

**INVESTIGATION ON FACTORS AFFECTING THE PERFORMANCE  
OF LOW-INCOME HIGH-RISE HOUSING IN COLOMBO**

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**27<sup>th</sup> February 2020**

## **DECLARATION**

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## ABSTRACT

Currently, Colombo is being developed very fast as the Commercial Capital, to make the most vibrant commercial and logistic hub of Asia under the vision of “The miracle of South Asia”. As a part of the process, the government allocates prime lands encroached by underserved settlers for city developments accommodating underserved settlers in modern high-rises in Colombo. However, the degree of sustainability of high-rise housing for underserved settlement people is arguable. There were approximately 68,000 substandard households in underserved settlements in Colombo which are unfit for human habitation. The percentage of underserved settlement population to the city population is 44 %.

The intention of this thesis is to find out factors affect to residential satisfaction, one of the main criteria affects the success of resettlement projects and hence, the most appropriate housing model for urban poor in Colombo. Because, if houses are not in accord with the norms, it tends to give rise to residential dissatisfaction which leads to residential mobility.

Colombo Municipal Council area is selected as a study area and the case study method was selected as a strategy for the research since it provides an opportunity for an in-depth understanding of high-rise’s real-life context. Informal and structured interviews with residents, key informants, focus group discussions, non-participants observations were used for primary data collection whereas literature review, documentary researches, case study analysis were used to secondary data collection. SSPS software package was used for quantitative analysis.

Results developed by the research states that land-sharing is the best strategy for upgrading underserved settlement people. Research further shows that overpopulation has serious implications for the overall management of resettlement schemes. Finally, results show that how government commitment and positive attitudes of the community are significant for the successful implementation of resettlement programs as well as building sustainable urban communities.

**Keywords:** *Residential satisfaction, residential mobility, underserved settlement, sustainability, rapid urbanization,*

## ACKNOWLEDGMENTS

First of all, I would like to express my appreciation to the University of Moratuwa and at the same time to the department of Town and Country Planning for giving me this opportunity. Also, I extend my sincere thanks to my employer organization, the Colombo municipal council, and the former Municipal Commissioner, (Mrs) Badhrani Jayawardane who gave me the opportunity to participate in this course and the necessary financial support for the course. I would like to thank my supervisor Doctor Mohamod Rizvi, Senior Lecturer, Department of Town and Country Planning, the University of Moratuwa for his valuable guidance, suggestions, encouragement and constant support throughout this project. I owe special thanks to Dr. Rangajeewa Rathnayake, Head of the Department of Town and Country Planning, the University of Moratuwa for his valuable guidance, and continued support to overcome difficulties arisen in logistic matters in my work organization. I would like to thank Dr. Malini Herath, Senior Lecturer, Department of Town and Country Planning, the University of Moratuwa for guidance, encouragement, and support for the study. Also, I extend my thanks to former Municipal Commissioner, Colombo Municipal Council Ms. Badhrani Jayawardana for moral support. I also extend my thanks to Senior Lecturer, Doctor Shanaka for his constructive comments and support in the study.

In addition, I am very grateful to Head, Department of Social Science, University of Colombo, Prof. Nishara Fernando for the support given to collect data for the study, I would like to thank Ms. Chethika, Lecturer, Department of Town and Country Planning, the University of Moratuwa for her valuable guidance for the study and Plnr. Prathibhani Bandusena for the assistance given me.

I owe special thanks to former Colombo Municipal Council Member Mr. Ajith D. Karunaratne, and Colombo Municipal Council Member, Mr. Aslam for their valuable support to collect data in several ways spending time with me, sometimes from dawn to late evening. Also, I highly appreciate the assistance given to me in carrying out field surveys for the study by undergraduates of Department of Town and Country Planning, University of Moratuwa more particularly Mr. Dimuthu Sandakelum and Mr. Manjula Rathnayaka.

I owe my gratitude to the Manager, Sahaspura Housing Scheme, Ms. Karunalatha, Co-ordinator, Siyapath Sevena, Mr. Athukorala, and Community leader, Siyasetha Sevana, Mr. Laxman for their fullest support given to complete the survey for this study.

I owe my gratitude to my husband Nimal and my two sons Pulasthi and Vimukthi for all their sacrifices and for giving me invaluable moral support and strength to make this study a success.

Finally, I express my very sincere thanks to those who helped me in various ways in bringing this study to completion.

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## LIST OF ABBREVIATIONS

<b>Abbreviation</b>	<b>Description</b>
ADB	Asian Development Bank
BBC	British Broadcasting Corporation
CCDP	City of Colombo Development Plan
CHP	Ceiling on Housing Property Law
CIFC	Colombo International Financial City
CMC	Colombo Municipal Council
CPF	Central Provident Fund
CSP	Clean Settlement Program
GDP	Gross Domestic Product
GOPP	General Organization of Physical Planning
HDB	Housing and Development Board
IMCAP	Improving Capacities for Poverty and Social Policy Research Program
ILO	International Labor Organization
LRT	Light Railway Transit
NHDA	National Housing development Authority
NHA	National Housing Authority
REEL	Real Estate Exchange (PVT) Limited
USS	Under Served Settlements
UN	United Nations
UDA	Urban Development Authority
UNCHS	United Nations Center for Human Settlement
USDA	Urban Settlement Development Authority
UBSIP	Urban Basic Services Improvement Programme
UNICEF	United Nations Children's Fund

USIP	Urban Settlement Improvement Project
UK	United Kingdom
UNESCO	United Nations Educational Scientific and Cultural Organization
WB	World Bank
WHO	World Health Organization

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# CHAPTER 01

## INTRODUCTION

### 1.1 Research Background

When the industrial revolution emerged in the 18<sup>th</sup> century in Europe, use of lands were gradually changed into industrial factories so that industrial cities grew rapidly. Due to the growing demand for labour, these cities were filled by the flux of rural-urban migration and the cities had to adapt to these massive population and factories. Because of poor planning and excessive migration, cities failed to adapt successfully to the new situation. As a result, it led to building cheap confined apartments for the growing labour which led to the rise of slums and shantytowns. In addition, these shantytowns were characterized by very small and attached dwellings with lack of exposure to daylight and ventilation as well as overcrowding.

This unpleasant condition in new industrial towns under the rapid urbanization caused to spread infectious diseases such as cholera, yellow fever, typhus, tuberculosis etc. Therefore, the need to control diseases was realized. Accordingly, steps were taken to control the diseases using urban planning strategies such as the provision of facilities for pure water, proper sewerage systems, collecting garbage, controlling rodent, removal of mosquito and restoring the city with fresh air, open spaces and sunlight.

During the mid 1900s, European and North American countries, as well as Japan could be transformed into the status of developed with the correct economic policies and resources. However, by the mid-1960s, the transformation of economies was not followed the same way in terms of developing countries and instead, they began to give way and widespread the unemployment even though they were growing economically. Meanwhile, the said unemployment condition was expanding during the periods of economic crises, economic adjustments or transitions, and globalization of the economies during the 1990s resulting increasing of slum and shanty dwellers in the cities of developing countries.

Different policies and strategies are implemented by developing countries to deal with the issue of inadequate urban housing which is the main factor for emerging



underserved settlements<sup>1</sup> (USS). Accordingly, the providing low-cost housing, improvement of infrastructure facilities in the USS, and relocation of underserved settlers are some of the programs implemented by the governments. Due to the lack of adequate government commitment towards urban housing demand, the USS spread very fast in developing countries. In some cities, the areas covered by these settlements are so huge, so that they are called as underserved settlement districts. For instance, Dharavi in Mumbai of India, Orangi Town in Karachchi of Pakistan, Kibera in Nairobi of Kenya, Neza-Chalo-Itza of Mexico, and Khayeltisha in Cape Town of South Africa (Shahraki, 2016).

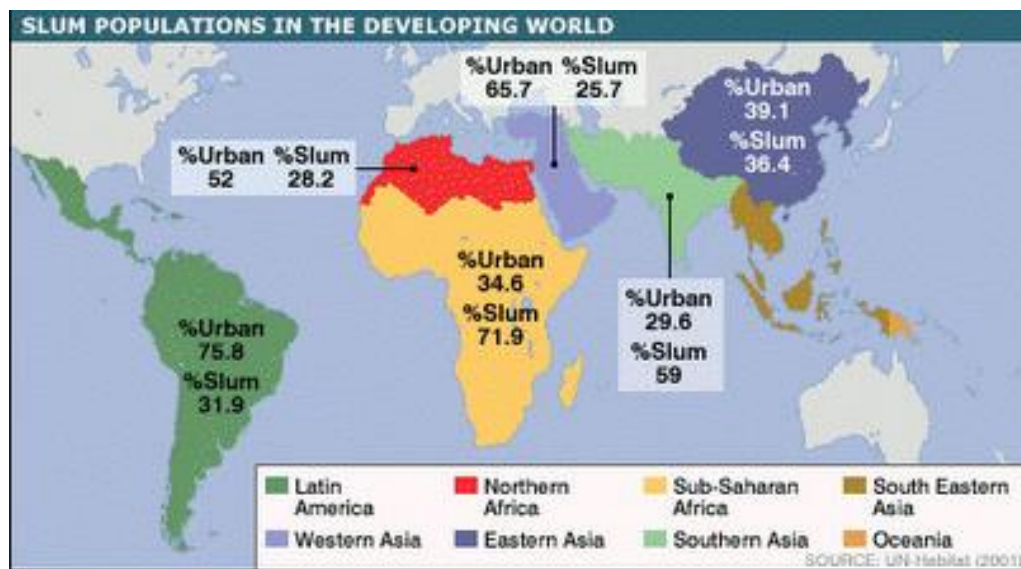


Figure 1: Slum populations as percentage of the Urban Population

Source: UN-Habitat (2001)

As per the UN calculation, in 2012, approximately 3.4 billion people, that is approximately half of the population of world live in cities. And this proportion will be increased to 60 % and 72 % by 2030 and 2050 respectively. Accordingly, the people live in cities by 2050 will be about 6.3 billion. Also, people live in slums in 2012 is about 1 billion, and that is approximately a sixth of the global population. It is predicted that the world population will raise to 9 billion by 2030, and then 2 billion people will live in the slum. (UN, 2012)

1 The term 'Underserved settlement' applies to the houses of the urban poor called as slums, shanties, and other unsuitable illegal constructions made for human living no security of tenure, poor service facilities and not comply with planning and building regulations (UN Habitat, 2015).

Today, cities are in a big competition as hubs of investments by improving its competitiveness in terms of economic growth, provision of facilities, job creation, and appearance. So that USS is considered as a constraint to attracting city investments and preventing developments due to its chaotic appearance and adverse image. In addition, with rapid urbanization, the demand for land for developments is increased in the inner lands of the city. But unfortunately, most of those lands are occupied by USS. Hence, land shortage and chaotic appearance of the USS are considered as the major constraints for urban development. Accordingly, the resettlement<sup>2</sup> of USS is considered as the best strategy because it enables to release of lands occupied by USS for development purposes.

Amidst the alternative solutions for housing shortage for people of USS, some countries have accepted high-rise living as a residential option such as Singapore, Hong Kong, Thailand, and China (Yuen *et al.*, 2006). As cited by Yuen *et al.* (2006), Costello (2005) stated that though high-rise housing is not always positive, it has re-appeared as a solution for housing problem in urban areas in the 21st-century. Manchester and London in Europe as well have started high-rise apartments as the latest alternative to the housing scarcity. In the mean time, Australia too has accepted back high-rise housing. Particularly, Melbourne after giving up its practice of high-rises in the 1970s". Singapore and Hong Kong have also accepted high-rise housing as the best option mainly due to the limited area of land, high population growth and necessity for better habitation (Yuen *et al.*, 2006).

In the Sri Lankan context, end of civil war in 2009 which existed for 30 years, the priority of the government shifted to the economic boom of the country followed by its overall well-being. The political stability and the peaceful environment in the country created a good environment to implement programs for the development of the economy of the country. Under the vision of "The miracle of South Asia" to make Colombo, the most vibrant commercial and logistic hub of Asia, the government wanted to develop the Colombo through the priority given to foreign and local investments by providing lands for developments and city beautification.

2 'Resettlement' is called a process of physical re-location of a human habitat with providing housing and land including basic infrastructure (UNCHS – *Habitat*, 1991).

The main constraint to the city development was the USS occupied in prime lands in the city of Colombo (Figure 2). The extensive number of USS encroached in prime lands are approximately more than 900 acres in Colombo. So the government's aim was to release 400 acres out of that and sale for investments. Taking all these factors into account, the then government decided to relocate USS in high-rises following the compact city concept to the city of Colombo (*UDA, 2011*).

In 1999, under the Clean Settlement Project implemented by Ministry of Housing Construction and Public Utilities, the Real Estate Exchange (Pvt) Limited (REEL) conducted a survey and disclosed that approximately 66,000 low-income households<sup>3</sup> are found in Colombo. The project called "66,000 Low-Income Housing Project" undertaken to redevelop the said USS was a significant program started in 2010 for addressing the USS in Colombo. The program mission included the construction of 10,000 houses in the initial year 2010/2011 and to build 30,000 more housing units during the next three years. Further, another 40,000 units to be constructed in the next consecutive three years. Eleven locations have been selected such as Dematagoda, Kotahena, Borella, Wellawatta, Salamulla, Henamulla and Maligawatta, etc. (*Samaratunga, 2013*).

So far, the past governments have implemented several development initiatives to supply adequate habitable living conditions for USS in Colombo in terms of resolving ownership problems, improving infrastructure and amenities, onsite upgrading, site and services programs, and minimum resettlements

As per the latest survey conducted by the UDA in 2011, there are 68,812 families live in USS (*UDA, 2012*). The percentage of the USS to the city's residential population of 752,993 is 53 % (*World Bank and UN Habitat, 2012*).

The major housing resettlement program commenced in 2011 for providing modern high-rise accommodation to USS families in the city of Colombo is called the "Colombo Urban Regeneration Project". It was implemented by the Ministry of Urban Development and Defense. It was successful to certain extent in relocation of people in USS in Colombo.

3 'Low-income housing' is the most commonly used term to explain housing provided by the government for underserved people in Sri Lanka (*Samathunga, 2013*)



In demographic context, 53 % of the total population of the city of Colombo is urban poor (World Bank and UN Habitat, 2012) while in an economic context, 58 % of the labor-power was supplied by the underserved settlers (Sevanatha, 2012).

As per the details of the UDA, 17 numbers of low-income high-rise housing projects have been completed and approximately 7000 families of USS have been resettled within the Colombo.

## **1.2 The emergence of USS in Colombo**

The Colombo city was built by colonial rulers with the purpose of trade activities via the port of Colombo. Therefore, they paid great attention to port, port-related activities, and port-related areas.

The Colombo port was initially commenced by the Portuguese and handled major trading activities during the British period. Colonials built canal, road and railway networks to connect Colombo and hinterland with the purpose of transportation of commodities to the port. With the development of port activities, commercial premises and warehouses were concentrated around the area, and colonial rulers brought unskilled workers from the rural areas to work in factories, harbor, and other establishments. They had been provided rental houses with shared amenities particularly in Colombo North in areas such as Mattakkuliya, Lunupokuna, Bolemandhal, and Kotahena. With the expansion of port-related activities and shifting the elite settlement towards Cinnamon garden, Kollupitiya, and Bambalapitiya, the low-income inhabitants moved to the old houses of British in Pettah and Fort and railway warehouses (*Centenary Volume of the Colombo Municipal Council 1865-1965*).

So the emergence of the underserved settlement goes back to the era of the emergence of the city of Colombo as a trading town. Being the commercial capital of the country, the city acts as the income generator, hence people are attracted to the city with the purpose of finding jobs.

The first census for the population of Colombo was conducted in 1871, and the population of the city of Colombo then was 95,843 (*Centenary Volume of the Colombo*

*Municipal Council 1865 – 1965*). The total population enumerated in the city of Colombo in 2017 is 752,993. The commuter population of Colombo is approximately 400,000 - 500,000 (*Dept. of Census, 2017*). The city of Colombo is the highest populated city in the country and its gross population density is 33,574 persons per sq. km in 2017 while, hundred years back, in 1901, the density of population was only around 6000 persons per sq. km. (*Centenary Volume of the Colombo Municipal Council 1865 – 1965*). Therefore, this represents a more than thirteen-fold increase since the first census in 1871.

As of today, the area of the city of Colombo spreads over 37.32 sq. km. The city of Colombo is on the list of the densely populated densities in Asia (*Department of Census and Statistics, 2018*). The population density in Singapore and Hong Kong are 8274 and 6000 persons per sq. km respectively. Generating 40 % of the GDP of the country by the city of Colombo and as the commercial capital, Colombo acts a significant role in economic, educational administrative, and social aspects of Sri Lanka (*Central Bank, 2018*).

As stated earlier, percentage of the urban poor is just exceeded the half of the city residential population. Most of them have occupied in vacant state lands, vacant private lands, abandoned industrial sites, environmentally sensitive low lying areas, road, railway, river, beach and canal reservations, lands adjacent to cemeteries, and in steep slope or unstable lands which are not suitable for human habitation. Nearly 11 % of the total state lands in Colombo have been taken over by USS (UDA, 2011). Insufficient capacity of the present infrastructure stock of Colombo makes the issue of USS more critical since it was created over 100 years ago for a city population of 35000 (*Centenary Volume of the Colombo Municipal Council 1865 – 1965*).

Though several high-rise apartments have been constructed by the government before 1977 for public sector employees of the middle-income category; Bambalapitiya flats, Maligawatta flats, Anderson flats, and Elvitigala flats consist of 4, 4 -9, 4 and 4 floors respectively, no apartments were constructed for underserved settlers except in-situ upgrading<sup>4</sup>.

4 'In-situ upgrading' is basically providing infrastructure and basic public services in terms of improving the quality of the USS (*World Bank, 2000*)

The REEL Program conducted in 1977 under the vision “housing for the poor and land for the urban development” was a significant project for upgrading USS. The concept was to develop high-density housing in high-rise apartments while releasing valuable urban lands occupied by USS for private sector investments. Funds for this project were generated through land sales and it was reinvested in further housing developments for USS. The first high-rise building developed under this program called “Sahasapura” in Wanathamulla consisting of 14 floors with 671 units (*Herath & Jayasundera, 2007*).

30,000 housing units were initially planned to relocate people in USS by the UDA after the 30 years civil war ended in 2009 with aim of releasing approximately 400 acres of land area which have been encroached by the USS in the Colombo and sale on the open market for initial capital. Approximately half of the liberated lands were planned to be sold to prospective investors on a long-term lease basis. Proposed housing units were planned to be allocated for the underserved settlers for a nominal value (UDA, 2011).

### **1.3 Current Situation in the city of Colombo**

As per 2018 estimates, the total number of housing requirement of the underserved settlers in the city is 68,812 whereas the total number of housing units supposed to be provided are 18,000 under 28 housing projects, some of them are ongoing and the balance is planned to be completed. Lands supposed to be released for low-income high-rise housing projects are 350 acres (*UDA, 2018*).

### **1.4 Brief Explanation about the research**

The researcher finds from the literature review that there has been a shift of the policy for resolving the housing problem of the urban poor from in-situ solutions to high-rise housing worldwide which appears totally different from the way of life practiced by them in USS. The Sri Lankan government too has chosen modern high-rise accommodation as the best practical solution to resolve the housing problem of the urban poor in Colombo. But at the survey, some resettlers expressed their grievances towards residential dissatisfaction under this strategy especially stating that issues they have not met earlier when they were in USS have been merged in to their lives.

Though it seems that some people have achieved a better status than earlier after resettlement, new issues have emerged in to their lives because of the relocation. In this research, the aim of the researcher was to find out the factors affecting the performance of low-income high-rise housing in Colombo and how impact these factors across time and its scale. In addition, the researcher wants to address how can the sustainability of such resettlements be improved.

### **1.5 Summary of research**

Under the literature review, chapter 2 describes the literature on sustainable housing solutions for urban poor under sustainable urbanization, the current trend for housing globally and its success. Moreover, it presents definitions of some commonly used terms related to resettlement of USS, different strategies applied for upgrading USS, issues of resettlement, factors affecting to effective resettlement, acceptance of high-rise as a solution of resettlement both locally and globally, theories of family housing adjustments and residential satisfaction of low-income high-rise re-settlers.

Chapter 3 presents the research methodology. Mainly, it presents research problems, selection of case study area, research strategy, selection of low-income high-rise resettlement projects as case studies, sampling, and designing of the questionnaire.

Chapter 4 outlines data collection for finding answers to the research problems using direct observation, personal interviews with re-settlers/ key informants and discussions with focused groups.

Under the analysis, chapter 5 describes analyzing of data using Statistical Package for the Social Sciences (SPSS) to find out answers to research problems. In addition, data that was collected under chapter 4 too was used to present more reliable answers to the research problems.

Finally, chapter 6 presents the findings and conclusion. It gives the recommendation to improve the practice of resettlement in Colombo, limitations of the research, avenues for further research and accountability of town planners for sustainable low-income high-rise housing as housing professionals.



## CHAPTER 02

### LITERATURE REVIEW

#### 2.1 Introduction

Cities are developing fast under the process of rapid urbanization. In this process, it is a major challenge for achieving a sustainable development<sup>5</sup> in cities which can only be achieved by correct urbanization policies and strategies.

One of the reasons for the lack of ability to engage successfully in sustainable urbanization of developing countries is growth of the USS. This growth of USS reflects the inappropriateness of policies and strategies used in urban planning, economic development, providing services etc. In addition, underserved settlers greatly suffer from the exclusion of benefits of urbanization in terms of spatial, economic and social levels.

The research finds from the literature review that there has been a shift of the policy to high-rise housing from in-situ solutions regarding underserved settlers that appears totally different from the way of life practiced by them.

As per the New Urban Agenda of the United Nations, cities are totally different from each other in every aspect. They are different in social, cultural, environmental and political contexts. They have different histories. Their capacities are different. Each city has its own goals to achieve. As such, the policies and strategies required for a sustainable urbanization should be different.

Cities have to be prepared to compete as hubs of investments. Some of the countries consider the USS as a constraint for attracting city investments and developments due to their chaotic appearance and the adverse image they create. Therefore, this appearance creates clashes with urban policies and strategies. As a result, USS is subject to redevelopment schemes with eviction and resettlement of its people.

5 'Sustainable Development' is defined as development that fulfill the requirements of present generations without compromising the ability to fulfill the requirements of future generations. In another words, Sustainable Urbanization has been defined as practices of urbanization that comply with the principles of sustainable development (*Jones, 2017*).

It is obvious that the failure for a sustainable situation in dealing with the USS is the result of a lack of political willingness, deliberate policies, outdated planning and policy tools which are inappropriate for finding sustainable solutions for modern urban issues. Accordingly, urban planning is determined and led by prevailing market and political settings. Because of urban policy contradictions, cities in developing countries struggle to full fill critical issues such as demand for housing, infrastructure, and services, affordable lands by applying a common approach to policies, and strategies. Within this context, cities are applied similar urban planning policies and strategies, although local objectives and goals to be achieved in city development are different in each other (Paul Jones, 2017).

As cited by Yuen (2006), BBC News in 2003 stated that “many failures of early high-rises were due to low-quality constructions, lack of maintenance, and bad management”. Further, Yuen says that “ high-rises have re-appeared in the past 10 years, as a solution for housing problems in cities. But major challenge for today is building livable high-rise housing”.

Many cities have inevitably considered engaging in high-rise high-density model, with the arrival of new technologies in the construction industry combined with the increasing urban population and the scarcity of lands in cities (Yuen, 2006). Also, as cited by Yuen (2006), Burton (2000); Planning (2002) stated that high-rise housing is progressively considered as the best solution to suburban sprawl, under the higher-density urban form and sustainable development. In addition, as cited by Yuen (2006), Corporation of London (2002) expressed that when the city is completely filled, and there is no way to spread outwards, then the only solution remaining is to go upwards.

