010. pp 12). Further Below, R. et al., (2007), divides the natural disaster into five categories i.e. Biological, Geophysical, Meteorological, Hydrological and Climatological.*
2. Man-made disasters: *Disaster which occurs due to human negligence. Manmade disasters are associated with industries or energy generation facilities and include explosions, leakage of toxic waste, pollution, dam failure to name few. This typology of disaster includes conflicts and war (Robinson 2003). He further indicated that conflicts and wars are often caused by human actions and resulted in large scale mortality, displacement, human rights violations and food insecurity.*

According to the United Nations International Strategy for Disaster Reduction (2009), a most common feature or characteristic that prevails for disaster is that they bring about large-scale destruction. On the other hand, disaster can be followed by death, injury, disease, negative impacts on physical and mental well-being, damages to property and environment, destroyed assets, and damages in the economy.

2.2.2. Disaster reconstruction

Reconstruction is referred as an innovative issue solving approach, which is crucial to development after a disaster or crisis (Burn and Lund, 2008). Jabareen (2013) has stated that reconstruction offers a greater opportunity to reduce the risk of disaster. Kennedy et al. (2008) have explained that disaster reconstruction process is not merely reviving back to pre-disaster condition but it is addressing existing vulnerabilities of affected people and developing toward sustainable solution for disaster. Further they argued that disaster reconstruction should “build back better” in terms of safety, security and livelihoods.

Most studies on disaster reconstruction are mainly focused on housing reconstruction and build the environment (Salazar and Jigyasu 2010; Barenstein 2006, 2008, 2010; Samaddar and Okada 2006; Arslan and Unlu 2006; Barakat 2003), since housing is an essential and complex asset linked to the livelihoods, health, education, security social and family stability (Richard et al., 2016).

Kennedy et al. (2008) declare that the disaster housing reconstruction should ensure the integration of five elements. As they explain, materials used in post disaster housing reconstruction, maintaining relevant housing standards, type of houses, engagement of communities and provision of grants are important elements to ensure communities satisfaction in disaster housing reconstruction activities. Furthermore Jordan et al., (2015) sated that the disaster reconstruction is a process that requires longer period of time because of extensive planning and also it brings in a variety of stakeholders ranging from local NGOs to International Funding Agencies.

2.3. Displacement

The term of displacement means as movement of population from their place of usual residence to another area (De Sherbinin, Castro and Gemenne, 2010). Further to the authors, this movement can be either internal or international. The Oxford Dictionary (2014) defined “displacement as the enforced departure of people from their homes, typically because of war, persecution, or natural disaster”. There are two categories in displaced people known as refugees and internally displaced persons.

World Bank (2010) introduced another type as involuntary displacement. This type of displacement is decided by external agent when there is no possibility to stay. Moreover, displacement refers to eviction of people from their habitual homeland without adequate compensation, guarantees or mechanisms of social support.

Having considered all above-mentioned definitions, displacement can be broadly defined as; “A process that involves physical eviction from dwelling, land and other assets, typically due to war, persecution, or natural disaster”.

2.3.1. Causes for displacement

As the authors have stated based on World Bank Report (2010), the displacements are caused by three factors, i.e., natural disaster induced displacement, conflict induced displacement and development induced displacement (Fernando et al, 2009 and Thiyagaraja, 2012).

Natural Disaster displacement

Natural disaster induced displacement means people displace due to natural disasters namely landslides, droughts, cyclones, earth quakes and floods (Chandran 2012). Literature identified the natural disaster displacement is displacements that occur due to the natural disasters. A disaster can happen in many ways and this can lead to displacements or in other words, such displacements can get triggered by natural or human-made hazards (Fernando et al, 2009 and Thiyagaraja, 2012).

When a disaster occurs, it results in a need of movement including physical assets and of the location. This typically results in consequences such as inability to recover from the economic and social damages that happened due to the disasters. There is no doubt that disasters or demolishing are always associated or correlated with the aspects of social and economic costs to the society and to the people. Hence, humanitarian intervention that includes aspects such as providing shelters and aids help with these disaster movements in big deal or scale UNDRR (2019).

Development induced displacement

Sherbinin (2010), stated that development induced displacement, is the eviction of communities from their original place due to make the development projects. The development factor remains to be the key challenge for the humanitarian actors. (Siddiqui 2012). Further he indicated eight main causes of development-induced displacement, namely:

- Construction of dams, hydropower plants, irrigation projects, artificial reservoirs and canals,
- Development of transportation,
- Urbanization, re-urbanization and transformation of urban space,
- Mining and transportation of resources,
- Deforestation and expansion of agricultural areas,
- Creation of national parks and reserves,
- Population redistribution schemes, and
- Other causes include creation of specific entities within a large surface area, such as airports, ports and landfill sites.

The displacement is often seen as a negative aspect that is correlated with factors such as dams, mining, roads, and power projects that are generally aimed to serve greater welfare, certain land and property is required. This is expected to damage the natural flow of the ecosystem of the affected society. Displacement on the other hand is also emphasized to be a consequence of a model of development that enforces technical as well as economical choices in order to impose those options that can trigger environmental options (Bartolome et al. 2000). Development is a major driver of displacement and a challenge for humanitarian actors.

Conflict induced displacement

Conflict induced displacement is an unlikely situation in which people leave their homes to escape political violence. The term conflicted displacement in the literature is used to express the displacements that occur due to various conflicts that occur in different contexts. In other words, the type of conflict can be in any form but it causes displacement to people. A conflict can be in the forms of civil war, international intervention, a

genocidal government or a prolonged violence, and many other political factors. Conflict induced displacements are more damaging since they are associated with violence (Lischer, 2009).

2.3.2. Problems of displacement

ADB (1998. pp 01) stated that the displacement creates “loss of physical and non-physical assets, including homes, communities, productive land, income-earning assets and sources, subsistence, resources, cultural sites, social structures, networks and ties, cultural identity, and mutual help mechanisms”. Further the World Bank (2014, pp 93) explained that the displaced people are affected not only physically but also affected by all other ways. Table 2.1 shows the problems of displacement identified by various researchers.

Table 2.1: Problems of displacement identified in previous studies

Problems of Displacement	[1]	[2]	[3]	[4]	[5]
Loss of land	√	√	√	√	√
Loss of employment/ Loss of income	√	√	√	√	√
Loss of shelter/ Housing Damage	√	√	√	√	√
Marginalization (<i>reduced economic mobility</i>)	√	√			
Increased morbidity and mortality	√	√			√
Greater food insecurity	√	√		√	
Loss of access to common property/services	√	√	√	√	
Social disarticulation	√	√	√	√	√
Health impact/ Injury			√		√
[1] World Bank, 2014; [2] Michael Cernen, 1999; [3] UNDRR, 2019; [4] Haigh, R., Amaratunga, D. and Keraminiyage, K. 2006; [5] Siddiqui, 2012.					

Moreover, the conflict induced displacements often come with a unique set of problems. These include aspects such as discriminations in the access to assistance, and the provisional discriminations in relation to the providence of aids, relocation or rehabilitation related problems, sexual or gender-based violence and unhealthy forms of returning to the home lands that can result in various security issues (Wunubo, 2018).

2.3.3. Term of IDPs and refugees

There are two types of displaced people known as IDPs and refugees. UN Guiding Principles on Internal Displacement (1998) identifies IDPs as “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border”. Further, United Nations Secretary-General, defined internally displaced persons as: “persons or groups who have been forced to flee their homes suddenly or unexpectedly in large numbers, as a result of armed conflict, internal strife, systematic violations of human rights or natural or man-made disaster, and who are within the territory of their own country”.

There were 28.8 million IDPs around the world from 2011 up to 2012 and tens to hundreds of thousands of people displace each year globally. Further, IDMC (2016) stated that there were 40.8 million IDPs by conflict and violence in 2015 as of 31st December 2015. It has increased by 6.9 million in 2016 (IDMC, 2016; IDMC, 2017). Moreover, IDMC (2016) estimated that there were up to 73,700 IDPs in Sri Lanka as of July 2015. During the period from 2008 to 2013, a total of 2.17 million people was newly displaced by disasters mainly due to cyclones and floods (IDMC, 2014).

According to the Convention Relating to the Status of Refugees (1951), Refugee is a person who “owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, is outside his country of nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country.” In Sri Lankan context, refugees are defined as “any person of legitimate Sri Lankan origin who has been forced or obliged to flee or to leave Sri Lanka as a result of or with intention of avoiding the effects of armed conflict situations of generalized violence and crossed the border of Sri Lanka” (Ministry of Resettlement, 2013).

In Sri Lanka, there are refugees due to armed conflict. There are 102,000 Sri Lankan refugees in India, and total of 4,870 such refugees returned back to Sri Lanka from 2011 up until 31st of December 2016 (Ministry of Resettlement, 2013).

2.3.4. Displacement in Sri Lanka

Sri Lanka is experiencing different type of displacements, where displacement commonly caused by disasters induced by natural hazards, civil conflicts and development projects (IDMC, 2017). Chandran (2012) declared that most of the displacements occurred by internally and it is not new experience for Sri Lanka. According to Siriwardhana (2014), major internal displacement is started in 1983 and came to an end in May 2009 caused by the civil conflict. IDMC (2017) indicates there were 44,000 IDPs who have been displaced by conflicts and violence as of 2016 as well as 117,000 refugees as of 2016. Refugees displaced mainly to the countries such as India, Europe , Canada and Australia.

Development induced displacements also occurred in Sri Lanka over the past half century. This displacement occurred due to some development elements such as water supply (dams, reservoirs, irrigation), transportation (roads, highway, canals), energy (mining, power plants, oil exploration and extraction, pipelines) and the rapid urbanization (McCully, 1996).

In Sri Lanka, many people have been relocated from colonial times due to large-scale projects that tried to expand and diversify agricultural production. After post-independence period, large dam projects lead to mass displacement. As well as displacement has mainly occurred due to Mahaweli irrigation development, nearly 12,000 families were displaced (Kuruppu and Ganepola, 2005). More over southern expressway is very first largescale road development project also lead to many internal displacements. Its length was Nearly 128km from Kottawa to Matara district, which relocated more than 1,300 families in 2006–2011 (Jayawardena, 2011). Since then, development-induced displacements have become more common also in urban areas, i.e. Colombo and its neighboring municipalities (Jayawardena, 2011).

2.3.5. Displacement problems in Sri Lanka

In Sri Lankan context major displacement was held due to the conflict and tsunami (Siriwardhana, 2014). The conflict that spanned for more than three decades resulted in several waves of displacement, property damages including houses and human loses. Jayatilaka (2015) stated that according to the joint report of UN and government reports 516,150 IDPs in the Northern and Eastern provinces faced dual disasters, i.e. conflict and natural disaster in 2009, Further, Siriwardhana and Wickramage (2014) indicated that “IDPs in Menik Farm Relief Villages in Vavuniya, faced lot of problems such as over crowded, spread of communicable diseases, insufficient access to medical care, clean drinking water, lack of freedom of movement, separation from family members and psycho social problems among IDPs to name few”.

After the end of civil conflict in 2009, GoSL had begun an accelerated resettlement program, in which, the majority of internally displaced persons (IDPs) had been officially returned to their original places, but they remained in a highly vulnerable situation and continued to struggle to find durable solutions (IDMC, 2016).

2.4. Resettlement

Resettlement is a process to assist the displaced persons to replace their housing, assets, livelihoods, land, access to resources and services as well as to restore their socioeconomic and cultural conditions (World Bank, 2011). Further *Encyclopedia of World Environmental History*, defined resettlement as "the process through which populations displaced from their habitat and/or economic activities relocated to another site and reestablish their productive activities, services, and community life". Moreover, AusAID (2012) defined the term resettlement as a process that helps displaced people to build a new life in a different location as well as mitigates the effects of displacement.

According to Woube (2005) resettlement is defined as "the process by which individuals or a group of people leave spontaneously or unspontaneous their original settlement sites to resettle in new areas where they can begin new trends of life by adapting themselves to the biophysical, social and administrative systems of the new environment".

Resettlement can be understood in two different ways as follows (Terminski, 2013): -

1. Resettlement may be a process associated with physical relocation of people to their original homes or places from camps or shelter.
2. Resettlement refers as a process of physical, pre-planned relocation, combined with appropriate support mechanisms, including social support, in the new location.

Further, IDMC (2005, pp 10-21) declared that IDPs can be resettled in one of three locations namely:

1. In their place of original,
2. At an authority determined destination place,
3. At a place which they have chosen by themselves without their original place.

In Sri Lankan context, resettlement refers to as all movement of displaced people from transit camps or places of temporary stay to either the original residence or to different parts of the country (Ariyaratne, 2011). GoSL had begun an accelerated resettlement programme towards end of 2009, in which the majority of internally displaced persons (IDPs) had been officially returned to their original places. There were 800,129 persons consisting of 233,835 families have been resettled in the Northern and Eastern Provinces in Sri Lanka as at 30th of September 2015, as well as 163,945 families and 552,010 persons resettled as at 31st December 2016. Further 166,672 families and 556,338 persons resettled as at 31st December 2017 in the Northern Province of Sri Lanka (Ministry of Resettlement, Reconstruction, 2015, 2016 and 2017).

2.4.1. Resettlement housing projects

Wasantha (2011) describes house is a building that functioning as the primary shelter, building for human habitation, and provides multiple needs to inhabitant, in the form of physical as well as psychological needs. Barakat and Zyck (2011) describe a house as a unique form of dwelling that linked the social, economic and political realities of the individuals. Barakat (2003), indicated that house is a social centre and form of identity.

Further he stated housing is essential to the wellbeing, complex asset; with links to livelihoods, health, education, security and social and family stability.

Conflict and natural disasters are caused for destruction of homes or homeless through displacement. Therefore, there is necessity to resettle and build the house in the same area or in other safety place during the disaster recovery phase (Sherbinin et al. 2011). Resettlement housing project is a significant priority among the disaster reconstruction efforts, and local and international actors have given much attention for the resettlement housing projects (Richard, 2016). According to Brun and Lund (2008), resettlement housing projects are interlinked concepts for marginalized groups. In order to support themselves with a livelihood, the displaced people should first have a house. Post disaster resettlement projects have been implemented several times for different types of disaster affected communities in both the local and global context.

Shaw and Ahmed (2010), stated about post disaster resettlement projects modes; he classified that into two types such as provision of assistance to rebuild their damaged house or new house in the same places and providing new housing scheme in another location. Resettlement housing facilities differ from country to country and it requires well planning and management activities (Badri et al., 2006).

2.4.2. Approaches of resettlement housing projects

Barakat (2003) classified two approaches of housing projects, namely Donor Driven Reconstruction Approach (DDRA) and Owner Driven Reconstruction Approach (ODRA). Similarly, Karunasena and Rameezdeen (2010), identified that Sri Lanka has been using mainly these two approaches: i.e., donor-driven reconstruction approach and the owner-driven reconstruction approach. Further, they have explained that in the donor-driven reconstruction approach. Government or Donor of the house will lead the entire housing reconstruction process including designing, planning, financing and other technical works, while Owner-driven reconstruction approach allows owner to undertake housing reconstruction work themselves with external financial and technical assistance. According to Barakat (2003), “ODRA is possible when labour is available, housing design is relatively simple, communities have a tradition of self-building and there are

no strict time pressures”. Moreover Barentein (2005), identifies the two types of DDRA as Donor-driven reconstruction in relocated sites and Donor-driven reconstruction in same sites.

Having considered many literatures, ODRA housing projects are more successful than DDRA housing land (Perera et al. 2013; Barakat 2003; Karunasena and Rameezdeen, 2010; and Barenstein, 2005). Further, they explained that communities who received houses under the ODRA show a higher satisfaction level than the communities who received houses under DDRA in Post disaster and conflict housing projects. Authors explained comparing parameters are durability of the houses, space availability, incorporation of beneficiary requirements at the design stage, flexibility to make changes in future, location of the houses, and size of the house and land (Perera et al. 2013: Barakat 2003: Karunasena and Rameezdeen 2010: and Barenstein 2005).

2.4.3. Resettlement housing projects in Sri Lanka

Sri Lanka experienced a period where natural and man-made disasters coincided. End of the conflict in 2009, 280,000 people were internally displaced UCPD (2015), while conflict leading to the destruction or damage of 58% of the total housing stock in the Northern and Eastern Provinces (World Bank, 2012). Displaced people were compelled to live in a temporary shelter and in camps or in friends’ and relatives’ houses (World Bank Report, 2012). Therefore, resettlement housing projects formed a major part in post disaster and post-conflict agendas (Barakat, 2003).

In Sri Lanka the government is playing a prominent role in housing sector. Resettlement housing program was undertaken by government coordinated with the World Bank, Office of the United Nations High Commissioner (UNHCR) for Refugees, United Nations International Children Fund (UNICEF) and other International Non-Governmental Organizations, National Non-Governmental Organizations (Ministry of Resettlement, 2013). In the Northern Province of Sri Lanka, some housing projects were completed and some are on-going. The following are the major projects which are implemented to resettled people in the Northern Province of Sri Lanka. Study has used these three projects for primary data collection.

2.4.3.1. Indian housing project

This is a housing reconstruction and repair of houses project under post-conflict rehabilitation support to Sri Lanka, which was undertaken by the Government of India with collaboration of Government of Sri Lanka. This project implemented through four implementing agencies namely UN-Habitat, International Federation for the Red Cross and Red Crescent Societies (IFRC), National Housing Development Authority of Government of Sri Lanka (NHDA) and UN-Habitat for Humanity. Indian housing project was carried out predominantly through owner-driven model and agency-driven model. Further, under owner-driven model, a cash grant was offered total Rs. 550,000 for fully reconstructed house and Rs.250,000 for repair the house (United Nations Human Settlements Programme [UN-Habitat], 2015).

This housing program implemented into two phases in the Northern Province, under phase one, 1,000 houses were constructed under agency driven approach for extremely vulnerable households. Under phase two, 43,000 houses were implemented through the owner driven model (Indian Housing Project, 2011). Duration of Indian housing project is shown in Table 2.2.

Table 2.2: Duration of Indian housing projects in the Northern Province

Phase	Period	New construction	Repair	Total Unit
Phase I (Donor Driven Housing Program)	2011-2012	1000	-	1000
Phase II (Owner Driven Housing Program)	2012-2013	8000	1000	9000
	2013-2014	15000	2000	17000
	2014-2015	15000	2000	17000
Total	2011-2015	39000	5000	44000

Source: Indian Housing Project (2011).

2.4.3.2. North East Housing Reconstruction Programme (NEHRP)

NEHRP is a prominent post conflict reconstruction agency in North and East part of Sri Lanka, which was set up with the assistance of World Bank and the Government of Sri Lanka to assist the displaced families in the Northern and Eastern Provinces in 2004. This project implemented through Government of Sri Lanka. The objectives of this program are:

- Reconstruction of housing units damaged due to conflict in Northern and Eastern Provinces.
- Regularization of land title to the targeted families
- Undertaking skill training of youths in the construction activity, thereby implementing measures for their self-development in the long term.

In this scenario, NEHRP has supported for new construction of 46,000 fully damaged houses (World Bank, 2010, NEHRP, 2012).

According to NEHRP Completion Result Report, housing construction was carried out under Owner-Driven model, where owner of the house constructs their house themselves, while NEHRP would give the financial and technical assistance. Estimated cost of a permanent house was to be Rs. 325,000 and Rs. 100,000 for the partly damaged house (NEHRP, 2012).

2.4.3.3. United Nations Human Settlement Programme (UN Habitat)

This program has been assisting thousands of Sri Lankan families to rebuild their lives and regain normality in the post conflict area over the past three decades (Sunday Times, 2011). This project focused on supporting 2675 vulnerable families through provision of grant payments and technical assistance to repair their damaged houses. In addition, it granted payment and technical assistance for 1,110 families to rebuild the fully damaged houses. Further, UN habitat extends its permanent housing support program in Northern Sri Lanka through collaboration with the European Union (EU), Government of Australia (AusAID) and the Swiss Agency for Development and Cooperation (SDC) to implement the second phase of the housing recovery project for conflict affected families. 4,000

conflict affected families have benefited from this project in the districts of Killinochchi, Mullaitivu, Mannar and Batticaloa. Under this project, vulnerable groups such as female headed households, elderly and disabled persons are given priority to select the beneficiaries for housing (Agalya, 2014).

According to Agalya (2014) based on the District Statistical Hand Books – 2014 for all five districts of the Northern Province of Sri Lanka indicates the details of housing units. The above maintained agency wise details of housing projects in the Northern Province as at 31.12.2013 are shown in Table 2.3. All housing projects are owner reconstructed projects.

Table 2.3: Agency - wise Details of Housing Projects in the Northern Province as at 31.12.2013

S. No	Agency	District	No. of committed houses as at 31.12.2013	No. of completed houses as at 31.12.2013
1	Indian Housing Project (Stage 2 and Stage 3)	Jaffna	8,700	2,114
		Killinochchi	7,100	1,738
		Vavuniya	4,200	707
		Mannar	7,500	1,555
		Mullaitivu	6,317	1,117
Sub Total			33,817	7,231
2	NEHRP (Phase IV and V)	Jaffna	8,377	8,377
		Killinochchi	3,405	3,382
		Vavuniya	497	496
		Mannar	3,473	3,431
		Mullaitivu	2,307	2,307
Sub Total			18,059	17,993
3	UN Habitat	Jaffna	1,029	1,029
		Killinochchi	833	833
		Vavuniya	328	328
		Mannar	150	150
		Mullaitivu	1,737	1,181
Sub Total			4,077	3,521
4	Other Agencies	Jaffna	2,702	2,371
		Killinochchi	4,971	4,462
		Vavuniya	4,529	3,529
		Mannar	2,001	1,724
		Mullaitivu	2,947	2,203
Sub Total			17,150	14,289
Grand Total			73,103	43,034

Source: Agalya, (2014).

2.5. Stakeholders and Their Satisfaction

2.5.1. Who is stakeholder?

According to Freeman (1984), stakeholder is defined as any group of segments of individuals who have a stake or interest in the organization. As defined by the Project Management Institute (PMI) (2008), stakeholders are “those individuals and organizations who are actively involved in a project or whose interests may be affected as a result of project execution or completion”. Further, Newcome (2003) explained that stakeholder may be “groups or individuals, who have a stake in or expectation of the project’s performance and include clients, project managers, designers, subcontractors, suppliers, funding bodies, users and the community at large”. However, the definition of stakeholder varies depending on the nature of project scope and objectives.

Mitchell et al. (1997) has a view of segmenting stakeholders through two major lenses that consist of narrow and broad perspectives. Narrow segments fall under those who have direct impact and interest on the project, while the broad segments can have indirect interests and impacts. For example, social activists can be indirect stakeholders for housing projects.

Having considered all above-mentioned definitions, stakeholder can be defined as people who can be influenced both positively or negatively or directly or indirectly on the project process and performance. These comprise government, project managers, clients, funding agents, users, pressure groups and general public.

In the perspective of post natural disaster reconstruction, many researchers have identified various stakeholders. Table 2.4 reflects the stakeholders identified by various researchers.

Table 2.4: Post disaster reconstruction related stakeholders

Stakeholder	Identified
End User/ Beneficiaries/ Effectuated Community	(Chang, Wilkinson, Potangaroa, & Seville, 2010; Dixon & McGregor, 2011; Dorosh, Malik, Karausova, 2010; Siriwardena, 2014; Amaratunga and High, 2011)
Government	(Chandrasekar, 2010; Chang et al., 2011; Brun & Lund, 2010; Tyler & Singh, 2011 Siriwardena, 2014; Amaratunga and High, 2011)
Non-government organizations (NGOs)	Brun & Lund, 2010; Chandrasekar, 2010; Chang et al., 2011; Samaratunge et al., 2012; Siriwardena, 2014; Amaratunga and High, 2011)
Community Based Organizations (CBOs)	(Siriwardena, 2014; Brun & Lund, 2010; Chandrasekar, 2010; Tyler & Singh, 2011; Amaratunga and High, 2011)
Professionals: Consultants, Architects	(Siriwardena, 2014; Brun & Lund, 2010; Ophiyandri et al., 2013)
Donors	Brun & Lund, 2010; Chandrasekar, 2010; Chang et al., 2011; Samaratunge et al., 2012; Siriwardena, 2014; Amaratunga and High, 2011)
Contractors	Brun & Lund, 2010; Chandrasekar, 2010; Chang et al., 2011; Samaratunge et al., 2012; Siriwardena, 2014; Amaratunga and High, 2011)

2.5.2. Classification of stakeholders from construction point of view

There are many techniques and scope for stakeholder categorization of the project. It is depending on the nature of the project. In general Freeman (1984) categorized the stakeholders into two main types. This classification is based on the priority of stakeholder's role such as;

1. Primary stakeholders - *refers people who enjoy a direct and contractually determined relationship with the project. These typically comprise of shareholders and investors, employees, customers, and suppliers, together with what is defined as the public stakeholder group.*

2. Secondary stakeholder - *those who influence or affect, or are influenced or affected by the corporation. But they are not engaged in transactions with the organization and are not essential for its survival (Clarkson, 1995).*

In construction point of view, stakeholders can be identified as people who were affected by or affected by the development of the project. Hence, capturing their input is a key component of the project development process. It is noted that there are common parties coming under the spectrum of construction projects. Further, Winch (2002) identified two type of stakeholder in construction point of view namely:

1. Internal stakeholders - *Parties who have a legal contract with the client of construction projects.*
2. External stakeholders - *Groups or individuals who possess a direct interest with the project.*

Table 2.5 presents the review on different classifications of stakeholders.

