

# Factors Influencing the Relocation of Informal Settlements: A Comparative Case Study of Two Urban Communities in Georgetown, Guyana

Madhavi Vinayak Godbole

Department of Geography, University of Guyana

**Abstract:** *Despite several decades of policy interventions and collaborative actions with local and international agencies, informal settlements continue to be a contentious and elusive issue confronting decision - makers in Guyana. Settlement relocation has been one of the main planks of the government's housing policy. However, the settlement relocation strategy has proven to be problematic as informal settlers often display an unwillingness and sometimes open defiance to be relocated. The aim of this research is to determine the factors influencing the informal settlers' reluctance to move to new sites and to explore policy - measures that could facilitate a smooth and effective settlement relocation. Two informal settlements, Lombard Street and Front Road, located in the capital city of Georgetown were selected for the research. The study utilized the Likert Scale with rankings of strongly agree, agree, neutral, disagree and strongly disagree to solicit and assess responses from households with respect to their concerns about removal to new settlement sites. The main findings of the study indicated that informal settlers have been reluctant to be relocated due to such issues as delays in land titling, proximity of proposed sites to services, relocation costs, nearness to employment opportunities, propinquity to relatives and friends and concern for security. The paper concludes by proposing measures that include institutional and policy adjustments for the relocation of informal settlers.*

**Keywords:** informal settlement, housing policy, relocation.

## 1. Introduction

Over the past five decades, urbanization and globalization have made significant contributions to human development in developing countries. These phenomena have lifted large numbers of the global population in the south out of poverty and degradation. Despite this positive trend, there is still much to be done to tackle some of the deep - seated problems that plague the urban environment of developing countries. Urban growth and expansion have led to overcrowding in many urban and peri - urban areas giving rise to the development of informal settlements and concomitant social, economic, and environmental consequences.

The global urban population living in slums declined from 28 percent to 23 percent between 2000 and 2014 (World Bank, 2019); University of Buffalo (2019); Akirso (2021), Koroso, Lengoiboni & Zevenbergen (2021).). However, in 2018, this positive trend was reversed as the proportion increased to 23.5 per cent, a growth rate of 0.5 percent, and the absolute number of people living in slums rose to over 1 billion, 80 percent of which is attributed to Eastern and South - Eastern Asia (370 million), Sub - Saharan Africa (238 million), and Central and Southern Asia (227 million). It is estimated that by 2030, a total of three billion people will require adequate and affordable housing and the need for shelter (Matamanda, 2019). The International Institute for Environmental Development (IIED) (2023) and the World Economic Forum (2023) suggest that if handled as an opportunity rather than a burden, improved housing can actually strengthen community health, education, and economic outcomes.

Several key factors pertaining to informal settlements include land tenure, poor governance, and poverty (Suleiman (2006); Devicienti, Groisman & Poggi, 2015). Other researchers, such as Brown - Luthango et. al (2017), Satterthwaite (2016),

and da Cruz et al. (2019), have sought to build on the concept of informality by broadening the discussion. Discussions of the concept of informality focus on three characteristics - physical, social, and legal that reflect how informal settlements are viewed and projected. Social characteristics include the exclusion of informal settlements from socio - spatial privileges, and other forms of discrimination that tend to disadvantage informal settlement dwellers (Gulyani & Bassett, 2007; Fullilove, 2016; Cities - Alliance, 2019). The physical aspect indicates a lack of social amenities and insufficient access to key services, while the legal aspect focuses on land occupation outside the existing planning regulations or what Mukumba (2019) perceives as a lack of compliance with urban planning regulations (UN - Habitat, 2015; (UN - Habitat, 2015b); Roy, 2009).

In developing countries, the growing number of slum dwellers is the result of both urbanization and population growth that are outpacing the construction of new and affordable homes. Adequate housing is a human right, and the absence of it negatively affects urban equity and inclusion, health and safety, and livelihood opportunities. Renewed policy attention and increased investment are needed to ensure affordable and adequate housing for all by 2030 (World Bank, 2019). In a research paper published by the University of Buffalo (2019) entitled *Strategies for Improving Informal Settlements*, it was posited that almost one billion people, or over 16 percent of the world's population live in informal settlements and the number is projected to double within the next decade due to the fallout from climate change related natural disasters and population dislocation from armed conflicts. The bulk of the migrant population arising from these unfortunate circumstances is likely to migrate to urban areas that appear to offer possibilities for employment, social services, and security.