As cited by Yuen (2006), Housing Development Board, Singapore (2000) mentioned that particularly, Singapore and Hong Kong have experimented with living in a high-rise as a residential option and now both countries have chosen high-rises as the residential option to the hindered land space and growing population. After some forty years of living in public high-rise housing in Singapore, the people who choose living in a high-rise is being increased. The percentage of the willingness to live in a public high-rise household is 82.5 %.

Further, as cited by Yuen (2006), Abel (2003) stated that, not only Singapore and Hong Kong, Manchester and London too have started to construct 50 stories high-rises as the most suitable option for the housing problem though in 1960s, most of public high-rise housing were demolished.

The first housing scheme built in Singapore called “Toa Payoh” is 40 stories and the people who were USS were resettled, The whole scheme has been connected to the whole Singapore by an extensive public transport network of roads, and rapid transit. It makes available various unit sizes with different facilities to meet different family needs. Also, it provides common facilities such as shops, markets, schools, playgrounds, libraries, swimming pools, and cinemas, within comfortable walking distances (5 minutes). These facilities encourage neighborliness and community life. Continuous maintenance provides quality housing and modern appearance. Those factors have strongly affected to keep residential satisfaction (Yuen, 2006).

Under the current public housing policy in Singapore, the people have been provided several options when they want to buy a high-rise public housing. Considering the continuous ideas of the community, the government of Singapore is ready to set its policies and strategies to achieve a win-win situation for both parties admitting that it is the responsibility to keep the citizens happy while guiding the city towards more competitive (Yuen, 2006).

Gifford (2007) states that there are some dystopia of functionality of high-rises such as safety and mental health of children, imprisonment, loneliness. But several advantages such as more housing units can be delivered within a smaller footprint of the land, a symbol of a developed society, symbol of modernity, shows economic dominance and power, privacy, quietness, striking views, amazing heights, prestige and status. Moreover, as cited by Gifford (2007), Rapoport, (1977); Ukoha and Beamish, (1997) stated that housing satisfaction can be affected by many factors such as characteristics of the dwelling unit, physical environment, nature of interaction with neighbours, the characteristics of the resident, and psychological feelings. Further, as cited by Gifford (2007), Smith et al., (1998) stated that the built environment of high-

rise flats are much unsatisfactory because these flats were designed and built by the people who do not occupy in them.

## **2.2 Housing**

Gilbert (2007) defined a house, which is one of the basic requirements of human beings as a place, a shelter, or a building for habitation by humans. In the modern concept, it includes not only “physical structure for providing protection and shelter but also the immediate neighbourhood, community services and facilities (BaharAli, 2015). World Health Organization (WHO) define the term “residential environment” where a family can grow and develop physically, mentally and socially and it includes all necessary services, facilities and equipment and devices required for physical and mental health and social well-being.

In urban areas, housing problem has been gradually shifted from the shortage of housing to the lack of housing affordability. In cities, housing prices are determined by the land availability and its cost and access to finance (Nallathiga, 2010). Then the term “Housing affordability” came to use and it says ‘the requirements of households whose earnings are not adequate to let them to access proper housing in the market without assistance (Milligan et al., 2004). Actually, recently, the term ‘affordable housing’ has been used as an alternative to terms ‘public’, social or low cost housing (Gabriel et al, 2005).

## **2.3 Low-income housing or public housing**

Locally, the most common terminology used for subsidized houses or the houses allocated by government to the poor is “low-income housing”, while internationally, the common terminologies used by the most of the countries are “public housing or affordable housing” such as Singapore, Thailand, Indonesia, etc. In the United Kingdom, it is referred to as “council housing” (Gifford, 2007). However, all these synonyms are used to describe the housing allocated by the government to the economically weaker strata in society. However, there is not a single universal definition to refer to low-income housing. In Sri Lanka, housing projects implemented by the government targeting the urban poor are called as “low-income housing projects” and moreover, it varies within the span of in-situ development programs (site

and facilities), redevelopment projects (low-rise and high-rise) and relocation projects (*Samarathunga, 2013*).

## **2.4 Slum and Squatter settlements**

Wider literature shows that the terms slum and squatter settlements mention almost all illegal, informal, and uninhabitable housing. These are normally situated in ignored or abandoned areas of the cities. Also, these houses and physical living conditions are poor and miserable (*Shahraki, 2016*).

UN habitat in 2015 has defined slum and squatter settlements separately: Slums or squatter camps are defined as “residential districts where residents have no security of tenure for the land, inadequate basic services and the housing does not comply with prevailing planning and building regulations. They are commonly located in geographically and environmentally unsafe areas”. The term “Squatting” is used for illegal occupation of land or buildings.

Some more definitions used in countries for slums and squatter settlements;

As cited by Viratkapan et al. (2004), the National Economic and Social Development Board and Government Housing Bank, Thailand, (1990) stated that, slum indicates to both slum and squatter settlements since both depict a form of poor physical conditions of the residential dwellings. Slum is called as “a group of buildings with a housing density of not less than 15 houses per 0.16 ha in an area described by overcrowding and flooding with worsen and unhygienic conditions that provide lack of air, damp and unsanitary accommodation, and which might be harmful for health, security or as the source of illegal or wrongful activities”.

As cited by Nassar and Elsayed (2017), the General Organization of Physical Planning in Egypt (GOPP) (2006) stated that slums refer as “all areas that have not been physically planned but have been developed as single or multi-story buildings or shacks by individual efforts, in the absence of law. The lands they have been built are not assigned for building housing in the city’s master plan. However, though the conditions of buildings might be good, they might be environmentally or socially hazardous and lack of the basic services and utilities”.

As per the literature, there is no single accepted definition internationally and it varies between countries as well as cities. Most probably, it seems that the terms of the underserved settlement, slum or squatter settlement are used to describe the unplanned, poorly maintained, deteriorated, unsanitary, unsafe and overcrowding residential area.

When compared with the global context, the word “slum” to describe inhabitable housing does not seem fair. Instead, since no single definition is used in a local context, the researcher supposes the term “underserved settlement” to use to describe the slum and squatter settlement in Colombo. Therefore, residential units, which are highly dense, congested, temporary built housing structure on the state or private land not always owned by the resident with a chronic condition of services is used as the working definition for “Underserved Settlement” here onwards.

## **2.5 What is resettlement?**

Resettlement is done by a government when people are required to displace due to natural disasters, manmade disasters, implementation of some development projects for the benefits of the people or inducing some government policies. The people who live in hazard-prone areas, historical sites, war areas, underserved settlements, internally displaced, and areas proposed for development projects are more vulnerable to be resettled.

Some of the definitions used to describe the term “resettlement” globally are shown below.

According to the World Bank, it includes all economic, and social losses as a result of taking land and restricting of access to the land. Also, it includes compensatory and remedial measures. Moreover, it states that “resettlement includes the acquisition of land and structures on land, physical relocation and rehabilitation of resettled people to improve their income and living condition” (*World Bank, 2019*).

Chowdhury (2011) has stated that resettlement refers as “the complete process of planning and implementation of relocation of people from one place to another for some particular reason, including all related activities; compensation for lost assets, livelihood restoration and enhancement, re-building of social networks, and restoring

social functioning and activities of the community, and providing vital public services” (Chowdhury, 2011).

UNCHS-Habitat (2019) stated that the terms ‘relocation’ and ‘resettlement’ are often used interchangeably. Principally, the very basic definition of above two terms, in the context of housing, is the shifting of people to another site together with land and/or housing with basic infrastructure (UNCHS-Habitat, 2019).

Another definition says “Resettlement is the action of shifting people from USSs to the well-managed apartments with basic needs” (Herath, Jayasundara, 2007).

Accordingly, resettlement can be generally defined as relocation of people from the place they occupied to another place by acquiring the land and hence it leads to loss of their land, shelter, income source and all other associated activities. But the compensation is paid for lost assets, resources, and cost of transport amidst support for livelihood restoration.

## **2.6 Why resettlement?**

Resettlement is implemented when a settlement is subjected to displacement or a government policy decision. Displacement can be occurred due to different reasons such as natural disasters, manmade disasters and implementation of development projects. Government policy decisions can be for providing better housing for citizens, improving the quality of lives, etc.

UN-HABITAT (2003) has stated that “In many developing countries of Asia, urban development often leads to the eviction of communities. When the demand is high for land in prime areas in terms of various development activities as well as the supply is limited, developers target sites inhabited by the poor of the urban society which are underutilized in economic terms. Since the developers are powered by the financial strength and are supported by favorable urban development policies, developers have the ability to pressurize on these poor people in USS. For households in USS, the security of tenure provides a relief from the forced removal, eviction, resettlement or relocation” (UN-HABITAT, 2003, PP. 164-1880).

## **2.7 Who is resettling?**

UN-HABITAT (2003) shows that different categories of people; underserved settlements, internally displaced people, and people who are in the areas of proposed development projects are a trend to resettle. In addition, people are resettled when inducing some government policies.

## **2.8 How is Resettling?**

The process of resettlement mainly can be divided into two categories; voluntary and involuntary resettlement. This categorization is mainly focusing on the willingness or preference of communities for the resettlement. Apart from that, it can be in-situ or off-site resettlement (*ADB, 2012*).

### **2.8.1 Involuntary Resettlement**

ADB (2012) stated that “involuntary resettlement includes both physical and economic displacement. Evacuation or relocation from the previous residential land is called Physical Displacement while loss of land, assets, income sources, livelihoods, or accessibility to assets is called Economic Displacement (*ADB, 2012*).

Further, ADB (2012) states that “ Displacement is occurred, when there is no right to displaced persons to refuse the land acquisition done by the state. There are two ways of land acquisition. (i) Takingover the land using its power, or (ii) negotiation. Involuntary Resettlement is occurred when affected communities have no right to refuse land acquisition. (*ADB, 2012*)

Involuntary resettlement results in inevitable losses and affected people have to rebuild their lives, incomes, and assets elsewhere.

### **2.8.2 Voluntary Resettlement**

In generally voluntary resettlement refers to the resettlement process which is conducted by the state with the willingness of the settlers.

Both World Bank and ADB (2012) state that “The important principles of involuntary resettlement is informed consent and power of choice. Informed consent refers to that the affected person fully aware of the project, its implications and consequences and



he/she fully agrees to resettlement. The power of choice refers to that the affected person has choices whether to agree or disagree for the resettlement, without adverse consequences being imposed formally or informally by the state. The power of choice is only possible if the project location is not determined” (*World Bank & ADB, 2012*).

As per ADB definition in 2012, voluntary resettlement refers to “any resettlement not applicable to esteemed domain or other modes of land acquisition supported by powers of the state. (*ADB, 2012*).

## **2.9 Working Definitions**

### **2.9.1 Underserved Settlement**

In this research, underserved settlement is defined by the researcher as a community or a neighborhood consists of residential units, which is highly dense, congested, and temporary built housing structures on state or private land not always owned by the residents, not adhere to the prevailing planning and building regulations, and with chronic conditions of services (*UN-Habitat, 2015; Viratkapan et al., 2004*).

### **2.9.2 Resettlement**

Also, resettlement is defined by the process of physical re-location of a human habitat with social, economic, and environmental sustainability (*Chowdhury, 2011*).

## **2.10 Different strategies to upgrade underserved settlements**

Different strategies are followed by developing countries to solve the problem of scarcity of urban housing of cities. It includes; in-situ upgrading, on-site redevelopment, eviction, and resettlement or relocation (*Nassar, and Elsayed, 2017*).

### **2.10.1 In-situ upgrading**

In 2000, the World Bank/UNCHS has identified the following 10 aspects for improving USSs (*World Bank/UNCHS, 2000*): Upgrading infrastructure facilities such as water supply, sanitation, storm water drainage, flood prevention, waste collection, , electricity, security, lighting, and telecommunication facilities etc., prevention or mitigation of environmental risks, provision of incentives, provision of community facilities such as nurseries, health centres, community centres, open spaces etc.,

regularizing security of tenure, improving houses, relocation of residents and compensation, upgrading accessibility to health care, education, and social support programs, improving income-earning opportunities through training programs and micro-credit schemes, and building social capital and the institutional framework to sustain improvements.

WB/ UN (2000) has stated that in-situ upgrading is the best approach in terms of the USS. Because, in-situ upgrading does not disturb their social, economic, cultural and environmental conditions (*World Bank/UNCHS, 2000*).

In-situ upgrading programs, conducted by the UDA in 1978 – 1984 and Million Housing Program conducted by the NHDA in 1984 – 1989 were the only two programs done by the government for the urban poor. Under these programs, improvement of infrastructure and amenities, and improvement of site and services were done. Under the One Million Housing Program, thousands of USS were upgraded in Sri Lanka. This program helped to upgrade the living standards of the urban poor but not the characters of underserved settlements. It was just created improved underserved settlements (*Samarathunga, and Hare, 2013*).

Ministry of Urban Development implemented another program in 2008 for upgrading urban poor called ‘Kusum Niwasa’. The funding was provided introducing a new tax of one percent charged from all buildings which exceed 500 sq. m. The urban poor received direct financial support of Rs. 125,000 to improve their houses. But the entire program was failed after two years due to abolishing one percent tax by the government later (*Samarathunga, 2013*).

There are important exceptions to the case of in-situ upgrading. “Some settlements are constructed to such poor standards and at such high densities that they are not possible to upgrade without demolishing completely. Many USS are required to render key infrastructure to be safe, accessible or livable. In the meantime, some USS is located where it is ineffective having in-situ upgrading due to severe conditions of flooding or unstable landing. In addition, some are located in reservations of road, railway, and canal, so that they must be relocated” (*Dovey, 2015*).

### **2.10.2 On-site redevelopment**

This approach is done when housing conditions of USS are highly deteriorated, and unsafe. Since they are highly deteriorated, a total renewal of the structure is done after its full demolition. It protects the legal right of underserved people for housing as well as their livelihoods since the location is not changed (*Nassar, & Elsayed, 2017*).

However, under this process, the occupants have to relocate into a new housing temporarily either on-site or off-site. This process is not simple as slum upgrading and also it may take years for completing the project.

There are several approaches to on-site redevelopment. Land sharing is one of the most popular techniques followed globally at this type of redevelopment. Land sharing approach is undertaken when the location and the value of the land are in great importance. While developers invest a portion of the land for commercial or mixed development, the balanced portion of land is used to build housing for the USS by the developers. Accordingly, no disturbances are happened economically, socially, culturally to the USS so that this approach is accepted by most of the countries since it allows all the parties involved; government, community and developer win-win-win situation (*UN-HABITAT, 2012*).

After finishing the 30 years civil war in 2009, the then government focused and followed this approach for achieving its goals; to develop the City of Colombo by promoting foreign and local investors for developments in Colombo liberating prime lands to prospective investors on long-term lease basis as well as to redevelop the USS into high-rises under the land-sharing process. TATA and John Keels mixed development projects at Salve Island are instances for such land-sharing approaches implemented by the government.

### **2.10.3 Evacuation and resettlement (Relocation)**

This intervention involves the demolition of USS and the relocation of underserved settlers into a new housing development. This mode of intervention particularly occurred to USS in prime lands which are targeted for selling the land for a high value

in terms of a commercial purpose. Eviction should only be carried out as last resort if all other modes of intervention are not feasible. (*Nassar, & Elsayed, 2017*).

As mentioned earlier under 2.10.1 in-situ upgrading, there are exceptions to the case of in-situ upgrading due to very low standards, high densities and emergence in poor locations of USS, so that housing must be relocated (*Dovey, 2015*).

Therefore, in this type of situation, evacuation and resettlement is the last resort.

### **2.10.3.1 Low-rise Housing (Walk-up Apartments)**

There are two types of apartment houses which can be used in terms of the urban poor: High-rise and Low-rise. A low-rise apartment is limited to four floors whereas an apartment is called high-rise when it goes above four floors (City of Colombo Development Plan (CCDP) – 1999). Previously, low-rise apartments have been practiced on several occasions in the country on behalf of urban poor but later, the government decided to select the option of high-rises as the last resort due to achieving the density of urban poor.

One of the key informants stated that “a resettlement will be very attractive, if it follows the process of incremental development rather than going to high-rises directly” (*Key informant, 2018*).

Yuen et al. (2006) have also given his comment regarding incremental development. Developed countries including Singapore who have chosen high-rise low-income housing as the option for USS have started at the beginning with low-rise apartments. Once the new living style was welcome by people and the economic growth of the country backed it, high-rise apartments were stepwisely introduced. Currently, people accepted more than 30 stories of public housing as well (*Yuen et al., 2006*).

According to the key informants, the type of housing is not the only factor to succeed the lives of the urban poor after the relocation. The economic growth of the country, income generation, the attitude of people towards high-rise, size of the population resettled, location, quality of the resettlement site, maintenance of the scheme especially the building and the common areas, community participation, community unity, and leadership, etc. are other dimensions (*Key informant, 2018*).

## **2.11 Issues of Resettlement**

The issues related to the resettlement of USS can be mainly classified into three categories; Environmental, Social, and Economic.

It is recorded that both at the national and international level, this process of resettlement creates tremendous negative impacts on re-settlers, particular in terms of socio-economic hardships due to changing the living places followed by changing livelihoods as well as on the economy of the area in micro-level. Through the literature of local and international level and direct observations, several problems such as loss of habitats, inadequate space, loss of livelihoods, lack of social interactions, lack of maintenance of buildings, lack of socio-cultural harmony, lack of disciplines, mental health which are common to many of these resettlement projects are identified. Hence, it is questionable whether the ultimate goal of the resettlement process has been achieved though it is an option for allocating decent housing and land tenure to the urban poor (*ADB, 2012*).

## **2.12 Factors affecting the effective resettlement**

There are several factors affecting for effective resettlement. Some factors are needed to be fostered by the commitment of the government whereas others have to be through community activities. Therefore, these factors are divided into two categories as external and internal. External factors are related to the external actors, for instance, government whereas internal factors are associated to the community. All these factors are compelled to change in time (*Viratkapan et al., 2004*).

The below literature supports the factors affecting for effective resettlement:

Viratkapan et al. (2004) stated that there are some factors which contribute to overall success of the resettlement project. As cited by Viratkapan et al. (2004), Cernea (1988) mentioned that five significant factors influencing to successful carrying out of a resettlement project: Resettlement Policy, Legislation, Pre-Planning, Public Participation and Adequate Compensation.

In addition to the above factors, as cited by Viratkapan et al. (2004), Davidson et al. (1993) stated that being resettlement site close to previous USS, Basic Urban

Infrastructure, and the Reliable Socio-Economic Programs for employment opportunities are also key factors (*Viratkapan et al. (2004)*).

Moreover, as cited by Viratkapan et al. (2004), UNCHS - Habitat (2003) recommended that planning and implementation are vitally important in the process of relocation for success of the projects. The principle factors contributing to the success of relocation have been pointed out as; Community Participation, Development of neighbourhood of Relocation Area, Awarding Compensation, Social Development, and Reinforcement of Income (*Viratkapan et al. (2004)*)

Also, ADB (2012) has identified that funding of resettlement events, getting community involvement for every stage of the resettlement process, and socio-economic restoration exercises as the key components for an reliable relocation process (*ADB, 2012*).

As cited by Viratkapan et al. (2004), Davidson et al. in 1993 identified that these five factors influence for effective relocation and resettlement: Policy, Public Engagement in relocation process, Location of the resettlement site, Development of employment opportunities.

Hence, with help of the said findings, it was able to identify contributing factors, which influence effective resettlement in the process of relocation. The researcher finds from the literature that the said contributing factors have been divided in to two: External and Internal factors as such to ease to address when finding solutions.

One of the important factors that are not included in the above studies is the positive attitude of the resettlers with regard to resettlement. It means, if resettlers are optimistic regarding the life after the resettlement, it contributes positively to be succeeded the resettlement. In contrast, if resettlers are pessimistic, it contributes more towards a failure of the project (*Viratkapan et al., 2004*).

Since these external and internal factors are bound to change with time, these factors are related to the three stages of a typical resdttlement: eviction, transition, and consolidation (*Viratkapan et al., 2004*). Principally, this concept was used in this theses. Accordingly, when selecting resettlement projects as case studies to find out

the factors contributing to performance or residential satisfaction of low-income high-rise living of urban poor, three projects were selected to be one from each stage.

### **2.13 Resettlement Policy of the Government of Sri Lanka**

The government enforced the National Involuntary Resettlement Policy (NIRP) in 2001 as a result of the land acquisition implemented under the Land Acquisition Act, No. 9 of 1950. Because, under the LAA, the state has vested powers to acquire private lands for 'public purposes' without offering long-lasting solutions to the affected people by the acquisition of lands. Due to the shortcomings in the LAA, the ADB initiated a process in 2001 to address the issues of involuntary settlement. As a result of the process initiated by the ADB, the government adopted the NIRP in 2001 which includes a set of international best practices such as impact mitigation, full and informed consent and local participation and addresses the gaps in the LAA and offers long-lasting solutions to affected people. Under the NIRP, the people displaced by development projects are offered a similar or better standard of living compared to their situation prior to displacement.

### **2.14 The present interventions by the Government of Sri Lanka**

The present government has chosen resettlement in high-rises as the practical option for resolving the scarcity of housing of the underserved settlers in Colombo. Approximately, Eight thousand one hundred and twenty (8120) of families of urban poor have been resettled in high-rises so far and seven thousand two hundred and fifty (7250) units have been completed and to be resettled by 2019. Hence, approximately, 53,440 housing units have to be built to cover 68,812 total families of the urban poor living in the city of Colombo as per the survey carried out by the UDA in 2011. (*Project Division, UDA, 2018*)

Hence, this is a challenging target for the government from releasing the government lands which have been occupied by the urban poor and to build low-income high-rise housing and resettle the urban poor in these high-rises. Because it has just been completed 15,370 number of housing units since 2009.

### **2.15 High-rise as a solution to resettlement**

In the local context, during the last few decades, the governments have practiced several resettlement projects in high rise resettlements. As per the below-mentioned researches, though the high rises provided the physical space and secure tenure to the underserved settlers, it is evident that the occupants are not fully satisfied. As cited by Samaratunga and O'Hare (2013), Niriella (2005) stated that "The residents of Sahaspura are still treated as a shanty community and hence they are paid disrespect by the outsiders". Hettige et al. (2004) stated that as per the survey conducted in 2003, 65% of resettlers believed that standard of life of them has been raised due to the movement to Sahaspura, while 30% believed that their social life has no effect of resettlement and hence no difference of levels of previous and present lives. Moreover, 5% believed that their lives have undergone bad because of several seasons. The said survey has been carried out in Sahaspura re-settlers in their transition period. Further, it was stated that though high rise resettlements make underserved settlers living standards high to some extent, the objectives of resettlement programs have not been fully achieved.

In international context, Yuen (2006) stated that scarcity of land area, an increasing population density and obligation to improve housing standards of urban poor urged Singapore and Hong Kong for high-rise developments for underserved settlers and 82.5 percent of families living in public housing prefer to live in public housing apartments. Singapore has kept a full stop to USS, developing 'Toa Payoh' new town in the 1960s and providing housing there to underserved settlers who lived in and around the city center.

According to Yuen (2006), high-rise housing for underserved settlers is not always positive. It has some negative characters such as the safety of children and their mental health, imprisonment, and loneliness of adults, lack of social relations, crime and vandalism. In addition, in case of a disaster of building in mechanical, electrical, or structural ways or fire, there is a risk of potential danger when building height increases.



In Hong Kong, fire risk, lift breakdown, disturbances by neighbour, vulnerability for a crime in a lift and accidental dropping of people from upper floors are the most biggest worries in descending order whereas in Australia, those are disturbances by neighbour, inadequate facilities, power failure, fire risk and delay for lift in terms of public high-rise housing (Yuen, 2006).

As cited by Yuen (2006), Gifford (1997) mentioned that the sustainability of low-income high-rises depends upon residential satisfaction so that residential satisfaction is the prime concern. The factors which can strongly affect residential satisfaction are quality of the neighborhood, community facilities, and services, social relations, and status,.