Table 2.5 Different classifications of stakeholders

Identified Stakeholders	Classification	
Affected community/End user/Beneficiary	Primary ^[1,2,3,4,5,6,7]	Internal ^[4,5,6,7] / External ^[6,7]
Consultant	Secondary ^(1,2,3,4,5,6,7)	Internal ^[4,5,6,7]
Contractor/sub-contractors	Secondary ^[1,2,3,4,5,6,7]	Internal ^[4,5,6,7]
NGOs/INGOs	Primary ^[1,5] / Secondary	Internal ^[4,5,6,7]
Donor/Funding body	Primary ^[2,5] / Secondary ^[3,7]	Internal ^[4,5,6,7]
Government	Primary ^[1,2] / Secondary ^[3,7]	Internal ^[4,5,6,7] / External ^[6,7]
CBOs representing local people/general public	Secondary ^[1,2,3,7]	Internal ^[4,5,6,7] / External ^[6,7]
References		
[1] Chandrasekar, 2010; [2] Amaratunga and High, 2011; [3] Brun & Lund, 2010; [4] Clarkson, 1995; [5] Olander and Landin, 2005; [6] Winch ,2002; [7] Siriwardena, 2014.		

2.5.3. Stakeholders in resettlement housing projects in Sri Lanka

In general, post-disaster housing reconstruction's stakeholders are different from normal construction project stakeholders (Siriwardena, 2014). Literatures emphasize different sets of stakeholders of the housing projects and however, it is very difficult to prepare a comprehensive set of stakeholder list for post-conflict housing projects. (Amaratunga & Haigh, 2011b). There are several challenges in post -disaster reconstruction projects. Those are resource scarcity, limited project time and funds and donors' satisfactions. In such situations delivering an effective housing reconstruction project and managing the associated resources are difficult to a developing country like Sri Lanka. Thus, construction industry has a responsibility to assist communities to anticipate assess, prevent, prepare, respond and recover from disaster by contributing in developing, implementing, and operationalizing the appropriate strategies. (Haigh, et al., 2006).

In these scenarios stakeholders of construction projects comprise professionals such as, engineers, quantity surveyors, architects, project managers, clients and contractors who have to work hand in hand. In addition, in post-disaster reconstruction projects introduce some other stakeholders such as, NGOs, INGO's, Donor agencies, CBO's and beneficiaries, alongside more traditional construction project stakeholders (Siriwardena, 2014).

In the view of post-disaster houses and post-conflict houses also, there have been various stakeholders who are identified by the scholars in Sri Lankan context, as pointed-out by Hassan, Bakar, Osman, and Bulba (2009) and Siriwardena (2014). The following stakeholders were identified as the main stakeholders of resettlement housing projects.

- Affected People
- NGOs
- Contractors
- Implementation partner
- Consultant
- Local Authorities
- Community based Organizations and
- Others

2.5.4. Stakeholder satisfaction

The term of stakeholder satisfaction is gradually important in construction projects. In terms of construction project, stakeholder satisfaction can be defined as “the achievement of stakeholders' pre-project expectations in the actual performance of each project stage” (Skitmore and Atkin, 2008). Further, Yang et al. (2011) suggest that the stakeholder satisfaction is important criterion for measuring project success. In general, stakeholder satisfaction is a measure of the extent to which the stakeholders are happy about what they receive from the project in terms of their psychological and functionality needs together with how well their social factors and socio-cultural identities have been addressed by the project. Stakeholder expectation and involvement are key elements of the satisfaction.

According to Chen (2009), projects need to satisfy the multiple stakeholders of the project who have participated in the project, including customers, employees, suppliers, and creditors, as they potentially affect the project's future performance. Therefore, stakeholders' involvement is important in implementation of construction projects according to their concerns and needs or expectations, because satisfaction of project stakeholders has widespread support to project success (Yang et al. 2011).

In post disaster reconstruction projects, previous housing experiences of stakeholders may influence the current housing satisfaction. It is mainly depending on factors such as materials used in people's former houses, quality of construction, design of the house, and size of the house (Snarr and Brown, 1980).

2.5.5. Factors affecting stakeholder satisfaction

There are wide-ranging views prevail in the literature in regards to the client satisfaction in the construction industry. Ahmed and Kangari (1995) identify six factors leading to client satisfaction in the construction industry, which include aspects such as time period of the project, costing, quality of materials, construction and overall design of the project, client orientation or coordination with the beneficiaries, and the fact of being reciprocating through enhanced communication in response to requirements and

complaints. As further suggested by Maloney (2002) that the assessment in regards to client satisfaction in projects especially related to the post-disaster housing projects should be based on five criteria that correlate the relationship between contractor and customer, project management, safety measurements and requirements, prepared/skilled workforce and cost.

Nkado and Mbachu (2001) explained that the level of stakeholder satisfaction depends on two basic factors such as:

- Concerns and needs of stakeholders and
- Stakeholder management process, e.g. how they are treated.

However, literature emphasizes the element of customer/client satisfaction as a subjective phenomenon. This can be derived through the stakeholder's expectations or perceptions rather than on reality itself (this can include delivery time, cost, and targets).

In post-disaster reconstruction housing project context these affecting factors are different from normal scenario. Clark and Onaka (1983), Lizarralde and Bouraoui (2010), Perera *et al.* (2012), identified eight factors for analyzing the post-disaster resettlement housing satisfaction such as:

1. Location of the house,
2. Size of room,
3. Size of the house,
4. Strength of the house,
5. Standard of construction,
6. Thermal comfort,
7. Acoustic comfort, and
8. Functionality of the house.

Barenstein (2012) and Snarr and Brown (1980) identified seven satisfaction indicators, which related to socio economic situation of the housing. This is also affecting the stakeholder satisfaction in post-disaster reconstruction housing. Those are;

1. Housing,

2. Neighborhood environment,
3. Community life,
4. Security,
5. Economic situation,
6. Health, and
7. Education.

Further, Siriwardena et. al (2014) identified the success or failure of post disaster housing reconstruction projects in Sri Lanka as summarized in Table 2.6.

Table 2.6: Factors affecting the stakeholder satisfaction in post-disaster housing reconstruction projects in Sri Lanka

Affecting factors related to the house	Affecting factors related to the institutional aspect
<ul style="list-style-type: none"> • Time (timely supply of material and cash, timely handover) • Cost (total cost for house and building material) • Quality (Quality of standard materials and construction) • Features of the house (Location, Design of the house suiting to cultural and social patterns) • Community participation • Availability of infrastructure and other facilities 	<ul style="list-style-type: none"> • Availability of resources – physical and human (professional, expert advice, information) • Unitary policies and frameworks or law and regulations • Coordination (community and with all the stakeholder group) • Clearly defined goals and commitments • Effective information management • Effective communication with all the stakeholder groups • Value addition to the product by introducing new technologies and materials • Sufficient mobilization and disbursement of resources

Source: Siriwardena (2014)

2.5.6. Stakeholders requirements and expectations in resettlement housing projects in Sri Lanka

Even though, there are many studies that examined Sri Lanka’s housing reconstruction in the post-tsunami phase, there is a lack of literature that focuses on the post conflict

context. Although some studies have actually considered the context (Brun and Lund, 2008), they have not considered their impact on conflict prevention after the cessation of conflict. Furthermore, it is evident that most of these studies were carried-out in the prior-conflict situation and before the reconstruction of the formal housing schemes. Hence, these studies mostly do not discuss the scenario of post-conflict housing schemes and hence, there is a gap where they have failed to look into the context of the post-conflict scenarios in most times. Seneviratne et al. (2015) has focused on recognizing the unique challenges in addressing housing needs within the context of post conflict housing reconstruction in the country. In cases of post disaster resettlement housing projects (PDRH), the stakeholder requirements refer to the needs or a compulsory feature. An expectation can be the hope or belief of a project. When the expectations are managed properly, they can result in higher satisfaction levels.

The type of houses provided through the post-disaster housing remains different as to the local requirements and based on the intervening agency that was involved in the project coordination. In certain cases, the project has been a failure (Siriwardena et. al, 2014). Further, a series of flows in the design and implementation of housing programs were found, which include aspects such as housing design incompatibility in reference to the socio-cultural and religious norms of people and lack of infrastructure and other services (Brun and Lund, 2008).

Siriwardena et.al (2014), explained stakeholder expectation of post-disaster housing reconstruction in Sri Lanka under three titles:

- Expectation related to time, cost, quality and design of the houses.
- Expectation in relocation site
- Expectation in institutional aspect.

Therefore, stakeholder requirements and expectation reflect the success or failure of the resettlement projects.

According to Manatunge and Abeysinhe, (2017), beneficiaries' expectation in relation to the design, layout and construction qualities were not adhered to by the project. Studies suggest to have better layout plans and space arrangements. Further, they identified

environmental and social related expectation variables, which can ascertain the level of satisfaction of beneficiaries. Table 2.7 reflects the stakeholder’s expectations related to environmental and social criteria of the house.

Table 2.7: Expectations related to environmental and social factors and perceptions regarding the resettlement process

Expectation in Environmental Criteria	
Expectations related to dwelling	<ul style="list-style-type: none"> • Size of dwelling unit • Design • Lighting and ventilation • Building quality
Expectations related to surrounding environment	<ul style="list-style-type: none"> • Landscaping • Site selection • Layout
Expectations related to services	<ul style="list-style-type: none"> • Water supply • Electricity • Solid waste management • Waste water management
Expectation in Social Criteria	
Expectations related to neighborhood	<ul style="list-style-type: none"> • Leisure • Neighborhood safety
Expectations related to facilities and coordination	<ul style="list-style-type: none"> • Education Facilities • Hospital facilities • Shopping and other daily facilities • Public Transport • Facilities for religious practices • Convenience to livelihood • Beneficiaries participation in Planning • Proper Coordination

Source: Manatunge and Abeysinhe (2017)

2.6 Factors Affecting Stakeholder Satisfaction – A Summary of Literature Review

Stakeholder satisfaction is extremely important aspect in any housing projects. It becomes imperative to evaluate the level of satisfaction of stakeholders in order to determine the success factor of a housing project. Stakeholder expectation and involvement are key elements of the satisfaction. Stakeholder satisfaction factors gathered from above literature review are shown in Table 2.8.

Table 2.8: Factors of the Stakeholder Satisfaction - A summary of the literature review

Factor No	Factor Description
Common factors for all stakeholders	
F1	Location of the houses
F2	Standard of house and Materials
F3	Housing design and Layout
F4	Infrastructure and functionality of the house
	F4.1. Water facilities
	F4.2. Electricity
	F4.3. Sewerage
F4.4. Accessibility for livelihood activities	
F5	Beneficiaries participation in Housing construction process
Beneficiary - Specific factors	
F6	Future extension of the house
F7	Cost of the house
F8	Duration of the project
F9	Cultural Considerations
F10	Sense of Safety
F11	Other Stakeholders coordination
Implementation Partner - specific factors	
F12	Beneficiaries participation in the Project
F13	Donor's attention in the project situation
Government bodies – Specific factors	
F14	Donor's attention in the project
F15	Implementation partners involvement in the project
Donors – Specific factors	
F16	Facilitates provide by government for donor
F17	Implementation partners involvement in the project

The above literature findings are used in the empirical investigation during Stage 2 of this study.

2.7. Summary

The literature review chapter firstly gave an introduction of this chapter, and then explored the displacement, resettlement, internally displaced persons and refugees, causes and problems in displacement and resettlement housing projects in local and global contexts. Further discussed about three resettlement housing projects, people who are involving housing projects and their expectations and requirements and factors affecting the stakeholder's satisfaction from literatures in Sri Lanka and other countries.

Chapter Three: Research Methodology

3.1. Introduction

This chapter describes the research methodology which will be adopted by this research to achieve the aims and objectives stated in Chapter One. Section 3.2 discusses the research approach, including rationale for the quantitative research and Section 3.3 explains the research process including background study, literature synthesis, data collection methods and data analysis methods.

3.2. Research Approach

Alzheimer (2009) classified four main research approaches namely, Qualitative, Quantitative, Pragmatic (mixed methods) and Advocacy/participatory approach. Selection of the research approach depends on the aim and objectives of the research. Further, appropriate selection of research approach could help to achieve the research aim successfully.

Qualitative research approach consists of Narrative research, Phenomenology, Grounded theory, Ethnographies and Case study. Qualitative study in opposition to the quantitative research deals with opinions and viewpoints of respondents. A qualitative approach helps in probing root-causes and in determining deep-rooted viewpoints

Quantitative data deals with the systematic collection and processing of numerical or statistical data into a meaningful form (Aliaga and Gunderson, 2000). Cresswell (2009) stated the quantitative data and relevant analysis tacks elements such as processing of the numerical data through testing assumptions of hypothesis through various means of analysis such as correlations and regressions. Hence, it tackles aspects such as proving or testing of hypothesis, and presenting generalized views on the presented assumptions.

Cresswell (2009) identified the need of providing a combination of both qualitative and quantitative data. These methods in the literature are named as mixed methods, while conducting a methodology through the sole quantitative or qualitative data can be framed as mono methods. Further, the author highlighted four major mixed methods, which, are;

convergent parallel mixed methods, explanatory sequential mixed methods, exploratory sequential mixed methods and transformative embedded and mutable mixed methods.

The aim of this study is to evaluate the stakeholders' satisfaction of resettlement housing projects in Northern Province in Sri Lanka. In order to achieve this aim, the researcher had to evaluate the documents which had been found through the literature review and verified with officials, donors, implementing partners, government bodies through interviews in Stage 1. Thereafter, a structured questionnaire survey was conducted among stakeholders, who are involving in housing projects in Northern Province of Sri Lanka for evaluating stakeholders' satisfaction in Stage 2. In Stage 1, the qualitative data collection was accomplished, while in Stage 2, quantitative data was collected. So that, this research consists of a significant portion of quantitative research as well as Qualitative research approach. Hence, combinations of both quantitative and qualitative data have been utilized in this study in order to provide comprehensive perspectives. Therefore, pragmatic research approach (mixed method) was used to carry out the research.

3.3. Research Process

The research process contains number of different steps: background of the study, the literature synthesis, data collection and data analysis. Figure 3.1 shows the details of research process.

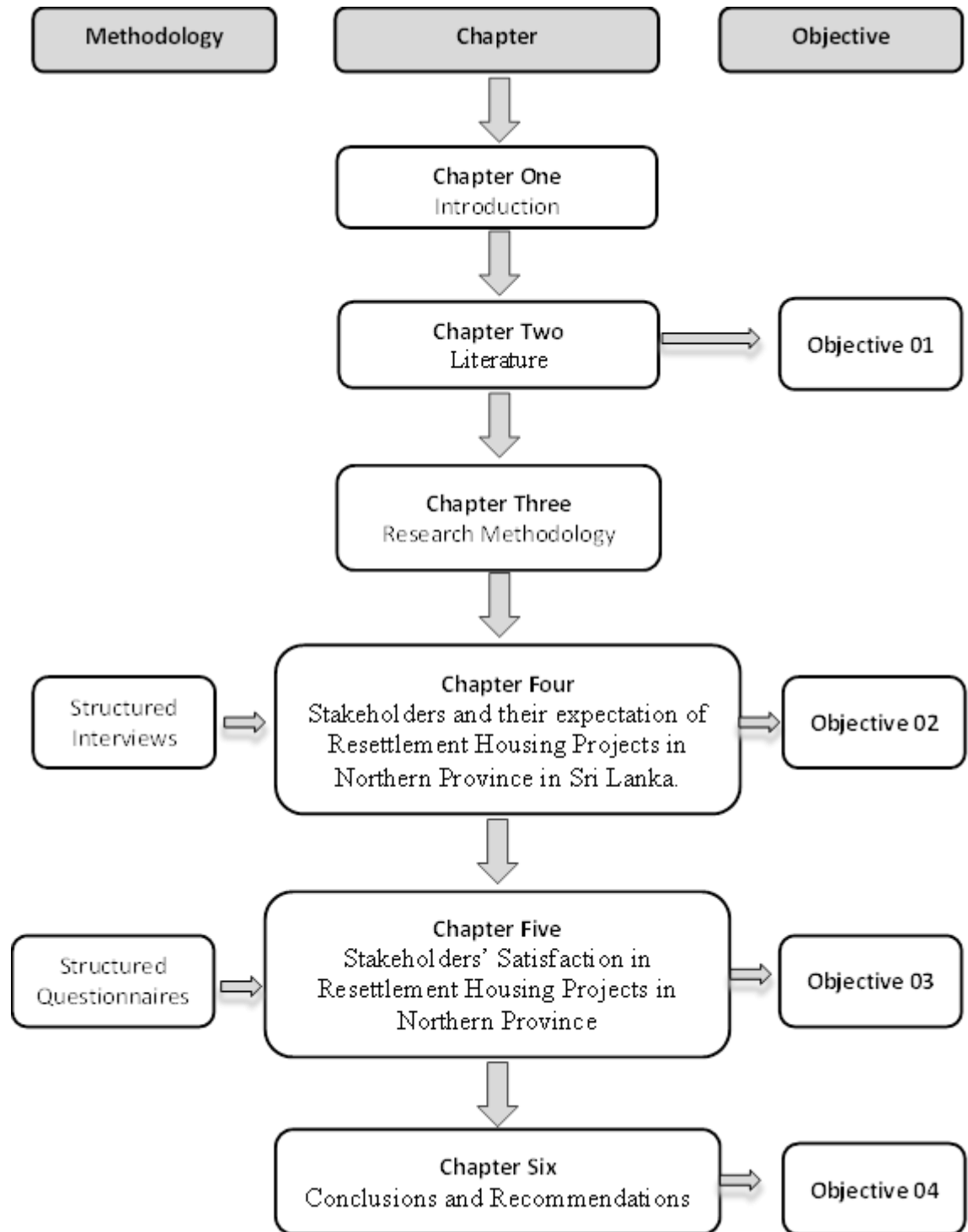


Figure 3.1: Framework for the Research process

3.3.1. Background study

The researcher carried out a background study on a broader perspective to identify and familiarize with displacement due to the disaster, disaster reconstruction process, the resettlement housing projects, stakeholders of the housing projects and their satisfaction referring books, journal articles and unpublished dissertations. The study revealed key aspects of resettlement housing projects and its stakeholder and their expectations and requirements, which are discussed based on local and global context. Further, focus on INGO and NGO funded resettlement housing projects is very limited in literature, even though importance of improving stakeholder satisfaction in resettlement housing project context is emphasized by various authors. Therefore, there is a need to investigate whether the resettled housing projects have yielded effective results for stakeholder satisfaction.

3.3.2. Literature synthesis

A comprehensive literature review was conducted to explore the concepts of disaster induced displacement, disaster reconstruction, resettlement housing project, its stakeholders and factors affecting the stakeholder satisfaction in literature. This is also helped to establish the significance of the research problem.

3.3.3. Data collection

In this research data was collected by using dual methodology. Primary data was collected from four type of target group namely; beneficiaries, implementing partners, donors and related government bodies of the resettlement housing projects in Northern Province of Sri Lanka in two major stages Data collection of this study was accomplished in two stages. Further in this research secondary data was collected from government reports, official statistics research papers and internet.

Stage 1: In-depth Interviews with Stakeholders in 3 Projects

Stage 1 of data collection aimed to evaluate the stakeholder expectations regarding the housing schemes. A total of 78 respondents were included into the sample, 6 were beneficiaries, 3 were implementing partners, 2 were donors, and 2 were government

bodies. DS Office staff, Grama Niladhari and other government office staff were the representatives of the government bodies. The interview guidelines are given in Appendices B, C, D and E. In this research purposive sampling technique was used to collect data. Beneficiaries include people who were affected by the conflict in Jaffna, Kilinochchi to Mullidivu. This sample size was divided according to the owner-driven and donor-driven base of the housing program. The sample for interviews in Stage 1 included 6 beneficiaries from both owner-driven and donor-driven projects. The selection of sample respondents in Stage 1 is shown in Table 3.1. A documentary analysis approach has been employed at this stage to identify the stakeholders and to classify them into categories. Document analysis consists of a systematic procedure that helps in reviewing both the electronic and print documents (Bowen, 2009) that can be then organized into major themes or categorizes (Labuschagne, 2003). In this study, various documents that include academic reviews, governmental reports/policy reviews, parliamentary reports, NGO reports, world bank reports, and proper literature have been utilized. Such documents included conflict related statistical handbooks, resettlement project documents, relevant research articles, and district statistics.

Table 3.1 Respondent Cross Section in Stage I

Districts	Category of Respondent	No. of Respondent	
		Own-driven (Indian Housing Project)	Donor-driven (NEHRP, UN habitat project)
Jaffna	Beneficiaries	6	6
	Implementing partners	2	2
	Donors	3	3
	Government bodies	2	2
Sub Total		26	
Killinochchi	Beneficiaries	6	6
	Implementing partners	2	2
	Donors	3	3
	Government bodies	2	2
Sub Total		26	

Mullaitivu	Beneficiaries	6	6
	Implementing partners	2	2
	Donors	3	3
	Government bodies	2	2
Sub Total		26	
Total Number of Respondents		78	

Stage 2: Questionnaire Survey

This stage of data collection aimed to evaluate the satisfaction level of the stakeholders. A structured questionnaire survey was employed to collect data in this stage. Four different types of questionnaires were distributed to gather data from four stakeholders of the study. 102 respondents were included for structured questionnaire survey.

This questionnaire survey sample of Stage 2 includes ten respondents from beneficiaries, three respondents from donors, two from Government bodies and one from implementing partners from three districts of the Northern Province in owner and donor driven base. The selection of sample respondents is shown in Table 3.2.

Table 3.2 Respondent Cross Section in Stage II

Districts	Category of Respondent	No. of Respondent	
		Own-driven – (Indian Housing Project)	Donor-driven (NEHRP, UN habitat project)
Jaffna	Beneficiaries	10	10
	Implementing partners	2	2
	Donors	3	3
	Government bodies	2	2
Sub Total		34	
Killinochchi	Beneficiaries	10	10
	Implementing partners	2	2
	Donors	3	3
	Government bodies	2	2
Sub Total		34	

Mullaitivu	Beneficiaries	10	10
	Implementing partners	2	2
	Donors	3	3
	Government bodies	2	2
Sub Total		34	
Total Number of Respondents		102	

All four categories of respondents were interviewed by using structured questions. The official's donors, implementing partners, government bodies were interviewed by appointments and beneficiaries were interviewed by visiting all the houses considered for the survey.

When the questionnaires were distributed among the respondents, appointments for the interviews were also made, while questionnaires were distributed among beneficiaries through the supports of governmental bodies. All Questionnaires issued with a translation in Tamil. The questionnaire survey instruments are given in Appendices F, G, H and I. And also overview of demographic details of respondents are given in Appendices K and J.

3.3.4. Data Analysis

Data analysis contains examining, categorizing, tabulating, testing the both quantitative and qualitative evidence to address the initial propositions of study (Yin, 2003). In this study, the data collected through interviews were analyzed through manual content analysis in Stage 1. Beneficiaries were interviewed considering their opinions about the resettlement house comparing with pervious house and their requirement and expectations. In Stage 2, data collected through structured questionnaires was analyzed by using statistical techniques through SPSS to make the data more presentable and conspicuous. Likert scale was used to assign weightages to stakeholder responses.

According to Sharjahan (2004) "the 'Likert Scale' is an ideal tool for analyzing attitude surveys of individual's responses on a certain topic. But it is not possible to make standard statistical calculations such as mean, and standard deviation with the Likert Scale since it does not provide clear numerical values for individuals' perceptions".

Therefore, the strengths of responses were ranged from 1 to 5 scores or weightings as shown in Table 3.3.

Table 3.3: Weightings Assigned for Preferences

Answer form	Weighting
Very bad / Highly dissatisfied	1
Bad / Dissatisfied	2
Good / Moderate	3
Very Good / Satisfied	4
Excellent / Highly Satisfied	5

The box plot technique was used to comparatively analysis the levels of satisfaction achieved before conflict and after conflict resettlement housing project completed. Finally, the Wilcoxon sign rank test was carried out to verify the results obtained through box plot analysis.