In the urban areas that are perceived to offer promise of jobs, better health and education, and safety, a considerable proportion of the impoverished migrants have become trapped in informal settlements that lack basic infrastructure, diminishing their dreams of a better life. These overcrowded settlements are often located in ecologically sensitive areas vulnerable to extreme natural disasters. In most developing countries the proliferation of informal settlements often contributes to tragic events such as landslides. A notable example is Freetown, Sierra Leone, where more than 1, 000 people perished from a landslide attributed to a lack of urban planning and management, poor government oversight, and a deficiency of affordable housing in the city (World Bank, 2019).

The 2019 World Bank study proffered that a global drive to improve informal settlements would have a transformative economic impact on societies. It was computed that in some countries gross domestic product (GDP) would increase as much as 10.5 per cent while ensuring that residents in low - and middle - income countries would have access to water, sanitation, and other key infrastructure at a cost of between 2 per cent and 8 percent of their GDP. Further, it was argued that an improvement of housing in informal settlements on a global scale would increase life span by an average of 2.4 years and that more than 730, 000 lives would be saved each year around the world and up to 41.6 million more children would be enrolled in school worldwide.

In Latin America and Caribbean (LAC), research undertaken by Sandoval, Hoberman & Jerath (2019) indicate that the informal economy of the region contributes as much as 50 percent of the total workforce in several countries. The LAC region was identified as one of the most urbanized in the world, with a high rate of the population involved in the urban informal economy. While informality presents municipal administrators with immense challenges, it is not always perceived in a negative light as it plays a significant role in urban development. Failure to achieve objectives related to informal settlement upgrading has been attributed to a multiplicity of issues, including poor coordination, lack of participation, complexity of evaluation techniques, weak financial mechanisms, weak performance of formal institutions, tenure rights and social conflicts (Abbott et al., 2001; Gulyani & Bassett, 2007; Imparato & Ruster, 2003; Iweka & Adebayo, 2015; Keivani & Werna, 2001; Khalifa, 2015). As observed by the researchers, the current literature on settlement upgrading suggests that the actual impact of disruptions on households is still under - studied and under - conceptualized. In the Caribbean context, this remains a major research gap despite the magnitude and threats posed to informal settlements by natural hazards. In this context, this study examined the determinant factors that are considered.

In Guyana, the development of informal settlement has gained the attention of policy - makers, planners and researchers for many decades. Despite various actions have been taken over the years to address the issue, it continued to be problematic. This study investigates the challenges confronting the occupants of informal settlements with respect to their decision - making regarding relocation to new settlement sites. It also identifies policy measures to address the issue of informality. Two informal settlements in the city

of Georgetown, Lombard Street and Front Road (West Ruimveldt), were selected as case studies.

## 2. Background

In Guyana, the emergence of informal settlements dates back to the early 1960s when the country was affected by civil disturbances and the population became spatially segregated. The result was that settlements emerged as families began to occupy areas where vacant lands were available. Due to high rates of rural - urban migration, many households settled in Georgetown and its periphery along canal embankments, sea defence infrastructure and abandoned sugar cane lands. As a result, poverty, joblessness, overcrowding, and housing deficits led to the propagation of informal settlements.

The problem of informality in Guyana has led to an initial response from the government through the creation of an Ad - hoc Emergency Squatter Resettlement Committee (AESRC).

Informal settlement regularization was initiated during the period 1964 - 1965, under the AESRC for over a dozen locations across the country; eight of which exceeded 700 plots. The process involved design layouts that sought to justify land use, focusing on public spaces, and informed by site and occupation surveys. The guidelines provided include maintaining 264 square metres as the smallest lots, limited relocations, provision of street reserves and widths. Despite these positive developments, the crucial element of land titling was neglected (Rajack & Barhate 2004).

The 1996 Report intimated that an attempt to address informal settlement in Guyana was stymied by high cost of infrastructure upgrading stipulated under the *Public Health Ordinance Act 1934*. This *Act* negatively affected the regularization projects set out for building purposes. By the 1970s, the work of the AESRC diminished as the informal settlers were unable to meet the demands of the plot costs. This led to the transfer of squatter issues to the Town & Country Planning Department (TCPD) in 1983. Despite this institutional change, there was a clear absence of a comprehensive framework for regularization. It was also noted that the much - needed institutional strengthening of the CHPA was an important element that was not addressed.