In addition, as cited by Yuen (2006), Rapoport, (1977) and Ukoha & Beamish, (1997) stated that residential satisfaction of underserved settlers depends on many factors such as characteristics of the dwelling unit, residents, interaction with neighbours, inner feelings, and physical environment.

## **2.16 Sustainability**

### **2.16.1 Introduction**

The success of a relocation project is concerned with the sustainability of both physical and non-physical outcomes (Viratkapan et al., 2004). Accordingly, it says that project performance should be viable in terms of socio-economic and physical developments.

Samarathunga (2013) stated that if the resettlers is financially stable, socially healthy and environmentally friendly, it becomes a sustainable community. Hence, an economically viable, socially acceptable, environmentally friendly resettlement projects with assuring sustainable living and developing a sustainable community is a difficult task.

Financial sustainability is a crucial aspect of building a sustainable community. Hence, government intervention for community development programs is highly necessary. Social acceptance is the prime element for social sustainability. Hence, they need positive recognition from social society. To achieve this status, they require to be secure in financial, academic, and social terms (Samarathunga, 2013). Their housing

project and their attitudes to be aimed to protect the environment decreasing the costs for maintenance, and operation cost through reliable design, maintaining a sustainable environment and engaging in sustainable practices.

### **2.16.2 Degree of sustainability of low-income high-rise living**

Yuen (2006) stated that the degree of sustainability of public high-rise living depends on government commitment and positive attitudes of the community in terms of affordable housing mechanism, funding for public housing, its maintenance, designing total living environments, encouragement mechanisms, diversity of home designs, options of sale or rental, housing for singles, specially designed housing for elderly with elderly-friendly features, subsidies provided by the government to ensure housing affordability, a reliable secondary market for public housing, routine improvement works, lifts maintenance, breakdown and rescue operations, citizen relationship management (attending complaints), etc. These mentioned factors are directly related to mental satisfaction, assisting economic hardships, safety, privacy, keeping the environment healthy and attractive, stress-free environment, to form a cohesive society, increasing social interactions, improving the family status, etc.

In addition, the below literature too provides measures that affect the degree of sustainability of low-income high-rise resettlement housing for urban poor.

As cited by Viratkapan et. al. (2004), Davidson et. al. (1993, 5) stated that the ‘success of relocation’ should be counted in terms of the benefits received by resettled people from the process of relocation on a sustainable basis or, at the very minimum, not being worse off. The benefits can be multi-dimensional, including the security of tenure, the standard of housing, the convenience of infrastructure and services, socio-economic conditions, etc.

Also, as cited by Viratkapan et. al. (2004), Bijl et. al. (1992) stated that the proportion of original households who benefited from relocation projects is an important assessment criterion.

In addition, as cited by Viratkapan et. al. (2004), Wettaosot (1994) added that occupancy rate in the new location, ownership transfers, re-settlers’ survival ability,

and satisfaction in the new location can be used to assess the success of a slum relocation project.

## **2.17 Theoretical framework**

### **2.17.1 Introduction**

As cited by Samarathunga (2013), Steggell et. al. (2003) expressed that theories are analytical tools. Hence, related theories can be supported to develop research questions, select research methodologies, and to interpret the results. In addition, Steggell et al. (2003) mentioned that many of the theories related to housing have focused to social issues, and deal with selection of housing, residential mobility, residential satisfaction, preferences to achieve needs, importance of housing and the importance of ownership of a house. In this thesis, it is the approach to analysis perspective of the urban built environment particularly, USS and low-cost high-rise resettlement by authorities and social groups, residential satisfaction living in such housing, and social issues arisen.

### **2.17.2 Theory of Family Housing Adjustment (Theory 1)**

This theory provides a conceptual and theoretical framework to study the housing adjustment behavior of families. It has been developed by Morris and Winter (2015). They argue that:

Families evaluate or judge housing conditions in terms of both cultural and family norms. When the house they live mismatch with norms, it causes for dissatisfaction, forming a natural tendency for reducing the normative deficit. Residential adaptation, family adaptation or residential mobility, are behavioral responses or ways of adjustments to reduce deficits (*Morris and Winter, 2015*).

- Residential mobility – Shorter distance movement
- Residential adaptation – Housing condition is altered to fit their needs such as doing additions, alterations, remodeling, changing the functions of the rooms
- Family adaptation – Altering family composition to fit the current housing by changing the actions or behavior of members.

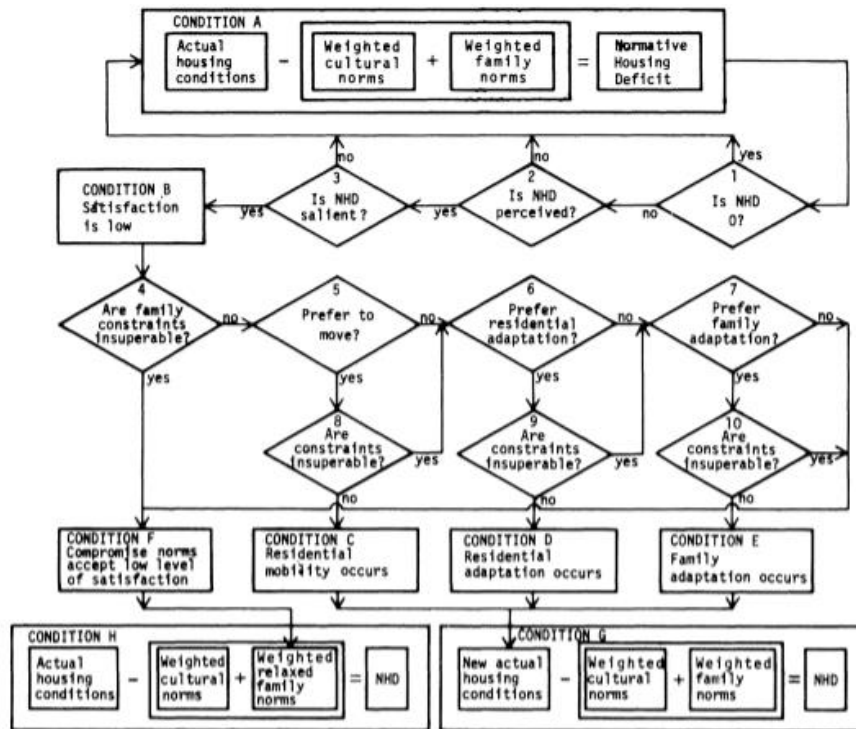


Figure 3: Flowchart of Housing Adjustment Process

(Morris & Winter, 2015)

As cited by Morris and Winter (2015), Rodgers (2000) stated that the composition and size of the family change over time, thus the norms that apply to them are changed in different life cycle stages. Further, as cited by Morris and Winter (2015), the theoretical paper issued by Sabagh *et. Al* (1969) on residential mobility behavior foreshadowed but did not fully explicate the perspective that it depends upon the ideals, aspirations, expectations, preferences, and family norms.

Due to the three main reasons shown below, both inside and outside of the family, family is compelled to negotiate or relax norms and adjust to appropriate behavioral feedbacks and housing goals.

- Family strengths and weaknesses to achieve consensus
- Economic, political and social factors such as family income, closeness to kins, neighborhood, location, state of the housing market, etc.
- Attractive features of the dwelling

Also, housing requirements not depend on minimum needs of shelter or lowest standards for health and safety but determine by cultural standards against which actual housing conditions are decided (*Morris and Winter, 2015*). For instance, Morris and Winter (2015) say the norms the American family seeks in the housing adjustment process are; space of house, ownership, type of structure, quality, neighborhood and location.

### **2.17.3 Residential satisfaction of low-cost public housing (Theory 2)**

It is important to note that type of housing is required to satisfy family requirements, as well as comfort, social, cultural and religious requirements, since it directly affects to the quality of living. Also, it influences the mental aspects of the residents (*Mohit et. al., 2014*).

Residential satisfaction or housing satisfaction is an important criterion that affects the success of housing projects particularly for the housing of low-income people. When the daily lives spent in the houses are not in accord with the norms, it will reduce housing satisfaction. In other words, they are in dissatisfaction in terms of their housing which leads to residential mobility or residential adaptation, or family adaptation.

As cited by Mohit et. al. (2014), Djebuarni & Al-Abed (2000) stated that residential satisfaction is the feeling of pleasure once someone achieves the things he desires in a house.

Also, as cited by Mohit et. al. (2014), Galster (2013) stated that “residential satisfaction is formed upon the concept that it measures the difference between housing conditions of actual and desired. If there are no complaints, it shows that the degree of matching actual and desired situations is high”.

Further, as cited by Mohit et. al. (2014), Wolpert (1966) stated that when there is a difference between housing needs and aspirations, it may cause dissatisfaction. This leads to migration or in situ adjustments (*Rossi, 1955*). Hence, migration or in situ adjustments can be considered as a process of adjustment to achieve residential satisfaction

As cited by Mohit et. al. (2014), Morris and Winter (2013) stated that there are two types of norms called personal and cultural, which affect to judge housing conditions. Also, as cited by Mohit et. al. (2014), Bruin & Cook (1997); Husna & Nurijan (1987) stated that housing deficit is an appropriate notion to describe residential satisfaction and mobility.

Mohit et al. (2014) mentioned that 45 variables which affect the residential satisfaction of low-cost housing residents have been identified and further, these variables have been categorized into 5 components;

1. Dwelling unit features – Areas of living, bedroom and dining, toilet, bathroom
2. Support services of dwelling unit - Lift, corridor, garbage collection, cleanliness of drains, street lighting, staircase,
3. Public facilities - Open spaces, parking, play areas, spaces for religious activities, access roads, passageways
4. Social environment - Safety, risks, noise, security, community relations
5. Neighborhood means - Distance to the city center, workplace, school, hospital, shopping Centre, LRT/bus stations

## **2.18 Research Gap**

As a basic requirement, housing is a very significant factor for all humans. It is not just a shelter, instead, it associates with social, economic, environmental, cultural, and political issues of the society. Housing shortage is a critical problem in urban areas.

The government of Sri Lanka has selected resettlement as the option to solve the shortage of housing problems of USS. The resettlement practices implemented by the government have been faced with certain issues not only in short term but also as long term.

There are many researches in the literature on resettlements of urban poor globally. However, there is inadequate literature which focuses on resettlement practices in Sri Lanka. Those few literature too has focused on resettlements projects as a product. Accordingly, there is a clear gap at the beginning itself on the correct conceptualization

of resettlement process. But as per the literature, it is not a product. Instead, it is a development process.

Hence, the basic conceptualization followed by the researcher in this research is that the relocation is a development process, but not a product. Therefore, the factors related to resettlement change over the time. For instance, the family size. It varies with the time. So that, every factors depend on the family size such as privacy, family adaptations, sanitary facilities etc. will change over the time. Accordingly, the issues imerge in to their lives also change over the time. Hence, the main research gap found by the researcher is the correct conceptualization of relocation process.

Next is the number of researches followed by the correct conceptualization of resettlement. As mentioned above, among few literature which focuses on resettlement practices in Sri Sri Lanka, very few has done the researches considering the resettlement as a development process occurred over years. Hence, one of barriers is inadequate literature that focuses on resettlement in Sri Lanka as a development process.

Hence, the objective of the research is to address gap of correct conceptualization of low-income high-rise resettlement, and accordingly, to improve the unsatisfactory terms and conditions, and events if any, affects to the urban poor from the decision taken by the authority from eviction to consolidation of the resettlement process and to minimize the mistakes done by the policymakers, qualified persons, government officials and the related housing professionals at every stages of planning, decision making, designing, constructing, relocating, and grievance redressing.

## CHAPTER 03

### RESEARCH METHODOLOGY

#### 3.1 Introduction

Research methodology outlines how research conducted and methods used: models, procedures, techniques etc. to find the answers to the research problems.

The research methodology follows the below mentioned series of actions: Research Problem Definition, Research Objectives, Research Design, Data Collection, Data Analysis, Interpretation of Results, and Validation of results.

#### 3.2 Problem definition

As the fastest growing city in South Asia in 2015, land is the most critical factor affected for the development in Colombo. Therefore, lands are highly valuable. There are so many competing demands for limited land. Thus land to be utilized for highest and best use. At the same time, considering the percentage of the contribution to the economy by the urban poor in Colombo, government cannot resettle the urban poor outside Colombo. Thus government compelled to find housing for urban poor in the city itself in high-rise apartments as government needs to compromise these two solutions.

1. Lands for urban development
2. Lands for low-income housing

Accordingly, government has selected low-income high-rise resettlement as the best practical option for housing the urban poor. Living pattern in these low-income high-rise resettlements are totally incompatible compared with that of the living pattern in earlier USS. Therefore, new issues have immersed in to resettlers lives so that impact of these issues reduces their residential satisfaction though they have been provided decent housing and basic infrastructure facilities for a comfortable living.

Accordingly, research problems are to be formulated mainly to search for factors affecting the performance of high-rise low-income housing, their impacts and sustainability of this resettlement projects.



### **3.2.1 Research Problems**

Since the research problem must be stated without any uncertainty, it was given utmost care when formulating the research problem. The research problems are derived from the research objectives with the aim to find out the way of improving the reliability of low-income high-rise housing. Hence, research problems were formulated as shown below;

1. What are the key factors affecting the success or failures of low-income high-rise re-settlement projects in Colombo in terms of residential satisfaction?
2. Whether and how the impacts of these factors vary across time and scale?
3. What is the degree of reliability of low-income high-rise resettlement for housing the urban poor in Colombo?
4. How can the sustainability of such re-settlements be improved in housing practices for urban poor in Colombo?

Before, formulating the objectives of the research, the following aspects need to be discussed;

- Hypothesis
- The boundary of the study (case study area)

### **3.2.2 Hypothesis**

It describes what researcher expect to be happened in the study. In this research, it is “The degree of residential satisfaction of re-settlers varies on different factors. These factors, as well as the level of influence of these factors to residential satisfaction, vary with the length of stay in high-rise low-income housing”.

### **3.2.3 Case Study Area**

In addition to the above two aspects of research problems and hypotheses, the boundary of the study had to be clearly defined.

Colombo Municipal Council area which is 37.32 sq. km. in extent is selected as the study area so that it is essential to recognize the demographic situation of the city. As mentioned earlier, the total population of the city of Colombo in 2018 was

approximately 1.2 million with the commuter population (*Colombo Municipal Council Budget Report, 2018*). The city of Colombo rewarded the credit of the highest contribution to the national GDP (*Central Bank, 2018*). Its contribution to the industrial sector is 73 % (*Central Bank, 2018*). The highest labor-power is contributed by the underserved settlers and the maximum number of USS are situated in the city of Colombo (*UDA, 2018*).

The total number of USS in the city of Colombo is 1735 which comprises 470,542 inhabitants, and 123,185 families (*Sevanatha, 2012*). Most of the underserved settlements have occupied in the state prime lands of the city of Colombo and the total area covered by these underserved settlements are approximately 900 acres (*Urban Regeneration Project Enumeration Survey 2010-2012*) whereas the percentage of the area covered by them to the total area of the city of Colombo is approximately 11 % (*UDA, 2018*).

Moreover, Colombo recorded the highest population of urban poor in our country. The below table shows the details of urban poor in the country in 2012.

*Table 1: Urban poor population as a percentage of Total Population of the City*

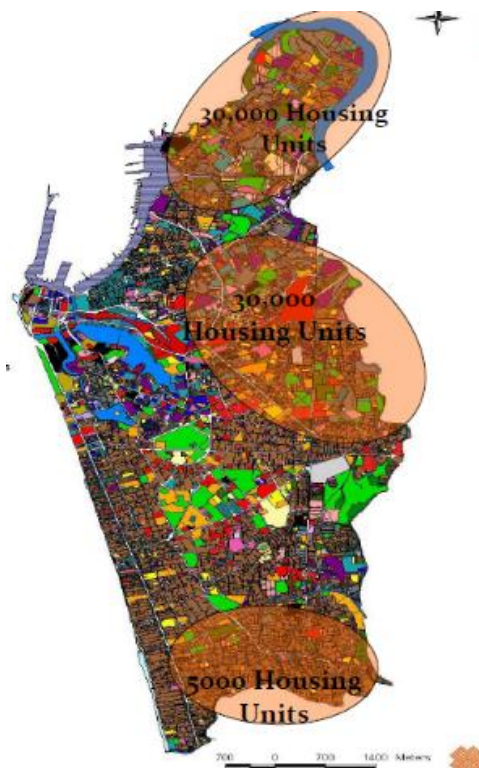
<b>City</b>	<b>Population in 2012</b>	<b>Urban poor (%)</b>
Colombo	752,993	53.0
Dehiwala Mount Lavinia	245,974	9.1
Moratuwa	207,757	7.75
Sri Jayawardhanapura Kotte	135,806	6.0
Negambo	127,754	7.5
Kaduwela	250,668	4.5
Kandy	125,351	4.6
Kalmunai	106,783	6.5
Galle	101,159	6.8
Anuradhapura	109,175	2.8

(*Source: UDA, 2018*)

- 1050 number of USS identified by the Ministry of Housing in 1998.
- 1614 number of USS and 77,612 families found by SEVANATHA and CMC in 2002.
- 1735 number of USS identified with 123,185 families by SEVANATHA and Colombo Municipal Council in 2012

(Sevanatha 2012)

As per the available data in the UDA, the total number of projects planned for implementation on behalf of the underserved settlements by the government is 265. Under the urban regeneration project, approximately 68,000 units to be provided for these underserved settlers by 2020 whereas the number of units supposed to be provided is 18,000 under 28 resettlement housing projects. Therefore, these entire 900 acres of the underutilized area will be cleared and utilized for relocation and development purposes (*Urban Regeneration Project Enumeration Survey 2010-2012*).



*Figure 4: Clusters of USS in Colombo*  
(Source: Sevanatha, 2012)

So that, the area of Colombo Municipal Council was selected to make the study feasible because 53 % of the total population are urban poor in Colombo and most of the resettlements projects are found in Colombo as well.

### **3.3 Objectives of the Research**

The Sri Lankan government has implemented many projects and programs funding its own treasury grants and with the help of donor agencies to solve the issue of scarcity of housing of urban poor but so far it has become difficult to find a sustainable option (*Samarathunga, 2013*).

The then government in 2011 brought high-rise living as the practical solution to address this grave issue and more than 8000 families have been relocated so far into high-rises without having much consideration of the impact on the urban poor. In addition, no attempts have been made to evaluate their difficulties and to provide some assistance in the process of relocation. For instance, some of them are helpless with the inability of finding jobs since they were jobless due to changing their neighborhood completely (*UDA, 2018*).

In addition, participation of people of USS who has to be resettled is obtained only at the awarding of the housing unit throughout the project cycle. Also, all resettlers are resettled to single sized units irrespective of family size (*UDA, 2018*).

If government can keep the citizens happy while guiding the city towards more competitive by setting its policies and strategies, both government and the urban poor can achieve a win-win situation.

Hence, it is focused on clear objectives of the research to explore the factors affecting the success or failures of low-income high-rise resettlement schemes in connection with residential satisfaction and examine impacts of these factors across the time.

Accordingly, the objectives are;

1. To find out key factors affecting the success or failures of low-income high-rise re-settlement projects in Colombo in terms of residential satisfaction.
2. To examine whether and how the impacts of these factors vary across the length of stay.

3. To evaluate the degree of sustainability of low-income high-rise resettlement for the urban poor in Colombo.
4. To find out the way, the sustainability of such re-settlements be improved in housing practices for urban poor in Colombo.

### **3.4 Research Design**

Once the objectives of the research were finalized, it has to move forward for designing the research. The research design guides for data collection. It involves choosing of research approach, designing sampling plan, designing the experiment, and designing the questionnaire.

#### **3.4.1 Research approach**

Inductive approach was selected for the research. It was a bottom-up approach so that it has to be started from observations to theories. As per Samarathunga (2013), *De Vaus (1991)*; *Tashakkori and Teddlie (1998)* have stated that combination of both quantitative and qualitative approaches can be supported for a better understanding of attitudes of people. Accordingly, based on the requirements of the study and for better understanding of attitudes of people, both qualitative and quantitative approach was selected as the appropriate method.

So, on one hand, it was modeling research since a model had to be used to find out the results because of involving statistical applications. Since there were multiple independent variables, the Statistical Package for the Social Sciences (SPSS) software (multinomial logistic regression model) was used to find out the results through the data analysis because it has been developed for data analysis of multiple independent variables with more facilities such as graph features.

#### **3.4.2 Method of Study**

Initially, a background study was conducted at international and local levels to establish the research gap, research objectives, and research problems. A research hypothesis was recognized to conceptualize the research framework.

Later, a comprehensive literature review, research studies, expert discussions, and surveillance at several USS and relocation projects were conducted to identify the factors affecting for satisfaction of living in low-income high rise housing, the impacts of high-rise low-income housing on the urban poor, the strategies established in terms of USS, and the low-cost high-rise housing as a solution for USS, and theories, concepts, norms related to high-rise low-income housing.

### **3.4.3 Research strategy**

The case study method was selected as the strategy for the research since this approach not only provides an opportunity for an in-depth understanding of high-rise's real-life context, but also a systematic way for observing real practical situations allowing to get more accurate and realistic picture of the problems faced by the urban poor when living in low-income high-rises, collecting data, and analyzing information.

Development of a relocation project is a development process that occurs over a long period of time and further, attitudes of the community after relocation are relatively changed over time. Hence, the relocation development can be divided into three specific periods being eviction, transition and consolidation stages (*Viratkapan et. al, 2004*).

As cited by Viratkapan et. al. (2004), Don (1995) says that time period is greatly affecting to the residential mobility and there are 3 stages as eviction, transition, and consolidation, it was decided to select a scheme from each stage. As per Viratkapan and Perera (2004), eviction, transition, and consolidation stages have been defined when relocation is within one year, 2 -3 years after relocation and if the relocation period is more than 10 years respectively.

Viratkapan, and Perera (2004) have stated that unity of the community, participation of community, attitude of community, and the strength of leadership to the new location are changed with time and hence, the analysis of these factors in each stage of a typical relocation project has been conducted. Further, they have stated that the stage re-settlers are passing mostly affect the residential mobility, or residential adaptation (*Viratkapan, and Perera, 2004*).

Therefore, it was decided to consider the changing of attitudes of the community over these three specific time periods and to include this character in the study. As such, it was selected to have a close observation for obtaining an in-depth understanding of the real-life context of several resettlement projects at the stages of eviction, transition, and consolidation.

So three case studies were selected from each stage.

As per theory 1 and 2, the housing is evaluated regarding cultural and family norms that leads to satisfaction or dissatisfaction about housing. As such, among the elements which determined residential satisfaction as per theory 2; dwelling features, dwelling support services, public facilities, social environment, and neighborhood facilities are considered as variables to survey.

Interviews with resettlers followed the questionnaire were conducted. When necessary, revisits were done to some families for further in-depth discussions. During the discussions, it was arranged to join the family members as much as possible. With the consent of the respondent, some of the discussions were recorded in the form of audio and video.

The table No. 2 in page 41 shows the resettlements already done by the UDA and the REEL company including the details of the number of storeys of the apartment, the total number of units in the apartment, number of units per floor and the stage of the project.

Location, number of residents, and stage of relocation were taken into account at the selection of resettlement projects as case studies since almost every resettlement has approximately the same number of floors. In the event of selecting a resettlement project for the consolidation stage, there was no selection since only one settlement was in Colombo. Accordingly, Siyapath Sevana, Siyasetha Sevana, and Sahaspura & Sinhapura, were cautiously selected for eviction, transition and consolidation stages for the study respectively.