3.3.5. The Box Plot

The Box Plot is a useful technique to compare two or more sets of data by displaying them in a same scale. It consists of five summary measures such as lower quartile, median and the upper quartile, smallest value and largest value as shown figure 3.2 (Aczel and Sounderpandian, 2006). Box Plot provides a way to determine its central tendency dispersion, skewness and probable outliers. Hence Box Plot was used as best tool for graphical representation of data in this research.

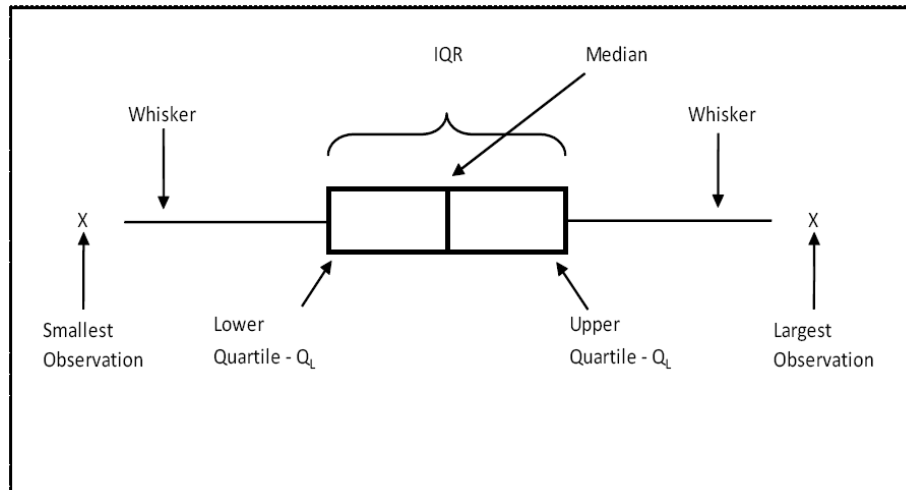


Figure 3.2: The Typical Elements of the Box Plot

3.3.6. Wilcoxon Signed Rank Test

The Wilcoxon Signed Rank Test was identified to be the most appropriate numerical test for this research. Wilcoxon is a non-parametric test based on ranks on difference in scores the data point (Tan, 2002). Wilcoxon signed-rank test is used to compare two related samples, matched samples, or to conduct a paired difference test of repeated measurements on a single sample to assess whether their population mean ranks differ. This test is a nonparametric alternative to the unpaired and paired Student's *t*-tests (also known as “*t*-test for matched pairs” or “*t*-test for dependent samples”), respectively. The two nonparametric tests do not assume that the samples are normally distributed. Hence, this does not actually require making assumptions to be made on population related differences (Refugio, 2008).

Wilcoxon signed rank test is used to test the null hypothesis. This test can be calculated under the null hypothesis of no effect on treatment. In general terms, the null hypothesis can be rejected, if *W* is large. “*W*” means that sum of positive ranks. (i.e. W^+ , the sum of the ranks of the positive dis, and W^- , the sum of the ranks of the negative). On the other hand, if the treatment is effective, *W* is expected to have a large negative value or a positive value. When there are ties, this can mean that the ranks are assigned. When

there are no ties, the differences that can be spotted in scores and will be dropped from the analysis. (Tan, 2002).

Every satisfaction factors of both housing type were subject to treatment and the stakeholder satisfactions level are being evaluated before and after the treatment. The differences in scores before and after the treatment (pervious house and after resettlement house) are computed and ranked. Therefore, this test suite for this study.

3.4. Summary

This chapter discussed about the research approach and research process. Research process of this study explained through methodology of framework. Research approach for this study is a mix method. Data was collected as primary and secondary form. Primary data was collected through interviewed various stakeholders using structured questionnaire. The collected data was analyzed through statistical analysis.

Chapter Four: Stage I - Stakeholders and their Expectation of Resettlement Housing Projects in Sri Lanka

4.1. Introduction

The success of any project is measured in terms the level of stakeholder satisfaction achieved. Therefore, identifying who are the stakeholders and what are at stake are generally the most important aspects of any project. Although stakeholder identification of a project is generally easy, assessment of their satisfaction is extremely difficult as human opinion differs from person to person. Since this research deals with reconstruction projects for disaster-stricken people, the need of finding out the true stakeholders and their needs is even more complex as the needs of stakeholders under disaster psychosis is extremely complicated. While discussing the process of stakeholder identification in general this Chapter deals in detail with the stakeholders and their expectation of Resettlement housing projects. This Chapter includes the stakeholders' opinion gathered from interviews using structured questions. The interview guidelines are given in Appendices B, C, D and E. A manual content analysis was used to assess the data obtained from the survey in stage I.

4.2. Identification of Stakeholders in Resettlement Housing Project in Northern Province

Providing houses, which was a vital part of reinstating the livelihoods of the displaced by the civil conflict, became a challenging task and gave birth to a large number of resettlements and housing reconstruction Projects. The identification of stakeholders is the foremost part in the overall planning of materials and designs. This stakeholder identification plays a key role in meeting the expectations of stakeholders and in shaping the offerings (housing designs, layouts and relevant facilities) as to the assessed demand patterns. Hence, stakeholder involvement is necessary from the beginning in order to derive more satisfaction in the post-construction state. The following stakeholders are identified as main stakeholders of this project. They came

together in this project to execute the final outcome. It was gathered from interview with government bodies.

1. Beneficiary
2. Donor
3. Government
4. Implementing Partner
5. Contractor

4.2.1. Beneficiary

Beneficiaries are said to be the key stakeholders of this project. These beneficiaries' roles in the project include proper communication with other relevant parties and expressing their needs and expectations clearly. It is expected that their involvement should be there in all stages of crucial decision-making in the stages of project implementation, monitoring and evaluation. In other words, beneficiaries remain to be the important part of authentic analysis where their concerns are included from demand assessing stage to evaluation stage, where the participation of beneficiaries remains crucial.

The District Secretariat selected the beneficiaries using the following criteria;

- All beneficiaries of the project should have been affected by the civil conflict.
- More preference was given to women headed families: Widows and victims of domestic violence.
- Marginalized income segments.
- Persons with physical or mental disabilities.
- Families with more dependents (Report of State Ministry of Rural Housing and Construction & Building Materials Industries Promotion, 2010).

4.2.2. Donor

Donors and funding bodies of the housing project are identified to be the Government, non-governmental and international organizations. European Union, Australian Government (AusAID) and the Swiss Agency for Development Cooperation remain to be the non-governmental funding bodies in this project. It was revealed from Report of

Resettlement of conflict-induced IDPs in Northern Sri Lanka political economy of state policy and practice in 2014.

For all three projects included in this study were funded by separate bodies/entities. The Indian Housing Scheme was funded by the Indian High Commission. The NERB project included into the assessment was funded by the World Bank. The UN Habitat Housing Programme was funded by the Swiss Development Corporation. These details were gathered by interviewing the staff of the DS Offices.

4.2.3. Government

The government representatives of the project include the Ministry of Resettlement and local government representatives from the District Secretary, DS offices and Grama Niladhari. A detailed tabulation is made in Table 4.1.

Table 4.1 Government bodies of Resettlement Housing Project

Resettlement Assistance	Providers
Land clearance	Ministry of Resettlement
Clearance of access roads	Ministry of Resettlement, Pradeshiya Sabha
House	Ministry of Resettlement
Water facilities	Pradeshiya Sabha, Ministry of Resettlement National Water Supply and Drainage Board
Sanitation (latrines and hygiene promotion)	Pradeshiya Sabha
Education	Ministry of Education
Health	Ministry of Health
Electricity	Ceylon Electricity Board
Transport	Sri Lanka transport Board
Livelihood	Ministry of Resettlement
Infrastructure	Agrarian Department, Agrarian Department, Northern Province-Provincial Council

Source: Status Report- Resettlement in North and East, 20 October 2016

4.2.4. Implementing partner

Main implementing partners are identified to be Ministry of Resettlement with NERB project team members and UN – Habitat and its partners where indirect support for each homeowner is provided in terms of funding, technical supports, and in overall supervision throughout the process. The UN Habitat has maintained proper communication with the government and beneficiaries, and this organization has coordinated with the government and the beneficiaries in order to make it a successful project. It was revealed from interview with DS officers (Government bodies) of all district.

The Indian Housing Scheme was implemented by the UN Habitat, NERB was implemented by the NERB project team, and UN Habitat housing scheme was implemented by the UN Habitat. These details were gathered by interviewing the DS office staff.

4.2.5. Contractor

Contractors are included in the project to work on constructions. These contractors have been selected by the beneficiaries who belong to the local communities for the owner driven housing schemes. The implementing partner (UN Habitat) of the donor driven project selected four contractors for material supply, civil work, carpentry, and electricity, to complete the tasks.

4.3. Classification of Stakeholders in the Context of Post Disaster Resettlement Housing project.

According to the Siriwardena (2014), the project identifies two main classifications of stakeholder segments, which are primary-secondary, and internal-external. Table 4.2 Categorizes the stakeholders under each classification for owner-driven reconstruction housing project. Table 4.3 categorizes the stakeholders under each classification for Donor - driven reconstruction housing project.

Table 4.2: Classification of Stakeholders in Owner Driven Resettlement Housing Project.

Identified Stakeholders	Classification	
Affected community/ Beneficiary	Primary	Internal
Contractor	Secondary	External
Donor	Secondary	Internal
Government bodies	Secondary	Internal
Implementation Partner	Secondary	Internal

Table 4.3: Classification of stakeholders in Donor-Driven Resettlement Housing Project.

Identified Stakeholders	Classification	
Affected community/ Beneficiary	Primary	External
Contractor	Secondary	Internal
Donor	Secondary	Internal
Government bodies	Secondary	External
Implementation Partner	Secondary	Internal

Primary stakeholders are those who gain benefits directly from the project and in this case, beneficiaries remain to be the primary stakeholders. Secondary stakeholders remain to be as intermediaries. Examples of secondary stakeholders include Contractor, NGO & INGO's Donor agency, Government bodies, Implementation patterns and the general public. Internal stakeholders are identified to be having direct legal contracts with the donors. All of Stakeholders have legal agreement with donors except contractors, therefore all of them are identified as internal stakeholder.

4.4. Stakeholder Expectations and Requirements in Resettlement Housing Projects

Stakeholder expectations can be both realistic or unrealistic but they should be managed properly when it comes to post disaster resettling housing projects. Stakeholders' expectations identified under four main titles, (a) expectation relating to quality and design of the houses, (b) expectation related to infrastructure and other facilities, (c)

expectations related to social and cultural patterns and (d) expectation related to institutional aspect. A summary of stakeholder expectations is shown in Table 4.4.

Table 4.4 Summary of stakeholders' expectations

Expectations of stakeholders from Literature	Expectations of stakeholders from Interviews	Respondents
<i>Related to quality and design of the house</i>		
Size of House	Comparable living space	R1, R2, R3, R5, R6, R7, R11, R15, R17, R20, R21, R22, R23, R24, R27, R29, R34
Location of house/ Neighbourhood Safety/ Site selection	Safety of the location	R1, R2, R3, R4, R5, R6, R7, R8, R9, R13, R14, R15, R16, R18, DR10, OR19, OR16
Cost	Reasonable Budget	R1, R2, R3, R5, R6, R11, R15, R17, R19, R20, R22, R23, R24
Time	Timely Supply of Materials and Finishing the Project	R4, R11, R12, R14, R19-R 34, DR1-DR21, OR1-OR21
Building Quality	Standard materials	R1, R3, R5, R6, R7, R11, R12, R15, R17, R19, R20, R23, R24, R26, R27, R33, R34, DR17, DR5, R4, DR12-DR18, OR11-OR19
<i>Related to infrastructure facilities and other facilities</i>		
Water Supply	Water supply	All Respondent from Beneficiaries (R1-R34)
Solid waste management	Sanitation	All Respondent from Beneficiaries (R1-R34)
Electricity	Electricity	All Respondent from Beneficiaries (R1-R34)
Thermal comfort	Natural lighting and ventilation	All Respondent from Beneficiaries (R1-R34)
Functionality of the house	Adequate space for essential daily activities	R1, R3, R5, R6, R7, R11, R15, R17, R20, R21, R22, R23, R24, R27, R29, R34
<i>Related to social and cultural patterns</i>		
Socio - Culture and religious norms	Vaastu - Cultural considerations	R1, R2, R4, R6, R8, R9, R12, R14, R16, R18, R21, R24, R27, R33, R34
<i>Institutional factors</i>		
Coordination	Coordination	R1, R5, R6, R9, R14, R17, R21, R31, R35, DR1-DR21, OR1-OR21
Information Management	Good Communication	R1, R5, R6, R9, R14, R17, R21, R31, R35, DR1-DR21, OR1- OR21

4.4.1. Expectations related to quality and design of the house

From the survey it is clear that overall stakeholder' expectation related to housing quality and design is providing safe, Practical and comfortable living space for affected people. As well as stakeholders' expectations in relation to time, cost, quality, and the overall designs of the project were gathered. Wide-ranging expectations were recorded,

When it comes to timing, stakeholders such as donors and implementing partners agreed that land acquisition and delays in permission granting have delayed the process of housing schemes in the selected contexts. When it comes to cost, the overall housing schemes have been classified into three costing categories, which belong to LKR 550,000, LKR, 1,000,000, and LKR 1,200,000. Hence, the implementers had to fit beneficiaries' requirements into these categories/schemes. Material selection and housing designs were dependent on the housing scheme that was selected for beneficiaries, where the overall project duration has been 6 months.

Expectations related to construction materials remain to have diverse views in all three districts. In the Jaffna, beneficiaries selected for the scheme owned medium to large houses and they were demolished during the conflict period. Hence, their expectations of materials quality are revealed to be high. However, there were no comments when it comes to the quality of design from all respondents except the fact that they had problems with social and cultural norms.

In the Kilinochchi and Mullaitivu quality-based expectations from beneficiaries were lower compared to Jaffna districts. A Jaffna based implementing partner revealed that there were high expectations of costs and materials in the Jaffna. As to the views of donors and implementing representatives, beneficiaries from Jaffna have high expectations on materials and design of the houses. One beneficiary among 80% of beneficiaries from the Jaffna explained *“we owned a medium scale house with 4 rooms. It was very sanitary and we headed a happy life there. Unfortunately, our house was totally damaged and we used to live in a small shelter. We didn't know what to expect. All we wanted was a house but we knew it would not be good as the previous house we used to live”*.

Beneficiaries in the Kilinochchi had expressed very low expectations. Some of them earlier lived in cement houses and others lived in houses made by clay and palmyra timbers. Beneficiaries from Mullaitivu expressed that they lived in huts made from clay and neem and palmyra timbers. As revealed by some beneficiaries in Mullaitivu and Kilinochchi, roofing was incorporated with dry coconut leaves, and timbers. It was observed that beneficiaries from the Mullaitivu and Kilinochchi did not have exact expectations on the housing design, cost and quality.

However, some implementers identified that beneficiaries were having single storied buildings with unstable structures during civil conflict and post-conflict stages and as to them, housing plans are efficient and capable whether be it donor driven or owner driven compared to the conditions that the beneficiaries lived in earlier stages. There are also other perspectives such as not all houses were fully damaged. Some beneficiaries had experienced a partial damage of the old houses and hence the implementers feel that these houses are better than the houses where beneficiaries lived in before, despite the fact whether they like the location or not.

4.4.2. Expectation related to infrastructure and other facilities

Infrastructure of a housing project relies on crucial aspects such as water, sanitation, proper ventilation, lighting, access to social life, and access to facilities such as markets/malls, hospitals, schools, buses and towns. A proper housing project should meet these requirements in order to be considered successful. According to this survey expectation related to Infrastructure and other facilities was varied with beneficiaries' economic condition and previous housing experience. Generally, beneficiaries have high level expectation on electricity, water and sanitation.

4.4.3. Expectation related to cultural and social patterns

Culture and social patterns remain to be a key aspect in determining the success of a housing project, because people from the Northern Province tend to have strong cultural and religious beliefs especially in relation to factors such as Vaastu, and Housing Astrology, etc. There have also been concerns related to neighborhood selection, where

beneficiaries preferred a knit family structure where they can easily reach and communicate with their relations, rather than being neighbors to strangers.

According to implementing partners' point in all districts, *"It is a bit disappointing for beneficiaries that they are unable to choose their houses and the neighborhood. But they still feel that these are secondary aspects when it comes to basic requirements of a house"*.

Another concern that was expressed by beneficiaries was based on the sustainability of donor driven houses. As per their views, these houses are less flexible to expand and unable to fit to conditions of long living with small rooms and with an inadequate housing structure. Due to the fact that these houses are not flexible to expand, most beneficiaries feel that there are less chances that they can see them as long-term resources and can incorporate socio-cultural aspects such as Vaastu placements.

As revealed by one of the beneficiaries of a donor driven house in the Jaffna *"we were very much into religious beliefs. Our earlier house was not built with Vaastu but you know we couldn't save it. We are now given a house and there is not much to complain about it"*. Accordingly, many beneficiaries have serious expectations related to Vaastu, while some didn't have.

4.4.4. Expectation related to institutional aspect

Stakeholders had expectations related to proper stakeholder coordination and good communication with all stakeholders' group that can enable the use of new technologies and innovative approaches, as well as to provide comfortable and satisfactory housing for beneficiaries. Implementing partners and the government bodies had expectations related to better project coordination and communication with beneficiaries and government bodies.

Donors and implementation partners also were confident that the role of communication and coordination was strong with government bodies and beneficiaries in both donor-driven and owner-driven reconstruction housing project, meanwhile implementing

partners had outsourced construction to private sector contractors where beneficiaries were not involved part of it in donor driven reconstruction housing project.

4.5. Summary

A successful housing project needs to consider the expectations and requirements of the stakeholders, while this will influence the overall satisfaction level of the housing project. Different life-styles and economic backgrounds remain to be the root-cause of this variation in relation to contextual expectations. Especially previous housing experiences had influence in expectation of the current housing project. It was mainly depending on size of the former house, materials used in former houses, quality of construction, and design of the house.

Chapter Five: Stage II - Stakeholders Satisfaction in Resettlement Housing Projects in Northern Province

5.1. Introduction

The data collected through the structured questionnaires in Stage 2 (the questionnaire survey instruments are given in Appendices F, G, H and I.) have been analyzed through SPSS using various statistical techniques such as Box Plots, and Wilcoxon Sign Rank. The analysis presented in this section has been presented in reference factors tabulated in section 2.6. As to the factors presented in Table 2.8, the stakeholder satisfaction level was analyzed through the box plot technique.

This chapter described the data gathered from structured questionnaires tabled with the frequencies of responses and weighted responses sorted into tables for ease of analysis. At first the Box Plots were drawn for satisfaction related factors in order to determine the central tendency of the respondents' views.

5.2. Analysis Based on Box Plot Comparison

Each factors of satisfaction values were tabulated and then those used for drawing the box plot. Those are given in Appendices L to R. The Box Plots comparisons of responses shown in following categories of questions, (a) common question, (b) specific questions for beneficiaries, (c) specific questions for implementation partners, (d) specific questions for government bodies and (e) specific questions for donors. The stakeholders' satisfaction have been compared within the owner driven housing project (ODH) and donor driven housing project (DDH) through the box plots comparisons. Also, comparison was done within the stakeholder's satisfaction level in previous house and present house.

5.2.1 Common Question Category

Table 2.8 shows the factors of satisfaction under common questions (i.e. F1, F2, F3, F4 and F5) that were asked from all stakeholders.

5.2.1.1. Satisfaction levels related to location of the house

Location of the house had a major role in stakeholder's satisfaction. Location of the house (F1) of which the median and Inter Quartile Range (IQR) were lying in the Highly Positive zone before civil conflict. After the conflict situation, their respective medians and IQR has not yielded any considerable change in Owner driven Housing Project (ODH). But when it comes to Donor Driven House (DDH), medians and IQR were shifted towards middle region. Following Box Plot Chart 5.1 shows level of stakeholders' satisfaction related to location of resettlement housing Project.



Box Plot Chart 5.1: Stakeholders' satisfaction Related to Location of Housing Project

The Donor Driven resettlement housing (DDH) project is completely relocated in a new location. Houses built and handled by the donor agencies. Most of the donor driven

houses are located in remote areas. Figure 5.1 shows the Location of DDH project. One respondent stated that “Beneficiaries cannot choose the location. That is why they have dissatisfaction in location of the house”. According to their opinion, there are lack of connection with infrastructural factors such as access to hospital, schools, shopping and public transport. where it is difficult to get buses. it was difficult for them to find livelihood options because they had to travel and travelling was difficult from that area. Meanwhile, beneficiaries were relocated in a same place under the owner driven housing (ODH) projects. Donors provided cash grant to the affected people for the reconstruction of their houses at the same site. Therefore, there are an optimistic revelation has been made with regard to the concept of owner driven housing projects.

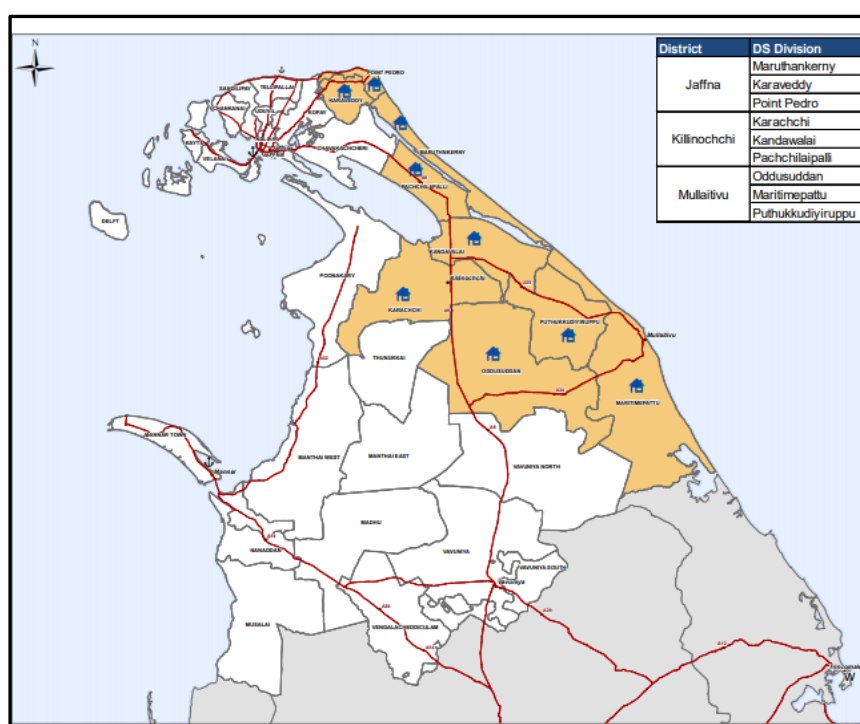


Figure 5.1: Location of Donor Driven Housing Project in Northern Province.

5.2.1.2. Satisfaction levels related to standard of housing materials

Factor 2 (F2) Standard of housing materials provided for walls, floor and roofing in projects. According to the findings, responses were lying in the low to middle area in pervious situation. When it comes to current situation which are shifted to positive area in an overall sense. But DDH project stakeholders have expressed low level satisfaction in present situation. It is not surprising. Meanwhile standard of housing materials (F2),

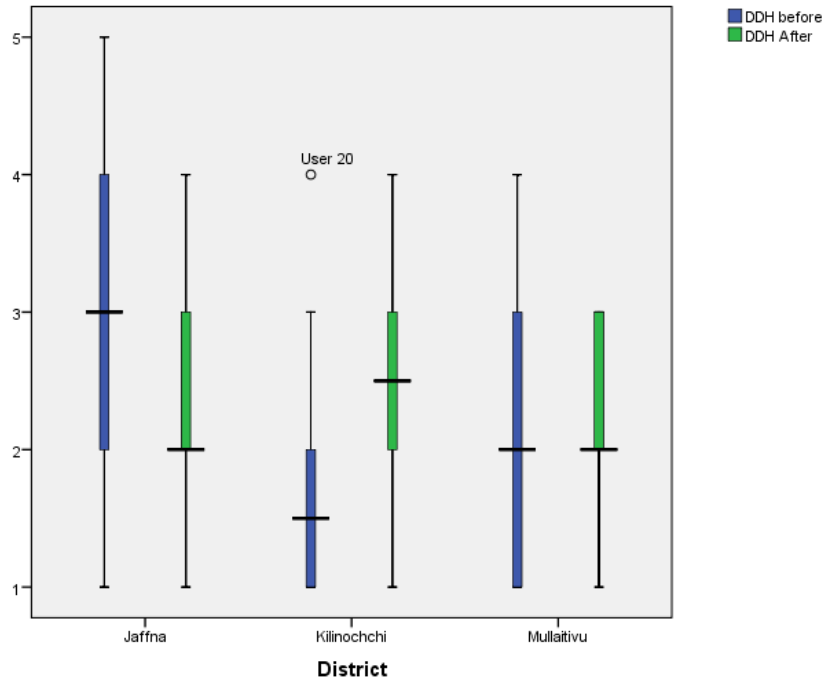
were very much vary among districts. Box Plot Chart 5.2 shown the level of satisfaction varied among the districts in standard of housing materials. Both donor driven and owner driven houses are constructed with clay, bricks, cement and concrete soil blocks, floor basements were built with concrete stones (60mm thick) clay tiles and palmyra timbers have been used for roofing systems, where Mahogany timber has been used for windows and doors. Implementing partners provided model of house by government bodies to beneficiaries. It was observed that the use of materials has been the same in all districts.