In 2001, the CHPA identified 216 informal settlements nationally. Of these, 117 were to be considered for regularization with the remaining 99 slated for relocation or enforcement alternatives. In this regard, a Squatter Settlements and Depressed Areas Upgrading Project (SSDAUP) was put into effect with the collaboration of the United Nations Development Programme (UNDP) and the Government of Guyana (GoG). The project entailed upgrading of physical and social infrastructure in selected communities. The Government also agreed in principle to review existing legislation for the determination of more affordable and appropriate infrastructure standards.

Three types of informal settlements have been identified for regularization: (a) High Priority Investment (HPI) Area - a pre - 1998 squatter settlement that satisfies at least 70 percent of the criteria for regularization; (b) Moderate Priority

Investment (MPI) Area - a pre - 1998 squatter settlement that satisfies 40 percent to 70 percent of the regularization criteria; (c) Low Priority Investment (LPI) Area - a pre - 1998 squatter settlement that satisfies less than 40 percent of the regularization criteria but which can incrementally progress toward regularization.

A fourth type of informal settlement was identified as Zero Tolerance (ZT) Area which is a squatter settlement that came into being in January 1998 or later, or regardless of its inception date, was not considered for regularization. Land in this area was demarcated or reserved for community, regional, or national purposes (including roads, drainage canals, schools, cemeteries, recreational parks, etc.) and/or is assessed as being unsuitable for housing development (CHPA, 2001). It is evident that there is still a need for research on the relocation of informal settlements in Guyana (Kaieteur News, 2011). The significant gaps that have not been researched to date include policy issues relating to both pre - and post - relocation, different models of relocation, longitudinal studies of relocated settlements, policy reviews.

Through the CHPA, large numbers of homes have been constructed and house lots distributed across the various Administrative Regions of the country. Nevertheless, there are several unresolved legal, administrative, social, and economic issues associated with the regularization of these settlements. Not all of the communities reacted positively to the relocation efforts. In some instances, resistance by informal settlers led to the forced eviction and demolition of houses, evoking public outcry in sections of society.

The implementation of the SSDUAP project has faced several obstacles (UN - Habitat, 2020). For instance, in 2017, the CHPA in collaboration with the Ministry of Public Health and the Ministry of Communities met with the informal settlers of Lombard Street and agreed with them that fifty - six (56) homes would be built for families in a section of East Bank Demerara on the outskirts of Georgetown. However, this proposal was rejected by the Mocha - Arcadia Village Council as the residents claimed they were not consulted on the decision. According to the Village Council Chairman:

*"I think it is not fair on our community that based on your plan, 49 families from Lombard Street are placed here. Mocha has problems of its own without adding to the socio - economic problems of Lombard Street residents to the equation"* (Kaieteur News, 2017).

### **Concept of Informal Settlement**

Informal settlement is a concept often viewed with confusion as it is used synonymously with such terms as squatter settlement, slum, shanty town and many other names used to refer to impoverished neighbourhoods. According to Suleiman (2006), several key factors pertaining to informal

settlement include land tenure, poor governance, and poverty. Other researchers such as Brown - Luthango et. al (2017), Satterthwaite (2016), and da Cruz et. al (2019) have sought to build on the concept of informality by broadening the discussion. They cited poor health, violence and other socio - economic challenges associated with unhealthy and unsafe physical conditions as the primary characteristics of informal settlements. In general, discussions on the concept of informality focus on three characteristics, physical, social, and legal, which reflect how informal settlements are viewed and projected. The social characteristics are the exclusion of informal settlements from socio - spatial privileges and other forms of discrimination that tend to disadvantage informal settlement dwellers. The physical aspect indicates a lack of social amenities and insufficient access to key services while the legal aspect focus on land occupation outside of the existing planning regulations or what Mukumba (2019) perceives as a lack of compliance with urban planning regulations (UN - Habitat, 2015).

An equally important dimension that elucidates the concept of urban informality is housing and settlement. As posited by Roy (2009), informal housing can include any form of shelter or settlement (or lack thereof) which is illegal, falls outside of government control or regulation, or is not afforded protection by the state. Such settlements generally lack urban infrastructure and basic services, while housing may not comply with current regulations, and is often situated in hazardous areas. In addition, informal settlements can be a form of real estate speculation for all income levels of urban residents, affluent and poor. Slums are the most deprived and excluded form of informal settlements characterized by poverty and large agglomerations of dilapidated housing often located in the most hazardous urban land (UN - Habitat, 2015b).