Table 2: Completed High-rise Resettlements in Colombo

No	Housing project	Completed year	No of Units	No of floors	Units per floor	Stage
1	Lakshiru Sevana Maligawatta	2017.06.28 (2017)	192	13	16	Eviction
2	Methsanda Sevana, Henamulla	A- 2017.10.30 (2018) B/C/D- 2018.05.23 (2018)	941	15	A - 15 B - 16 C - 18 D - 14	Eviction
3	Laksetha Sevana, Maligawatta	2017.11.13 (2018)	480	15	32	Eviction
4	Siyapath Sevana, Dematagoda	2018.05.10 (2018)	223	15	15	Eviction
5	Mihindu Sempura, Dematagoda	2013.11.18 (2014)	500	10	25 units	Transition
6	Lakmuthu Sevana, Colombo 06	2014.10.07 (2015)	118	12	10	Transition
7	Sirisanda Sevana, Colombo 13	2014.10.17 (2015)	366	12	A- 10 B - 11	Transition
8	Sirisara Uyana, Colombo 08	2014.10.27 (2015)	718	12	A - 36 B - 24	Transition
9	Methsara Uyana, Colombo 08	2014.10.27 (2015)	430	12	A - 36	Transition
10	Randiya Uyana, Colombo 15	2014.11.18 (2015)	1137	12	24	Transition
11	Sirimuthu Uyana, Colombo 14	2014.11.21 (2015)	546	12	A- 11 B -12 C - 12 D- 08	Transition
12	Muwadora Uyana, Colombo 15	2016.01.12 (2016)	872	12	B/C- 26 A/D- 11	Transition
13	Siyasetha Sevana Maligawatta	2016.08.05 (2016)	260	14	19	Transition
14	Sahaspura, Dematagoda (REEL)	2001	671	14	55	Consolidation
15	Sinhapura, Dematagoda (NHDA)	2007, 2011	120	5	A - 60 B - 60 4	Consolidation

3



### 3.4.4 Design of Sampling Plan

#### 3.4.4.1 Sampling

Usually, it's not possible to survey the total population due to the cost involved, or time availability or even not getting a chance to meet them. Therefore, a sample, that is a fraction of entire population is surveyed.

“Sampling” is defined as a process of choosing randomly a subset of members of the total population of a study and gathering data about their attributes.

#### 3.4.4.2 Estimation of sample size

Taking a sample from the population is called the sample size. Here, it is required to figure out a big enough sample size. Though there are many formulas for calculating sample sizes, it is required some details about the population. But though we know nothing about the population, Slovin's formula which was formulated by Slovin in 1960 can be used to work out an appropriate size of sample from a entire population.

Slovin's Formula,  $n = N / (1 + Ne^2)$  ————— Equation 01

Where n = Sample size, N = Total population , e = Error tolerance

Error tolerance “ e “ can be calculated just subtracting the confidence level from one.

Since sample sizes are too big to do the survey practically for the confidence level of 98 %, a 95% confidence level was selected for the research. Hence the results are shown below in Table No. 03.

Table 3: Sample size of selected Resettlement

Sample size	Siyapath Sevana Dematagoda (Eviction)	Siyasetha Sevana Maligawatta (Transition)	Sahaspura & Sinhapura Wanathamulla (Consolidation)
	142 (218)	158 (260)	266 (791)

(The numbers outside brackets indicate the sample size whereas numbers within the brackets indicate the total number of households in the scheme)

(Source: By the Researcher, 2018)

#### **3.4.4.3 Sampling method**

Based on the sample size, precision, and time availability for conducting the research, a simple random/probability sampling method was decided to use in the study. Due to some practical difficulties to cover up the samples, it was impossible to select some strata for selection of the sample such as gender, children, economy, ethnic groups, previous stay, floor level they stay, etc.

#### **3.4.5 Design of experiment**

The satisfaction of living in low-income high-rise resettlement is the dependent variable to be studied in the research. This variable may be affected by several factors called independent variables such as the location of the resettlement, the area allocated for a housing unit, characteristics of neighborhood etc. Hence, a suitable experiment had to be designed to research the impact of these factors on the dependent variable, such a way that data required for studying the impact of the factors had to be gathered and inferences of the study were highly reliable.

Accordingly, it was decided to collect primary data by direct observations, and by the personal interviews while the secondary data by government publications, publications from WB, WHO, ILO, ADB, journals, books, magazines, newspapers, census data, existing records, etc.

Since relocation project development is considered as a development process that occurs over years, study was also concerned with the effect of the factors over three specific periods; eviction, transition, and consolidation stages.

#### **3.4.6 Designing the questionnaire**

Reliability of the survey depends on the quality of the questionnaire designed. Identifying research problems and related objectives properly, the questionnaire was prepared particularly making the questions as such to compare the previous and the present including all the factors affecting the satisfaction of living with the knowledge gained through reviewing the literature, related books and articles, discussions held with key informants, underserved communities, and using techniques of fishbone, content, and cause-effect analysis (Appendix A).

## **CHAPTER 04**

### **DATA COLLECTION**

#### **4.1 Introduction**

Data is the main input to any decision-making process. Primary data are important for current and future studies. Key informant interviews, focus group discussions, informal and structured interviews with residents, and interviewing the police unit were used as research techniques for community profiling. The direct observation method helped to capture the behavior of respondents directly. It was a time consuming as well as costly exercise.

Door-to-door interviews were conducted to collect the details from community, whereas executive interviews were carried out to for the key informants.

Secondary data were collected from sources of UDA, Central Bank. Department of Census, Sevanatha, Real Estate Exchange Pvt. Ltd., Literature reviews, Internet, Books, Paper articles, government publications, journals, magazines, newspapers, annual reports such as CMC budget, research reports in universities, etc.

#### **4.2 Data Collection**

##### **4.2.1 Direct Observation (Non-participant observation)**

As cited by Samarathunga (2013), Drury and Stott (2001) stated that participant and non-participant observations are two common observation methods used in qualitative research works. Non-participant observation which is the most commonly used method was used as the most appropriate method. The objective of the direct observation was to explore the day-to-day lifestyle of the communities, to identify the mechanisms adopted by this group of people in adapting to their new location and the facilities provided by the government.

##### **4.2.2. Data collection using personal interviews of residents**

The questionnaire prepared was the instrument to collect the data of respondents. In addition to the interview, if necessary, revisits were done to some families for further in-depth discussions. During many of the discussions, all the family members joined.

### **4.2.3 Data Collection from Focus Group Discussions**

A group of people was interviewed to explore their perceptions, experiences, and understandings with regard to the situation of the resettlement. As per the research methodology guidance by Panneerselvam (2014), it is advisable to take seven to ten members for the focus group discussion.

### **4.2.4 Data collection from Key Informants**

As cited by Samarathunga (2013), King and Horrocks (2010) mentioned that data collection using key informants' interviews is an approved method. It's a strategy used to explore ideas, perceptions or feelings regarding a program or an issue through an open discussion in a qualitative research. Further, as cited by Samarathunga (2013), Berg (2009) stated that since the key informants are knowledgeable persons and experts in the subject area, valuable information can be collected.

In this research, the questionnaire (Appendix B) for them was prepared to collect the valuable information related to the policies, mechanisms for obtaining funds, and lands, government commitment, current demand for housing of the urban poor, facilities provided for them in resettlements, compensation, grievance redressing, etc.

As cited by Samarathunga (2013), Denzin & Lincoln (1994); Dwyer & Limb (2001) stated that sometimes the information received from the key informants are not available in secondary sources.

In this research, seven top-ranking experts were selected representing all the sectors: the government sector, private sector, and independent professionals in order to avoid the information being bias. All participants are senior decision-makers and they are experts in the relevant field. The selection criteria of the key informants were designation, expertise, and experience.

#### 4.2.4.1 List of Key Informants

Table 4: List of Key Informants

No.	Designation	Organization	Selection criteria	Expertise
1	Board Member /Former Senior Academic	Urban Development Authority, Sri Lanka / University of Moratuwa, Sri Lanka	Designation, Knowledge, Experience	Chartered Architect / Town planner / Senior Lecturer: Over 20 years' work experience in City Planning and 5 years' experience in Low-income Housing
2	Board Member	Asian Development Bank (Non-Government Organization)	Designation, Knowledge, Experience	Chartered Town planner: Over 20 years' work experience in City Planning and 10 years' experience in Low-income Housing
3	Senior government officer	Urban Development Authority, Sri Lanka	Designation, Knowledge, Experience	Chartered Town planner: Over 10 years' work experience in City Planning and 10 years' experience in Low-income Housing
4	Senior government officer	Ministry of Mega Polis and Western Development	Designation, Knowledge, Experience	Chartered Architect / Town planner / Senior Lecturer: Over 20 years' work experience in City Planning and 20 years' experience in Low-income Housing
5	Middle-level manager of semi-government	Urban Development Authority, Sri Lanka	Knowledge, Experience	Chartered Town planner: Over 4 years' work experience in City Planning and 4 years' experience in Low-income Housing
6	Retired Senior government officer	Urban Development Authority, Sri Lanka	Knowledge, Experience	Chartered Town planner: Over 25 years' work experience in City Planning and 25 years' experience in Low-income Housing
7	Senior government officer	Urban Development Authority, Sri Lanka	Designation, Knowledge, Experience	Chartered Town planner: Over 5 years' work experience in City Planning

(Source: By the Researcher, 2018)

## CHAPTER 05

### ANALYSIS

#### 5.1 Introduction

The empirical results of the study are presented and analyzed in this chapter.

Both primary and secondary data were collected as such to get the answers to the research questions. The main objective of the research is to find out key factors affecting success or failures of low-income high-rise resettlement projects in Colombo in terms of residential satisfaction and to examine whether and how the impacts of these factors vary across the length of stay. In addition, sub-objectives are to evaluate the degree of sustainability of those resettlement housing and to find out the way of the sustainability of such re-settlements be improved in housing practices.

To obtain the answers to the research problems, key factors affecting the success or failures of such re-settlements in terms of residential satisfaction had to be found out through the literature review, and non-participatory observations, and the impacts of these factors which vary across time were found through the SPSS analysis.

Next to the collection of data, is the classification and analysis of data. To proceed with this stage, proper tools and techniques should be used. Under the classification of data, data is presented for clear interpretation. The analysis of data was done in manual and software forms. The content analysis was done manually in connection with interviews conducted for the residents, key informants and focus group to realize the core issues which underserved settlers encountered mostly after relocation and commitments and shortages of the government.

Samarathunga (2013) stated that as per Kumar (2011), data analysis is done by data reduction, data display, and conclusion respectively.

Accordingly, the data collected at the interviews of residents and key informants, by direct observations, and focus group discussions were analyzed and used to present a more correct and advanced answer to the problem.

## **5.2 Data reduction**

Since the sample size was large, it was very difficult to understand the patterns of the data. So it was necessary the data to be aggregated and summarized. Accordingly, the data were input to the Chi-Square test in SPSS for unnecessary data reduction. Hence, by using simple aggregations of frequency distribution, and cross-tabulation tables, the large quantity of data were reduced to be easier to understand. Also, the Chi-Square test helped to ascertain whether there is any association or relationship between factors and residential satisfaction (Correlation analysis) and to find out the strength of the relationship between two sectors.

Accordingly, the main analysis was done relating to the questionnaire using SPSS Analysis (Statistical Package for the Social Sciences). Because SPSS is a comprehensive system for data analysis for such a big data set and in addition, it can be used to generate charts, tabulated reports, plots of distributions and trends, etc.

### **5.2.1 Results of Chi-Square test in SPSS**

Tables 5, 6, and 7 show the association or relationship between the residential satisfaction and nineteen variables.

Asymptotic Significance value which is the p-value of the chi-square test indicates whether there is an association between these variables (dependent and independent variables) or not. If this value is less than or equal to 0.05, it says that the test result is significant so that there is an association between these variables. On the other hand, this value is more than 0.05, it says there is no association between variables.

In addition, if there is any association or relationship between variables, the Chi-Square test provided an indication of the strength of the relationship and the level of confidence that could be placed in findings.

Table 5: Relationship between Residential Satisfaction and other Variables at the eviction stage

No.	Variables	Siyapath Sevana		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	45.397	.000	.565
2	Garbage collection	11.947	.001	.290
3	Tenure	9.705	.002	.261
4	Livelihood	6.090	.014	.207
5	Family adaptation	4.592	.032	.180
6	Social interaction	4.555	.033	.179
7	Sanitary facilities	4.518	.034	.178
8	Residential adaptation	3.889	.049	.165
9	House size	3.889	.049	.165
10	Lift	3.000	.083	.145
11	No. of bed rooms	1.841	.175	.114
12	Water and electricity facilities	1.825	.177	.113
13	Discipline	1.204	.273	.092
14	Drying area	1.068	.301	.086
15	Shops	0.832	.362	.077
16	Public facilities	0.403	.526	-.053
17	Safety from natural hazards	0.379	.538	.052
18	Privacy	0.352	.553	.050
19	Safety within scheme	0.047	.828	-.018

(Source: By the Researcher, 2018)



Table 6: Relationship between Residential Satisfaction and other Variables at the transition stage

No.	Variables	Siyasetha Sevana		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	29.323	.000	.536
2	Residential adaptation	18.980	.000	.431
3	Water and electricity facilities	12.141	.000	.345
4	No. of bed rooms	10.772	.001	.325
5	Privacy	9.309	.002	.302
6	Family adaptation	9.154	.002	.300
7	House size	8.777	.003	.293
8	Safety within scheme	6.292	.012	.248
9	Sanitary facilities	6.061	.014	.244
10	Garbage collection	5.740	.017	.237
11	Shops	5.495	.019	.232
12	Social interaction	5.119	.023	.226
13	Lift	4.982	.026	.221
14	Livelihood	3.662	.056	.189
15	Safety from natural hazards	2.409	.121	.154
16	Discipline	0.747	.387	.286
17	Tenure	0.589	.443	.076
18	Drying area	0.352	.553	.059
19	Public facilities	0.005	.942	.007

(Source: By the Researcher, 2018)

Table 7: Relationship between Residential Satisfaction and other Variables at the Consolidation stage

No.	Variables	Sahaspura & Sinhapura		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	61.848	.000	.512
2	Privacy	32.934	.000	.374
3	House size	23.329	.000	.340
4	No. of bed rooms	25.376	.000	.328
5	Safety within scheme	15.409	.000	.256
6	Livelihood	13.36	.000	.238
7	Sanitary facilities	13.091	.000	.236
8	Social interaction	12.533	.000	.230
9	Family adaptation	12.429	.000	.229
10	Drying area	10.129	.001	.207
11	Water and electricity facilities	10.15	.001	.207
12	Public facilities	9.717	.002	.203
13	Residential adaptation	9.249	.002	.198
14	Discipline	5.891	.015	.158
15	Tenure	3.700	.054	.125
16	Safety from natural hazards	3.393	.065	.120
17	Shops	.791	.374	-.058
18	Garbage collection	.007	.934	-.005
19	Lift	.002	.969	.003

(Source: By the Researcher, 2018)

According to the results obtained by Chi-Square test, the below tables 8, 9, and 10 show the data reduction for three stages of eviction, transition, and consolidation.

If the Phi value is equal to zero, it indicates that there is no relation between the two variables. If Phi is equal to 0.2 or less, it specifies a weak relationship between the two variables. Also, If Phi is equal to 0.21 to 0.3, it shows a moderate relationship between the two. Finally, if Phi value equals to 0.3 or greater than 0.3, it tells the relationship is strong between both variables.

*Table 8: Data reduction by Chi-square method for eviction stage*

No.	Variables	Siyapath Sevana		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	45.397	.000	.565
2	Garbage collection	11.947	.001	.290
3	Tenure	9.705	.002	.261
4	Livelihood	6.090	.014	.207
5	Family adaptation	4.592	.032	.180
6	Social interaction	4.555	.033	.179
7	Sanitary facilities	4.518	.034	.178
8	Residential adaptation	3.889	.049	.165
9	House size	3.889	.049	.165

*(Source: By the Researcher, 2018)*

Table 9: Data reduction by Chi-square method for the transition stage

No.	Variables	Siyasetha Sevana		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	29.323	.000	.536
2	Residential adaptation	18.980	.000	.431
3	Water and electricity facilities	12.141	.000	.345
4	No. of bed rooms	10.772	.001	.325
5	Privacy	9.309	.002	.302
6	Family adaptation	9.154	.002	.300
7	House size	8.777	.003	.293
8	Safety within scheme	6.292	.012	.248
9	Sanitary facilities	6.061	.014	.244
10	Garbage collection	5.740	.017	.237
11	Shops	5.495	.019	.232
12	Social interaction	5.119	.023	.226
13	Lift	4.982	.026	.221

(Source: By the Researcher, 2018)

Table 10: Data reduction by Chi-square method for consolidation stage

No.	Variables	Sahaspura and Sinhapura		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	61.848	.000	.512
2	Privacy	32.934	.000	.374
3	House size	23.329	.000	.340
4	No. of bed rooms	25.376	.000	.328
5	Safety within scheme	15.409	.000	.256
6	Livelihood	13.36	.000	.238
7	Sanitary facilities	13.091	.000	.236
8	Social interaction	12.533	.000	.230
9	Family adaptation	12.429	.000	.229
10	Drying area	10.129	.001	.207
11	Water and electricity facilities	10.15	.001	.207
12	Public facilities	9.717	.002	.203
13	Residential adaptation	9.249	.002	.198
14	Discipline	5.891	.015	.158

(Source: By the Researcher, 2018)

### 5.3 Analysis

#### 5.3.1 Non-participation (Direct) observations

##### a) Sahaspura

Sahaspura located in Wanathamulla was the first high-rise building constructed for the relocation of USS people in Colombo. It was constructed in 2001 by the REEL.

The total area covered by the Sahaspura scheme is 2.2 acres. Sahaspura housing complex consists of 14 floors with 671 units. There are four types of housing units with different sizes: 300, 400, 500 and 600 ft<sup>2</sup>. Housing units consist of either one or two-bedrooms, an entrance passage, sitting room, bathroom, and a toilet. The houses were allocated on the basis of size of the previous house. The ground floor was

allocated for commercial activities and community facilities. Relocated communities are mainly from the adjoining USSs.

There are three more resettlement schemes called Sinhapura, Methsara Uyana, and Sirisara Uyana adjacent to Sahaspura at the same location in Wanathamulla. Sinhapura consists of five storey buildings whereas both Methsara Uyana and Sirisara Uyana consist of 12 storey buildings. They consist of 120, 430, and 718 housing units respectively. In addition, there are many low-income flats at both sides of these resettlements and a USS called Halgahakumbura is also situated at the rear of the Sinhapura. Therefore, all schemes seem and act as one entity being more than 6000 households in one location. This would cause promoting illegal activities as well as unhygienic conditions.



*Figure 5: Low Income Flats adjacent to Sahaspura and Sinhapura*  
*Source: By the Researcher, 2018*



*Figure 6: Halgahakumbura USS viewed from Sahaspura*  
*Source: By the Researcher, 2018*

People from USS have been compensated house-to-house without any additional cost but had to pay Rs. 25,000 for maintenance as one time payment.

The residential dissatisfaction of residents in Sahaspura was mainly due to the poor quality of the neighborhood particularly in terms of drug-abusing. The inadequacy of the floor area of the present house is another factor for dissatisfaction.

The community profile highlights the issue of lack of sense of belonging is one of the major challenges to achieve the residential satisfaction of Sahaspura residents. This has disturbed to achieve common goals and means for them. The condominium lifestyle has brought them individualization which has made it difficult for residents to mobilize themselves as a group with a strong sense of community in order to address common concerns or issues. Living in low-income housing complexes like Sahaspura is likely to develop a competitive attitude among residents who want to live a life better than their neighbors. This sense of competition would also lead to the successful management of finances and to achieve a higher status of living.

The building and the neighborhood were not well maintained.



*Figure 7: Children Park in Sahaspura*

*Source: By the Researcher, 2018*

There are adequate shops on the ground floor to buy essential goods while some more shops are available on each floor making easy access. Lift was always crowded seeming the lift space is not adequate to the mass of community. Some staircases were closed putting padlocks as a result of using them for illegal activities by gangsters.

Most of the children were playing on corridors on their floors or in the houses because of the insecurity of going down and playing on the ground without their parents.



*Figure 8: Children are playing at corridors in Sahaspura*  
*Source: By the Researcher, 2018*

Almost all the households have taken measures on security purposes because of petty thefts. A police unit has also been installed to control these petty thefts and disputes among the community.



*Figure 9: Security arrangements in Sahapura due to insecurity*  
*Source: By the Researcher, 2018*

In addition, they have made additional changes for comfortable living such as floor tiling, temporary partitioning, adding balconies to bedrooms, providing additional



security arrangements, colorful painting, etc. Staircases, corridors and common places have been misused by throwing garbage. There is no adequate greenery around the scheme. The scheme seems solely as a concrete jungle making living there uncomfortable.

#### **b) Sinhapura**

Sinhapura is situated in Wanathamulla. Wanathamulla has generally recognized as a place of violence. As cited by Lakshman et. al. (2016), Niriella in 2012 expressed that “Wanathamulla, is long perceived as an area of criminal activity and violent behavior, low-income levels, and low social status”.

Sinhapura as a resettled housing apartment consists of two phases; Phase 1 has been constructed in 2007 by the REEL and Phase 2 in 2011 by the Urban Settlement Development Authority, each with 60 apartments comprising 3 towers of 5 floors. The area of a housing unit is 500 ft<sup>2</sup>. Communities of two USS called 54 watta which was situated at the same location of Sinhapura and 187 watta, Torrington in Colombo 7 have been relocated.

The people from 54 watta had to come to Sinhapura due to the government’s new housing complex project called Sirisara Uyana in Wanathamulla. They were offered houses in Sahaspura which was a newly constructed apartment complex then. Part of the community was resettled in Sahaspura while the balance refused to resettle in Sahaspura because of a high-rise apartment and less floor area of 300 ft<sup>2</sup>. Instead, they demanded an apartment with 5 floors, bigger houses, and no lifts. Accordingly, phase 1 of Sinhapura was built as a response to the said demand.

Residents of phase 1 of Sinhapura were generally happy about the quality of the houses they have received compared with their previous substandard, and illegal shanty houses. Residents of phase 2 however, have other concerns, especially in relation to the location of Sinhapura. Living in Colombo 7 had provided them easy access to many social amenities that are of high quality. The residents of phase 2 had experienced severe culture shock due to changing both their houses as well as their location especially because of the Wanathamulla (*Lakshman et. Al., 2016*)

At the survey, it was known that the residents of Phase 2 had experienced more unpleasant situations when adapting to a very different culture including harassments and ill-treatments by the original residents of Wanathamulla. Residents who are originally from Wanathamulla still treat the residents of phase 2 as ‘strangers’ making it difficult for residents of phase 2 to fit in.

Relocation can impact on livelihoods in a positive or negative manner. Hence, it directly affects the quality of life enjoyed by them. The livelihoods of residents of phase 1 have not been severely disrupted due to relocation since their location of resettlement has not been changed. However, the livelihoods of some of the residents of phase 2 have been affected due to changing their area after relocation. Most of the females who worked as domestic helpers in houses of Colombo 07 have given up their jobs after relocation since the long distance to the workplace, additional expenses of commuting and inability to attend to the needs of the family while working.

There is a small playground for children. However, this playground has dilapidated being unsuitable for children due to lack of maintenance. According to the information received and witnessed, currently, it is used not only as a gathering place for adults who engage in smoking and/or speak in an obscene language in or near the playground but also as a place for drying clothes. This is the only common space available for Sinhapura residents.

The social life of Sinhapura shows a lack of sense of belonging being a challenge to achieve the residential satisfaction. This has disturbed to achieve common goals and means for them. The condominium lifestyle has brought them individualization. But now their lives have become more methodical and improved the individual development, which in turn may result in community development.

The most commonly cited issue faced by both communities was that of drug dealing and consumption within the Sinhapura complex. The perpetrators were accused of playing loud music, speaking loudly in groups and using obscene language, getting into frequent arguments and disputes, and engaging in petty theft to meet their need for purchasing drugs. The absence of a strong community network seems to become the residents more vulnerable to these issues. As a result, parents discouraged their

children from engaging in community activities or associating them. Also, many families opt to suffer this situation in silence and wait to leave the house when they are offered the deeds of the house or some people have already moved out because of the difficulty to bring up their children in Sinhapura.