In Kilinochchi and Mullaitivu, beneficiaries had positive concerns with regard to the housing quality compared to Jaffna. Most of the beneficiaries admitted that they were residing in temporary shelters made from dry coconut leaves, cadjan and tarpaulin, where they had high security related concerns and the housing project was an obvious helping scenario. Box Plot Chart 5.3 & 5.4 shown the beneficiaries' level of satisfaction varied among the districts in standard of housing materials in both donor driven and owner driven housing projects.



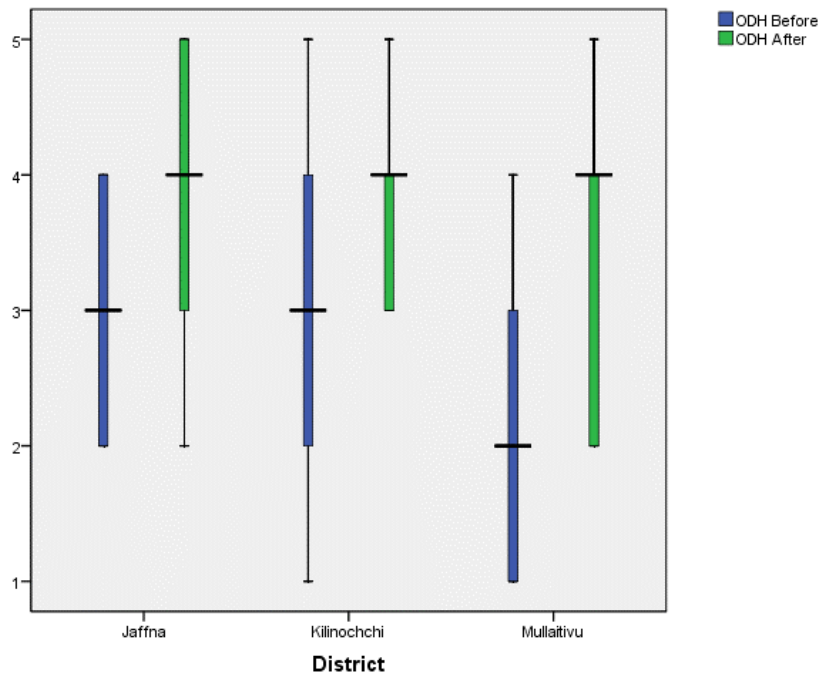
The Box Plot Chart 5.2 shown the level of satisfaction varied among the districts in standard of housing materials

Beneficiaries' satisfaction levels related to standard of housing materials for Donor driven housing project



The Box Plot Chart 5.3 Beneficiaries' level of satisfaction varied among the districts in standard of housing materials in Donor driven housing project.

Beneficiaries' satisfaction levels related to standard of housing materials for Owner driven housing project



The Box Plot Chart 5.4 Beneficiaries' level of satisfaction varied among the districts in standard of housing materials in Owner driven housing project.

Looking at the Box plot comparison given in charts 5.3, beneficiaries satisfaction about standard of housing materials is high in Kilinochchi and Mullaitivu districts compared to Jaffna district. When it comes to owner driven housing project, which the median and IQR were shifted to positive zone in all three districts, it has yielded high positive changes in Mullaitivu district compared to others. Pre-conflict context of housing design was determined the current level satisfaction in Mullaitivu district. As evidenced in Box Plot Chart 5.4, it can be seen that beneficiaries' satisfaction levels are very high in ODH Project.

5.2.1.3. Satisfaction levels related to housing design and layout

Looking at the box plot comparison given in chart 5.5, F3 have shown exceptional improvements in the level of stakeholder satisfaction in the ODH projects. But has not yielded any considerable change in DDH Projects. Cultural consideration in housing design (F10), together with Infrastructure of house (F4), and also future extension of the house (F7) have been determined by the well-planned house layouts.

UN Habitat (Implementing Partner) has been the initiator of design and layout of both owner-driven and donor-driven projects.

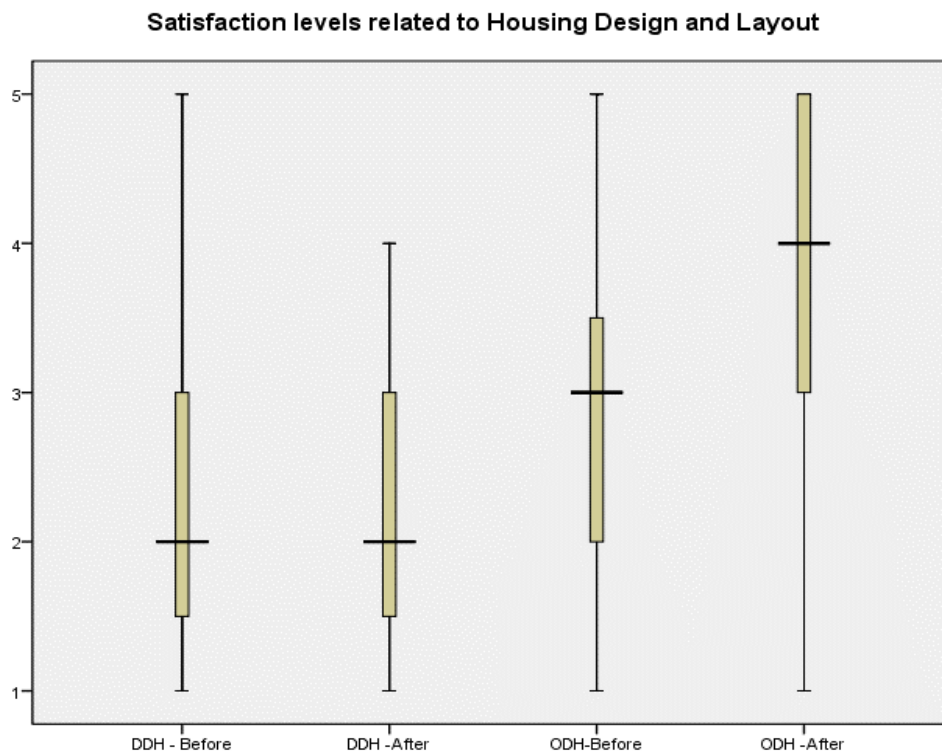
Common layout of the owner driven housing project- *It consists of 550 Square Feet with the facilities of a living room, 2 bedrooms, one kitchen and a sanitary toilet. Both tube wells and open wells were provided as to the requirements of the beneficiaries. Groundwater levels were considered determining whether to construct tube walls or open walls.*

Common layout of the donor driven housing project - *It consists of 500 Square Feet with the facilities of a living room, 2 bedrooms, one kitchen and a sanitary toilet. Apart from the differences in the size, the same materials have been used for donor-driven houses just as owner-driven houses. Only common well was provided to the beneficiaries as proposed in the protocol.*

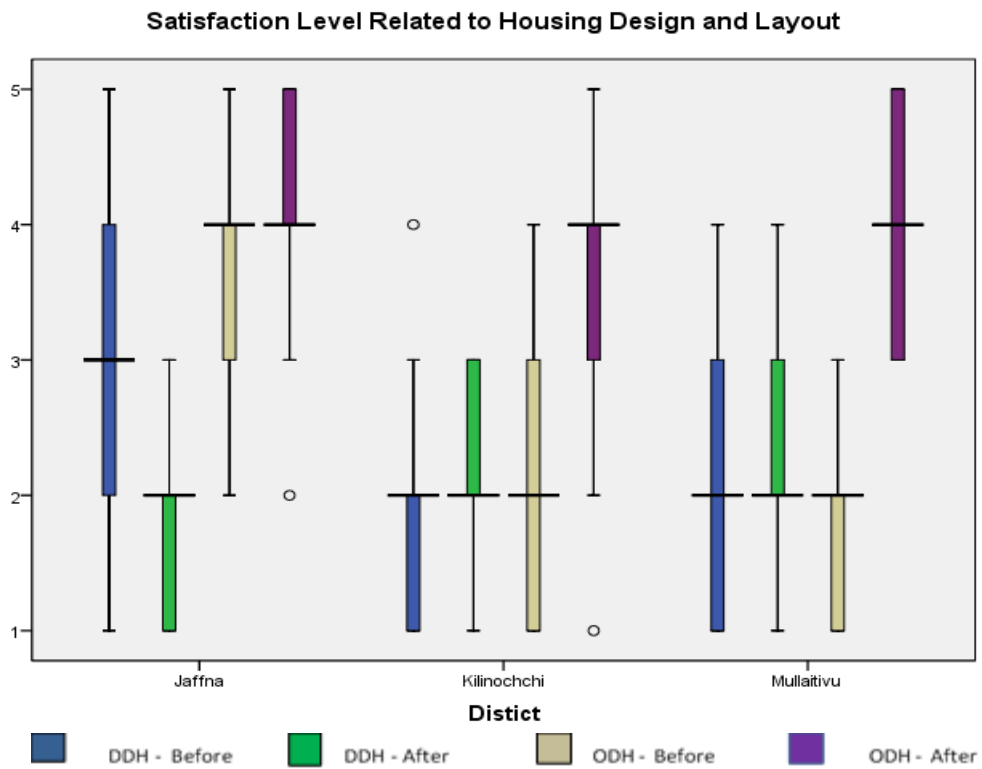
Owner-driven houses were allowed to facilitate the modification and enlargement of houses based on the requirements of the family needs and futuristic aspirations. Hence

beneficiaries were part of the stakeholder in the designing and planning activities. They were allowed to build their dreamed house. Meanwhile donor-driven housing designs remain to have poor facilities in relation to the expectation of futuristic intentions of family enlargement. Lack of consideration of family enlargement facilities tends to reduce the satisfaction levels compared to the owner-driven houses.

Another concern that was expressed by implementers, based on the sustainability of donor driven houses. As to their revelations, these houses are less flexible to expand and unable to fit to conditions of long living with small rooms and with an inadequate housing structure, due to the fact that these houses are not flexible to expand. In the district context there has been a simultaneous improvement in the satisfaction levels of ODH in the Kilinochchi and Mullaitivu districts, while the same level of satisfaction (median) is reported in the Jaffna in post conflict situation. Pre-conflict context of housing design was determined the level satisfaction in the post-conflict situation. This finding is shown in Box Plot Chart 5.6.



Boxplot chart 5.5: Satisfaction Levels related to Housing Design and Layout



Box Plot chart 5.6 Satisfaction Levels in Housing Design among the Districts.

5.2.1.4. Satisfaction levels related to infrastructure and functionality of the houses

Views from respondents were gathered in perspective of four major criteria of infrastructure and functionality of houses, where positive responses have been recorded. Such four main criteria include the following; Infrastructure and functionality (F4) of the houses provided water supply (F4.1), Electricity (F4.2), Sewerage (F4.3) and Accessibility for livelihood activities (F4.4). This shows that water facilities, electricity, and sanitation facilities have achieved greater results. But DDH project has received extremely low positive concern in overall sense of infrastructure and functionality due to the location of house (F1) and water facility (F4.1). Most DDH projects were built in remote areas. Therefore, accessibility of livelihood activities has vastly inferior change in the level of satisfaction.

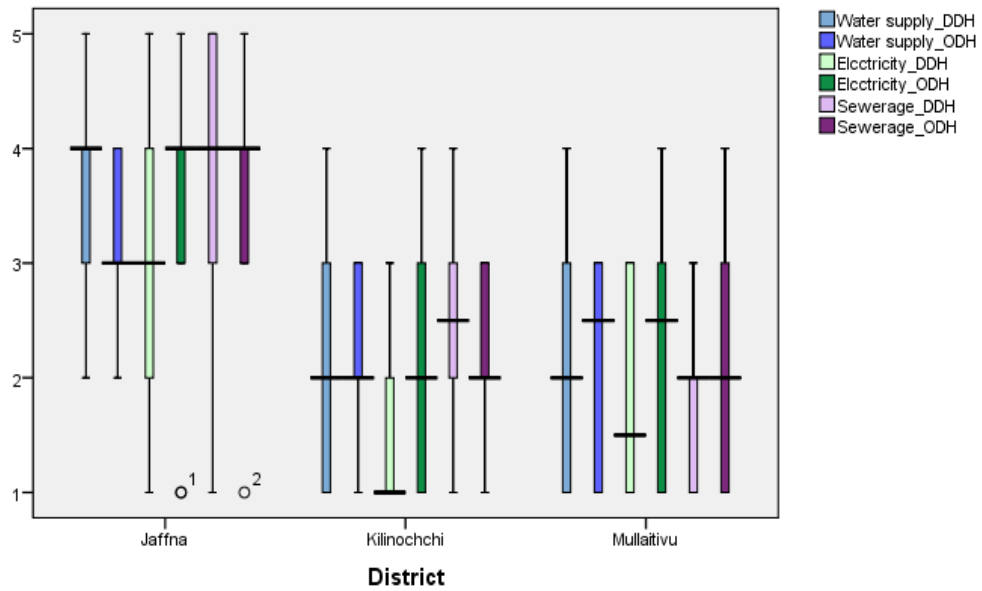
When analyzing water facilities, most beneficiaries mentioned that the water supply was a problem before the housing scheme when they lived in previous house. But many beneficiaries feel satisfied with the water supply after implementation of the new house

in ODH scheme. Both implementing partners and donors also express similar views in water facility of the both ODH and DDH projects. But DDH beneficiaries express low level satisfaction in water facility because they share common wells in DDH project, Land allocated for each house remains to have limited space, which tends to result in poor water facility in overall housing arrangements in DDH.

As well as, all stakeholders feel that the sewerage provision has risen-up in the post-housing stage, while others feel completely different. Electricity facilities were said to be negative earlier as most beneficiaries feel that electricity supply was not that good in their previous houses. Both Owner-Driven and Donor-Driven projects' Beneficiaries from Kilinochchi and Mullaitivu had high satisfactions with regard to electricity supply in the current places where they live. Box Plot Chart 5.7 and 5.8 show that satisfaction levels of infrastructure facilities vary among pre-conflict and post-conflict scenarios.

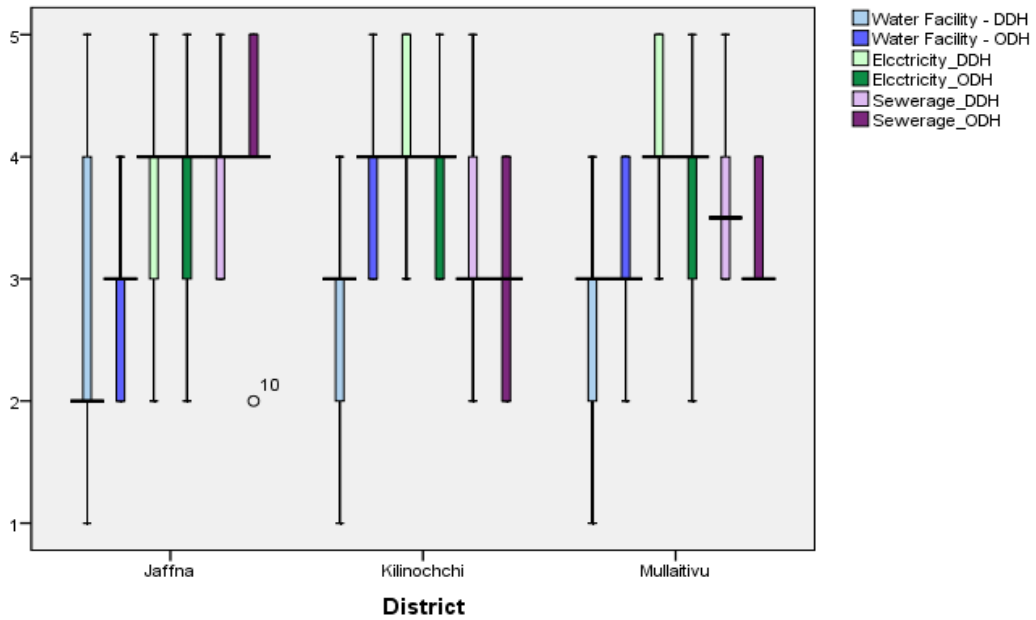
In addition, donor-driven projects' beneficiaries strongly dissatisfied of the resettlement project due to the social facilities, such as leisure, hospital and education facilities, public transport and shopping. which are directly affected their livelihood and income generating activities.

Infra-structure facilities in pre-war context of houses



Box Plot Chart 5.7: Stakeholders' Satisfaction Levels in Infrastructure and Functionality of previous houses.

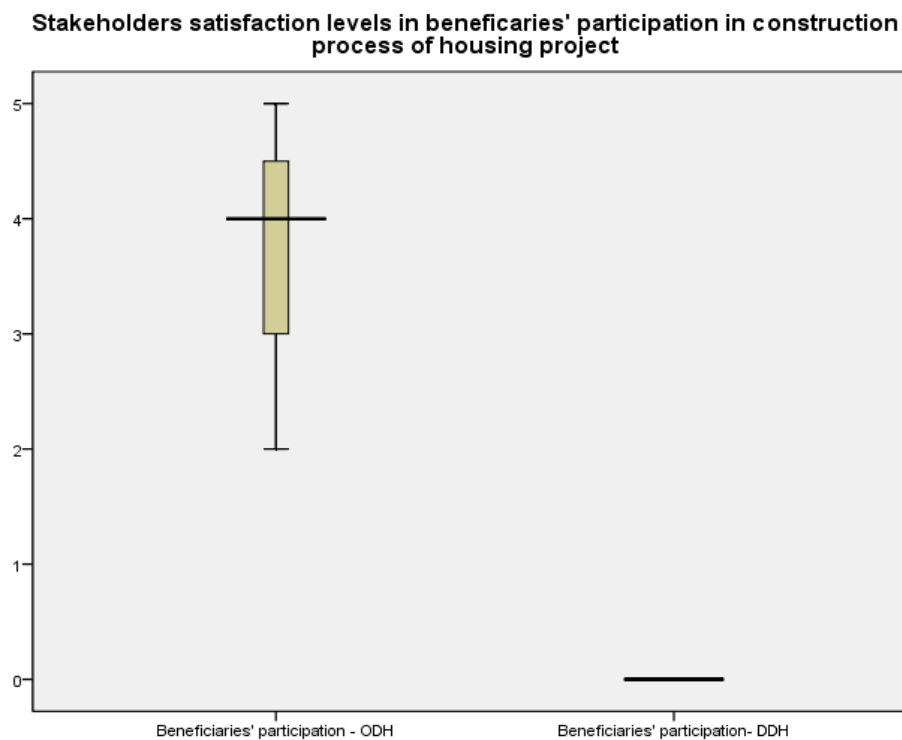
Stakeholders' satisfaction level in Infra-structure facilities of Resettlement housing Project



Box Plot Chart 5.8: Stakeholders' Satisfaction levels in Infrastructure and Functionality of Present the Houses.

5.2.1.5. Satisfaction levels related to beneficiaries' participation in construction process

Looking at Box Plot Chart 5.9, beneficiaries' participation level in ODH project is in excellent level but compared to DDH project situation where there was no beneficiaries' involvement at all stages of housing construction processes. DDH project was completely handled by donors, where site selection was driven by the government hence there was no opportunity to involve beneficiaries in the designing phase and construction phase. As evidenced through the interview data, the implementing partner UN Habitat hired 4 main contractors for the donor-driven project, to complete the tasks of material supply, civil work, carpentry work and electrician works. The beneficiaries were handed-over with the full furnished houses that were built/engineered in collaboration of the implementing partners and contractors. In ODH project, beneficiaries were provided with much involvement to build their dream houses. There was an opportunity to involve beneficiaries prior to housing design and construction phases. This aspect seems to have been well said by both government bodies and donors as excellent satisfaction levels for F5 as shown in Box Plot Chart 5.9.



Box Plot Chart 5.9: Beneficiaries' Participation Level in Resettlement Housing Projects.

5.2.1.6. Overall Summary on Common Question Feedback

In Summary responses for common questions show that factors location of house (F1), standard of house and materials (F2), housing design and layout (F3), infrastructure and functionality of the house (F4) have yielded intensive reduction in negative responses and even larger scale increase in positive responses after the resettlement housing work is completed. It's only observed in owner driven housing (ODH) project. But there is only marginal reduction in frequencies of negative responses in donor driven housing project compared with ODH project. Hence location of house (F1) is even worse now in DDH project as well as beneficiary's participation in housing construction process (F5) not acceptable factor for DDH project stakeholders. Therefore, standard of house and materials, housing design and layout, water facility, electricity, sewerage are been satisfactory factors for all stakeholders in both owner driven and donor driven housing projects. Location of house and beneficiary participation are been non satisfactory factor for donor driven housing project.

5.2.2. Specific Questions for Beneficiaries

Beneficiaries' satisfaction was identified under six main factors, (a) future extension of the house, (b) cost of the house, (c) duration of the house, (d) cultural consideration, (e) sense of safety and (f) coordination of other stakeholders. Future extension of houses was analyzed with housing design and layout under common question.

5.2.2.1. Satisfaction levels related to cost and duration of the house

Looking at the Box Plot comparison, given in below Box Plot Chart 5.10, Factors F6 and F7 have shown exceptional improvement in the level of beneficiaries' satisfaction. Apparently, level of satisfaction in present reconstruction project has been determined by nature of the previous houses (F2).

Majority of respondents from beneficiaries in the all districts said that the cost of reconstruction of their houses is around Rs. 550,000.00 to Rs. 1,200,000.00. The payment was made in four installments. First installment was made upon completion of foundation

work, second at completion of wall level work, third at upon completion of roof level and, fourth at completion of floor and wall finishing works.

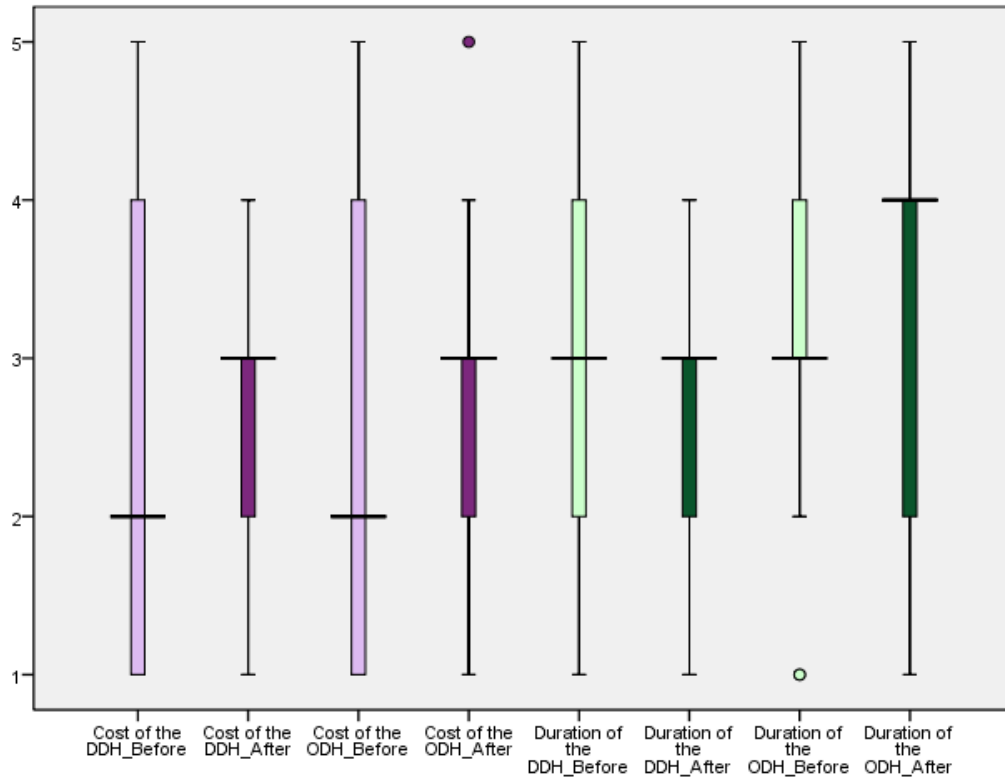
When asked about the cost related satisfaction, 66% of respondents in the Jaffna district dissatisfied about the cost of the resettlement housing project. The respondents claimed that the cost of damage to their previous houses was more than Rs 1200000. Beneficiaries also had confusions on when they would receive their permanent houses and this also needed to be highlighted as a challenge. This made beneficiaries spend their own money in their houses to fasten the process of completion. Another drawback is that some beneficiaries were found to be struggling to complete the houses since the project model was based on reimbursement. Hence, these were the core pillars of dissatisfaction. Although beneficiaries reveal that they are satisfied with the fact of owning their permanent houses compared to the temporary shelters where they lived in the districts of Kilinochchi and Mullaitivu.