## **3. Research Methodology**

### **Methods and Materials**

This section addresses three aspects, namely the conceptual framework, overview of the study areas, and the research design. Figure 1 shows the conceptual framework of the relationships among the five main factors (economic, social, environmental, infrastructural, and community participation) that determine informal settlers' willingness to relocate to new sites and the issues related to each of the five relocation determinants. These include availability of employment linked to economic factors, proximity of relatives and friends to the proposed relocation site related to social factors, vulnerability to flooding associated with environmental factors, condition of road networks connected to infrastructure, and informal settlers' roles in site selection related to community participation factors. This framework was used to determine the types of data collected.

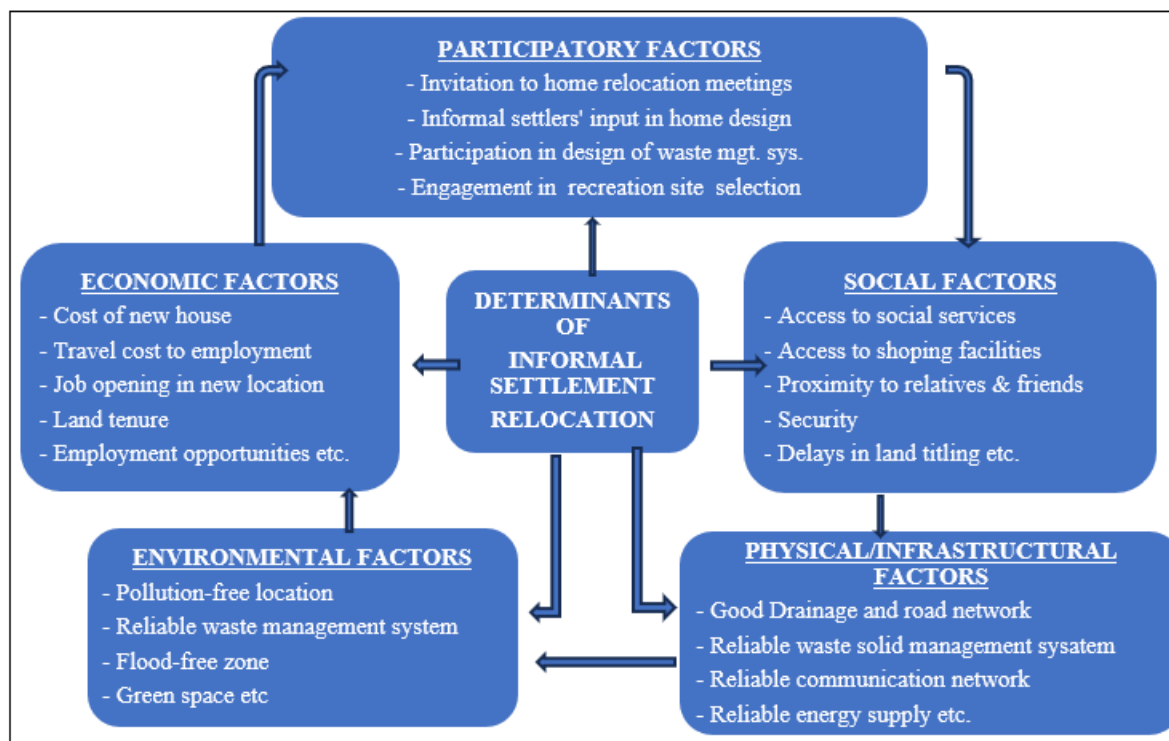


Figure 1: Conceptual Framework

### Overview of the Study Areas

This section of the paper addresses the selection criteria for the two communities investigated, study location, research design, sample size and data collection procedure.

### Selection Criteria

Three criteria were considered for the selection of the settlements investigated. The first is the conditions under which the households have been living. These include the state of buildings and the physical environment. Second, communities identified by the authorities for relocation. The third is the income levels to which the households belong. Households in the lowest - income bracket were considered.