*(Source: By the Researcher, 2018)*

*Figure 10: Children Park in Sinhapura*

#### **c) Halgahakumbura**

Halgahakumbura is an underserved settlement situated adjacent to Sinhapura and Sahaspura. By 2002, there were about more than 600 houses. Later, the USS was gradually enlarged due to increasing number of families came from USSs located in the vicinity of Halgahakumbara. It was under flooding during the rainy seasons since it is a low-lying land and located close to a canal. It lacks basic infrastructure facilities for the use of all 600 families and not suitable for human habitation.

#### **d) Siyapath Sevana**

Siyapath Sevana which was opened in May 2018 by the UDA consists of 218 housing units over 15 floors. Mainly, the community of 187 watta, Torrington, Colombo 7 has been relocated. All houses are typical with an area of 550 ft<sup>2</sup>. The scheme has been provided with basic facilities such as housing, electricity, sanitary, water supply, and lifts. There are three schemes in the same location consisting of a large number of buildings. But few of them are occupied yet. In the very near future, it will be a huge

resettlement scheme like Wanathamulla and Henamulla gathering a huge population at one location.

Most of the residents were very energetic about their new residence. Many of them have sense of belonging to the scheme.



*(Source: By the Researcher, 2018)*

*Figure 11: Open space centered in Siyapath Sevana*

The design of scheme is good at the security point of view, especially, for children. Mothers can have a look at their children from their floors directly. In addition, nobody can make the scheme dirty throwing unnecessary things to the ground without notice to anybody.

There are few shops on the ground floor to buy essential goods while at least one shop is available on each floor making easy access. Dematagoda town is also at the walking distance.

#### **e) Siyasetha Sevana**

Siyasetha Sevana consists of 260 housing units over 14 floors.



*Source: By the Researcher, 2018*

*Figure 12: Closely viewed CBD from Siyatha Sevana*

People were relocated there in 2016. All houses are typical with an area of 450 ft<sup>2</sup>. Some alterations were made by the residents including security doors. There are few shops on the ground floor to buy essential goods while few shops are available on each floor making easy access.

### **5.3.1.1 Summery of Observations**

The new locations are very close to the town centres as well as to the CBD. Within few minutes they can reach to the service centres. It seems that many of the resettlers are happy about the facilities provided for them, basically about the decent housing and infrastructure facilities. In addition, new locations are not far away from their earlier USS so that the earlier social net work has been minimally disturbed to the livelihoods. People of different USSs resettled in one location and at the same time adopting high-density settlements has supported the settlements to become unhygienic, vulnerability to drug abusing and illegal activities, insecurity, lack of interaction, alianess etc.

Authorities have provided adequate commercial spaces within the settlement for easy access for marketing. In addition, each floor has atleast one shop. The peaceful environment allows children to engage in studies more peacefully at home. Now many

of the resettlers lives seem methodical and achieved higher states of living. Due to the condominium life style, many of them spend better lives. Many children have been restricted to move in the community to prevent the bad company in the community. As a result, social integration between the younger generation would be diminished.

On one hand, poor quality of the neighbourhood is the critical factor the residents seriously worried about. Accordingly, violence and criminal activities followed by drug-abusing are the main factors affected for dissatisfaction mainly because of the difficulty to bring up children. On the other hand, insecurity, lack of sense of belonging, lack of maintenance, lack of unity etc are counted next.

### **5.3.2 Key informants' interviews**

At the discussions, all the informants fully rejected in-situ upgrading of USS due to their low standards, and high densities not enabling upgrading without full demolition. Two third of key informants expressed that though the walk-up apartments are better for living, it couldn't be implemented in Colombo due to limited land plots, high density of USS, policy of the government to be treated everybody in USS equally by providing a house and the limited time period planned to develop Colombo. Hence, according to their beliefs, the best practical option suit to Colombo in terms of USS people is high-rise living. According to them, a 10 years period is enough to adopt a child to a new situation followed by diminishing and disappearing the USS.

Further, according to them, it is not possible to send low-income people away from the Colombo due to damaging to the economy and the society. ADB stated that due to the contribution made by the USS to the economy are high in the city, disturbing their livelihoods directly impact to the city economy followed by severe damage to the society as well as to the economy" (*Involuntary Resettlement Safeguards, A Planning, and Implementation Good Practice Source Book, ADB, November 2012*). In addition, according to them implementing such a decision is politically too impossible.

Also, total population of low-income people is estimated as 68,000 by the UDA. They have encroached 900 acres of state lands in Colombo. Government supposes to release about 350 acres of lands out of 900 acres for relocation of underserved people and 400

acres are targeted to use for investments. In addition, 150 acres are planned to keep as reservations and public spaces.

Though high-rise housing may not be the most reliable alternative for resolving housing problem of USS people, achieving density was the main option of the UDA. Further, he added that going for typical designs at the initial stage was the policy of the UDA with 550 ft<sup>2</sup> housing area having 2 bed rooms. Also, those who had commercial type spaces in the previous settlement is considered to offer a shop on the ground floor in the resettlement scheme. In addition, a shop space has been provided on each floor and anybody who is willing to run a shop or a business can purchase it. Several social development programs are implemented in resettlement schemes especially for women, youth and children with the aim of increasing their abilities, uplifting their self-esteem and income generation. In addition, some programs are implemented to increase the interaction among people, keep them happy, and overcome illegal activities. Also, they would be introduced more facilities with more public participation in the very near future.

The cost of a housing unit was Rs. 5.0 million and the residents of 450 ft<sup>2</sup> housing units have to pay Rs. 1.0 million as monthly installments of Rs. 2800.00 for 30 years while residents of 500 ft<sup>2</sup> housing units have to pay Rs. 1.2 million as monthly installments of Rs. 3000.00 for 30 years. One major issue that currently UDA suffers is the impossibility to establish a Condominium Management Corporation.

One informant told that overpopulation resettled in one scheme has serious implications making inconvenience and risks to the residents live there. According to key informants, a lot of things have to be considered and attended from the planning stage to the consolidation for the success of resettlement schemes. More attention has to be paid towards the quality of the project by the government rather than number of households. Few of them expressed that some of the important and essential processes have been missed by the UDA at the relocation and it leads to irrecoverable losses to USS people followed by the resettlement a failure.

In addition, the most priority thing to be done by the government is an evaluation survey of the resettling process. Then it can be identified the weak areas needed to be

addressed and what are the missing parts it has to be added to the success of the projects. No mistakes can be done. No missing events or processes. Because, omitting essential events will create unnecessary problems damaging the whole society.

## 5.4 Interpretation of results

After analyzing the data through multiple methods (quantitative and qualitative), the next task was to present the findings. As cited by Samarathunga (2013), Miles and Huberman (2004) stated that analyzed data can be exhibited in form of diagrams, pie charts, tables etc. to understand well.

Hence, analyzed data were represented by way of diagrams, tables, and graphs.

### 5.4.1 Residents interviews

#### 5.4.1.1. Sample Demography

Due to the sample size, there was no opportunity to select the sample to reflect the general demographic and multiethnic national profile nor to reflect the gender profile.

A typical household of resettled housing comprises the parents, children, and grandparents. It was common an extended family structure. The percentage of six or more persons families are 25 %. The majority of families (50 %) have 4 – 5 persons in three schemes.

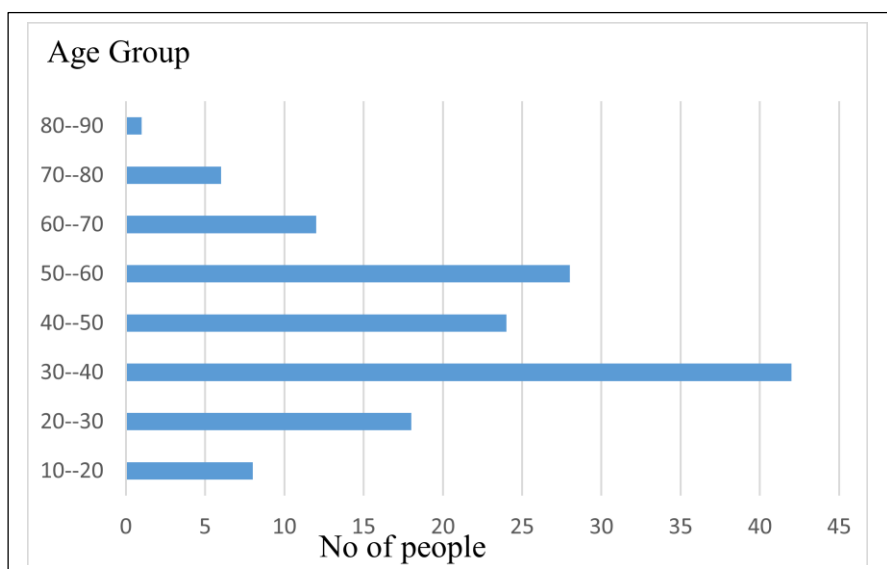
*Table 11: Number of Family members in resettlement schemes*

Resettlement	Number of family members											Average family size
	1	2	3	4	5	6	7	8	9	10	11	
Siyapath Sevana	04	14	22	43	31	16	08	03	01	-	-	4
Siyasetha Sevana	05	08	10	24	28	15	07	02	01	01	01	5
Sahaspura & Sinhapura	03	16	27	65	59	29	20	07	08	02	-	5
Total	12	38	59	132	118	60	35	12	10	03	01	

*(Source: Field Survey, 2018)*



The interviewed sample size of Siyapath Sevana was 142. Approximately, 30 percent of the majority of the sample represents the age group of 30 – 40 years, that is economically active group (labour force). The participation percentage of female (63 %) for interviews was approximately double of male. Average respondents lived in the previous USS for 35 years whereas they spent in the present location only about 4 months. The average family size was 4 – 5 members.



(Source: Field Survey, 2018)

Figure 13: Percentage of Age group interviewed

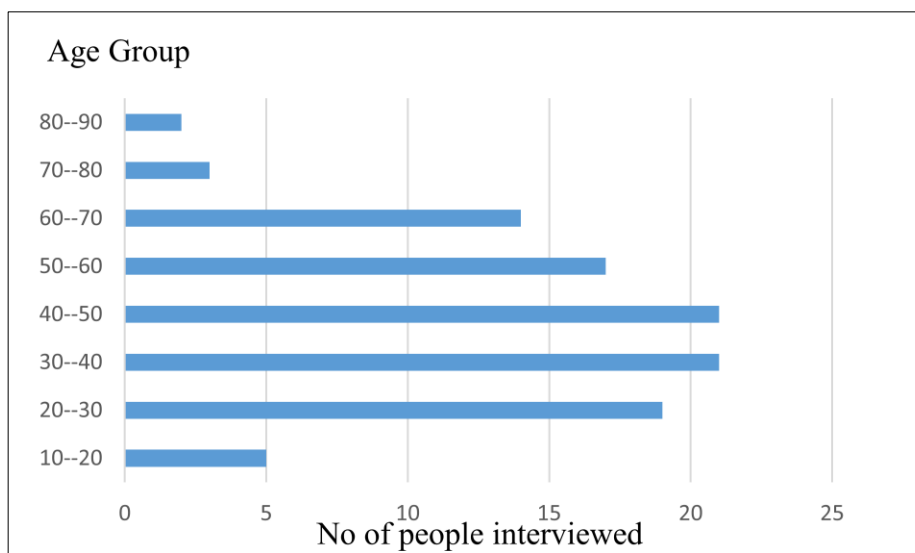
Table 12: Percentage of Age group interviewed (Siyapath Sevana)

Age Group	Percentage
80 - 90	0.7
70 - 80	4.2
60 - 70	8.5
50 - 60	20.4
40 - 50	17.6
30 - 40	30.3
20 - 30	12.7
10 - 20	5.6
Total	100

(Source: Field Survey, 2018)

## 2. Siyasetha Sevana

The interviewed sample size of Siyasetha Sevana was 102. Approximately, 20.6 percent of the majority of the sample represents the economically active group of 30 – 50 years. The participation percentages of female and male for interviews was approximately equal (51 % male and 49 % female). Average respondents lived in the previous USS for 36 years whereas they spent in the present location only about one and a half years. The average family size was 4 – 5 members.



(Source: Field Survey, 2018)

Figure 14: Represented percentage of Age group interviewed (Siyasetha sevana)

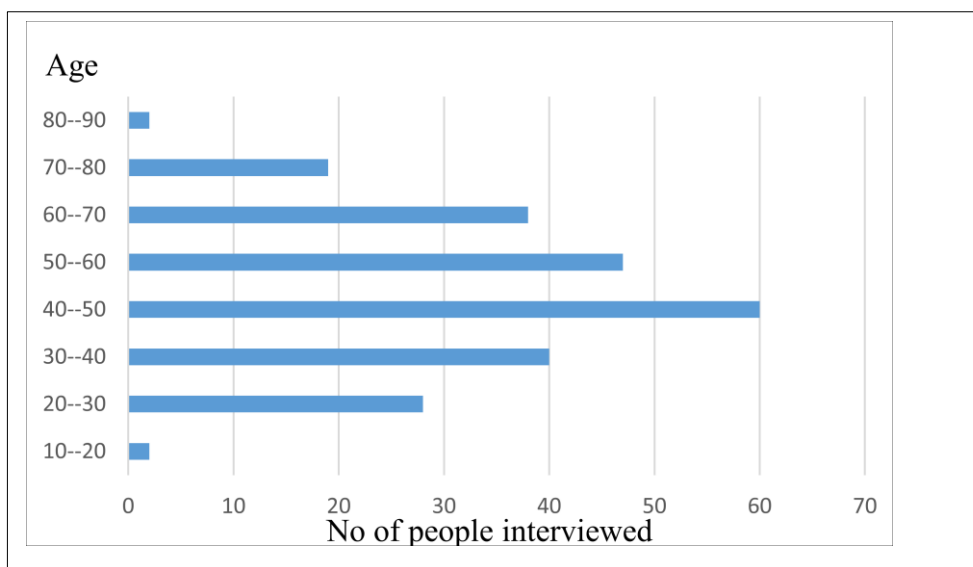
Table 13: Percentage of Age group interviewed (Siyasetha Sevana)

Age Group	Percentage
80 - 90	2.0
70 - 80	2.9
60 - 70	13.7
50 - 60	16.7
40 - 50	20.6
30 - 40	20.6
20 - 30	18.6
10 - 20	4.9
Total	100

(Source: Field Survey, 2018)

### 3. Sahaspura and Sinhapiura

The interviewed sample size of Sahaspura and Sinhapura was 236. Approximately, 25 percent of the sample represents the economically active group of 40 – 50 years. The participation percentages of female (68 %) for interviews was approximately double of male. Respondents lived in the previous USS for 27 years whereas they spent in the present location only about 17 years. The average family size was 4 – 5 members.



(Source: Field Survey, 2018)

Figure 15: Percentage of Age group interviewed (Sahaspura & Singhapura)

Table 14: Percentage of Age group interviewed (Sahaspura & Singhepura)

Age Group	Percentage
80 - 90	1.3
70 - 80	8.0
60 - 70	16.1
50 - 60	19.8
40 - 50	25.3
30 - 40	16.9
20 - 30	11.8
10 - 20	0.8
Total	100

(Source: Field Survey, 2018)

#### 5.4.1.2 Negotiations and compromises in relocation

Yeoh, in 1996 stated that the urban built environments of a city were continuously shaped by processes of conflict and negotiation that occurred between the authorities and the different social groups. It is not shaped only by dominant forces or powerful groups. The strategies and counter-strategies imposed by the authority and the social groups are involved in this transformation. Hence, a powerful and meaningful urban built environment is only created by processes of conflict and negotiation between the authority and the different social groups within the society (Yeoh, 1996).

Table 15: Percentage of negotiations, conflicts, compromises, and ignorance at resettlement

Processes at resettlement	Sahasapura & Sinhapura (%)	Siyasetha Sevana (%)	Siyapath Sevana (%)	Average (%)
Had negotiations/compromises with government	77.5	85	86	83
Had conflicts with government	12.7	22	18	18
Government ignored/neglected the people's opinions at resettlement process	15.3	30	16	20

(Source: Field Survey, 2018)

As per the residents' interviews, those negotiations and compromises were regarding injustices caused by the forced evictions at the relocation process such as to relocate in the same location, in low-rise low density housing, compensation for relocation, taking financial security away from them restricting selling, renting and mortgaging the apartments, lack of facilities such as inadequate area of the house, absence of a playground for children, and worship places, to reduce monthly installments, inadequate period to vacate the previous house, difficulties to be faced from livelihood to children's schooling, to consider cultural values etc.

About 20 percent say that the government has ignored their opinions and grievances at the resettlement process. That says that about 80 % of them had no critical issues.

In addition, the attention was paid at the research to find out the way of resettlement occurred. As per the information, it has been done in three different ways: voluntary, involuntary and on personal preference (on the grounds of a convenient location, familiar neighborhood, being near family members) after advertising the government to fill vacancies.

*Table 16: Mode of Resettlement*

<b>Way of Resettlement done</b>	<b>Sahaspura &amp; Sinhapura (%)</b>	<b>Siyapath Sevana (%)</b>	<b>Siyasetha Sevana (%)</b>
Voluntary resettlement	75	77	64
Forced Eviction (Involuntary resettlement)	17	18	27
personal preference when advertising by government	8	5	9

*(Source: Field Survey, 2018)*

*Table 17: Public Participation of resettlement*

<b>Public Participation of resettlement</b>	<b>Sahaspura &amp; Sinhapura (%)</b>	<b>Siyapath Sevana (%)</b>	<b>Siyasetha Sevana (%)</b>
Participation in gathering information	4	0	0
Participation at preparation of resettlement plan	4	0	0
Participation at Site selection, Housing designing, Provision of facilities	4	0	0
Participation at Resettlement	4	0	0

*(Source: Field Survey, 2018)*

The government has not taken any participation from the public. But in connection with Sinhapura, the government has been forced by the residents in terms of reliable housing: less number of storeys, adequate size of the house, and an adequate number of bedrooms etc. That's why it indicates that percentage is 4 %.

*Table 18: Selection criteria for allocation of houses*

<b>Selection criteria for serving the housing</b>	<b>Sahaspura &amp; Sinhapura (%)</b>	<b>Siyapath Sevana (%)</b>	<b>Siyasetha Sevana (%)</b>
First come first served basis	26	4	8
Randomly	32	6	14
Bias	16	4	17
Lottery	26	86	61

*(Source: Field Survey, 2018)*

Normally, the lottery system has been mainly used as the common selection criteria. The survey revealed that priority has been given to those who have special requirements, pregnant mothers as well as who have some political influences when selecting the floor and the house on the said floor. In addition, priority has given on a first come first served basis, who completed relevant payments.

#### **5.4.2 Factors affecting the residential satisfaction**

Below table No.s 19, 20 & 21 (similar to table No.s 8, 9, & 10) show the elements associated with residential satisfaction and degree of dependency of residential satisfaction on each factor in different colours. There are some significant findings in the analysis. Number of factors associated with residential satisfaction are increased over the time spent in resettlement scheme and also the factors affected to residential satisfaction vary over the time. On the other hand, degree of dependency of residential satisfaction on each factor too vary over the time. The analysis shows that several numbers of factors are commonly affected to residential satisfaction at every stages such as location, house size, livelihood, residential adaptation etc.

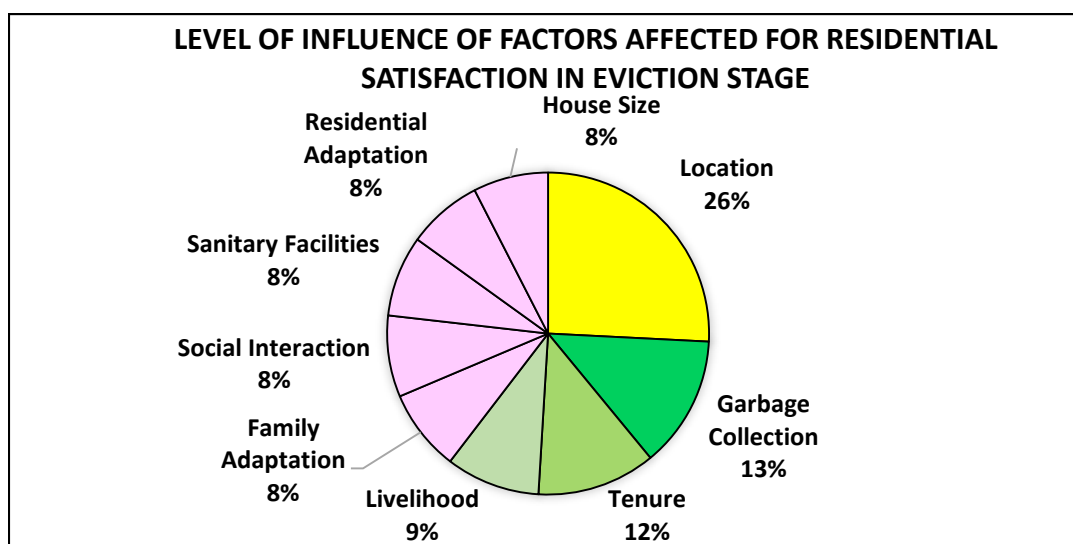
### 5.4.2.1 Factors affecting the success or failure of low-income high-rise resettlement projects in Colombo in terms of residential satisfaction

#### (a) At the Eviction stage

Table 19: Factors affected to residential satisfaction (Siyapath Sevana)

No.	Variables	Siyapath Sevana		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	45.397	.000	.565
2	Garbage collection	11.947	.001	.290
3	Tenure	9.705	.002	.261
4	Livelihood	6.090	.014	.207
5	Family adaptation	4.592	.032	.180
6	Social interaction	4.555	.033	.179
7	Sanitary facilities	4.518	.034	.178
8	Residential adaptation	3.889	.049	.165
9	House size	3.889	.049	.165

(Source: Field Survey, 2018)



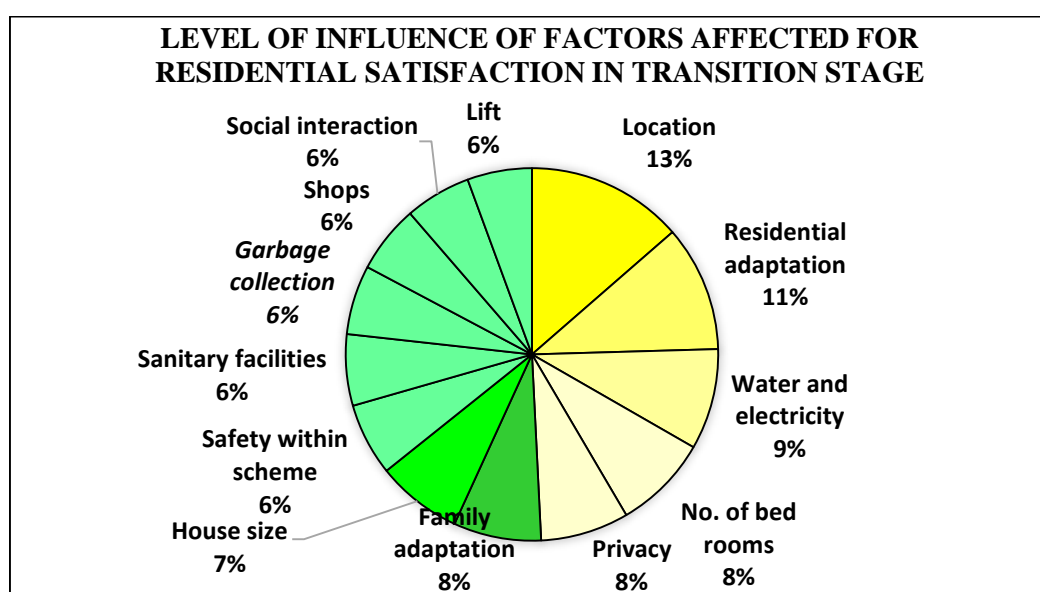
(Source: Field Survey, 2018)

Figure 16

Table 20: Factors affected to residential satisfaction (Siyasetha Sevana)