Meanwhile the biggest challenge in concern of time was highlighted by the implementing partners in the provision of transitional shelters. It was the delay that occurred in beginning the construction. Hence, this delay in the initiation caused the project to get implemented in the monsoon season, which was subject to further delays in completion.

According to their opinion, satisfaction levels remain to be lower to moderate when it comes to cost and time elements. Delays due to permission granting of deeds have been the negative factors when it comes to satisfaction levels.

Donors also suggested that lack of planning when it comes to uncertain situations such as increase in the cost of materials had created timing limitations. The fund allocated in the project was not adequate to meet these uncertain situations. It caused delays in the time-frame and both implementing partners and donors had to work extra to fit aspects within the budget of costs and timelines. Those were revealed during the interviews.

Sstisfaction Levels related to Cost and duration of the Housing Projects



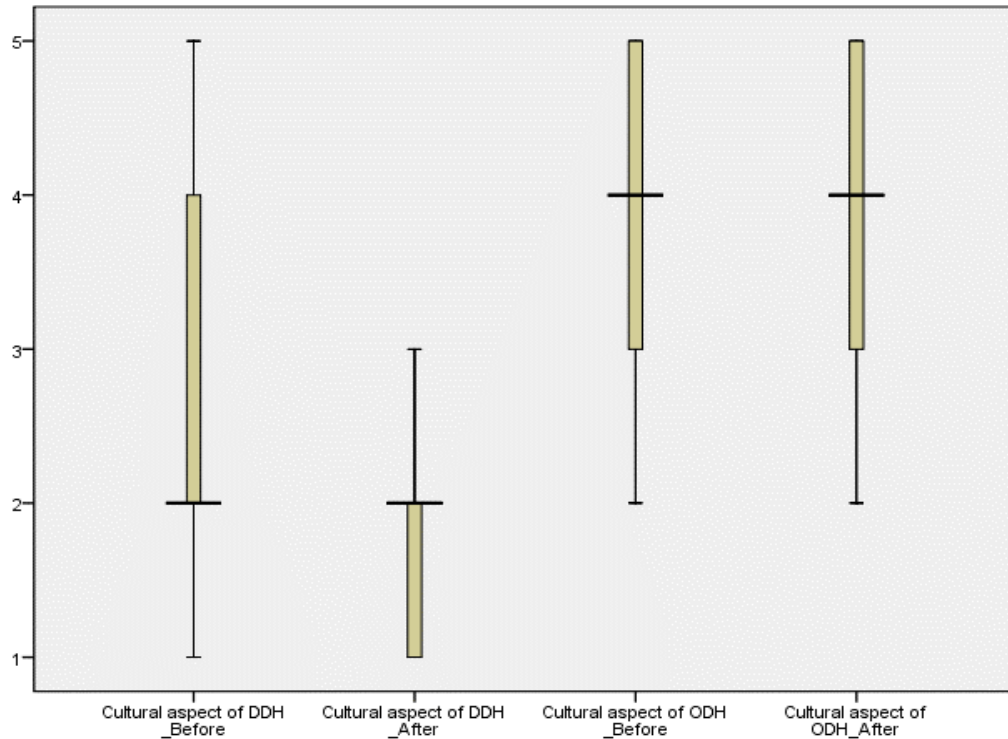
Box Plot Chart 5.10: Beneficiaries' satisfaction levels in cost and duration of the housing projects

5.2.2.2. Satisfaction related to social and cultural aspect

Social and Cultural factors have a major role in satisfaction level of house in Northern Province. With above factors have been virtually disregarded by donors and implanting partners when the designing the house. Cultural aspect of the house of which the median and IQR were shifted to negative zone in DDH project, has not yielded any considerable change in ODH Project. As evidenced in Box Plot Chart 5.11, it can be seen that satisfaction levels are lower in DDH Project.

It is not surprising that the respondents have expressed much dissatisfaction about the overall sense of cultural aspect of DDH Projects. Because DDH project beneficiaries felt that their houses were not designed in accordance with the Vasstu measurements. While some had negative concerns about it, others didn't take it as a serious problem.

Satisfaction Levels related to Social and Cultural aspect of the House



Box Plot Chart 5.11: Beneficiaries’ Satisfaction Levels in Social and Cultural aspect of the Houses.

Hence, most beneficiaries of the donor driven houses felt that they didn’t have the choice of selecting their neighborhood. Although many of them expressed that all the circles in the beneficiary list are known to them, they were not content with the neighborhood selection. Further government agencies also revealed ‘this concern on neighborhoods came as a complaint from many. Some said that *“our neighbors always fight and it disturbs us, but we have limited facilities only”*. This was a reason for some social and cultural issues.

Other common social trauma was highlighted as lack of privacy due to the closeness of houses in all three districts. Almost all stakeholders taken for this study elaborated that donor driven houses have boundary walls and side distance of houses remain to be very much limited. This results in problems such as lack of privacy, conflicts with the neighborhoods, domestic violence due to conflicts and extramarital affairs.

Hence as explained by a government agency, donor driven houses are located nearby, which can cause sanitary problems and lack of privacy to beneficiaries. Further wells are common for houses. This can cause disputes and sanitary issues at times.

In summary responses for social and cultural aspects (F9) show that yielded drastic reduction in positive concerns of the cultural aspect.

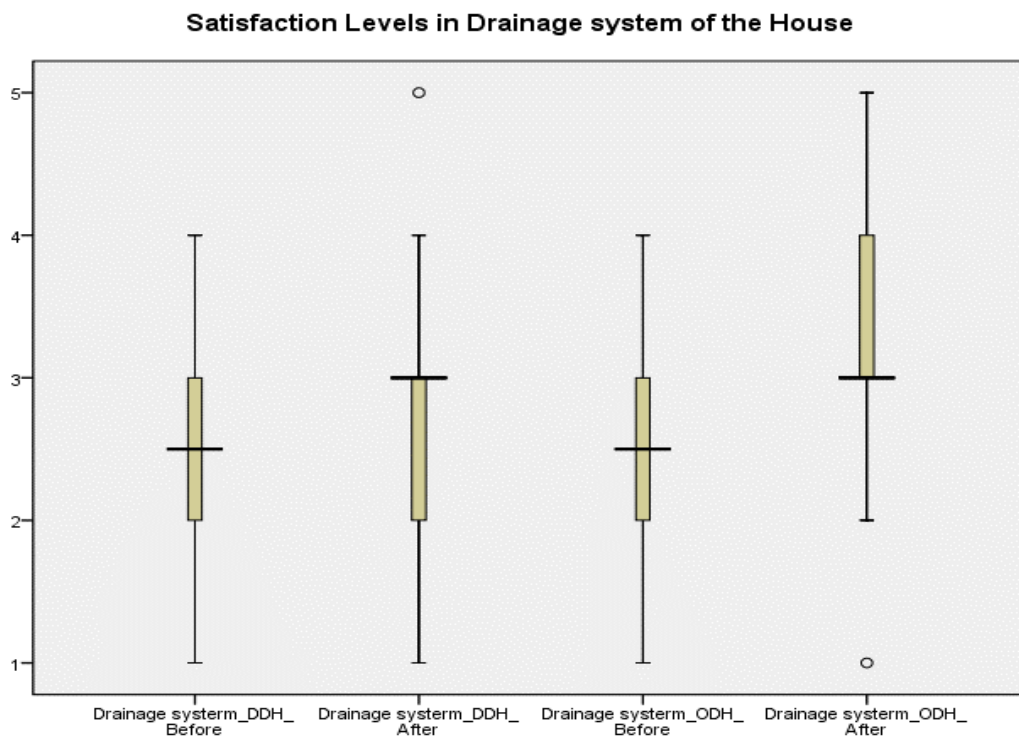
5.2.2.3. Satisfaction levels related to sense of safety

Monsoon flood is the main issue in Northern Province. So that beneficiaries were asked about drainage system (F10) of the houses. Foundation levels want to raise up to prevent flood coming into the houses. Drainage system has improved with the improved physical nature of the houses such as materials of present houses, layout of the houses. Box Plot Chart 5.12 shows the satisfaction levels in drainage system of houses.

It was observed that the use of materials has been the same in all districts and beneficiaries did not have much negative concerns on the quality aspect when qualitative discussions were held. When further probed on the quality and materials related aspect, it came to know that disaster risk reduction features were also incorporated into the housing project. 150 mm thick walls have been incorporated to deal with extreme weather conditions. The external walls were also connected to reinforced concrete ring beams in the lintel level. It was revealed that the hipped roofs were also connected to ring beams. In all three districts, restraining bands were integrated into the roof to deal with excessive wind waves in wind seasons it was revealed from the secondary source of the data collection.

As revealed by DDH projects' beneficiaries, drainage after facilities are in a better state in the Jaffna and satisfaction levels have been shifted to positive area. In the Kilinochchi, and Mullaitivu both satisfactory and negative views were gathered. In some areas such as Maruthankerny, Karachchi beneficiaries felt that drainage after facilities were not that good, while in other places, drainage after facilities were middle. Hence, an overall conclusion can be made that the houses have been constructed with adequate drainage facility.

In other concern donor driven beneficiaries from the Mullaitivu mentioned that the placements of houses remain to be in a vulnerable sense where the roads surrounded are not in a good condition to travel. Many school children find it even difficult to walk in the road and driving vehicles in the lanes surrounded remains to be an extra challenge or them. On rainy days, the situation gets worse and it often results in accidents and injuries, especially for kids who ride bicycles.



Box Plot Chart 5.12: Beneficiaries' Satisfaction Levels in Drainage System of the Houses.

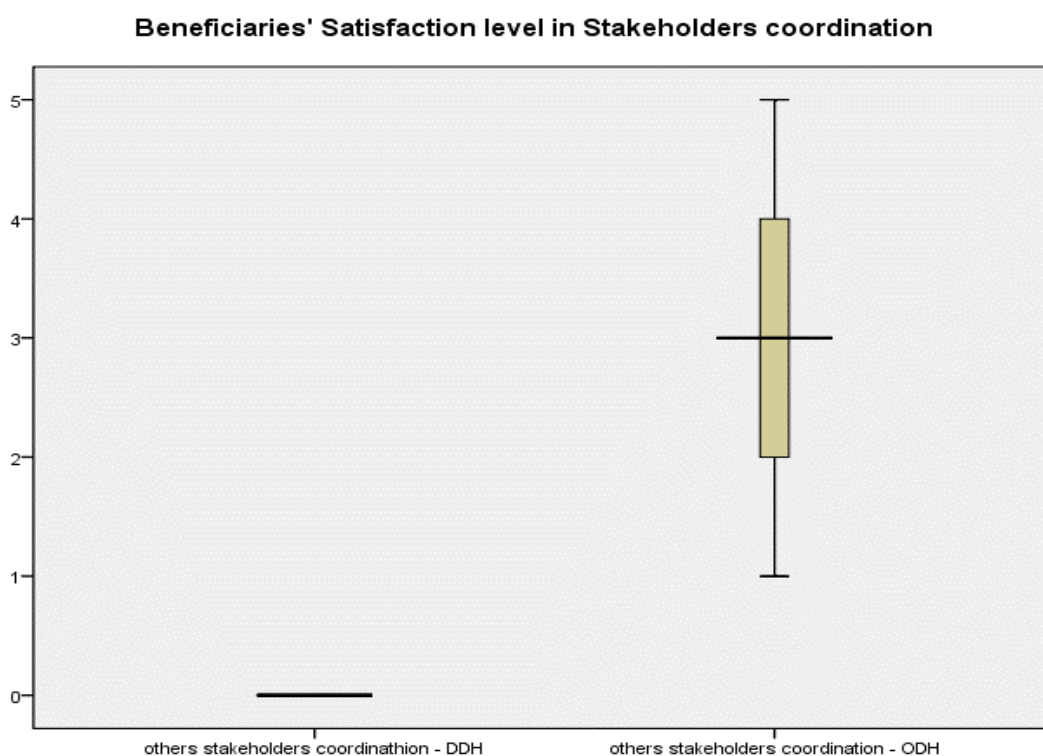
5.2.2.4. Satisfaction levels related to other stakeholders' coordination

The role of coordination plays a key role in the resettlement projects. It involves multi-level stakeholder coordination where donors to beneficiaries were a crucial part of the project from the beginning of the coordination end.

In reference to analysis, beneficiaries have only coordination with government bodies. It was happened only in Owner driven housing project. Their satisfaction levels with regard to coordination with the government bodies remain middle level. It has been reported that lack of information transparency and coordination have been the core challenges in

this project in perspective of payment delivery. This caused beneficiary's challenges in planning their expenses that reduced the overall productivity. It also had made significant influences on the completion of the constructions within the allocated time frames.

Beneficiaries' involvement in the all planning and construction processes of project was nonexistent. So that there is no opportunity to coordinate beneficiaries with other Stakeholders. It is seemed only in DDH project. An overall stance of beneficiaries remains to be satisfied where they felt that the coordination was adequate, although the satisfaction was moderate as outlined in Box Plot Chart 5.13.



Box Plot chart 5.13: Beneficiaries' Satisfaction Levels in Coordination with Other Stakeholders.

5.2.2.5. Overall Summary on Beneficiaries Question Feedback

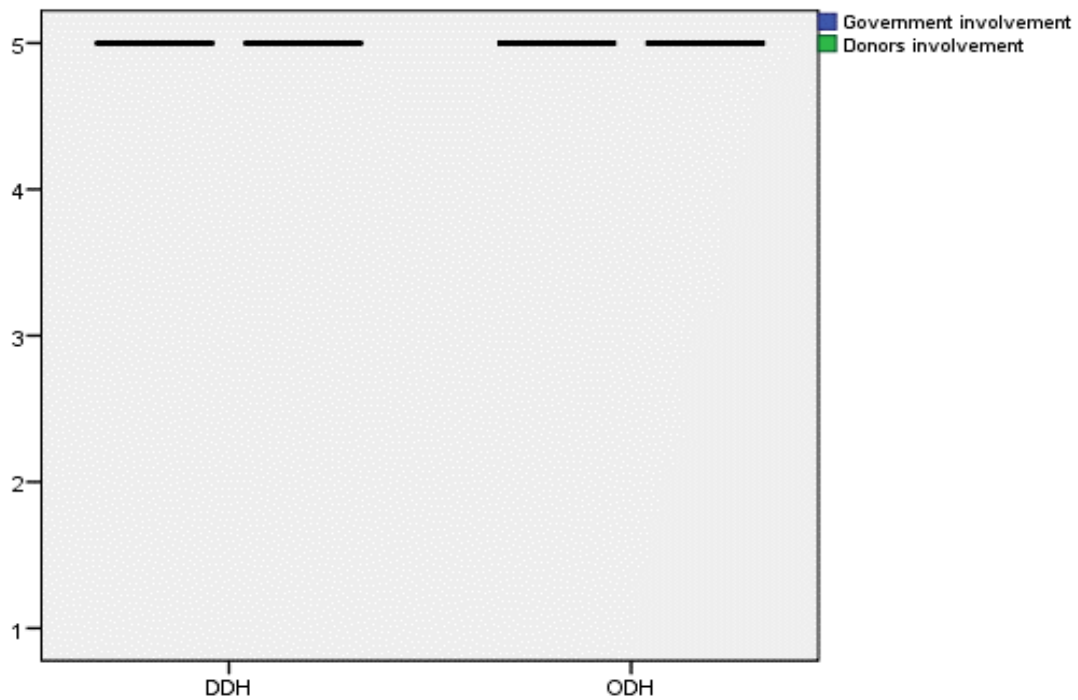
In Summary beneficiaries' satisfaction levels have increased in all factors both ODH and DDH projects except for the satisfaction level on the social and cultural conditions, and coordination of other stakeholders in DDH project. It seems resettlement housing project has helped to bring about positive change in all aspects of beneficiary's life style. But

unfortunately, social and cultural factor is most essential for housing project has received more negative responses in present scenario of DDH. The coordination with other stakeholders is non-answered factor for DDH beneficiaries. It was determined on DDH project success. Because housing design and planning done by donors, implementation partners and government bodies, this has been not accepted by the beneficiaries.

5.2.3. Specific Questions for Implementation Partners

As seen in Box Plot Chart 5.14, the facilitates provide by government (F12) and Donors' attention (F13) have the IQRs and medians level mostly in excellent region. An excellent level of satisfaction is shown in the implementation partners' perception on government involvement in providing facilities during difficult situation. It is apparent that even though the resettlement housing projects have helped to local people to enhance their life style in a short period after civil conflict. Beneficiary selection and site selection for DDH project was driven by government. It was determined the project success. So that government bodies had a major role in the resettlement housing projects. The Donors' attentions on resettlement housing project also have reached near maximum in all stages of resettlement housing projects. Donors hired implementation partners to properly implement the project with great knowledge on the local context. In summary satisfaction levels of implementation partners have reached excellent in both factors F12 and F13. It shows that coordination level among stakeholders was excellent in the resettlement housing projects.

Implementation partners' Satisfaction Levels in Coordination with Government bodies and Donors

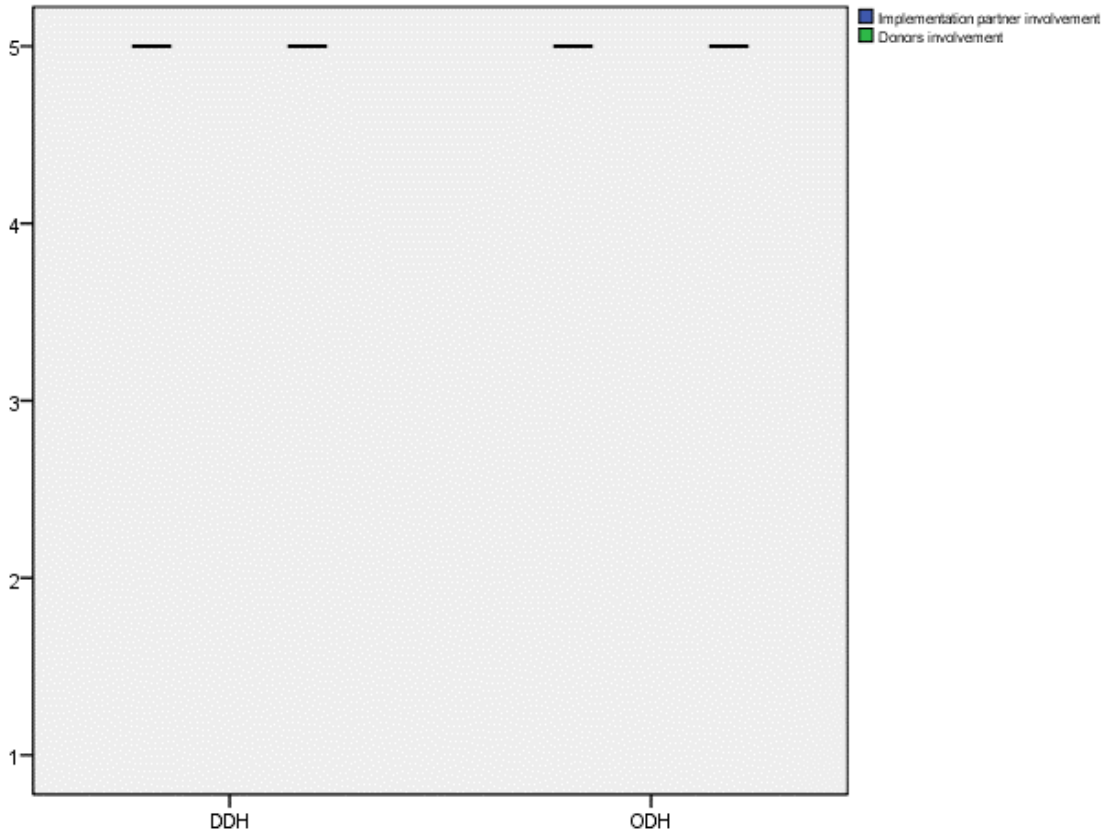


Box Plot chart 5.14: Implementation partners' Satisfaction Levels in Coordination with Government bodies and Donors.

5.2.4. Specific Questions for Government bodies

Box Plot Chart 5.15 shows that government bodies' perception on donors and implementation partners' involvement (F14, F15) in providing new houses for affected people. Mainly Ministry of Resettlement was worked with Donors and implementation partners. There are excellent levels of satisfaction with their medians and IQRs were lying in positive region. Donors were granted the fund and implementation partners were executed the project with proper manner. It was seen in Box Plot Chart 5.13.

Government bodies' Satisfaction Levels in Coordination of the Implementation partners and Donors of the Housing Project



Box Plot chart 5.15: Government bodies' Satisfaction Levels in Coordination with Implementation partners and Donors.

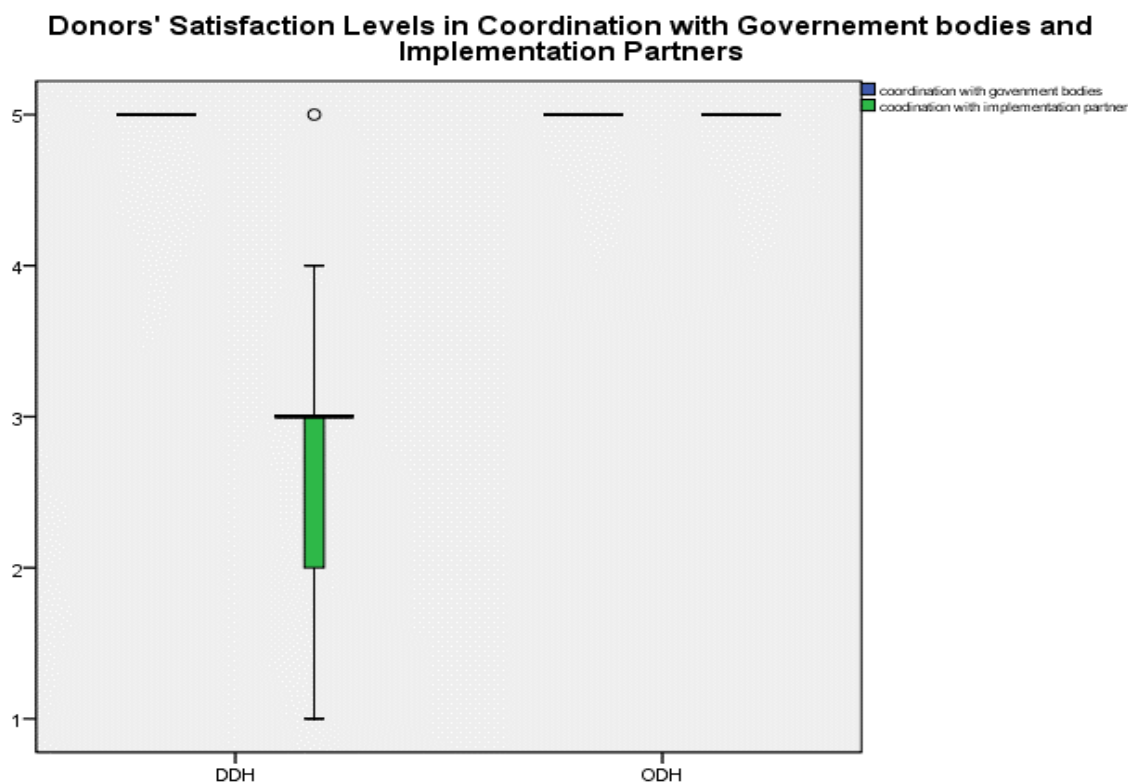
5.2.5. Specific Questions for Donors

The donors' satisfaction has been boosted by greater facilities provided by government and success of the project. Satisfaction levels have been excellent for donors in ODH project. But there was some dissatisfaction gathered in implementing partners' involvement for DDH project as shown in Box Plot Chart 5.16.

Donors perceive that all the objectives related to institutional aspects have been fully achieved, for example, donors from the Jaffna mentioned that there were external audits and evaluation of outcomes was carried-out with implementing partners to ensure that the funds are allocated to beneficiaries in a proper manner.