No.	Variables	Siyasetha Sevana		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	29.323	.000	.536
2	Residential adaptation	18.980	.000	.431
3	Water and electricity	12.141	.000	.345
4	No. of bed rooms	10.772	.001	.325
5	Privacy	9.309	.002	.302
6	Family adaptation	9.154	.002	.300
7	House size	8.777	.003	.293
8	Safety within scheme	6.292	.012	.248
9	Sanitary facilities	6.061	.014	.244
10	Garbage collection	5.740	.017	.237
11	Shops	5.495	.019	.232
12	Social interaction	5.119	.023	.226
13	Lift	4.982	.026	.221

Source: Field Survey, 2018



(Source: Field Survey, 2018)

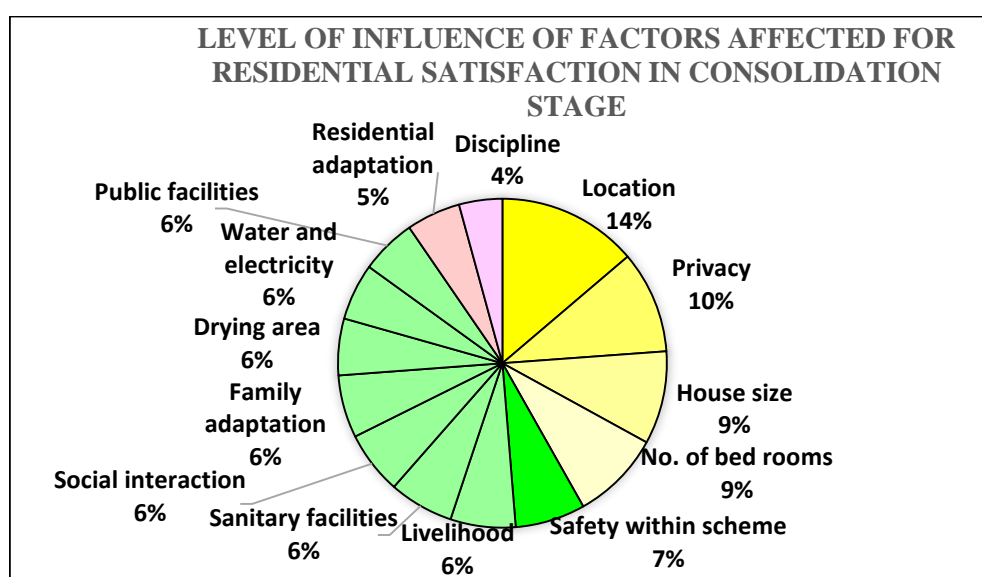
Figure 17



Table 21: Factors affected to residential satisfaction (Sahasapura & Sinhapura)

No.	Variables	Siyasetha Sevana		
		Pearson Chi-Square	Asymp. Sig. (2-sided)	Phi Value
1	Location	61.848	.000	.512
2	Privacy	32.934	.000	.374
3	House size	23.329	.000	.340
4	No. of bed rooms	25.376	.000	.328
5	Safety within scheme	15.409	.000	.256
6	Livelihood	13.36	.000	.238
7	Sanitary facilities	13.091	.000	.236
8	Social interaction	12.533	.000	.230
9	Family adaptation	12.429	.000	.229
10	Drying area	10.129	.001	.207
11	Water and electricity	10.15	.001	.207
12	Public facilities	9.717	.002	.203
13	Residential adaptation	9.249	.002	.198
14	Discipline	5.891	.015	.158

(Source: Field Survey, 2018)



(Source: Field Survey, 2018)

Figure 18

#### 5.4.2.1.1 Summary of the results of table No.s 19, 20 & 21

Table 22: Degree of Relationship with Residential Satisfaction varies over time

Factor	Strength of Relationship with Residential Satisfaction		
	Eviction	Transition	Consolidation
Location	Yellow	Yellow	Yellow
Garbage collection	Green	Green	White
Tenure	Green	Green	White
Livelihood	Green	White	Green
Family adaptation	Orange	Yellow	Green
Social interaction	Orange	Green	Green
Sanitary facilities	Orange	Green	Green
Residential adaptation	Orange	Yellow	Orange
House size	Orange	Green	Yellow
Water and electricity	White	Yellow	Green
No. of bed rooms	White	Yellow	Yellow
Privacy	White	Yellow	Yellow
Safety within scheme	White	Green	Green
Shops	White	Green	White
Lift	White	Green	White
Drying area	White	White	Green
Public facilities	White	White	Orange
Discipline	White	White	Orange

(Source: By the Researcher, 2018)

Supporting the literature, analysis proved that location is the critical factor affected to residential satisfaction. But it is not the only factor that decides success or failure of a resettlement project. In addition, number of bed rooms and privacy have become significant factors in terms of residential satisfaction. Besides the location, family adaptation, social interaction, sanitary facilities, residential adaptation, and house size have some kind of association with residential satisfaction at every stage.

### **5.4.3 Whether and how the impacts of these factors vary across the length of stay?**

#### **5.4.3.1. External Factors**

##### **1. Location**

The research findings show that the location is the most critical factor for residential satisfaction at every stage of resettlement. Because, it ultimately decides the easiness of commuting (employment, and schooling), market opportunities, social support networks, close to the CBD, quality of the neighborhood etc.

This finding supports by the statement made by the ADB in 2000 that location is always considered as the critical factor in resettlement planning because it ultimately determines social support networks, access to land, employment, business, credit and market opportunities (ADB, 2000). Again this finding is confirmed by Yuen stating that “a dominant consideration is a broad consensus that people should feel satisfied with the location” (Yuen et al., 2004).

As cited by Viratkapan et al., ADB (2000) and Davidson et al. (1993) stated that new location should be close to the USS they lived earlier to maintain existing social networks and communities and by extension, this implies that the appropriate resettled location should be close to the city or sub-center/ community area.

The study reveals that the relocation projects are almost closer to the previous location being the average distance between previous location and present is 4 km minimizing the disturbance to the residential satisfaction.

The research findings show that approximately 69 % are satisfied with their present location and when the length of stay is increased, this rate gradually becomes higher. That may be because, they were coping with the unfamiliar surroundings and get used to the area, developing new social networks and diminishing their status as ‘newcomers’ to the area. Further, approximately 83 % of residents who satisfy with the location of the resettlement project, have residential satisfaction and when the length of stay is increased, the rate of residential satisfaction gradually decreases. The

study revealed that the major reason for this decrease is the vulnerability of the environment for drug-abusing.

Viratkapan et al. (2004) argue that location is the most critical factor influencing the success or failure of a slum relocation project but not the one and only factor. This helps view expressed by UNCHS-Habitat in 1991, 37 and as cited by Viratkapan and Perera (2004), Misra and Gupta in 1981 stated that location is not the only factor that decides success or failure of a resettlement scheme.

Supporting the above findings, the study reveals that there are many factors that affect residential satisfaction (Table No. 21). Hence, it can be expressed that though the location is the critical factor affected to residential satisfaction, it is not the only factor that decides success or failure of a relocation project.

## **2. Size of House and number of bedrooms**

Research findings show that (Table No. 21) the size of house and number of bedrooms too are significant factors that affected residential satisfaction. Its relationship with the residential satisfaction gradually increased from weak to a strong relationship from eviction to consolidation. Hence, it shows that as soon as they occupied in the new settlement, there were some other factors that have become significant than the house size. Because, at the beginning, they were satisfied with the provision of decent housing with modern sanitary facilities. But when it comes to daily routines, they experience the inconvenience of limitation of housing space.

The research findings show that satisfaction with their house size significantly decreases with time.

UN, (2004) stated that one of the rights of resettlers is to be resettled in places of identical or better in quality compared with their previous houses and to be occupied in houses which are included in decent housing criteria. Also, Hettige et al. (2004) stated that “While there is a change in the living environment of the resettled people, all the inadequacies have to be seen in comparison to the living situation at their earlier habitat”.

As cited by Cavalheiro and Abiko (2015), Takesada et al. (2008) stated that residents who consider that their previous household were better than present, they have greater dissatisfaction. At survey, 59 % of re-settlers said their previous households were better than present housing units.

### **3. Garbage collection**

Garbage collection has become a serious issue in low-income resettlement housing. Since, residents have not been provided a reliable method to manage the garbage until the truck comes, the residents are compelled to bring waste to the truck only when the truck comes. This really affect to the working people. As a result, mismanagement of garbage is commonly seen at common places affecting the whole community in the scheme.

The research findings show that the relationship between residential satisfaction and garbage collection is moderate. Percentage of satisfaction about garbage collection decreases from 58 % to 24 % from eviction to consolidation, while, the percentage of residential satisfaction also decreases from 80 % to 66 %.

### **4. Water and Electricity facilities**

The result shows that water and electricity affect residential satisfaction. In the survey, it was found that earlier, water has been provided free of charge by the government while most of the community has obtained electricity illegally. So that these overheads had not been previously counted on underserved settlers. But after resettlement, they are compelled to pay for utilities. Accordingly, their living expenses have been increased.

As cited by Cavalheiro and Abiko (2015), this supports the view expressed by Chardon and Cifuentes (2010) that almost all resettlers have to face high costs than when they were in USS. Some of them have claimed that it has been influenced their satisfaction level of new life.

Hettige et al., in 2004 say that “when they move into a new housing complex, the expenditure pattern changes. Many take loans to settle down these expenditures.

Moreover, now, they have to pay water and electricity bills on a regular basis. These circumstances have imposed more economic pressure on them”.

The research findings reveal that though payment for water and electricity has not pressurized them in the eviction stage, it gradually becomes a significant factor by transition stage and later on.

## **5. Sanitary facilities**

Sanitary facilities are poor or non-existent in slums. Toilets had to be shared among several households (*Roy et al., 2014*). The survey revealed that sanitary facilities made a remarkable change in their lives. So it shows a significant relationship with residential satisfaction. Research finding shows that relationship between sanitary facilities and residential satisfaction is increased with time from weak to moderate.

These modern sanitary facilities provided not only some positive impacts but also some negative impacts on them. Most of the community people mentioned that lack of sanitary facilities leads to sharing them resulting to increase the interaction and unity among community people which create high security within the scheme and sense of belonging to the community and area. But now, there is no such interference with neighbors as earlier resulting lack of social interaction, insecurity within the scheme, and lack of sense of belonging to the community as well as to the area.

Illnesses like cholera and diarrhea are more common in many slums due to inadequate access to basic services such as water, closed sewage systems, and sanitation (*Roy et al., 2014*). Currently, the re-settlers have access to basic services and health has been improved due to individual sanitary facilities.

## **6. Public facilities**

Study shows that there is no relationship between public facilities and residential satisfaction at the early stages, but there is a moderate relationship at the consolidation stage. That is because they were compelled to concern only to the basic facilities to fulfill their basic requirements at the early stages. But when time passes, they feel lacking public facilities such as community hall, and common spaces for gathering, playground, parking spaces, etc.

As cited by Yuen et al. (2004), this supports the view expressed by Rapoport (1977); Ukoha and Beamish (1997). It says, "Residents' satisfaction can be influenced by several factors including physical environment".

Study reveals that UDA has paid its attention only to limited factors basically, for housing but little for providing public facilities.

## **7. Tenure**

The results show there is a moderate relationship between tenure and residential satisfaction at the eviction stage. But the relationship has been decreased with time to no relationship. It may be because of getting deeds after the fulfillment of the payments or residents are quite obvious that the deeds would be obtained soon after completing the payments. According to the result of the survey at the consolidation stage, 91.0 % of residents have obtained deeds in Sahaspura.

This supports the view expressed by Hettige et al. (2004) that another significant advantage at the new settlement is ownership of the apartment.

## **8. Livelihood**

The results show that residential satisfaction has a moderate relationship with 'livelihood'. Though the few of them have been affected due to loss or change the previous economic activity they engaged, however, most of the re-settlers have continued to engage in the same economic activity as before. This may be because of the policy to resettle the underserved people within a distance of 4 km not disturbing their employments.

This supports the view expressed by Hettige et al. (2004) that there is no direct or significant impact on income generation activities after resettlement of underserved people into low-income high-rise housing provided they are relocated within a reasonable distance to workplace.

In the meantime, the study reveals that some of the residents have lost the previous income due to demand decreasing because of changing the location and breaking down the social network. Many of them are women who supplied food for shops.

## **9. Lifts**

This is a very important factor for residential satisfaction.

As cited by Yuen (2004), Conway and Adams in 1977 expressed that lifts area is a very significant feature when high-rise living is concerned. It is the area where the problems are reported by the residents. Further, Yuen (2004) has stated that one of the reasons to fail the early high-rises was lack of maintenance. It includes all electrical, mechanical and structural maintenance. The maintenance of elevators is very important and significant because it is operated throughout the day so that the lives of residents are fallen into risks if the absence of proper maintenance.

Proving that Cavalheiro and Abiko (2015) says, the design of buildings with elevators take high cost, because elevators are required regular high-cost maintenance since they are operated throughout the day. If not, it can cause to put the lives of residents in to risk.

The study reveals that the size of lifts are not adequate to transport such a big mass in the scheme whereas it is lack of maintenance.

Singapore's high-rise housing residents have appreciated the current design of lifts provided for public housing. The lifts have been designed to stop on each floor. In addition, glass window panels have been installed on the lift door, as a safety measure against crimes to be happened in lifts (*Yuen et al., 2004*).

The study revealed that one resident has been killed due to breaking down the lift. Several troublesome incidents have occurred but they were lucky to escape. Hence, it is the responsibility not only of the authority but also of the community to pay special attention in terms of maintenance of elevators as well as the usage of elevators.

## **10. Shops**

Shops too are a factor that influenced residential satisfaction. There is a moderate relationship with residential satisfaction.

At the study, it was observed that the ground floors of all three resettlement projects have been allocated to commercial establishments in addition to community facilities.



Further, at least, there is one commercial space on each floor making easy access to the residents on the same floor.

In addition, there are more shops on both sides of the access road to Sahaspura and Sinhapura. Further, all resettlement projects are very close to the town centers (15 minutes walking distance). The authority has paid adequate attention in this regard.

### **11. Drying area**

This is one of the criteria that the authority has not paid its attention in designing the scheme. At the previous settlement, they were on the ground. Hence, there were ways to tackle the space problem they had. But, it is a significant issue in the present housing. Hence, drying clothes on handrails of the corridors is a common scene in all the resettlement schemes adding an untidy look.

### **12. Safety within scheme**

As cited by Yuen (2004), Moser in 1981, p. 58 stated that “when concerned with tall buildings, there is a high probability to turn a minor incident into a major or catastrophic one due to complexity of its system. Hence, a disaster related to the system failure or in case of fire, the risk of potential danger increases with the building height”.

The risk can be in form of mechanical, electrical, structural failure or fire. Hence, an accident can happen due to breakdown of a lift, electrical shocks, structural failures of buildings, fire, falling children from upper floors, doing suicide by falling from upper floors, crime, the vulnerability of youth for drug-abusing, thefts, etc.

The research findings show that safety within the scheme is another important factor that affected residential satisfaction. Though no relationship exists with residential satisfaction at the eviction stage, it has a moderate relationship at transition and consolidation stages.

According to the residents, breaking of lifts due to absence regular maintenance, thefts, doing suicide, insecurity due to drug dealing, and drug abusing, violence, and crime are the main risks they face.

So many literature reviews have discussed the safety within the scheme. The below shows few of them:

As cited by Yuen (2004), Young (1976); The National Tower Blocks Directory (1992); and Costello (2005) stated that the some of the failures of high-rise resettlement are children's safety and mental health, personalization, loneliness among adults, crime and vandalism. Yuen et al. (2004) say that people should satisfy the safety of lives within the high-rise.

As cited by Yuen et al. (2004), BBC News (2003) stated that lot of failures happened in earlier high-rises were due to mismanagement, low-quality works, inadequate maintenance and lack of choice.

### **13. Privacy**

In the survey, it was revealed that life in an underserved settlement has lack of privacy. This supports the view expressed by Roy, in 2014, that women have lack of privacy in slums. Adding more, he mentioned that "sanitary facilities in USS are poor or unavailability. Single toilet is normally shared by several families.

Findings show that though the 'privacy' has no relationship with 'residential satisfaction' at the stage of eviction, gradually, it builds up a strong relationship with 'residential satisfaction' at transition stage. At the consolidation stage, this has become a significant factor compared to the transition stage.

As cited by Yuen (2004), this supports the view expressed by Conway and Adams, in 1977 that high-rise living is highly appreciated for privacy and quietness. And also, by Hettige et al., in 2004, many new settlers value the newly gained privacy and freedom in the new settlement as a distinct advantage. Especially, women value this newly gained privacy which they had not earlier in USS.

### **5.4.3.2. Internal factors**

#### **1. Social Interaction**

The research findings show that social interaction is another factor that affected residential satisfaction. As cited by Yuen (2004), this supports the expression made by Gifford (1997) that diverse factors such as social relations can strongly affect residential satisfaction. Its relationship with the residential satisfaction gradually increased from a weak relationship to moderate from eviction to consolidation.

At the resettlement, different USSs have been resettled into one being the new settlement heterogeneous. Hence, the intra-community relations have been reduced compared with the earlier settlements. In addition, the condominium life style brought them individualization resulting less interaction with neighbours.

Interaction among people can make people happy. But high-rise living discourage the social interaction and dissatisfaction of community life.

As cited by Viratkapan et al. (2004), Desai (1995), P 47 – 60 expressed that, social interaction severely affects to the demand-making. Because, if there is a good interaction among residents, a strong community unity is prevailed. Further, he said that community unity is important factor for successful demand-making. Also, the safety within the scheme can be increased maintaining a good social interaction among residents.

As cited by Yuen et al. (2004), Blair and Hulsbergen (1989) stated that common facilities encourage neighborliness and community life. Hence, by conducting development programs, and providing communal facilities such as open spaces, community halls, playgrounds, parks etc., social interaction can be encouraged.

Viratkapan, and Perera, in 2004 have stated that the unity of community was relatively unchanged during the eviction and the transition stage. However, about ten years after the initial relocation, the unity of communities reduced. There were two reasons for this reduction. The community had gradually consolidated so that they got familiar with the surroundings and their individual problems had been solved with the time. In

addition, new generation of the community didn't involve for common activities like the original settlers (*Viratkapan, and Perera, 2004*).

## **2. Residential adaptation and family adaptation**

Residential adaptation refers to the various activities the residents can do to make the present house fit their needs. Additions, alterations, remodeling, and changing the functions of rooms are included in these activities to foster residential satisfaction. In addition, family adaptations included actions a family takes to alter its composition to fit the current situation.

The research findings show that residential adaptation and family adaptation are significant criteria because both have a relationship with residential satisfaction at each stage. Though there is a weak relationship with the residential satisfaction at the beginning, it developed to a strong relationship in the transition.

Earlier, these types of residential adaptations had been restricted by the authority. But across negotiations, residents have been permitted internal alteration without doing any damages to the superstructure.

## **3. Discipline**

The research finding shows that the discipline associated with residential satisfaction only after the transition stage. In a high-rise building, discipline is a significant criterion because lot of issues may be arisen due to the absence of discipline. At the study survey, it was observed that mismanagement of garbage, misuse of common space, loud noises disturbing the neighbors, etc. were more common within the scheme. In addition, respondents mentioned that disputes and petty thefts too were common in the schemes due to lack of discipline.

At the key informants' interviews, it was mentioned that the authority has arranged public awareness programs particularly in terms of discipline before occupation of the resettlement scheme because of its importance when living in apartments.

#### **5.4.5 Summary of analysis of the questionnaire**

- The government has not conducted adequate awareness programs in a proper manner prior to the resettlement.
- Absence of compensation at the eviction.
- The number of housing units per project is a critical factor. Overpopulation severely affects reliability of the resettlement scheme. As per WHO, the density of a family housing project should normally be below 210 habitable rooms to the hectare ( Guidelines for healthy housing, WHO, 1988).
- No public participation involved throughout the entire resettlement process. Hence, issues have arisen after the relocation such as socio-economic hardships.
- Average number of family members is 4 – 5.
- According to the current policy, UDA decided to increase the sizes of houses to 550 ft<sup>2</sup> and to provide typical two-bedroom houses. The minimum floor area proposed by the United Nations as per the family size is 56.5 m<sup>2</sup> (607.8 ft<sup>2</sup>) for 2 bedrooms with 5 number of occupants (Guidelines for Healthy Housing, WHO, 1988). i. e. 121 ft<sup>2</sup> per person. Hence, as per the world's standards maintained for the housing of low-income people, that is acceptable.
- Public facilities is a critical factor but UDA only provides basic facilities.
- Absence of programs supporting livelihood disturbances at the eviction.
- There is no proper mechanism for maintenance of the scheme.
- Lack of well planned and periodical development programs.

#### **5.4.6 Focus group discussions**

All the members in the focus group of three schemes had a positive perception with regard to the relocation in high-rise housing. According to them, the absence of development committees are the main shortage to develop unity, and interaction among the residents which is very essential since there is overpopulation in the area and the community is heterogeneous in character.

According to them, 95 % is good in character. The reason for not being the rest good is drug abusing. Hence, the urgent requirement which can be seen today is to conduct well-planned, and periodical development programs for different people in the scheme.

Finally, they mentioned that ultimately, the accountability of maintaining the sustainability of the scheme is in the hands of the community. They, on one hand, be with positive attitudes as well as should keep the unity within the community.

### **5.5 What is the degree of sustainability of resettlement schemes for urban poor in Colombo?**

#### **5.5.1 Introduction**

Viratkapan et al. (2004) stated that the success of a relocation project is concerned with the sustainability of both physical as well as non-physical outcomes.

Accordingly, the proportion of the original beneficiaries can be considered as a assessment criterion in deciding the sustainability of a resettlement project. In addition, encouragement mechanisms (community development programs), funding, affordable Housing, facilities/ designing total living environment, maintenance, improvement works, breakdown and rescue operations, design of building, citizen relationship management under the government commitment, and positive attitudes of community can be considered for assessing the sustainability of a project.

Accordingly, in answering this section, the perception of the community about the factors mentioned above obtained through the survey was considered. Hence, all descriptions fully depend on the responses they made at the survey.

## **5.5.2 Criteria affect the degree of sustainability of low-income high-rise resettlement**

Degree of sustainability of low-income high-rise housing covers vast area. As the sole researcher and limited time period, the researcher only considered the limited number of factors, and the responses only came from the perspectives of residents.

### **5.5.2.1 Number of original beneficiaries remaining in the scheme**

It was proved by the survey that 100 percent of relocated families still remain in the resettlements of Siyapath Sevana and Siyasetha Sevana. That is because they have strictly been noticed by the UDA that if somebody rent out the house, it is vested back immediately. In the meantime, in Sahaspura and Sinhapura, 72 % of relocated communities still remain after the consolidation stage. That means, only 28 % have left after the completion of the project once tenure has been gained or rented out to another buyer immediately after the transition stage or in the consolidation stage.

Though a high percentage of families still remain, a significant portion of the re-settlers intends to leave the current household. The study revealed that this is due to a variety of reasons. The main reason intend to leave was to protect their children from drug-abusing. In addition, others have moved due to family debt or achieving a higher status of living. It could also be noted that though some households wanted to move from the resettlement scheme, they are still not moved because of not owned the deed, or there was no other place to move due to unaffordability for a new house in Colombo, or they wish to keep the new house as a family property or having a sense of belonging.