Donors also were confident that the role of communication and coordination was strong, proper coordination of the government partners, which enhanced local knowledge and understanding from a root-level.

In summary the results show that the donors' satisfaction levels have been heavily boosted by resettlement housing project with all factors achieving high scores.



Box Plot chart 5.16: Donors' satisfaction levels in coordination with government bodies and implementation partners.

5.3. Wilcoxon Signed Rank Test

Each and every factors of satisfaction to be subjected to the above analysis were included to Wilcoxon signed rank test. Table 5.1 shows the Wilcoxon sign rank test of common question category. According to the analysis differences of each stakeholder's satisfaction level (pervious house –new house) tested in both DDH and ODH aspect.

Table 5.1: Wilcoxon signed ranks test for common question category

		N	Mean Rank	Sum of Ranks
Standard of house and Materials - DDH after vs before	Negative Ranks	17	18.47	314.00
	Positive Ranks	19	18.53	352.00
	Ties	15		
	Total	51		
Standard of house and Materials - ODH after vs before	Negative Ranks	4	12.25	49.00
	Positive Ranks	40	23.52	941.00
	Ties	7		
	Total	51		
Housing Desing and layout DDH-After VS DDH-Before	Negative Ranks	25	23.66	591.50
	Positive Ranks	19	20.97	398.50
	Ties	7		
	Total	51		
Housing Desing and layout ODH-After VS ODH-Before	Negative Ranks	9	19.00	171.00
	Positive Ranks	38	25.18	957.00
	Ties	4		
	Total	51		
Infrastructure and Functionality of the house - DDH After VS DDHBefore	Negative Ranks	21	22.00	462.00
	Positive Ranks	23	22.96	528.00
	Ties	7		
	Total	51		
Infrastructure and Functionality of the house - ODHAfter VS ODHBefore	Negative Ranks	8	11.38	91.00
	Positive Ranks	38	26.05	990.00
	Ties	5		
	Total	51		
Location of the house DDH After VS DDH Before	Negative Ranks	44	27.23	1198.00
	Positive Ranks	6	12.83	77.00
	Ties	1		
	Total	51		
Location of the house ODH After VS ODH Before	Negative Ranks	16	13.00	208.00
	Positive Ranks	8	11.50	92.00
	Ties	27		
	Total	51		

Table shows that 17 respondents had a higher satisfaction in the previous house than resettlement houses. However, 19 respondents had a higher satisfaction in after treatment and 15 respondents said no change in their levels of satisfaction. This means that all stakeholders have thought that things are not worse than before. Table is obvious that all other factors were fetch more favorable results in both DDH and ODH project except for some dissatisfaction levels concern in design and layout of the house (F3) and location of the house (F1). It was highly observed in DDH project.

Indeed, median rating of the location of house was sifted towards negative ranks in both scenarios. Mean rating of location of the house, after resettlement project – 12.83, while pervious rating is 27.23 in DDH project. As well as after resettlement project 11.50 while previous situation it was 13.50. Likewise, satisfaction levels of the water facility of the house (F4.1) and cultural conditions of the house (F10) were shifted towards negative area as shown in Table 5.2.

Table 5.2: Wilcoxon Signed Ranks Test for Water Facilities and Cultural Conditions of the House

Wilcoxon signed ranks Test Table for water facilities and cultural condition of the house

		N	Mean Rank	Sum of Ranks
Water supply_DDH After vs DDH Before	Negative Ranks	13	9.88	128.50
	Positive Ranks	9	13.83	124.50
	Ties	8		
	Total	30		
Water supply ODH After vs ODH Before	Negative Ranks	6	9.33	56.00
	Positive Ranks	17	12.94	220.00
	Ties	7		
	Total	30		
Cultural condition of the House_DDH After Vs DDH Before	Negative Ranks	15	15.67	235.00
	Positive Ranks	10	9.00	90.00
	Ties	5		
	Total	30		
Cultural condition of the House_ODH After Vs ODH Before	Negative Ranks	10	10.25	102.50
	Positive Ranks	10	10.75	107.50
	Ties	10		
	Total	30		

The collected data for all other factors of satisfaction do not have a single response which is worse than previous situations in both DDH and ODH projects. Therefore, the tables for all factors of satisfaction will end up being in similar dispersion of values compared in Wilcoxon Sign Rank Test.

Therefore, it is reasonable to conclude that the stakeholders are well satisfied with the owner driven resettlement housing (ODRH) project output. Meanwhile stakeholders have low level satisfaction in donors driven resettlement housing (DDRH) project.

5.4. Summary

The Box Plot comparisons show that the all stakeholders of ODH project are extremely satisfied with the physical and social improvements of the houses which were beyond their expectations. Well planned housing layouts with futuristic aspiration and effective stakeholder's coordination have helped to achieve excellent results. But DDRH projects was located the different locations without concerning beneficiaries' opinions, which has been a major cause of concern for stakeholders. Relocation of the house, which has brought stakeholder dissatisfaction. Further, lack of participation of beneficiaries in design and construction process of housing project have caused to low levels of stakeholder satisfaction on factors relevant to these issues. Those are observed in box plot comparisons. When the Wilcoxon Signed Rank, test was carried out to the research data it proved that the conclusions reached with the Box Plot comparisons on the stakeholder satisfaction levels about the reconstruction output are reasonable.

Chapter Six: Conclusion and Recommendation

6.1. Conclusion

The aim of this study is to evaluate stakeholder satisfaction levels in post-conflict resettlement housing projects. The conceptual framework that was developed for this study is based on a review of the relevant literature and the research findings. Interviews and structured questionnaire surveys have been used in the data collection process. Purposive samples have been utilized. Secondary data collected from previous research, official statistics, diaries, government reports, letters, mass media products and web information. The research findings are discussed below under each objective.

Objective 1 - Critically review the literature on resettlement housing projects and stakeholder satisfaction in disaster reconstruction process

Literature review carried-out in Chapter 2 highlighted stakeholders such as donors or funding bodies, implementing partners, government bodies/representatives, contractors/subcontractors and the general public (beneficiaries). The research looked into the satisfaction levels of four key stakeholders, who are government bodies, implementing partners, donors, and beneficiaries for primary analysis.

Various literature about post-conflict reconstruction housing projects also described in Chapter 2. Study has used three projects for primary data collection and they are Indian housing project, North East Housing Reconstruction Project and UN Habitat housing Program.

Objective 2 - Investigate stakeholder requirements and expectations in resettlement housing projects

The analysis provides stances of stakeholder expectations in varied perspectives. Expectations related to time, cost, quality, design, cultural and social norms, infrastructure and other facilities, and the expectations related to institutional aspects

have been the main pillars of analysis in evaluating stakeholder expectations. These were presented in Chapter 4.

Success of the housing project was determined through the stakeholders' expectations and requirements. While this was influencing the overall satisfaction level of the housing project. The beneficiaries had expectations related to the housing schemes in relation to housing quality and design, infrastructure, and cultural and social considerations. The expectation levels were higher in the Jaffna district in comparison to the Kilinochchi and Mullaitivu. Higher levels of expectations were gathered in Jaffna district in reference to housing quality and infrastructure.

In the Jaffna Housing expectations were varied as to different stakeholders' preferences, socio-economic background, lifestyle and beliefs. Housing expectations can vary as to different stakeholders' preferences, socio-economic background, lifestyle and beliefs. Especially previous housing experiences had influence in expectation and satisfaction of the current housing Project. It was evident from the study that stakeholders from Jaffna district had higher level expectations than stakeholders from the Kilinochchi and Mullaitivu districts.

Moreover implementing partners and the government bodies had expectations related to better project coordination and conforming to budget thresholds and time plans. They also had concerns related to the success of the project in perspective of public acceptance.

Objective 03 - Examine the level of stakeholder satisfaction in resettlement projects.

The analysis presented in this section has been presented in reference factors tabulated in section 2.8. As to the factors presented in Table 2.8, the stakeholder satisfaction level was analyzed through the box plot technique. The study found that Owner driven reconstruction housing projects has been more successful than the donor driven reconstruction housing project.

The results have been diverse where both positive and negative views were recorded. It is evident that certain aspects such as satisfaction related to cultural and social norms,

location of the present house were recorded with negative views for downer driven project. Contextual differences also prevailed where respondents from Mullaitivu and Kilinochchi tended to have higher levels of satisfaction, while moderate to low satisfaction level was recorded in the Jaffna in an overall sense of donor driven reconstruction project. Meanwhile many stakeholders had expressed their positive concerns for all other factors of satisfaction in both owner driven and donor driven housing projects.

General conclusion can be drawn from the study that a greater sense of dissatisfaction or distress can be observed in perspective of donor-driven houses, due to their poor nature of customization and less flexibility when it comes to expanding or meeting the real expectations of stakeholders while owner-driven houses are aimed to meet stakeholder satisfaction to a certain level.

Hence, the study has accomplished all its objectives and the following recommendations are aimed to enhance more satisfaction to stakeholders in future projects.

6.2. Recommendations to Improve Stakeholder Satisfaction in Resettlement Housing Projects.

- Stakeholders can use the findings of this study to improve their satisfaction with regards to post-conflict resettlement housing project in Sri Lanka. Donors can use the findings to identify the suitable housing model for vulnerable communities of Northern Province in terms of efficiency. Both owner driven and donor driven or other reconstruction approaches should take a holistic perspective and fulfill the all social and cultural needs of beneficiaries such development initiatives are suited for Northern Province.
- Government can use the findings to identify most suitable approach to improve beneficiaries' and other stakeholders' satisfaction. Another recommendation for government, who can give low-interest housing loan scheme as a form of prominence to those affected by conflict. Government can use these findings to identify beneficiaries' socio and economic issues in newly relocated area. lack of

livelihood facilities and increase in poverty have become as serious socio-economic issues in that area. There is necessity to restoration of sustainable livelihoods and viable employment options for newly relocated communities.

- Implementation agencies can use this finding to improve the project development model. Implementation agencies can maintain participatory development model or the consultive model with housing beneficiaries, which participation or consultive should be initiated at the inception of the project, as well during various stages of the construction process. Participatory development model or owner driven housing model may not easy to do to female headed family and disabled members 'households. This is essential to use donor driven housing approach as replacement of a one-size-fits-all method with housing assistance, which is designed to address specific challenges of female headed and disabled members' household.
- Beneficiaries can use the findings to build their house with fulfillment of their requirement. It can be to advise for better results of financial planning and housing satisfaction specially for female – headed households and other vulnerable households. They may struggle to contribute their participation and labor to the housing construction process. It could be depending on their satisfaction level.
- Contractors can design and construct resettlement projects in locations that share same geographic, socio-cultural, demographic features according to the findings to enhance the satisfaction of beneficiaries.

6.3. Further Research

Analysis presented in this section witnesses varied viewpoints through the lenses of stakeholder expectations and stakeholder satisfactions. It also embarked on analysis on other demographic factors. However, long term perspectives of the post-disaster housing projects have to be tested. It will give a good impression to study beneficiaries' long-term plans when it comes to these houses, whether they plan to rebuild or expand. A niche focused approach will be helpful in determining the actual stance of donor-driven houses. Various negative viewpoints have been recorded in view of donor-driven projects and hence it becomes important to learn what the beneficiaries actually plan in long term, whether they want to move or settle there. Hence, incorporating long term expectations in future research will benefit studies that will be developed in this field.

Reference

- Aczel, A. D. and Sounderpandian, J., (2007), *Complete business statistics*, 6th ed., New Delhi: Tata Mcgraw-Hill publishing Ltd.
- Agalya, L., (2014), System for Implementation of housing projects for resettlement in Northern Province of Sri Lanka. Retrieved from <http://dl.lib.mrt.ac.lk/handle/123/11725>. accessed on 11th April 2017).
- Ahmed, S.M., Kangari, R., (1995) Analysis of client-satisfaction factors in construction industry, *Journal of Management in Engineering, ASCE 11 36–44*.
- Albuja, S., Anwar, A., Birkeland, M. N., Caterina, M., Charron, G., Dolores, R., Turner F. A.,....Zeender, G. (2012). Global Overview 2011-People internally displaced by conflict and violence, Geneva, Switzer Land: Internal Displacement Monitoring Centre, Norwegian Refugees Council.
- Alex de Sherbinin, Marcia Castro, Francois Gemenne. (2010). “Preparing for Population Displacement and Resettlement Associated with Large Climate Change Adaptation and Mitigation Projects”, Background Paper for the Bellagio Workshop. Retrieved from www.ciesin.columbia.edu/confluence/download/.../Background_Paper_final.pdf.
- Aliaga, M. and Gunderson, B. (2002), “Interactive Statistics. [Thousand Oaks]: Sage Publications”. Retrieved from: https://www.researchgate.net/publication/320346875_Quantitative_Research_Methods_A_Synopsis_Approach/link/59df3a3b0f7e9b2dba82e2db/download
- Amaratunga, D., & Haigh, R. (2011a). Post-disaster Reconstruction of the Built Environment: Rebuilding for Resilience. John Wiley & Sons. Retrieved from <http://usir.salford.ac.uk/id/eprint/9761/1/536.pdf>
- Arslan H, Unlu A (2006) The evaluation of community participation in housing reconstruction projects after Duzce earthquake. *Paper presented at 2006*

international conference and student competition on post-disaster reconstruction “meeting stakeholder interests.” Florence, 17–19 May. Retrieved from http://www.grif.umontreal.ca/pages/ARSLAN_%20Hakan.pdf . (accessed 12 June 2017).

Asian Development Bank. 1998a. Handbook on Resettlement: A Guide to Good Practice. Asian Development Bank. Manila, Philippines.

Atkin, B., Skitmore, M., (2008), Editorial: stakeholder management in construction, *Construction Management and Economics* 549–552.

Australian Agency for International Development (AusAID). (2012). Displacement and resettlement of people in development activities. Australian Government.

Badri, S.A., Asgary, A., Eftekhari, A.R., & Levy, J. (2006). Post-disaster resettlement, development and change: a case study of the 1990 Manjil earthquake in Iran. *Disasters*, pp 451–468.

Barakat S (2003) Housing reconstruction after conflict and disaster. *Humanitarian network paper no. 43*. Humanitarian Practice Network, Overseas Development Institute, London.

Barenstein JD (2006), Housing reconstruction in Post-Earthquake Gujarat: a comparative analysis. *Humanitarian practice network paper 54*. Humanitarian Practice Network, Overseas Development Institute, London.

Barenstein, D. J., (2005), A Comparative Analysis of Six Housing Reconstruction Approaches in Post-Earthquake Gujarat, Humanitarian Policy Network Paper 54. Retrieved from <http://www.odihpn.org/report.asp?ID=2782>.

Below, R. et al., (2007), Drought related disasters – A global assessment, The International Disaster database Centre for Research on the Epidemiology of Disaster CRED, *Journal of Environment and Development*, 16. Pp 328-344. Retrieved from: <https://www.cred.be/projects/EM-DAT>

- Bowen, G. A. (2009) Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9, 27-40. Retrieved from <http://dx.doi.org/10.3316/QRJ0902027>
- Brun, C. and Lund, R. (2008), "Making a home during crisis: post-tsunami recovery in a context of war, Sri Lanka", *Singapore Journal of Tropical Geography*, Vol. 29 No. 3, pp. 274-287.
- Centre for Research on the Epidemiology of Diseases (CRED). (2007), University Catholique de Louvain, Ecole de Santy Publique. Brussels. <https://www.cred.be/>.
- Chambers, R., (1969) *Settlement schemes in Tropical Africa: A study of organizations and development*, Praeger, London.
- Chandran, S., (2012) Challenges of IDP Resettlement in Sri Lanka An Examination of Northern Spring Programme in Vavuniya District. 65-82. Retrieved from http://ir.lib.hiroshima-u.ac.jp/metadb/up/kiyo/AN10482914/JIDC_18-3_65.pdf.
- Chandrasekhar, D. (2012). Digging deeper: Participation and non-participation in post-disaster community recovery. *Community Development*, 43(5), 614-629. Retrieved from <http://dx.doi.org/10.1080/15575330.2012.730538>
- Chang, Y., Wilkinson, S., Brunson, D., Seville, E., & Potangaroa, R. (2011). An integrated approach: managing resources for post-disaster reconstruction. *Disasters*, 35(4), 739-765. Retrieved from <http://dx.doi.org/10.1111/j.1467-7717.2010.01240.x>.
- Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review* 20: 92 – 117 Retrieved from <https://www.jstor.org/stable/258888>.
- Clinton, W.J (2006). *Lessons Learned from Tsunami Recovery: Key Propositions for Building Back Better*, Office of the UN Secretary-General's Special Envoy for Tsunami Recovery.

- Creswell, J. (2008), “Educational research: Planning, conducting, and evaluating quantitative and qualitative research”, *New Jersey: Pearson: Merrill Prentice Hall*.
- Danquah, A. et al (2014). Assessment of Residential Satisfaction in the Resettlement Towns of the Keta Basin in Ghana, *International Journal Civil Engineering, Construction and Estate Management, Vol. 2, No. 3, pp. 26-45*.
- De Sherbinin, A., Castro, M., and Gemenne, F. (2010). Preparing for population Displacement and Resettlement Associated with Large Climate Change Adaption and Mitigation Projects. Retrieved from [http://www.ciesin.columbia.edu/confluence/download/attachments/92799210/B](http://www.ciesin.columbia.edu/confluence/download/attachments/92799210/Background_Paper_final.pdf)ackground_Paper_final.pdf (accessed on 11th April 2017).
- Dixon, R., & McGregor, A. (2011). Grassroots development and upwards accountabilities: Tensions in the Reconstruction of Aceh's fishing industry. *Development and Change*, 42(6), 1349-1377. Retrieved from <http://dx.doi.org/10.1111/j.1467-7660.2011.01739.x>
- Dorosh, P., Malik, S. J., & Krausova, M. (2010). Rehabilitating agriculture and promoting food security after the 2010 Pakistan floods: Insights from the south Asian experience. *Pakistan Development Review*, 49(3), 167-192. Retrieved from <http://dx.doi.org/10.2307/41261043>
- FEMA (2017). Social Impacts of Disaster – Federal Emergency Management Agency. Pp 03 Retrieved from <https://training.fema.gov/hiedu/docs/fem/chapter%206%20-20hazard%20vulnerability%20> (accessed on 7th august 2017).
- Fernando, P. et al, (2009), Force to Move: Involuntary Displacement – Policy and Practice, CEPA (Centre for poverty Analysis), *In proceedings of the 9th Annual Symposium on Poverty Research in Sri Lanka*. Retrieved from: <https://www.cepa.lk/AR2009/pages/pubs&article.htm>

- GoSL (2012) 'Resettlement Authority' Ministry of Resettlement, <http://www.resettlementmin.gov.lk/resettlement-authority.html>, Accessed on 5th April 2020.
- Haigh, R., Amaratunga, D. and Keraminiyage, K. (2006) An Exploration of the Construction Industry's Role in Disaster Preparedness, Response and Recovery, *The construction and building research conference of the Royal Institution of Chartered Surveyors, 7-8 September 2006, London, University College London.*
- Harris, S., (2010), Humanitarianism in Sri Lanka: Lessons Learned?, *Briefing Paper, Feinstein International Center, Tufts University.*
- Hayles, C. (2008) An exploration of current planning, design and building issues in post-disaster housing reconstruction, Proceedings of the CIB W89: International Conference in Building Education and Research: Building Resilience, 11 February, Kandalama, Sri Lanka.
- IDMC (Internal Displacement Monitoring Centre), (2005, pp 10 -21., 2014, pp 18., 2016, pp 08., 2017, pp 10), Global Report on Internal Displacement, Norwegian refugees council. Retrieved from <https://www.internal-displacement.org/sites/default/files/publications/documents/2006-global-overview2005-global-en.pdf>, <http://www.internal-displacement.org/global-report/grid2017/#>, <http://www.internal-displacement.org/globalreport2016/> and <https://www.internal-displacement.org/sites/default/files/inline-files/201409-global-estimates2.pdf>.
- Indian project report, (2011) Retrieved from www.hcicolombo.org/pdf/HOUSING_PROJECT_6000.pdf and www.hcicolombo.org/pdf/HOUSING_PROJECT_43000.pdf.
- Jabareen, Y. (2013), "Conceptualizing 'post-conflict reconstruction' and 'ongoing conflict reconstruction' of failed states", *International Journal of Politics, Culture, and Society, Vol. 26 No. 2, pp. 107-125.*

- Jayatilaka, D., Amirthalingam, K., (2015), *The Impact of Displacement On Dowries In Sri Lanka*, Centre for Migration Research and Development, Colombo, Sri Lanka.
- Jordan, E., Javernick-Will, A. and Amadei, B. (2015), “Post-disaster reconstruction: lessons from Nagapattinam District, India”, *Development in Practice*, Vol. 25 No. 4, pp. 518-534.
- Karunasena, G. and Rameezdeen, R. (2010), “Post-disaster housing reconstruction: comparative study of donor vs owner-driven approaches”, *International Journal of Disaster Resilience in the Built Environment*. Retrieved from <http://www.emeraldinsight.com/doi/pdfplus/10.1108/17595901011056631>
- Khanna B.K. (2005), “All you wanted to know about disasters”, New India publishing agency, New Delhi.
- Kishore, K. (2000), “ Reconstruction after disaster”, *Asian Disaster Management News*, Vol. 6 No.1, pp.137-148.
- Krech, S., McNeill, J.R., Merchant, C. (eds.), (2004), *Encyclopedia of World Environmental History*, *Routledge*, pp. 1046.
- Kuruppu, S., Ganepola, V. (2005), “WHOSE RIGHT OF WAY? Development Induced Displacement”. Retrieved from https://file.ejatlases.org/docs/whose_right_of_way.pdf
- Labuschagne, A. (2003). “Qualitative Research - Airy Fairy or Fundamental?”. *The Qualitative Report*, 8(1), 100-103. Retrieved from <https://nsuworks.nova.edu/tqr/vol8/iss1/7>
- Luchi, K. (2010). “Reducing Vulnerabilities through Resettlement Planning in Disaster-Affected communities: Relocation or Repopulation”. *A Phd paper presented to the University of Illinois at Urbana Champaign*.

- Maloney, W.F., (2002), “Construction product/service and customer satisfaction”, *Journal of Construction Engineering and Management, ASCE 128, 522–529.*
- Mccully, P. (1996), “Silenced Rivers. The Ecology and Politics of Large Dams”. Zed Books, London. *Journal of Geosciences and Geomatics.* 2015, Vol. 3 No. 3, 50-55 Retrieved from DOI: 10.12691/jgg-3-3-1.
- Ministry of Resettlement and reconstruction, (2013- 2017), Progress and performance Reports – 2013, 2014, 2015, 2016, and 2017, pp 02 -07. Sri Lanka: Ministry of Resettlement and reconstruction. 2013, pp 2-8., 2014, pp 03., 2015, pp 03., 2016, pp 02., 2017, pp 02 -07. [https://www.parliament.lk/uploads/documents/paperspresented/performance-report-of-ministry-of-prison-reforms.](https://www.parliament.lk/uploads/documents/paperspresented/performance-report-of-ministry-of-prison-reforms)
- Manatunge, J., & Takesada, N. (2013b). “Long-term preceptions of project-affected persons: A case study of the Kotmale Dam in Sri Lanka. Restoring Communities Resettled After Dam Construction in Asia” (*Routledge special Issues on Water Policy and Governance*), Oxford: Taylor and Francis, pp. 78-89.
- Miyata, s., & Manatunge, J. (2004). “Knowledge sharing and other decision factors influencing adoption of aquaculture in Indonesia”. *International Journal of Water Resources Developmen*, 20 (4), pp 523-536.
- Muggah, R (2008). “Reconciliation failures in Sri Lanka: A short history of internal displacement and resettlement”, Zed Books; London, New York.
- Nkado, R.N., Mbachu, J.I., (2001), “Modelling client needs and satisfaction in the built environment”, in: *Proceedings of the ARCOM Conference, Salford.*
- Olander, S., Landin, A. (2005) “ Evaluation of stakeholder influence in the implementation of construction projects”, *International Journal of Project Management* 23 (4) 321-328.
- Ophiyandri, T., Amaratunga, D., Pathirage, C., & Keraminiyage, K. (2013), “Critical success factors for community-based post-disaster housing reconstruction projects

in the pre-construction stage in Indonesia”, *International Journal of Disaster Resilience in the Built Environment*, 4(2), 236-249. Retrieved from <http://dx.doi.org/10.1108/IJDRBE-03-2013-0005>

THE REFUGEE CONVENTION, 1951. pp 05. Retrieved from: <https://www.unhcr.org/4ca34be29.pdf>

Refugio, C. (2008), “An Empirical study on Wilcoxon Signed Rank Test”, *Multidisciplinary researches and articles*. Retrieved from: DOI: [10.13140/RG.2.2.13996.51840](https://doi.org/10.13140/RG.2.2.13996.51840).

Richard, H., Siri, H., Maheshika,S., Vickneswaran, G., Lasantha Namal, W. (2016), "A study of housing reconstruction and social cohesion among conflict and tsunami affected communities in Sri Lanka", *Disaster Prevention and Management: An International Journal*, Vol. 25 Issue: 5, pp.566-580. Retrieved from https://www.researchgate.net/publication/328581175_Practice_Framework_for_the_Management_of_Post-Disaster_Housing_Reconstruction_Programmes

Robert Muggah, “A Tale of Two Solitudes: Comparing Conflict and Development induced Internal Displacement and Involuntary Resettlement”, *International Migration*, Vol. 41 (5), 2003, p. 8.

Robinson, W.C. (2003), “Risks and Rights: The Causes, Consequences, and Challenges of Development-Induced Displacement”, Brookings Institution, Washington, DC.

Salazar A, Jigyasu R (2010), “A decade of lessons from Marathwada: earthquake vulnerability, politics and participatory housing”, In: Patel SB, Revi A (eds) *Recovering from earthquakes: response, reconstruction and impact mitigation in India*. Routledge, New Delhi, pp 79–117.

Samaddar S, Okada N (2006), “Participatory approach for post-earthquake reconstruction in the villages of Kachchh, India”, *Ann Disaster Prev Res Inst, Kyoto Univ* 49B:197–205.

- Samaratunge, R., Coghill, K., & Herath, H. M. A. (2012), "Governance in Sri Lanka: Lessons from post-tsunami rebuilding", *South Asia: Journal of South Asia Studies*, 35(2), 381-407. Retrieved from <http://dx.doi.org/10.1080/00856401.2012.662713>
- Shamini, C., (2012), "Challenges of IDP Resettlement in Sri Lanka: An Examination of Northern Spring Project in Vavuniya District", *Journal of International Development and Cooperation Vol.18, No.3, 2012, pp. 65-82.*
- Shajahan, D.S. and Shajahan, L. (2004), "Organization Behavior", *New Age International Publications*. Retrieved from [https://www.scirp.org/\(S\(i43dyn45teexjx455qlt3d2q\)\)/reference/ReferencesPapers.aspx?ReferenceID=1438498](https://www.scirp.org/(S(i43dyn45teexjx455qlt3d2q))/reference/ReferencesPapers.aspx?ReferenceID=1438498)
- [Shaw, J. and Ahmed, I., \(2010\), "Design and delivery of post – disaster housing resettlement programme: case studies from Sri Lanka and India", Melbourne, Australia: The Royal Melbourne Institute of Technology. Retrived from <https://www.recoveryplatform.org/assets/publication/sri%20lanka%20comparison%20of%20owner%20driven%20and%20donor%20driven%20shelter.pdf>.](#)
- [Siriwardhana, C. Wickramage, K., \(2014\), "Conflict, forced displacement and health in Sri Lanka: a review of the research landscape", 1-9 Retrieved from <https://conflictandhealth.biomedcentral.com/articles/10.1186/1752-1505-8-22>.](#)
- Tan, W. (2002), *Practical Research Methods*, Prentice-Hall, Singapore.
- [Terminski, b \(2013\), "Development-induced displacement and Resettlement: Theoretical frameworks and current challenges", geneva. Retrived from <https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/8833/Bogumil%20Terminski,%20development-Induced%20Displacement%20and%20Resettlement.%20Theoretical%20frameworks%20and%20current%20challenges.pdf> \(Accessed on 7th august 2017\).](#)

Thal pawila, O, N. (2017), “The Land Issue in the Resettlement Process in Former Conflict affected Areas in Sri Lanka”, *International journal of Social Science and Humanity*, Vol. 7, No. 3, 192-195.

[Thiyagarajah, J. \(2012\), “A road map to the end of displacement in Sri Lanka?”](#), [FMR/BRRKINGS-BERNSPECIAL/ISSUE.](#) Retrieved from <https://www.fmreview.org/sites/fmr/files/FMRdownloads/en/brookings/thiagarajah.pdf>. (Accessed on 7th august 2017).

Tyler, J., & Singh, A. (2011), “Enhancing post-earthquake disaster resilience”, *International Journal of Disaster Resilience in the Built Environment*, 2(2), 103-117. Retrieved from <http://dx.doi.org/10.1108/17595901111149114>

UCPD (2015), UCPD Conflict Encyclopedia, Uppsala University Department of Peace and Conflict Research, Uppsala. pp 06

UNDRR (2019), “Disaster Risk Reduction in Sri Lanka: Status Report 2019”. Bangkok, Thailand, United Nations Office for Disaster Risk Reduction (UNDRR), Regional Office for Asia and the Pacific. pp 07-13. Retrieved from: https://www.unisdr.org/files/68230_10srilankadmstatusreport.pdf

United Nations International Strategy for Disaster Reduction (UNISDR) Secretariat Evaluation. (2009), pp 06. Retrieved From: https://www.unisdr.org/files/12659_UNISDRevaluation2009finalreport.pdf

[United Nations, Guiding Principles on Internal Displacement, 22 July 1998, E/CN.4/1998/53/Add.2,](#) pp 1. Retrieved From <https://www.refworld.org/protectionmanual.html>. (accessed on 11th April 2017).

Winch, G. (2002), “Towards a theory of construction as production by projects”, *Article in Building Research and Information* · March 2006 Retrieved from DOI: 10.1080/09613210500491472

- World Bank report (2010), “Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters”, pp 12-16. Retrieved from www.housingreconstruction.org. (Accessed on 7th august 2017).
- World Bank report (2011), “World development report – 2011, Conflict, Security, Development”, World bank, pp 58-64. Retrieved from <https://openknowledge.worldbank.org/handle/10986/4389>.
- World Bank report (2012), Document 1, “Implementation completion and Results Report – North East housing Reconstruction Program”, World Bank, pp 1-19. Retrieved from:
<http://documents1.worldbank.org/curated/en/632701468301524806/pdf/ICR23040P083930C0disclosed060250120.pdf>.
- World Bank report (2014), “Document 1, Sri Lanka Ending Poverty Promoting Shared Prosperity”, World Bank, pp 93-98. Retrieved from:
<http://documents1.worldbank.org/curated/en/363391467995349383/pdf/103246-SCD-P152526-PUBLIC-NON-BOARD-VERSION-SriLankaCompleteFinal-122515lr-2.pdf>
- World Disaster report – Focus on ethnic in aid (2003), International Federation of Red Cross and Red Crescent Societies. pp 08. Retrieved from:
https://www.ifrc.org/Global/Publications/disasters/WDR/43800-WDR2003_En.pdf
- Woube, M., (2005), “Effects of Resettlement Schemes on the Biophysical And Human Environments: The Case of Gambela Region, Ethiopia”, *Universal Publishers, Boca Raton, Florida, pp. 19*.
- Wunubo, B. (2018), “Challenges of Conflict Induced Displacement”, Retrieved from
https://www.researchgate.net/publication/339069497_Challenges_of_Conflict-induced_Displacement/link/5e3be90fa6fdccd9658abb3a/download.

Yang, L.R., Huang, C.F., Wu, K.S., (2011), “The association among project manager's leadership style, teamwork and project success”, *International Journal of Project Management*, 258–267.

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Mr/Mrs/Miss.

Dear Sir/Madam,

Dissertation Questionnaire – M.Sc. in Project Management

I am a M.Sc. student in the department of building economics at University of Moratuwa, conducting a Post Graduate research under the supervision of Mrs. Y.Sandanayake on the topic of “EVALUATE THE STAKEHOLDER SATISFACTION IN RESETTLEMENT HOUSING PROJECTS IN SRI LANKA”. The final objective of this research is to establish a set of effective suggestions to improve stakeholders’ satisfaction level in resettlement housing projects in case of future displacement.

The level of stakeholder satisfaction has to be evaluated regularly for the successful implementation of a project. The evaluation of stakeholder satisfaction is one such technique that can be used to evaluate the performance of the project’s output to understand how well it satisfy user requirements while supporting in achieving project goals.

Purpose of this questionnaire is to evaluate level of stakeholder satisfaction in resettlement housing projects and provide recommendation to above stakeholder satisfaction. I would be grateful if you could complete the questionnaire within your valuable time. The information provided will be held with strict confidence, results would be summarized.

Thank you for your valuable time in responding to this questionnaire.

K.Malika
M.Sc. Student
University of Moratuwa
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Interview guideline for Beneficiaries

General Information

A. District:

B. D.S Division:

C. G.N Division:

D. Name of the Project (if Donor driven):

E. Name of household: (If interest)

Background Information.

1. Can you please explain about your involvement in project?
2. Can you give me a brief introduction about the project including scope duration and cost?
3. Can you explain briefly about your role in the project?
4. Can you explain the time period you joined into this project team?

Expectations of Beneficiaries

5. A. Are you satisfied with the project information disclosed to you? give reasons for your answer
B. What sort of project information were disclosed to you?
6. A. Are you satisfied with the level of goal achieved with the expected quality the project benefited by you? give reasons for your answer
B. How far goal is achieved in your project? Give reasons for your answer
7. Are you satisfied with the achievement of goals with the set time frame? Give reasons for your answer
8. Are you satisfied with the achievement of goals within the set budget? Give reasons for your answer
9. Are you satisfied by the contribution made by the project to up lift social harmony and well-being of you? Give reasons for your answer

Involvement of beneficiaries

10. A. Explain about your involvement during the identification of project benefited by you

B. Are you satisfied about your involvement in identification of projects? Give reasons for your answer

11. Are you satisfied about your involvement in planning of project benefited by you? Give reasons for your answer

Questions related house

Location

12. Are you satisfied about the house location? Give reasons for your answer.

- i) Does the location have access to key services, as healthcare, banks, place or religion?
- ii) Is the house site supported by public transport network and main road access?
- iii) Is the house site promotes the residents interaction?

Design and Layout

13. Are you satisfied about housing design?

- i) Is the design specific to the requirement of the scheme? / Developer? /Donor?
- ii) Does the size of the house comply with space requirement and standards for the number of rooms?
Note- single bed unit (min 60m³)
- iii) Do the housing units provide adequate space for essential daily activities and functional requirement? such as cooking eating sleeping and studying
- iv) Are cultural considerations and life style patterns of the dwellers taken into account in the unit layout design and space allocations
- v) Is "Vasu shastra" concept practised in the unit layout design? Positioning of rooms entrance door etc.
- vi) Do the unit layouts have the ability to maximize natural light and ventilation into all habitable areas?
- vii) Does the design to allow for future space expansion

Services and Infrastructures

14. Are you satisfied about the housing infrastructure facilities?

i.e. Water supply

Electricity

Sewerage

Drainage system

Quality of construction

15. Are you satisfied the housing quality and material?

i.e. Roof

Floor

Wall

Interview guideline for Implement agencies

Name of Organization: -

Name of the interviewer: -

Designation/Respondent information: -

Date of interview: -

Venue: -

Duration: -

Background Information

1. Can you please explain about your working experience in implementation of the project?
2. Can you give me a brief introduction about the project including scope duration and cost?
3. Can you explain briefly about your role in the project?
4. Can you explain the time period you joined into this project team?
5. Can you explain about donors and beneficiaries of your project?

Satisfaction in terms of the Expectation of the implement agencies

6. Are you satisfied with the involvement of government bodies in managing projects implemented by you? give reasons for your answer
7. A. Are you satisfied with the level of goal achieved with the expected quality the project implemented by you? give reasons for your answer
B. How far goal is achieved in your project? Give reasons for your answer
8. Are you satisfied with the achievement of goals with the set time frame? Give reasons for your answer
9. Are you satisfied with the achievement of goals within the set budget? Give reasons for your answer
10. Are you satisfied with the participation of beneficiaries /local people in the project implemented by you? Give reasons for your answer
11. Are you satisfied with the return that you gained from the project implemented by you? Give reasons for your answer

Involvement of implementers

12. A. Explain about your involvement during of planning of project implemented by you?
B. Are you satisfied about your involvement in planning of projects implemented by you? Give reasons for your answer
13. Are you satisfied bout your involvement in progress review discussions of you?
Give reasons for your answer

Interview guideline for Government bodies

Name of Organization: -

Name of the interviewer: -

Designation/Respondent information: -

Date of interview: -

Venue: -

Duration: -

Background Information

1. Can you please explain about your working experience in implementation of the project?
2. Can you give me a brief introduction about the project including scope duration and cost?
3. Can you explain briefly about your role in the project?
4. Can you explain the time period you joined into this project team?
5. Can you explain about donors and Implementation partners of your project?

Involvement of Government bodies

6. A. Explain about your involvement during of selection or identifying the beneficiaries?
B. What are criteria used in beneficiary selection process?
7. Are you satisfied about your involvement in planning of projects? Give reasons for your answer
8. Are you satisfied about your involvement in progress review discussions of you?
Give reasons for your answer

Satisfaction in terms of the Expectation of the Government bodies

9. A. Are you satisfied with the level of goal achieved with the expected quality of the project? give reasons for your answer

B. How far goal is achieved in your project? Give reasons for your answer

10. Are you satisfied with the achievement of goals with the set time frame? Give reasons for your answer
11. Are you satisfied with the achievement of goals within the set budget? Give reasons for your answer
12. Are you satisfied with the participation of beneficiaries /local people in the project? Give reasons for your answer

Recommendations to improve stakeholder satisfaction

13. What sort of issues or challenges did you face in achieving the satisfaction of another stakeholder in the project?
14. How did you overcome the issue or challenges that you encountered in achieving satisfaction of other stakeholders?

Interview guidelines for Donors

Name of Organization: -

Name of the interviewer: -

Designation/Respondent information: -

Date of interview: -

Venue: -

Duration: -

Background Information

1. Can you briefly explain about your project? explain about your project model?
2. Can you please explain about your working experience in donor Organization?
3. Can you give me a brief introduction about the project including scope duration and cost?
4. Can you explain briefly about your role in the project?
5. Can you explain the time period you joined into this project town?

Satisfaction in terms of the Expectation of the Donor

6. A. can you explain whether the government and line ministries have given their approval for implementation of the project that you are working in? give reasons for your answer
B. Are you satisfied about their involvement in approval process, give reasons for your answer
7. Are you satisfied with the coordination that your project is having with the government bodies or line ministries? Give reasons for your answer
8. Are you satisfied with the involvement of implementation partners of your projects? Give reasons for your answer
9. Are you satisfied with the involvement of councilors of LAS for the management of project founded by you? Give reasons for your answer

10. Are you satisfied with the contribution made by the project for the improvement of The beneficiaries life? Give reasons for your answer
11. A. Are you satisfied with the level of goal achieved with the expected quality of the project founded by you? Give reasons for your answer
B. How far goal is achieved in your project? Give reasons for your answer
12. Are you satisfied with the achievement of goals with the set time frame? Give reasons for your answer
13. Are you satisfied with the achievement of goals within the set budget? Give reasons for your answer
14. Are you satisfied by the contribution, made by the project to uplift Social harmony and wellbeing of the beneficiaries? Give reasons for your answer

Involvement related satisfaction.

1. Are you satisfied bout your involvement in identification of projects founded by you? Give reasons for your answer
2. Are you satisfied with the involvement in planning of project founded by you? Give reasons for your answer

QUESTIONNAIRE FOR BENEFICIARIES

Questionnaire administered to the implementing partners of North East Housing Reconstruction Programme (NEHRP), Indian Housing Programme, Un Habitat Housing Programme and Others in Northern Province of Sri Lanka.

SECTION A- General Information

- 1. District: -
- 2. D.S Division: -
- 3. G.N Division: -
- 4. Name of the house hold: -
- 5. Telephone Number: (if available)

Please put an “x” in the appropriate box

- 6. Sex
 - a. Male
 - b. Female
- 7. Age
 - a. Less than 14 years
 - b. Between 14-21 Years
 - c. Between 21-35-year
 - d. Between 35-60 Years
 - e. More than 60 years
- 8. Income Level (monthly)
 - a. Less than Rs. 2500
 - b. Between Rs. 2500- Rs.5000
 - c. Between Rs. 5000- Rs.10000
 - d. Between Rs. 10000- Rs.20000
 - e. More than Rs. 20000
- 9. Material Status
 - a. Single
 - b. Married
 - c. Widower/Widow
 - d. Divorced
 - e. Separated
- 10. How many members in your family?
 - a. One
 - b. Between 2-5
 - More than five

11. How do you feel with construction of your house?

- a. Very Happy b. Happy c. Somewhat Happy
d. Not Happy e. Not Very Happy

Please indicate you're your comments on the buildings and facilities before and after the conflict as given in the following. (Please tick (✓) against the right answer)

(12) What type of buildings were there by the time of Civil Conflicts

Only shelters

Single storied with old or unstable structures

Single storied with new or stable structures

Multy storied with old or unstable structures

Single storied with new or stable structures

(13) What is the Extent of damage Caused by Conflict?

Almost Completely

Partially

A little

Not at all

(14) What are the expectations of new house and facilities?

Almost same

More than what there had been

Less than what there had been

(15) What kind of buildings and facilities here provided after reconstruction?

Temporary shelters

Renovated Buildings

New Building

(16) How much of extend of house by the time of civil conflict

Almost same for newly constructed house

Less than that

More than that

C. Details of construction and comparison between before conflict and after conflict period.

17. Characteristics of pervious house

Roof – Tiled roof Asbestos Others

Walls- Brick/ Block wall Timber / Mud wall

Floor- Tiled/ Cement rendered floor Mud floor/ others

Number of bed rooms (.....)

18. Characteristics of Present house

Roof – Tiled roof Asbestos Others

Walls- Brick/ Block wall Timber / Mud wall

Floor- Tiled/ Cement rendered floor Mud floor/ others

Number of bed rooms (.....)

19. Construction method used

Owner- driven Donor-driven

20. Did you get which housing programme?

a. Indian Housing Programme b. UN Habitat

c. NEHRP d. Other housing Programme

21. Construction period

1-3 months 1-6 months 1-9 months

1-12 months more than 1 year

22. Facilities/spaces provide in new house:

a. Living area **yes / No** if yes, Size

b. Dining area **yes / No** if yes, Size.....

c. Kitchen **yes / No** if yes, Size

d. Sanitary facilities:

Toilet only Toilet and bath

23. Beneficiary's view on construction process

Very bad (very dissatisfied) bad -somewhat dissatisfied

Good (somewhat satisfied) Very good (very satisfied)

24. Total construction cost (donor assistance)

1-250000 1-500000 1-750000 1-1000000

25. Ownership of land (before conflict)

With proper deeds Government. Permits

Encroached land other (corporate ownership)

26. Ownership of the land (after conflict)

Govt. land transferred not transferred

With proper deeds (constructed in their own land) other

27. If available extend of land before conflict

28. If available extend of land after conflict

Please mark your evaluation on the following factors in the case given against each answer only the relevant section. Please tick off (✓) the relevant option

	Factor	Before conflict					After conflict				
		Very bad	Bad	Good	Very Good	Excellent	Very bad	Bad	Good	Very Good	Excellent
Common question											
1	Location of the house										
2	Standard of the house										
3	Engineering system and construction material										
4	Infrastructure facilities of the house										
5	Public interest in the project										
6	Sense of safety from disaster										
7	Involvement of the beneficiaries										
8	Involvement of the government bodies										
9	Followed UDA planning regulation										
Questions for beneficiaries											
Location Related											
10	Accessibility to key service										
11	Support to residence interaction										
12	Housing design and layout										
13	Functionality of the house										
14	“Vasusastra” and cultural consideration										
15	Lighting and ventilation										
Service and infrastructure											
16	Water supply										
17	Electricity										
18	Sewerage										
19	Drainage system										
Material of construction											
20	Roof										
21	Floor										
22	Wall										

QUESTIONNAIRE FOR IMPLEMENTATION PARTNER

SECTION A – Respondents’ General information

1. District:
2. Designation:
3. Name of Staff:
4. Telephone Number:
5. Email Address:

Please put an “X” in the appropriate box.

6. Educational Level
 - a. G.C.E (O/L) b. G.C.E (A/L) c. Diploma
 - d. Degree e. Post Graduate f. Others (specify)
6. Number of years of working experience
 - a. less than 2 Years b. Between 6-10 Years
 - c. Between 6-10 Years d. More than 10 years
7. Occupational Level
 - a. Non –Executive b. Executive c. Managerial
8. Are you involved/involving following housing program (select only one)?
 - a. Indian Housing Programme b. UN Habitat
 - c. NEHRP d. Other housing Programme
9. Construction method: Donor Owner
10. Are you satisfied with implementation of above selected housing program in Northern Province of Sri Lanka for resettlement?
 - a. Very Satisfied b. Satisfied c. Somewhat Satisfied
 - d. Not Satisfied e. Not Very Satisfied

Please mark your evaluation on the following factors in the case given against each answer only the relevant section. Please tick off (✓) the relevant option

No	Factors	Before conflict					After conflict				
		Very bad	Bad	Good	Very	Excellent	Very bad	Bad	Good	Very	Excellent
Common question											
1	Location of the house										
2	Standard of the house										
3	Engineering system and construction material										
4	Infrastructure facilities of the house										
5	Public interest in the project										
6	Sense of safety from disaster										
7	Involvement of the beneficiaries										
8	Involvement of the government bodies										
9	Followed UDA planning regulation										
Questions for Government bodies											
10	Availability of recourses										
11	Approval process										
12	Government Involvement in beneficiary's selection										
13	Beneficiaries' involvement										
14	Effective communication with all stakeholder										
15	Coordination of stakeholder										
16	Defined goals and commitments										
17	Improvement of life style										

QUESTIONNAIRE FOR GOVERNMENT BODIES

SECTION A –Respondents’ General information

1. District:
2. Name of the staff:
3. Designation:
4. Telephone Number:
5. Email Address:

Please put an “X” in the appropriate box.

7. Educational Level

b. G.C.E (O/L)	<input type="checkbox"/>	b. G.C.E (A/L)	<input type="checkbox"/>	c. Diploma	<input type="checkbox"/>
d. Degree	<input type="checkbox"/>	e. Post Graduate	<input type="checkbox"/>	f. Others (specify)	<input type="checkbox"/>
6. Number of years of working experience

a. less than 2 Years	<input type="checkbox"/>	b. Between 6-10 Years	<input type="checkbox"/>
c. Between 6-10 Years	<input type="checkbox"/>	d. More than 10 years	<input type="checkbox"/>
7. Occupational Level

a. Non –Executive	<input type="checkbox"/>	b. Executive	<input type="checkbox"/>	c. Managerial	<input type="checkbox"/>
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8. Are you involved/involving following housing program (select only one)?

a. Indian Housing Programme	<input type="checkbox"/>	b. UN Habitat	<input type="checkbox"/>
c. NEHRP	<input type="checkbox"/>	d. Other housing Programme	<input type="checkbox"/>
9. Construction method: Donor Owner
10. Are you satisfied with implementation of above selected housing program in Northern Province of Sri Lanka for resettlement?

a. Very Satisfied	<input type="checkbox"/>	b. Satisfied	<input type="checkbox"/>	c. Somewhat Satisfied	<input type="checkbox"/>
d. Not Satisfied	<input type="checkbox"/>	e. Not Very Satisfied	<input type="checkbox"/>		

Please mark your evaluation on the following factors in the case given against each answer only the relevant section. Please tick off (✓) the relevant option

	Factors	Before conflict					After conflict				
		Very bad	Bad	Good	Very Good	Excellent	Very bad	Bad	Good	Very Good	Excellent
Common question											
1	Location of the house										
2	Standard of the house										
3	Engineering system and construction material										
4	Infrastructure facilities of the house										
5	Public interest in the project										
6	Sense of safety from disaster										
7	Involvement of the beneficiaries										
8	Involvement of the government bodies										
9	Followed UDA planning regulation										
Questions for Government bodies											
10	Availability of recourses										
11	Approval process										
12	Government Involvement in beneficiary's selection										
13	Beneficiaries' involvement										
14	Effective communication with all stakeholder										
15	Coordination of stakeholder										
16	Defined goals and commitments										
17	Improvement of life style										

QUESTIONNAIRE FOR DONOR**SECTION A –Respondents’ General information**

6. District:
7. Name of the staff:
8. Designation:
9. Telephone Number:
10. Email Address:

Please put an “X” in the appropriate box.