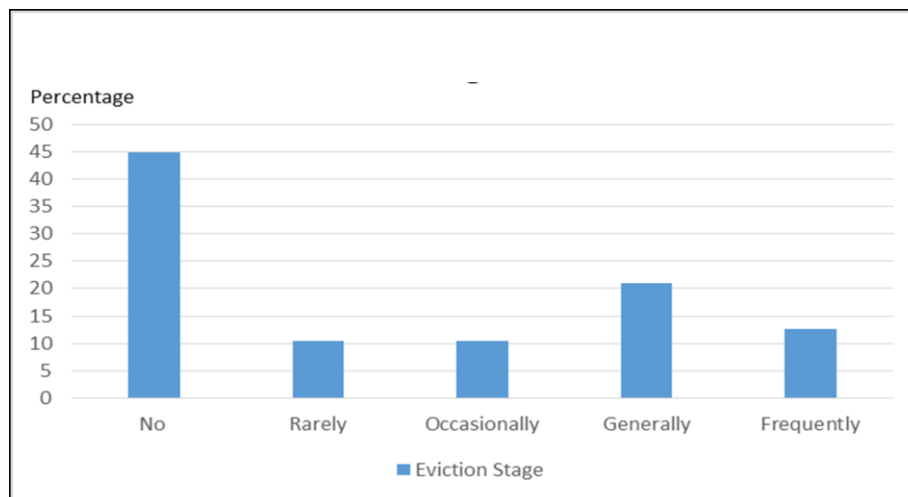
Therefore, if they were capable enough, the number of families remaining would be less than that of the 72 %. The study revealed that most of them were worrying about the inability of moving out of the resettlement scheme.

Hence, in this research, it is not worth assessing the success of relocation projects by the proportion of the original beneficiaries in deciding the sustainability though it gives a direct assessment across a numerical value.

### 5.5.2.2 Residents' intention to leave the resettled house

Yuen (2004) has stated that the degree of sustainability of low-income high-rise housing depends upon the positive attitudes of the community. Accordingly, when there are negative attitudes of the community in connection with the resettlement scheme, they are inclined to consider leaving the resettled house. Therefore, the criteria of intention to leave the resettled house are considered to measure the degree of sustainability of high-rise low-income housing.

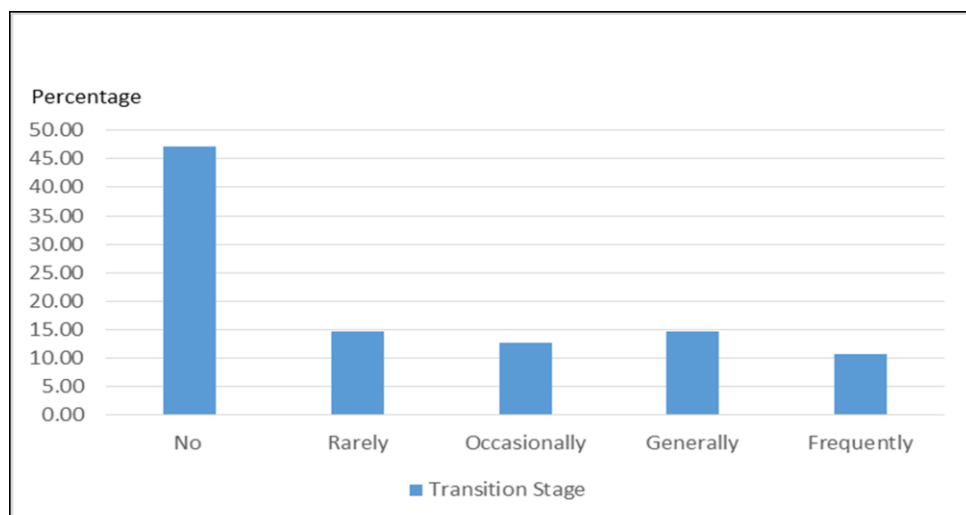
#### 1. Siyapath Sevana



(Source: Field Survey, 2018)

Figure 19: Intention to leave the resettled house at eviction stage (Siyapath Sevana)

#### 2. Siyasetha Sevana

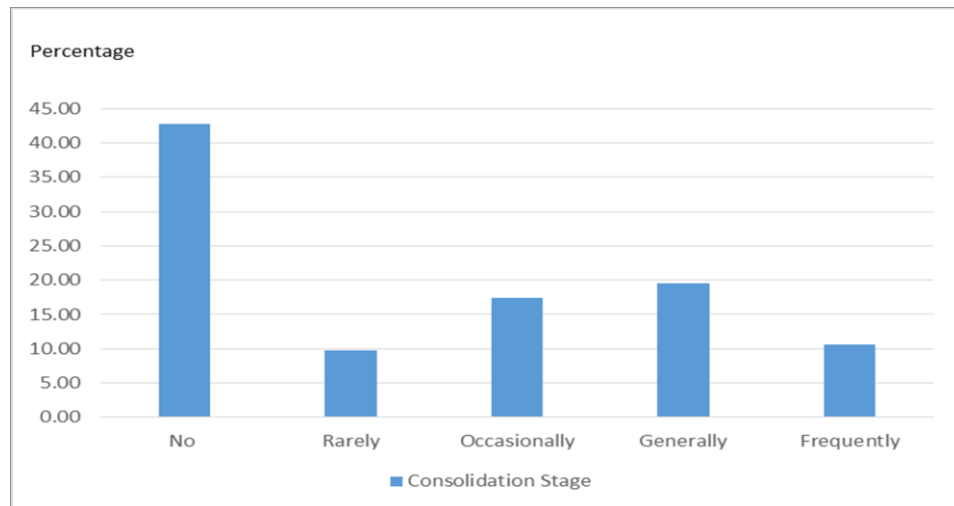


(Source: Field Survey, 2018)

Figure 20: Intention to leave the resettled house at transition stage (Siyasetha Sevana)



### 3. Sahaspura & Sinhapura



(Source: Field Survey, 2018)

Figure 21: Intention to leave the resettled house at consolidation stage (Sahaspura & Sinhapura)

Irrespective of the length of the stay in the apartment, approximately half of the residents have no intention to leave the present place. It is due to housing and neighborhood is equal or better as desired.

But on the other hand, indirectly, it says that the balance half has some kind of intention to leave the resettlement house. The study revealed that it is mainly due to the vulnerability of the drug-abusing environment, overpopulation followed by insecurity and less social interaction. Hence, it gives an indication on future mobility that directly affect to the sustainability of the project.

Results show that the percentage of residents' intention to leave the resettled house at the eviction stage is higher than that of the transition stage. That may be because of compelling them to deal with unfamiliar surroundings and unfamiliar social networks. But by the transition stage, gradually diminishes the status of the unhappiness of them. But due to the absence of government support to solve the new issues they face which have not been met earlier because of high-rise living and overcrowding such as insecurity, drug-abusing etc., again the percentage of residents' intention to leave the resettled house at the consolidation stage goes higher.

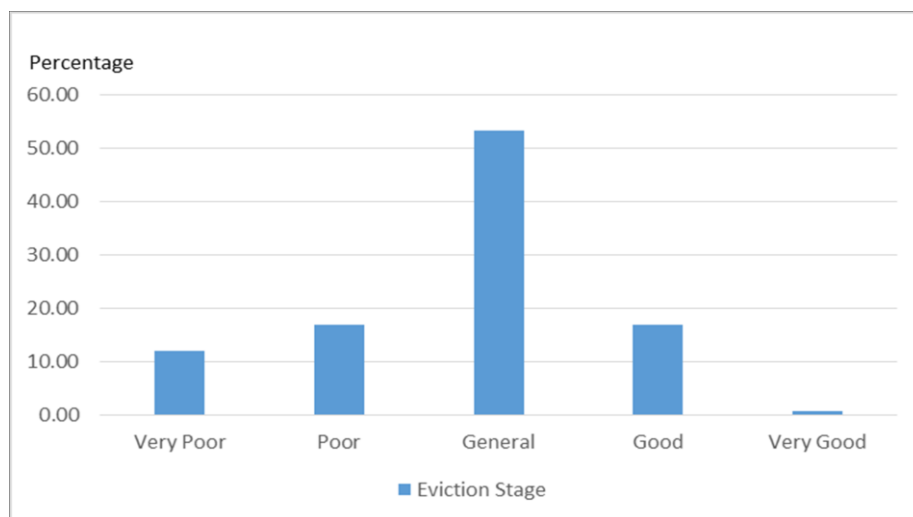
### 5.5.2.3 Government Commitment

#### 5.5.2.3.1 Encouragement Mechanisms (Community Development Programs)

Currently, community development programs are conducted specially for women, youth and children. Community development programs are implemented to improve their cultural, educational, social, and livelihoods' abilities. In addition, these programs have been designed and implemented to increase the interaction among people because people from different settlements have been occupied in a scheme as well as interaction among people is highly necessary to manage the scheme effectively, to stop leaving the people from the scheme, and to overcome illegal activities reasonably.

##### 5.5.2.3.1.1 Socio-economic restoration Activities conducted by Authorities

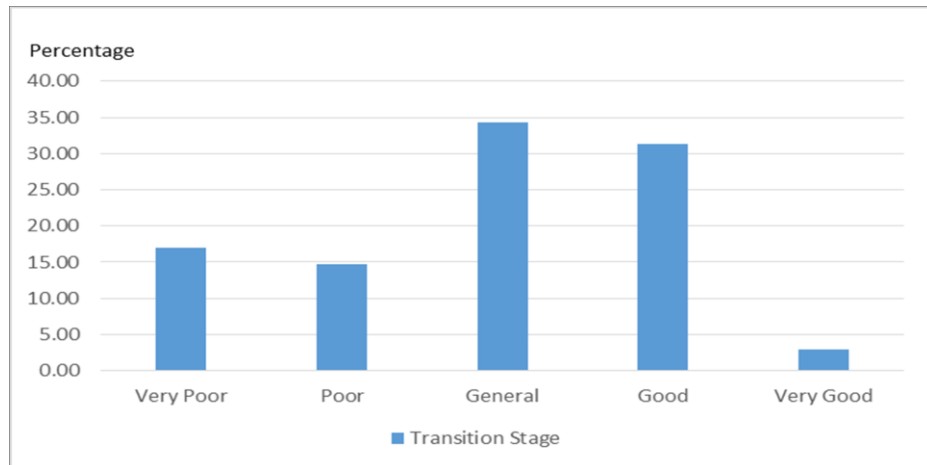
#### 1. Siyapath Sevana



(Source: Field Survey, 2018)

Figure 22: Socio-economic restoration Activities by Authorities (Siyapath Sevana)

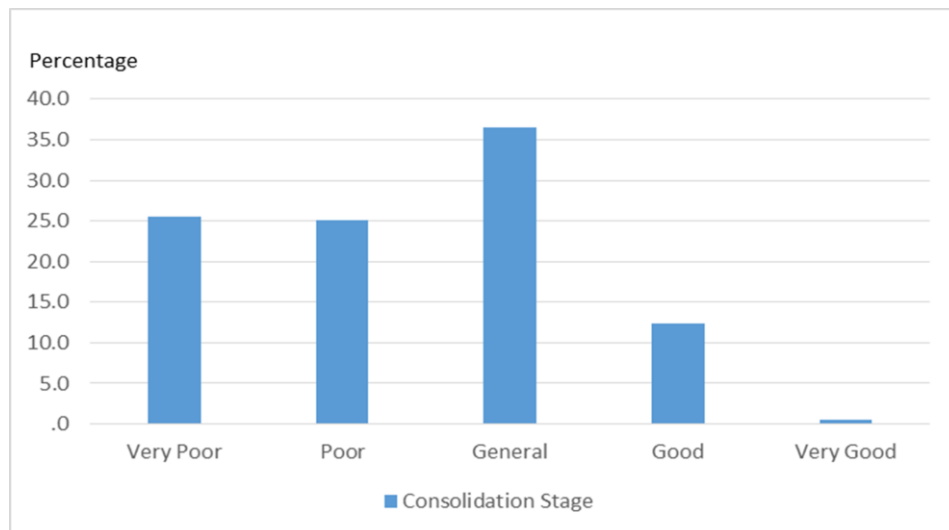
## 2. Siyasetha Sevana



(Source: Field Survey, 2018)

Figure 23: Socio-economic restoration activities by Authorities (Siyasetha Sevana)

## 3. Sahaspura & Sinhapura



(Source: Field Survey, 2018)

Figure 24: Socio-economic restoration activities by Authorities (Sahaspura & Sinhapura)

The study revealed that the degree of commitment to socio-economic restoration activities conducted by the authorities is declining. Some of the residents have been lost their livelihoods, newly school children have not been admitted to schools since their parents' names were not in the election list, employment difficulties by increasing

the distance and reducing the demand for the products due to disturbing the social network etc. Some of the residents are still suffering from severe economic hardships. These situations directly affect their mental health as well.

Hence, it is questionable whether the provided support in terms of changing their socio-economic situation due to resettlement is adequately addressed to raise to a satisfactory level.

#### **5.5.2.3.2 Funding**

There is no suitable and strong funding mechanism for resettlements. The mechanism planned by the government for generating funding are not worked properly: government funds, funds generating selling lands for developments, and housing installments to be paid by residents. Hence, UDA has faced unexpected issues for funding followed by the problem for continuation of relocation process.

#### **5.5.2.3.3. Affordable Housing**

The UDA has cost a housing unit to Rs. 2.5 million. A resident of a housing unit of 450 ft<sup>2</sup> has to pay Rs. 1.0 million in 30 years on a monthly installment of Rs. 2800.00 whereas for a housing unit of 500 ft<sup>2</sup>, 1.2 million in 30 years on a monthly installment of Rs. 3000.00. The government contributes to the balance. But, it has posed a significant financial burden on them. Chen (2012) has stated that many families in USS are either casual, unskilled workers or are engaged in low-income, self-employment activities. Their incomes are not adequate to fulfil diverse needs now due to new living pattern. Many have taken loans for attaining higher social status or to become better off as per their life aspirations and desire.

Since, low-income housing has not been integrated with the mainstream, they are not considered to obtain loans from banks. Hence, the only approach they have to remain is getting micro credits from private agencies that are not legalized for higher interest rates which are not fair enough for the urban poor causing further impoverishment.

On one hand, delaying or not paying monthly installments for housing directly affects to receipt of the deed at the scheduled period. On the other hand, it directly affects the continuation of the relocation process as well.

#### **5.5.2.3.4 Facilities provided/ Designing a total living environment**

Yuen (2004) has stated that designing a total living environment affects the degree of sustainability of high-rise living. But at the survey, it seemed that UDA has not paid its adequate attention to designing the total living environment.

As cited by Yuen (2006), Blair and Hulsbergen (1993) stated that provision of common facilities encourage neighborliness and community life.

All schemes have a management office. Some schemes have community halls.

Almost all the resettlement schemes are lack of open spaces, green spaces, facilities to promote interaction of people etc. which improve the attraction to the place and hence, improve the livability of the place.

#### **5.5.2.3.5 Maintenance, improvement works, breakdown and rescue operations**

The maintenance of high-rise building is a complicated task. Cavalheiro & Abiko (2015) stated that “according to the condominium system, maintenance cost of facilities is automatically shifted to the residents, once they receive the deed. Therefore, until adapting condominium set up, the authority has to do the maintenance. Therefore, UDA should pay its attention to the empowerment of the residents because, one day they must have the ability to do their own requirements by themselves. UDA suppose that the community will be able to get the ability or empowerment to do the maintenance by themselves after a 10 years period.

#### **5.5.2.3.6 Design of building**

In designing the public housing building, attention to be paid for safety and comfortability. Yuen (2004) has stated that one of the factors that affected by the degree of sustainability of high-rise living is the diversity of home designs. In addition, it should be available with various facilities to meet different family requirements resulting in livability.

#### **5.5.2.3.7 Citizen relationship management**

Citizen relationship management (attending complaints) is another factor that affected the degree of sustainability. There is an office on the ground floor at each resettlement

and authority attends to complaints made by the residents. In addition, there is a police unit or mobile service for every schemes. According to the survey, it was revealed that the service provided by these units is not in a satisfactory level.

#### 5.5.2.4 Community Attitude

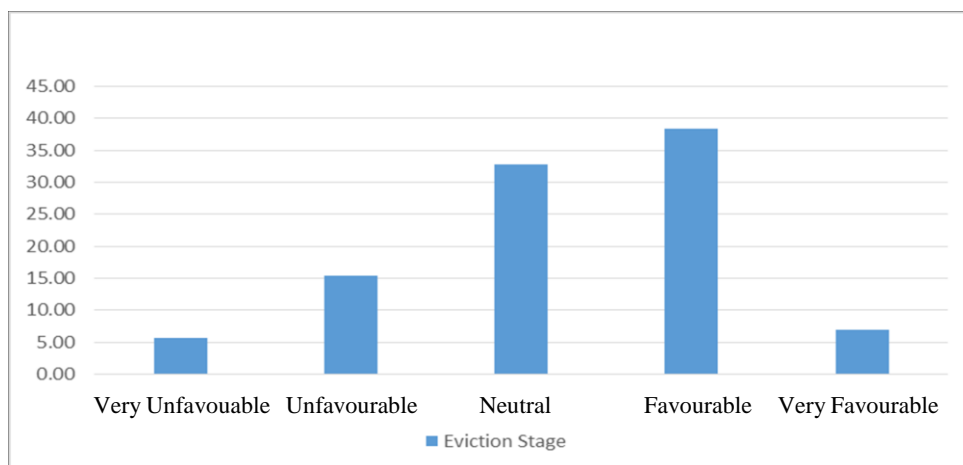
Study revealed earlier that some households expect to leave elsewhere for various causes. However, if a significant portion of re-settlers leaves the resettlement housing, it will influence the motivation of remaining resettlers in the scheme. Therefore, it is very important to make arrangements to build positive attitudes within the community to the new location till families are securely consolidated (Turner, 1967).

Viratkapan & Perera, in 2006 have stated that “ If community are positive about the new life in the new location, it leads to the success of resettlement process. Moreover, positive attitudes of the community must be continued from the eviction stage to the consolidation stage.

The research results show that the positive attitude of the community has gradually reduced with time. That is not good signage in terms of the community as well as the success of the resettlement project. UDA has initiated several programmes with the aim of improving attitudes of the community and some are still at the planning stage.

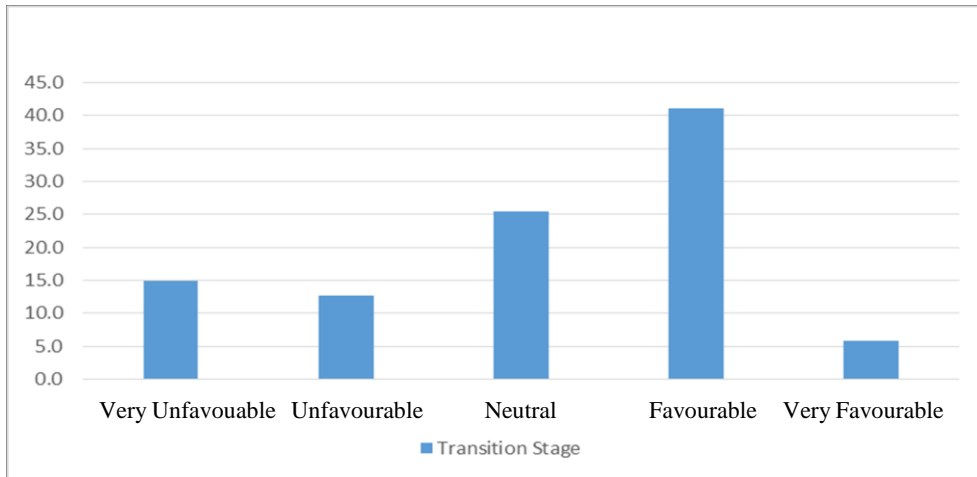
##### 5.5.2.4.1 Attitude of relocated community at a new location

#### 1. Siyapath Sevana



(Source: Field Survey, 2018)

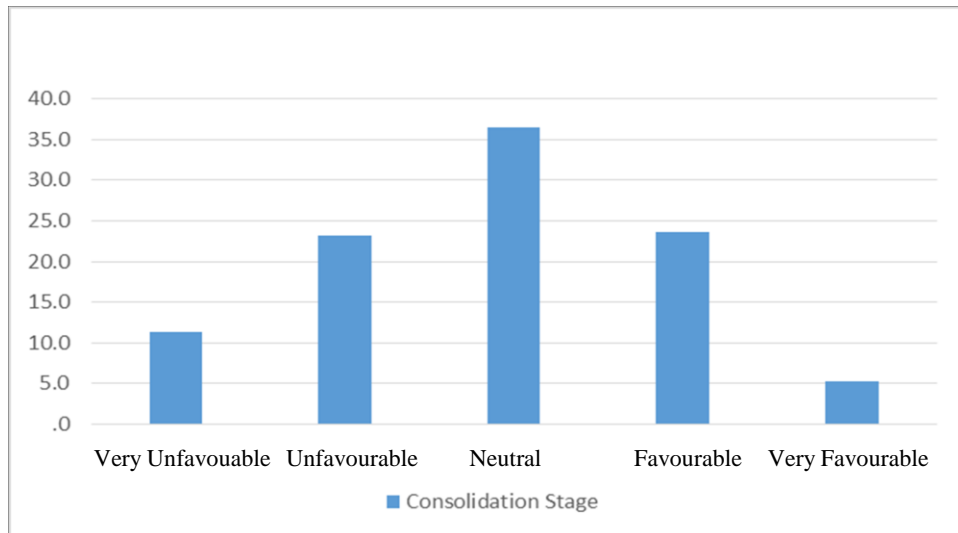
Figure 25: Attitude of Relocated community at new location (Siyapath Sevana)



(Source: Field Survey, 2018)

Figure 26: Attitude of Relocated community at new location (Siyasetha Sevana)

### 3.Sahaspura and Sinhapura



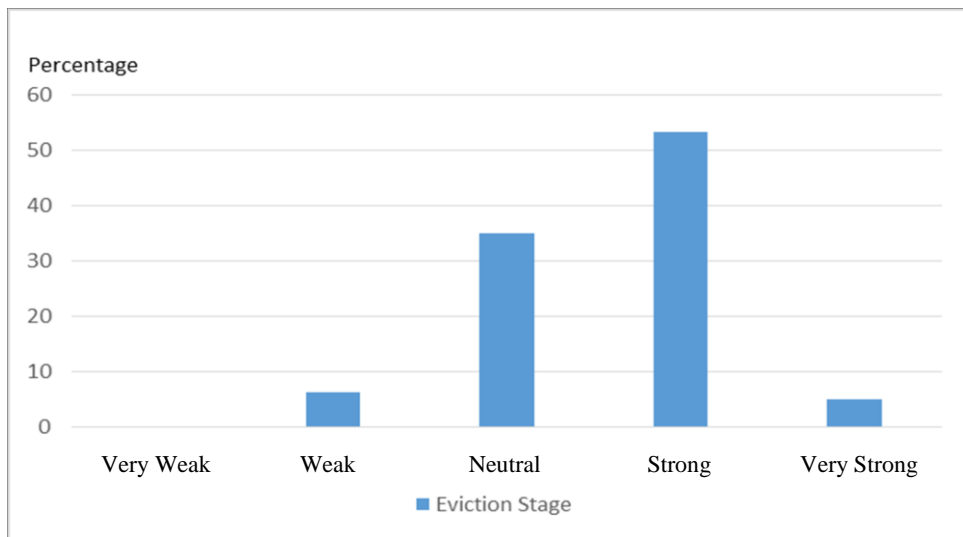
(Source: Field Survey, 2018)

Figure 27: Attitude of Relocated community at new location (Sahaspura & Sinhapura)

### 5.5.2.4.2 Unity of Resettled Community

The study revealed that community unity was much stronger in the community during the eviction stage and subsequently declined during the transition stage due to the reducing degree of pressure on the re-settlers once the eviction was finalized. Again it was stronger at the consolidation stage but lesser than the eviction stage.