8. Educational Level
- c. G.C.E (O/L) b. G.C.E (A/L) c. Diploma
- d. Degree e. Post Graduate f. Others (specify)
6. Number of years of working experience
- a. less than 2 Years b. Between 6-10 Years
- c. Between 6-10 Years d. More than 10 years
7. Occupational Level
- a. Non –Executive b. Executive c. Managerial
8. Are you involved/involving following housing program (select only one)?
- a. Indian Housing Programme b. UN Habitat
- c. NEHRP d. Other housing Programme
9. Construction method: Donor Owner
10. Are you satisfied with implementation of above selected housing program in Northern Province of Sri Lanka for resettlement?
- b. Very Satisfied b. Satisfied c. Somewhat Satisfied
- d. Not Satisfied e. Not Very Satisfied

Please mark your evaluation on the following factors in the case given against each answer
only the relevant section. Please tick off (✓) the relevant option

No	Factor	Before conflict					After conflict				
		Very bad	Bad	Good	Very Good	Excellent	Very bad	Bad	Good	Very Good	Excellent
Common question											
1	Location of the house										
2	Standard of the house										
3	Engineering system and construction material										
4	Infrastructure facilities of the house										
5	Public interest in the project										
6	Sense of safety from disaster										
7	Involvement of the beneficiaries										
8	Involvement of the government bodies										
9	Followed UDA planning regulation										
Specific factor for Donor											
10	Availability of resources										
11	Unitary policies and frameworks or law and regulation										
12	Government Involvement										
13	Beneficiaries Involvement										
14	Effective communication with all stakeholder										
15	Coordination of stakeholder										
16	Defined goals and commitments										

Table 01: Overview of Data collection for Donor Driven Housing Project

Category of Respondent	Number of respondents	Location (District)	Organization	Respondent Code	Designation	Data Collection tool	
Implementation Partner	2	Jaffna	UN Habitat	DR1	Filed Office	Interview & Questionnaire	
				DR2	Project Officer	Interview & Questionnaire	
Government Bodies	2		Divisional Secretary - Thellipalai (Mruthankeni)	DR3	Development Office	Interview & Questionnaire	
			District secretary - Jaffna	DR4	Development Office	Interview & Questionnaire	
Donor	3		Consulate General of India-	DR5	Commercial and Media Officer	Interview & Questionnaire	
				DR6	Cultural and Education Officer	Interview & Questionnaire	
				DR7	Vice Consul (Admin/DDO)	Interview & Questionnaire	
Implementation Partner	2		Kilinochchi	UN Habitat	DR8	Research Assistant	Interview & Questionnaire
					DR9	UN-Habitat Technical Officer	Interview & Questionnaire
Government Bodies	2			District Secretary Office - Kilinochchi	DR10	Development officer	Interview & Questionnaire
					DR11	Development officer	Interview & Questionnaire
Donor	3			Consulate General of India-	DR12	Commercial and Media Officer	Interview & Questionnaire

				DR13	Cultural and Education Officer	Interview & Questionnaire
				DR14	Vice Consul (Admin/DDO)	Interview & Questionnaire
Implementation Partner	2	Mullaitivu	UN Habitat	DR15	Project Officer	Interview & Questionnaire
				DR16	UN-Habitat Technical Officer)	Interview & Questionnaire
Government Bodies	2		District Secretary - Mullaitivu	DR17	Divisional Securitate	Interview & Questionnaire
				DR18	Development Officer	Interview & Questionnaire
Donor	3		Consulate General of India-	DR19	Commercial and Media Officer	Interview & Questionnaire
				DR20	Cultural and Education Officer	Interview & Questionnaire
				DR21	Vice Consul (Admin/DDO)	Interview & Questionnaire

Table 02: Householders' details for Interview Data collection for Donor Driven Housing Project

District	Respondent Code No	Location of House
<i>Jaffna</i>	R1	Poinpedro
	R2	Poinpedro
	R3	Karaveddy
	R4	Karaveddy
	R5	Maruthankeny
	R6	Maruthankeny
<i>Kilinochchi</i>	R7	Kandawalai
	R8	Kandawalai
	R9	Karachchi - Akkarayan
	R10	Karachchi - konavil
	R11	Pachchilaipalli
	R12	Pachchilaipalli
<i>Mullaitivu</i>	R13	Oddisuddan
	R14	Oddisuddan
	R15	Mariyampattu
	R16	Mariyampattu
	R17	Puthukudiyirupu
	R18	Puthukudiyirupu

Table 01: Overview of Data collection for Owner Driven Housing Project

Category of Respondent	Number of respondents	Location (District)	Organization	Respondent Code	Designation	Data Collection tool	
Implementation Partner	2	Jaffna	UN Habitat	OR1	Project Officer	Interview & Questionnaire	
			Northern Provincial Council	OR2	Field Officer (Former NERP Project)	Interview & Questionnaire	
Government Bodies	2		Northern Provincial Council	OR3	Development Officer	Interview & Questionnaire	
			Pradesh Sabha, Valikamam North	OR4	Development Officer	Interview & Questionnaire	
Donor	3		District Secretariate - Jaffna	OR5	Additional District Secretary (Land)	Interview & Questionnaire	
			Divisional Secretary - Thellipalai	OR6	Development officer for SDC housing Project	Interview & Questionnaire	
			Branch office World Bank - Jaffna	OR7	Project Officer	Interview & Questionnaire	
Implementation Partner	2		Kilinochchi	UN Habitat	OR8	UN-Habitat Technical Officer	Interview & Questionnaire
				Kachcheri - Kilinochchi	OR9	Development Officer - (Former NERP Project)	Interview & Questionnaire
Government Bodies	2			Northern Provincial Council	OR10	Field Officer (Former NERP Project)	Interview & Questionnaire

			District Secretary Office - Kilinochchi	OR11	Development Officer - SDC Project	Interview & Questionnaire
Donor	3		District Secretary Office - Kilinochchi	OR12	Additional District Secretary - Kilinochchi	Interview & Questionnaire
			Divisional Secretary Office - Pachchilaipalli	OR13	Additional Divisional Secretary - Pachchilaipalli	Interview & Questionnaire
			Branch office World Bank - Jaffna	OR14	Project Officer	Interview & Questionnaire
Implementation Partner	2		UN Habitat	OR15	Project Officer	Interview & Questionnaire
			Divisional Secretary Office - Puthukudiyirupu	OR16	Additional Divisional Secretary - Puthukudiyirupu	Interview & Questionnaire
Government Bodies	2		Northern Provincial Council	OR17	Field Officer (Former NERP Project)	Interview & Questionnaire
			Divisional Secretary - Oddisuddan	OR18	Development Officer	Interview & Questionnaire
Donor	3	Mullaitivu	Divisional Secretary - Oddisuddan	OR19	Additional Divisional Secretary - Oddisuddan	Interview & Questionnaire
			Northern Provincial Council	OR20	Project Officer (NERP)	Interview & Questionnaire
			Branch office World Bank - Jaffna	OR21	Project Officer	Interview & Questionnaire

Table 02: Householders' details for Interview Data collection for Owner Driven Housing Project

District	Respondent No	Location of House
Jaffna	R19	Mirusuvil North
	R20	Mirusuvil North
	R21	Karainagar
	R22	Sankuveli South
	R23	Sankuveli South
	R24	Ponnalai
Kilinochchi	R25	Thadduvakuddi
	R26	Elephant pass
	R27	Tharmapuram East
	R28	Elephant pass
	R29	Tharmapuram East
	R30	Thadduvankuddi
Mullaitivu	R31	Oddisudan
	R32	Welioya
	R33	Puthukudiyuru
	R34	Oddisudan
	R35	welioya
	R36	Puthukudiyuru

Box Plot Table - Common Question Category - Donor driven Housing Project

Respon dents	District	Benefic iaries partici pation	Standard of house and Materials		Housing Design and layout		Infrastructure and Functionality of the house		Location	
			Before	After	Before	After	Before	After	Before	After
BDR1	Jaffna	0	4	2	4	2	4	1	5	2
BDR2	Jaffna	0	3	2	4	1	4	2	4	1
BDR3	Jaffna	0	4	3	5	1	5	2	5	2
BDR4	Jaffna	0	1	3	2	1	2	1	5	3
BDR5	Jaffna	0	2	2	2	2	3	1	4	2
BDR6	Jaffna	0	5	1	4	1	4	2	5	2
BDR7	Jaffna	0	2	2	2	2	3	1	3	2
BDR8	Jaffna	0	5	1	5	2	4	1	4	1
BDR9	Jaffna	0	3	2	3	1	3	1	5	1
BDR10	Jaffna	0	1	4	1	3	2	3	4	2
DR1	Jaffna	0	4	2	4	2	3	2	5	2
DR2	Jaffna	0	2	2	2	1	2	2	4	2
DR3	Jaffna	0	4	2	3	2	4	2	5	2
DR4	Jaffna	0	4	3	4	3	4	3	5	2
DR5	Jaffna	0	3	3	4	3	3	2	4	2
DR6	Jaffna	0	4	2	3	1	4	1	5	1
DR7	Jaffna	0	3	2	2	1	3	1	4	1
BDR11	Kilinochchi	0	1	3	1	2	1	3	4	3
BDR12	Kilinochchi	0	1	2	2	2	1	4	5	1
BDR13	Kilinochchi	0	1	2	2	1	2	3	4	2
BDR14	Kilinochchi	0	1	1	1	2	1	3	4	2
BDR15	Kilinochchi	0	1	3	1	3	1	4	5	2
BDR16	Kilinochchi	0	2	3	2	2	2	3	4	2
BDR17	Kilinochchi	0	2	4	2	3	1	4	5	2
BDR18	Kilinochchi	0	2	1	1	2	1	4	5	1
BDR19	Kilinochchi	0	3	3	3	2	3	3	3	2
BDR20	Kilinochchi	0	4	2	4	2	4	2	5	3
DR8	Kilinochchi	0	1	3	1	2	2	4	2	4
DR9	Kilinochchi	0	2	2	3	1	3	4	3	4
DR10	Kilinochchi	0	1	2	2	3	2	4	2	4
DR11	Kilinochchi	0	3	3	3	2	4	4	5	2
DR12	Kilinochchi	0	1	2	1	3	1	5	5	3
DR13	Kilinochchi	0	2	3	2	3	2	4	5	3

DR14	Kilinochchi	0	2	1	2	2	2	3	4	1
BDR21	Mullaitivu	0	1	3	1	3	1	4	4	3
BDR22	Mullaitivu	0	1	2	1	3	1	3	5	2
BDR23	Mullaitivu	0	2	2	2	2	2	2	3	2
BDR24	Mullaitivu	0	3	3	3	2	3	2	4	3
BDR25	Mullaitivu	0	3	1	3	1	4	2	5	2
BDR26	Mullaitivu	0	2	2	3	2	3	1	5	1
BDR27	Mullaitivu	0	4	2	4	2	4	2	5	2
BDR28	Mullaitivu	0	1	3	2	4	2	2	4	1
BDR29	Mullaitivu	0	1	3	1	3	1	3	2	4
BDR30	Mullaitivu	0	2	2	2	2	2	2	3	4
DR15	Mullaitivu	0	2	1	2	1	2	1	5	3
DR16	Mullaitivu	0	1	3	3	1	3	3	4	2
DR17	Mullaitivu	0	2	2	2	3	2	3	5	2
DR18	Mullaitivu	0	1	3	1	3	2	4	4	4
DR19	Mullaitivu	0	1	2	2	4	1	3	2	4
DR20	Mullaitivu	0	3	3	1	2	2	3	5	2
DR21	Mullaitivu	0	2	2	1	2	1	3	5	1

Box Plot Table - Common Question Category - Owner driven Housing Project

Respondents	District	Beneficiaries participation	Standard of house and Materials		Housing Design and layout		Infrastructure and Functionality of the house		Location	
			Before	After	Before	After	Before	After	Before	After
BOR1	Jaffna	4	2	4	3	4	2	4	4	4
BOR2	Jaffna	4	2	5	3	5	3	5	2	2
BOR3	Jaffna	3	3	5	3	4	4	5	4	4
BOR4	Jaffna	3	3	4	3	4	4	4	5	3
BOR5	Jaffna	4	3	3	4	3	4	3	4	4
BOR6	Jaffna	3	4	5	4	5	5	5	5	3
BOR7	Jaffna	4	4	2	5	3	4	3	4	4
BOR8	Jaffna	5	2	5	4	4	4	3	5	5
BOR9	Jaffna	4	4	4	4	2	4	3	5	3
BOR10	Jaffna	4	4	3	5	3	5	3	4	4
OR1	Jaffna	3	2	5	3	4	3	3	5	3
OR2	Jaffna	4	2	5	4	5	4	4	5	4
OR3	Jaffna	4	5	5	4	5	4	5	5	4
OR4	Jaffna	4	3	5	3	5	4	5	5	5
OR5	Jaffna	5	1	5	2	5	3	5	4	3
OR6	Jaffna	5	4	5	4	5	3	5	4	5
OR7	Jaffna	4	4	5	5	5	4	4	4	4
BOR11	Kilinochchi	5	2	4	2	4	1	3	4	4
BOR12	Kilinochchi	4	2	5	3	4	3	4	5	5
BOR13	Kilinochchi	3	2	4	1	4	2	4	4	4
BOR14	Kilinochchi	3	1	3	1	3	2	5	5	5
BOR15	Kilinochchi	4	3	4	3	4	4	5	4	4
BOR16	Kilinochchi	5	5	3	4	3	4	3	4	5
BOR17	Kilinochchi	2	4	5	3	1	3	4	4	4
BOR18	Kilinochchi	4	4	3	3	2	4	5	5	3
BOR19	Kilinochchi	3	3	3	4	3	4	3	4	2
BOR20	Kilinochchi	2	3	4	3	2	4	3	4	3
OR8	Kilinochchi	3	2	5	2	3	2	4	4	4
OR9	Kilinochchi	4	1	5	1	4	1	5	5	5
OR10	Kilinochchi	4	2	5	1	5	2	5	4	5
OR11	Kilinochchi	5	3	5	3	4	3	5	5	3
OR12	Kilinochchi	4	1	5	1	5	1	5	5	5
OR13	Kilinochchi	4	2	5	1	3	1	5	5	2

OR14	Kilinochchi	5	3	5	2	4	2	5	4	1
BOR21	Mullaitivu	3	3	4	1	4	2	5	3	5
BOR22	Mullaitivu	4	2	2	2	3	2	3	4	4
BOR23	Mullaitivu	5	1	4	2	3	2	4	5	5
BOR24	Mullaitivu	4	1	5	3	3	2	5	5	5
BOR25	Mullaitivu	5	1	2	2	4	1	5	5	5
BOR26	Mullaitivu	4	1	3	2	4	1	4	5	4
BOR27	Mullaitivu	3	2	2	3	4	2	5	4	4
BOR28	Mullaitivu	3	2	5	2	4	2	3	3	4
BOR29	Mullaitivu	2	3	4	3	3	3	5	4	4
BOR30	Mullaitivu	4	4	4	2	3	3	4	5	5
OR15	Mullaitivu	2	1	4	1	5	2	5	3	5
OR16	Mullaitivu	5	2	5	2	5	2	5	4	4
OR17	Mullaitivu	5	2	5	2	4	1	4	3	5
OR18	Mullaitivu	4	1	5	1	5	1	5	5	4
OR19	Mullaitivu	5	2	5	1	5	2	3	5	5
OR20	Mullaitivu	4	2	5	2	4	2	5	5	4

Box Plot Table - Specific Question for Beneficiary - Donor driven Housing Project

Respondents	District	Others coordination	Cultural consideration		Quality of the house		Future extension		Cost of the house		Duration of the Project		Water supply		Electricity		Sewerage		Drainage system	
			Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
			BDR1	Jaffna	0	4	2	4	2	3	1	4	4	4	2	4	2	4	4	5
BDR2	Jaffna	0	4	1	3	1	3	1	4	2	5	2	4	2	3	4	5	5	4	2
BDR3	Jaffna	0	5	1	4	1	2	1	5	3	4	3	5	2	5	5	5	3	4	2
BDR4	Jaffna	0	2	1	1	2	3	2	3	4	2	3	3	2	2	5	3	4	3	1
BDR5	Jaffna	0	2	2	2	2	4	1	2	3	3	3	3	2	3		4	4	2	1
BDR6	Jaffna	0	4	1	5	1	3	2	5	3	4	2	4	5	3	2	4	5	3	3
BDR7	Jaffna	0	2	2	2	1	3	1	3	2	2	2	4	4	4	3	5	3	3	4
BDR8	Jaffna	0	5	2	5	1	4	1	4	2	3	1	4	5	4	4	4	3	4	4
BDR9	Jaffna	0	3	1	3	2	3	2	3	1	3	3	3	2	2	2	2	3	2	3
BDR10	Jaffna	0	2	3	1	4	4	2	4	1	4	2	2	1	1	3	1	4	1	2
BDR11	Kilinochchi	0	1	2	1	3	2	2	2	3	2	3	1	4	1	4	3	4	3	1
BDR12	Kilinochchi	0	2	2	1	2	3	1	1	4	4	1	2	3	1	4	2	2	4	2
BDR13	Kilinochchi	0	2	1	1	2	3	2	1	3	2	3	3	2	2	4	2	3	3	3
BDR14	Kilinochchi	0	1	2	1	3	4	2	2	3	3	4	1	1	1	5	3	2	2	2
BDR15	Kilinochchi	0	1	3	1	3	4	1	1	4	2	4	2	2	1	5	2	4	1	4
BDR16	Kilinochchi	0	2	2	2	3	3	3	2	2	2	3	3	3	1	5	3	3	2	3
BDR17	Kilinochchi	0	2	3	2	4	2	2	1	3	3	4	2	1	1	3	1	3	1	1
BDR18	Kilinochchi	0	1	2	2	1	2	1	1	2	1	3	1	4	1	4	1	5	3	2
BDR19	Kilinochchi	0	3	2	3	3	4	3	3	3	2	3	3	3	2	5	3	4	2	3
BDR20	Kilinochchi	0	4	2	4	1	4	2	4	2	2	3	4	3	3	4	4	3	4	3
BDR21	Mullaitivu	0	1	2	1	3	2	2	1	3	1	4	1	4	1	4	1	3	3	3
BDR22	Mullaitivu	0	1	3	1	2	2	2	1	3	2	3	1	3	1	4	2	3	3	3
BDR23	Mullaitivu	0	2	2	2	2	3	1	2	4	3	4	2	1	1	5	2	3	2	4
BDR24	Mullaitivu	0	3	2	3	1	3	2	1	3	3	3	1	2	2	5	1	5	1	5
BDR25	Mullaitivu	0	4	1	3	1	4	2	2	2	4	2	3	3	3	4	2	4	2	3
BDR26	Mullaitivu	0	3	2	2	2	2	2	2	3	3	2	3	2	3	4	2	4	3	4
BDR27	Mullaitivu	0	4	2	4	1	4	1	4	3	4	4	4	3	3	4	3	4	2	4
BDR28	Mullaitivu	0	2	3	1	3	2	3	2	4	3	2	2	2	1	5	1	5	1	2
BDR29	Mullaitivu	0	1	2	1	3	3	2	1	3	2	4	1	3	2	5	1	3	1	2
BDR30	Mullaitivu	0	3	1	2	2	2	1	1	3	2	3	2	2	1	3	2	3	1	2

Box Plot Table - Specific Question for Beneficiary - Owner driven Housing Project

Respondents	District	Others coordination	cultural consideration		Quality of the house		Future extension		Cost of the house		Duration of the house		Water supply		Electricity		Sewerage		Drainage system	
			Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
BOR1	Jaffna	4	5	5	2	4	3	4	4	3	3	4	2	3	1	4	4	4	1	4
BOR2	Jaffna	4	4	4	2	5	3	4	3	3	3	5	2	3	1	3	1	5	2	3
BOR3	Jaffna	3	3	3	3	3	3	3	4	3	4	4	3	4	3	4	3	4	2	3
BOR4	Jaffna	3	4	4	3	4	3	4	5	1	4	4	3	3	3	4	3	5	2	4
BOR5	Jaffna	3	4	3	3	3	4	3	4	4	4	3	3	4	4	4	4	4	3	3
BOR6	Jaffna	2	4	5	4	2	4	2	5	2	4	2	3	2	4	5	5	4	3	3
BOR7	Jaffna	2	5	5	4	2	5	3	5	2	4	1	3	3	4	3	3	5	3	2
BOR8	Jaffna	1	4	3	2	5	4	3	3	3	3	4	4	2	4	5	4	4	3	3
BOR9	Jaffna	4	4	2	4	4	4	4	5	3	3	4	4	2	5	2	4	4	3	4
BOR10	Jaffna	5	5	3	4	3	5	3	5	3	3	4	4	3	5	4	4	2	4	2
BOR11	Kilinochchi	4	2	4	2	3	1	4	1	3	2	4	1	5	1	5	1	4	1	4
BOR12	Kilinochchi	3	5	5	2	3	2	4	2	2	2	5	1	4	1	4	1	4	3	4
BOR13	Kilinochchi	2	4	4	2	4	1	2	1	3	1	3	2	4	1	5	2	4	3	3
BOR14	Kilinochchi	3	3	5	1	3	1	3	1	2	1	4	2	3	1	3	2	2	1	4
BOR15	Kilinochchi	3	2	5	3	4	2	4	2	4	3	4	2	5	2	4	2	3	2	3
BOR16	Kilinochchi	2	4	5	5	3	4	3	4	3	4	3	2	3	2	4	2	3	2	3
BOR17	Kilinochchi	2	5	5	4	2	3	4	3	2	5	2	2	4	2	4	2	3	2	2
BOR18	Kilinochchi	3	5	3	4	3	4	2	2	2	5	2	3	3	3	3	3	2	3	3
BOR19	Kilinochchi	2	4	3	3	2	3	3	2	2	4	2	3	3	3	3	3	2	3	2
BOR20	Kilinochchi	4	5	2	3	4	2	3	2	3	4	3	3	4	4	3	3	3	3	1
BOR21	Mullaitivu	3	4	4	3	4	2	4	3	4	3	4	1	4	4	2	1	4	4	2
BOR22	Mullaitivu	2	5	4	2	2	2	3	2	3	2	2	1	4	4	3	1	4	4	5
BOR23	Mullaitivu	4	4	2	1	4	1	2	1	3	3	4	1	4	3	3	1	4	4	3
BOR24	Mullaitivu	4	3	4	1	5	2	3	1	4	2	5	2	4	3	4	1	3	3	4
BOR25	Mullaitivu	2	2	4	1	2	1	4	1	3	3	2	2	3	3	4	2	3	2	4
BOR26	Mullaitivu	3	2	5	1	3	2	4	1	5	2	2	3	3	2	3	2	3	2	4
BOR27	Mullaitivu	2	3	4	2	2	1	3	2	3	3	2	3	3	2	4	2	3	1	4
BOR28	Mullaitivu	4	3	2	2	5	2	4	1	4	4	4	3	3	1	5	3	3	1	3
BOR29	Mullaitivu	3	4	4	3	4	3	3	2	4	3	4	3	2	1	5	4	3	1	3
BOR30	Mullaitivu	4	4	5	4	4	2	3	4	3	4	3	3	2	1	4	4	3	1	3

Box Plot Table - Specific Question for Implementation Partners

Respondents Code No	Beneficiaries participation	Government involvement	Donors involvement	Type of Project
OR1	4	5	5	ODH
OR2	3	5	5	ODH
OR8	5	5	5	ODH
OR9	3	5	5	ODH
OR15	5	5	5	ODH
OR16	4	5	5	ODH
DR1	0	5	5	DDH
DR2	0	5	5	DDH
DR8	0	5	5	DDH
DR9	0	5	5	DDH
DR15	0	5	5	DDH
DR16	0	5	5	DDH

Box Plot Table - Specific Question for Government bodies

Respondents Code No	Beneficiaries Involvement	Coordination with implementation partner	Coordination with Donors	Type of Project
OR3	4	5	5	ODH
OR4	3	5	5	ODH
OR10	5	5	5	ODH
OR11	3	5	5	ODH
OR17	5	5	5	ODH
OR18	4	5	5	ODH
DR3	0	5	5	DDH
DR4	0	5	5	DDH
DR10	0	5	5	DDH
DR11	0	5	5	DDH
DR17	0	5	5	DDH
DR18	0	5	5	DDH

Box Plot Table - Specific Question for Donors of the Housing Projects

Respondents	Coordination with Govt bodies	Coordination with implementation partner	Type of Project
OR5	5	5	ODH
OR6	5	5	ODH
OR7	5	5	ODH
OR12	5	5	ODH
OR13	5	5	ODH
OR13	5	5	ODH
OR19	5	5	ODH
OR20	5	5	ODH
OR21	5	5	ODH
DR5	5	3	DDH
DR6	5	4	DDH
DR7	5	2	DDH
DR12	5	3	DDH
DR13	5	2	DDH
DR13	5	5	DDH
DR19	5	3	DDH
DR20	5	2	DDH
DR21	5	1	DDH