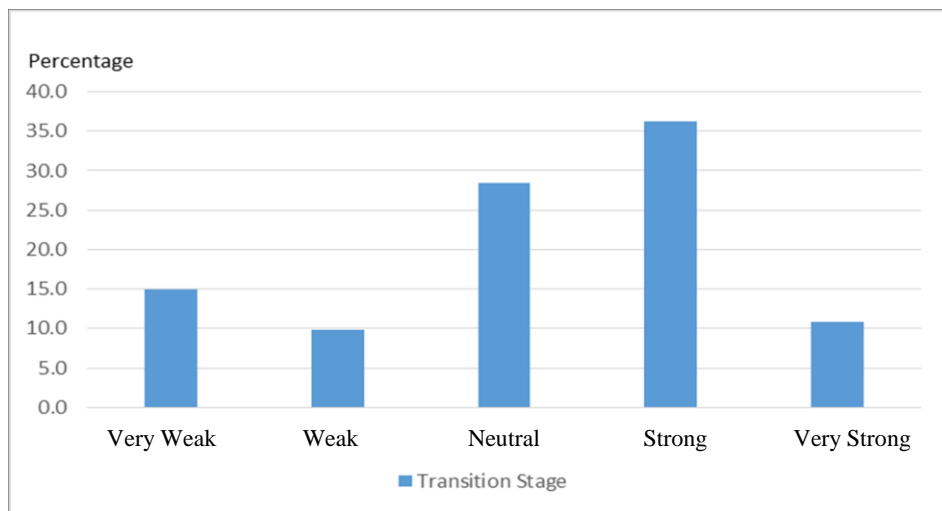
#### 1. Siyapath Sevana



(Source: Field Survey, 2018)

Figure 28: Unity of resettled Community (Siyapath Sevana)

#### 2. Siyasetha Sevana

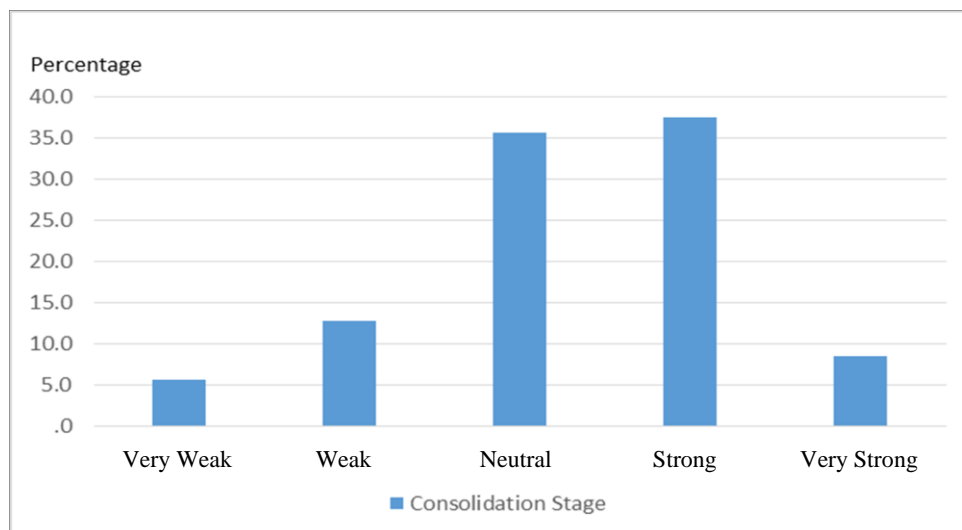


(Source: Field Survey, 2018)

Figure 29: Unity of resettled community (Siyapath Sevana)



### 3. Sahaspura & Sinhapura



(Source: *Field Survey*,

*Figure 30: Unity of resettled Community (Sahaspura & Sinhapura)*

Community unity is an important ingredient for community participation and successful demand-making (Desai , 1995, 47 – 60).

The study revealed that the degree of unity of the community at the stage of eviction is strong. Because, as a result of the pressure of eviction, people united strongly and opposed the eviction.

During the transition stage too, the unity of community is strong due to the insecurity related to the new unknown surroundings. During this period, the unity of the community members was boost up due to difficulties faced by them, particularly, to solve their individual problems. But, the results show that the degree of the unity of the community is little less than the eviction and consolidation.

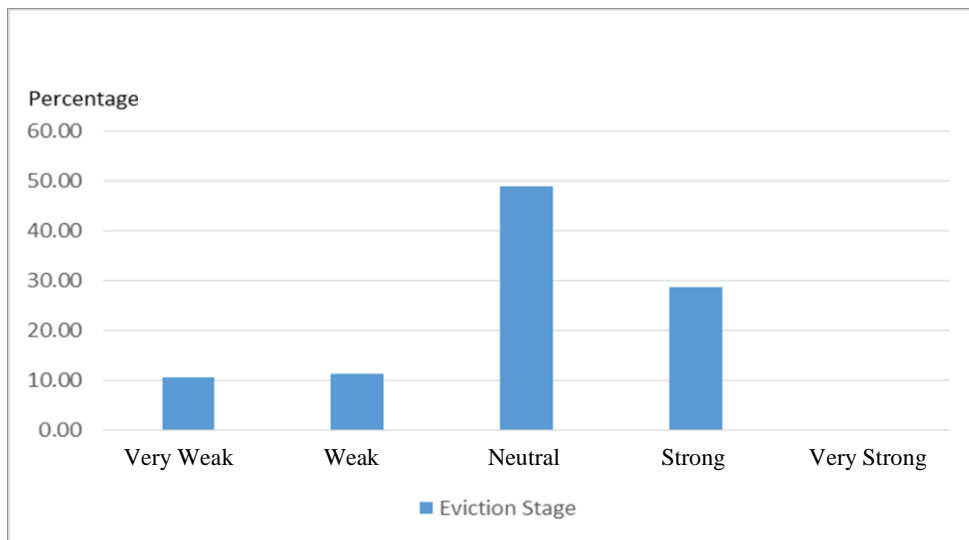
However, by the time of consolidation, the unity of the community has become again stronger than transition but lesser than eviction. As per the respondents of the survey, they believe that they are now neighbours for years so that sense of unity and belonging have improved.

However, the unity of the community can be improved further with the support of development programs for the betterment of the residents. Because, unity of community is an important ingredient for community participation and also it directly affects to many other factors of which the residential satisfaction depends such as social interaction, lack of discipline, violence, crime rate, mismanagement of waste, mismanagement of common spaces, number of petty thefts etc. occurred within the scheme.

### 5.5.2.4.3 Community Participation

The ADB (1998) defines participation as a process of decision making and contributing to the development efforts. Viratkapan, 2004 stated that participation in the resettlement process allows diminishing the fear of re-settlers on resettlement. Also, resettlement projects carried out with the absence of community consultation may cause inappropriate strategies and finally impoverishment of the resettled community.

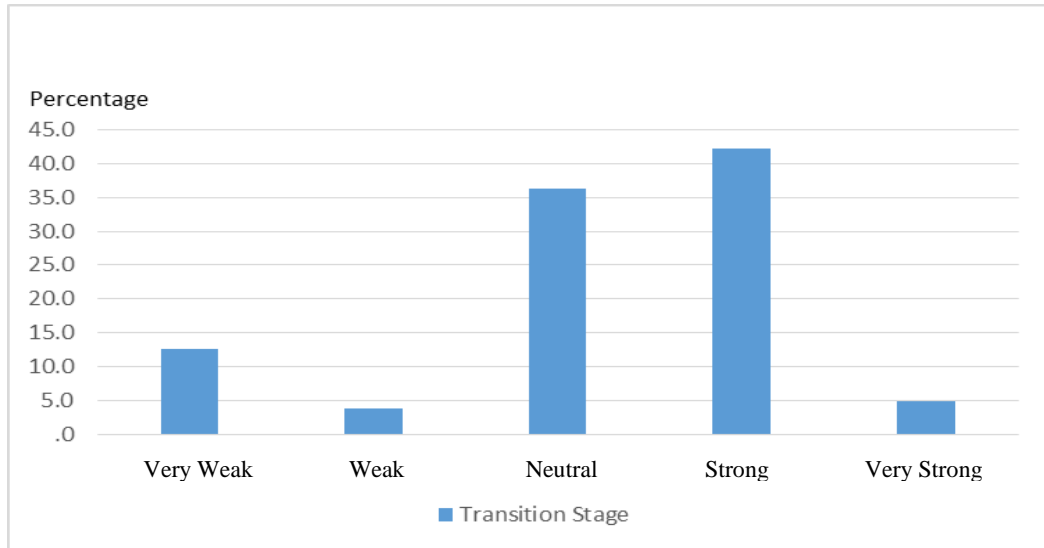
#### 1. Siyapath Sevana



(Source: Field Survey, 2018)

Figure 31: Community Participation in relocation Process (Siyapath Sevana)

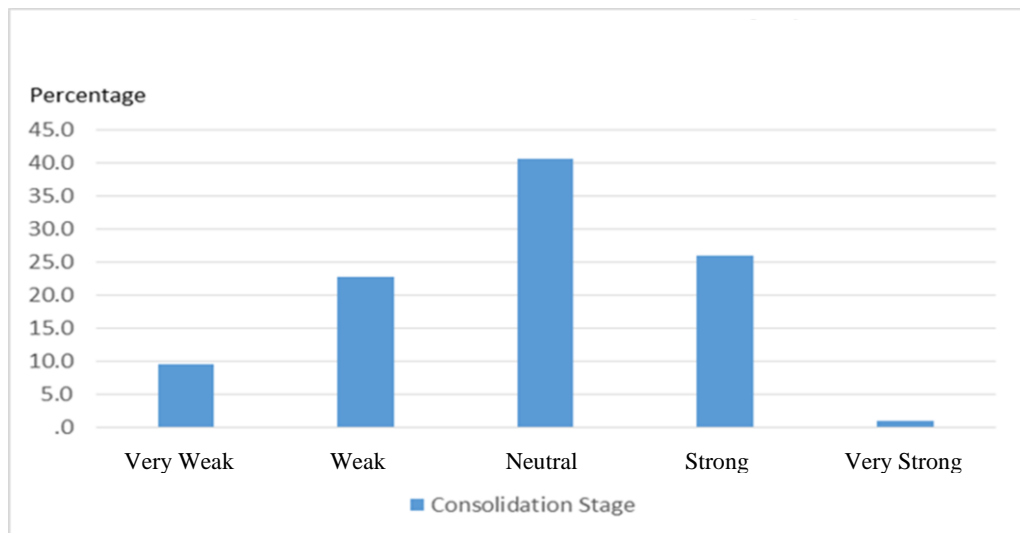
## 2. Siyasetha Sevana



(Source: Field Survey, 2018)

Figure 32: Community Participation in relocation Process (Siyasetha Sevana)

## 3. Sahaspura and Sinhapura



(Source: Field Survey, 2018)

Figure 33: Community Participation on relocation Process (Sahaspura & Sinhapura)

The research revealed that the majority of the community members had participated in the stages of eviction and transition. But when the time passes, it has been gradually decreased and it declined during consolidation stages due to the diminishing degree of pressure on the re-settlers once the eviction has been finalized, individual facilities, individualization in the condominium life style, and mobility of original re-settlers.

The respondents mentioned that at the beginning, there were several activities including community meetings, infrastructure improvement, savings and credit societies, vocational training for women, and children. But due to many reasons such as absence of strong leadership in the community, different USS people etc., those activities gradually have been collapsed.

### 5.5.3 Summery of section 5.5

*Table 22: Strength of Relationship with Residential Satisfaction varies over time*

Factor	Degree of Sustainability (%)		
	Eviction	Transition	Consolidation
Percentage of remaining beneficiaries	100	100	72
Intention to leave resettled house	55	53	57
Socio-economic restoration activities	70.5	68.5	50
Positive Attitude of Community	78.5	72.5	65.5
Unity of resettled Community	93	75	81.5
Community Participation	77.5	83.5	68.5

*(Source: By the Researcher, 2018)*

As mentioned at the beginning of this section, only limited number of factors shown above were considered to find the degree of sustainability and table 22 shows the responses came from the perspectives of residents to the said factors. Accordingly, from the residents' perspective, degree of sustainability keep declining over the time. But, if we analyse different factors of sustainability, the results could be different.

## CHAPTER 06

### FINDINGS AND CONCLUSION

#### 6.1 Findings

The objectives of the research are finding out the key factors affecting the success or failures of low-income high-rise re-settlement, examining their impacts vary over the time, degree of sustainability of these housing and finally finding out the way the sustainability of such re-settlements can be improved.

The research revealed that several factors affect to the performance of low-income housing while the location is found as the critical factor affected the performance of such resettlements because it decides social support network, access to land, employment, business, market opportunities etc. In addition, size of housing, number of bed rooms, safety within the scheme, privacy, sanitary are some significant factors affect to the performance of low-income housing resulting sustainability of such schemes. The study revealed that these factors and their impacts vary over the time. Also, it was found that the number of factors affected to performance for these housing is increased over the time.

The results show that average family size is 4 – 5. The majority of resettlers has a positive perception with regard to low-income high-rise housing. The relocation from an underserved settlement to a high-rise housing has become a major shift for resettlers. The eviction has given shocking and painful experience for most of them and has led to loss or disturb their social networks, social trust and organization of the community. In eviction, resettlers are not supported by any assistance or compensation by the government.

Comparing with the previous living in USS, the distinct advantages mentioned by the residents of every resettlement were the security of tenure, availability of infrastructure facilities, decent housing, adequate privacy, adequate ventilation, free from bad environment, pollution, and flooding.

After they move into the new housing complex, the expenditure pattern has been changed. Key economical burdens they experience at present living are regular

payments for utilities, and monthly housing installment. In addition, there is some change in their lifestyle, life aspirations and desire for attaining higher social status or to become better off. Hence, more economic pressure has been imposed by these alternative housing on them. Many have been compelled to take loans to settle down this expenditure imposing more economic pressure on them. There is no government mechanism of providing cheaper financing to the poor to buy a house and no legal authority to get assistance on public housing matters. Instead, they are trapped in more difficult situations receiving credits from private money lenders for very higher rates.

At the survey, it was revealed that more attention at the relocation project has been given to fulfil the security of tenure, and ensure social welfare. But due to relocation, new issues have emerged in to their lives such as insecurity, lack of social interaction and distrust due to over population, more vulnerability for drug abusing etc.

Also, it was found that the attention of the authorities disappears after completion of the project. The study revealed that interest of the community also diminishes. These attitudes directly affect to the unity of the community, and their participation to common activities followed by reducing the performance of the project.

Also, it was found across the key informant interviews that many housing policies are prepared to address the issues arisen only at eviction and transition stages. They have no provision to support the issues emerged at the consolidation stage. The study finds that specialized activities are required to introduce to the consolidation stage of relocation projects as well.

Also, the development programs currently implemented are not adequate and well planned with the aim of supporting to different groups such as for family, women, adults, children, youth, special kind of groups, floor level, etc. to get better results and at different time periods since the issues they come across and the level of influence of these issues change over the time.

It is very happy to state here that resettlement has created a positive impact on school children in several ways: happiness in living in decent housing, raising social status, enhancing their motivation, new environment more conducive for studies, less

disturbances for studies due to much privacy within the house. This has led them to obtain many educational achievements.

In addition, this research wishes to highlight the following inevitable facts which are vital for the resettlers but not given priority in the relocation process:

1. There are some people who had deeds previously not yet received legal title to new houses even after several years.
2. More heterogeneity of resettled schemes has greatly affected to unity, interaction, safety of the community, discipline, and finally, to the sustainability of the project.
3. The densities of relocation schemes have exceeded the standards. Over-crowding within the scheme has serious implications making inconvenience to the residents live there. This directly links to the lack of safety, lack of unity, vulnerability for drug abusing, difficulties to form a viable and manageable CBO's to address their collective needs.
4. A comprehensive evaluation has not been conducted by the relevant authorities for any resettled scheme. The Absence of evaluation misses the opportunity to know the shortages of the relocation process.
5. No community participation is involved in the relocation process except for development programs.
6. Public facilities - The study reveals that authorities have paid its attention to limited factors basically for housing but little for providing public facilities.
9. Livelihood - The study revealed that resettled families have been affected by livelihood disturbances due to the relocation.
10. Maintenance - There is no proper and regular mechanism for maintenance of the scheme.

## **6.2 Recommendations to improve resettlement practices in Colombo**

In addition, this researcher wishes to highlight the following recommendations related to the finding in the relocation process:

1. It is recommended to be strongly explored all possible options for on-site redevelopment to eliminate and minimize involuntary resettlement.
2. It is recommended to provide adequate support in terms of both physical and non-physical terms within and after the evacuation process.
3. Attention of housing professionals should be focused on the factors affect to performance of resettlement not only in eviction stage but till the consolidation for providing a sustainable living for the resettlers.
4. In order to maintain the performance of the schemes, continuous support needs to be placed in terms of social welfare and community development that takes a time-frame into the consolidation stage. Specialized community activities need to be implemented with the involvement of related authorities, housing professionals, and community based organizations. Also, specialized programs should be implemented on issues find out at the development programs and are sought to overcome those.
5. For the long-term sustainability of projects, there is a need for community development workers within the relocated communities to place more emphasis on fostering community activities. In addition, the active participation of a multi-disciplinary team needs to be involved in intensive community consultations to effectively cope with a range of day-to-day problems.
6. It is advisable not to relocate so many different USS people and over-crowding in one location since it greatly affects to the sustainability of the project.
7. It is highly necessary to conduct a comprehensive evaluation of the relocation process for every resettlements and hence to address all the shortages find out in the relocation process.
8. Close observations are necessary to identify affected parties and to take immediate measures to solve the economic hardship faced after eviction.
9. All the low-income high-rises should be high-quality constructions and undertaken continuous maintenance.



10. It is advisable to make a mechanism to integrate low-income housing with the mainstream housing which allow those people to obtain loans from banks to ensure housing affordability. Also, if they are in a position to buy a better house elsewhere after a considerable period of time and able to provide legal proofs, it is advisable to take away restrictions on selling, mortgaging and renting the resettled house thereafter.

Table 23: Summary of recommendation to improve sustainability in each stage

Factor	Activities to be attended to improve the sustainability		
	Eviction	Transition	Consolidation
Comprehensive Community Consultation	√	√	√
Adequate Support	√	√	√
Cheaper Financing/Govt. Subsidies	√	√	√
Provision of Deeds			√
Take away Restrictions			√
Continous Support for Social Welfare	√	√	√
High Heterogeneity	×	×	×
Over Crowding	×	×	×
Evaluation Survey		√	√
Regular Maintenance & Improvements	√	√	√
Citizen Relationship Management	√	√	√

(Source: By the Researcher, 2018)

In addition, this researcher wishes to highlight the following negative and positive aspects created within the relocation process:

1. Almost all of them mentioned that they now have more freedom and privacy due to less interaction with their neighbors when compared with their previous dwelling. However, that less interaction has been created a lack of security within the scheme which was not the case in the USS. Further, it is interesting to note that less interaction has resulted to absent the sense of belonging to the community.

2. The absence of public spaces and recreational facilities contributes to keeping the residents isolated in their own homes but it contributes to a supportive environment for the development of the family.
3. Some residents gave positive comments that it is an advantage of living with more people because, it automatically creates a competition among neighbors to earn much and to adopt a higher social status.
4. Living in a high-rise building will be a new experience for almost all resettled families. Over-crowding within the scheme and inadequacy of space of lifts have resulted in queuing and waiting a long time at the lift. These kinds of inappropriate conditions can lead to disputes and conflicts becoming major hindrances for the performance of social activities.
5. New housing schemes should provide an adequate environment for people to maintain some of their traditional customs and habits. Otherwise it can lead to forms of alienation and isolation in the new community. Hence, specific social and cultural needs should be taken into account in designing a building complex for resettlement.

### **6.3 Limitations of the research**

Like other researches, this research also had limitations.

Due to the limited time period and particularly being the sole researcher, this research has been restricted only to three case studies selecting one for each stage though more than 15 high-rise low-income housing projects have been implemented so far in Colombo.

It's better if the same scheme is able to analyse for the 3 stages for better results. But due to the limited time period, it was unable so that 3 different schemes were selected in the research for comparison though they are not similar in condition being different by location, number of resettlers, building designing, neighbourhood, management authority, provision of facilities, funding etc. Hence, though it was assumed that these conditions were the same in the analysis, it was not. Hence, there might be some effect on the results.

There was no any resettlement project to select for the consolidation stage in Colombo, so that it was compelled to select Sahaspura and Sinhapura, though they have passed nearly 18 years after relocation.

The year issued of some data and information is another limitation in this research. Therefore, some data may not be totally accurate.

The survey group consisted of several persons. Hence, the explanation of the questionnaire to the residents, understanding the status of them and deciding the rank of answers were depended on the person who surveyed it. Hence, it might be affected to the results to some extent. In addition, some times, because of the busy schedules of the residents, they might have not much considered the importance of the research and not allowing much time to select exactly correct answer expressing their answers soon which can affect the results.

Though it was required to select the most suitable key informants from relevant agencies, for instance NHDA, and REEL, it was unable to find out them who really involved in the relocation process and have all the valuable information with them. Hence, valuable opportunities were sometimes missed for getting the correct information.

Research activities had sometimes to be restricted due to the limited time period, for instance allocated time for a questionnaire, limited budgetary allocations, busy schedules of community people and particularly being the sole researcher.

Also, for degree of sustainability, the responses came from the perspectives of residents for the limited factors which are more related to them were considered. Hence, in this part, the research scope was limited to that aspect only.

#### **6.4 Avenues for further research**

The thesis analyzed the factors affecting success or failures of low-income high-rise resettlement projects in terms of residential satisfaction which leads to residential mobility if not satisfied, the impacts of these factors which vary across the length of stay, and degree of sustainability of these projects.

Due to the limited time period and particularly being the sole researcher, this research has been restricted only to three case studies though more than 15 high-rise low-income housing projects have been implemented so far. A significant avenue is available for further research considering all these housing projects.

Due to the limited time period, this research was restricted to survey the same resettlement project for the said 3 stage: Evacuation, Transition and Consolidation for more correct results.

In addition, this research explored only 19 factors out of 45 as per the literature. Hence, further research can be carried out for the remaining factors to see how they influence on residential satisfaction of resettled people.

Degree of sustainability of high-rise low-income housing covers a vast area. In the research, the researcher only considered the limited number of factors and the responses came from the perspectives of residents to the said factors. But, if we analyse different factors of sustainability, the results could be different.

Finally, according to the research findings and limitations, this researcher suggests for further research opportunities within the subject area.

## **6.5 Accountability of Town Planners as housing professionals**

Town planners have a tremendous responsibility in providing a professional opinion on the development efforts of the government. It is widely recognized that more community involvement in planning and development is the only way in shaping the environment the people live in and make the place better for human settlement. It is now recognized as the best way to ensure a safe, strong, wealthy and more sustainable community.

Town planning is the main tool in approaching development issues. Sound planning can make quality human settlements and the environment. Urban discipline produced through enforcement and regulation could make a city to become economically vibrant but yet a pleasing entity to live in.

It is noteworthy to note here that whoever is responsible for the past failures of development efforts, the people were the affected party.

When at the stages of planning and implementation of housing for the low-income community, lack of community consultation is a major shortage to achieve sustainable human settlements. Community consultation helps to take effective and positive decisions pertaining to town planning matters. Effective planning however cannot be delivered through government activities alone, but all sectors of society have to share the responsibility.

It is noteworthy that planning cannot survive without considering the needs of the community.

## **6.6 Conclusion**

In conclusion, it clearly shows that there is a land scarcity problem within the Colombo. In addition, population density is rapidly increasing due to urban renewal. On one hand, as the experts shown, it is not advisable sending the urban poor away from Colombo. On the other hand, the country has lagged its developments for approximately 30 years due to civil war and the other countries in the region are far more in the front. From the research, it is very clear that the problem is not the high-rises but some other issues such as poor decision making, deliberate policies, poor contribution of community etc.

This research attempted

1. To provide an evidenced-based informative analytical framework for planners and policy makers to consider relocation as a process in which there are multiple factors at play to affect their performance that change across time.
2. Relocation practices and policies must not be misguided by people's perceptions at short terms for their appear to invariably change with time when the sustainability aspect of relocation is considered.

Therefore, long term perceptions and analysis are significant. But, those are too often missing in our urban housing strategies and approaches for low-income settlers. The above two significant perspectives emerging from this research on relocation would enable planners and policy makers to design and direct appropriate recommendations to improve relocation practices in future.

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