### Location

The two informal settlements of Lombard Street and West La Penitence Front Road are located in the southern section of Georgetown (Refer to Figure 2). The Lombard Street informal

settlement is located in the ward of Charlestown, adjacent to an old industrial area with several dilapidated and abandoned buildings and in proximity to wharves. Some of the wharves are still operable and lie along the east bank of the Demerara River. This industrial area serves as a main source of part-time employment for the Lombard Street residents; hence, their location can be seen as strategic, both in terms of employment and non - rental occupancy. One of the main issues that complicate the situation is that the land occupied by them belongs to a private individual who filed a court action and was granted the right to remove residents from the property. The West Ruimveldt Front Road informal settlement has been in existence for over 20 years, occupying a narrow stretch of land that extends from Hunter Street, Albuystown on the west to Cemetery Road, on the east. To the immediate north of the settlement is a canal that provides drainage for the area, and on the west is the public road.



**Figure 2:** Location of Lombard Street and West La Penitence Front Road Informal Settlements, Guyana

Source: Compiled from Google Earth

**• Research Design**

The research used a mixed - methods approach focusing on the collection of primary and secondary data and information. Questionnaire surveys, focus group discussions and observation were used to collect primary data. Secondary data were obtained from journal articles, newspaper reports, and documents from government agencies.

**• Sample size**

From a total of 412 households, two hundred (200) were sampled, using a confidence level of 95% and a margin of error of 5%. Two focus groups comprising 10 persons each were held to obtain information on why they were reluctant to relocate from the areas and the living conditions.

**• Data Collection Procedures**

For the survey, a simple random sample method was employed. The head or adult member of each household was requested to respond to a set of statements organized into five groups (social, economic, community participation, environmental, and infrastructure). Interviews were conducted with youths and other community members to determine the main issues confronting them with respect to their decision about relocation. The building conditions, evidence of flooding, and services available among other aspects were observed.

**4. Results**

This section of the research focuses on case studies that reflect the perspectives of the respondents in the study areas. The

Case Studies provide an analysis of the social, economic, environmental, participatory, and infrastructural factors that influence relocation. The factors considered for relocation under the Likert Scale are identified as strongly agree (1), agree (2), neutral (3), disagree (4), and strongly disagree (5).

**Case Study A: Lombard Street**

**Social Factors**

The results showed that five social factors have influenced relocation (refer to Table 1). Lombard Street respondents observed that land allocation within proximity to shopping, security and delays in the receipt land titles were the most important factors. Each of the three factors recorded a 50 % response under strongly agree. For the same factors, 40 %, 50 %, and 30 %, respectively fell in the category of agreed. Overall, 90 %, 100 %, and 80 %, respectively, fell under the categories of strongly agree and agree. With respect to proximity to shopping facilities, they rely on public transportation for the procurement of household commodities, which is an additional cost. In the case of security, the respondents expressed a desire to be located among friends and families as a deterrent to crime. The lack of land titles was a concern among households, as these are required for access to bank loans for small business opportunities.

**Table 1:** Social Factors and Settlement Relocation (percentage)

| Likert Scale Statements   | 1  | 2  | 3  | 4  | 5 |
|---|----|----|----|----|---|
| Relocation to new areas needs to consider proximity of relatives and friends.             | 10 | 35 | 45 | 10 |   |
| Land allocation in new housing areas needs to be within proximity of shopping facilities. | 50 | 40 | 10 |    |   |
| Security is an issue for new settlements.   | 50 | 50 |    |    |   |
| Delays in issuing land titles is not a concern for applicants.                            | 50 | 30 | 10 |    |   |
| Informal settlers are willing to accept residence in any area.                            | 12 | 30 | 20 | 10 |   |

### **Economic Factors**

Table 2 provides data on the economic factors that guide the decision - making process of informal settlers with respect to relocation. The most important consideration is proximity to workplace (80 %), reduction in building material costs (60 %), government subsidies (60 %), and cost of land (50 %). Households responded 'strongly agree' to the four factors. For each of the factors, namely land cost, building material cost, and subsidies, 40 % of the respondents stated 'agree'. Overall,

under the categories of strongly agree and agree, the figure for proximity to the workplace is 90 %, cost of land 90 %, reduction in building materials cost 100 %, and government subsidies 100 %. In relation to proximity to workplace, most of the workers are within walking distance from the waterfront where they have temporary employment as stevedores. A distant relocation will increase travel cost to the current place of employment.

**Table 2: Economic Factors and Settlement Relocation (percentage)**

| Likert Scale Statements                             | 1  | 2  | 3  | 4  | 5  |
|---|----|----|----|----|----|
| Proximity to workplace is important.                | 80 | 10 | 10 |    |    |
| Cost of land is a concern.                          | 50 | 40 | 10 |    |    |
| Reduction on building material costs is necessary.  | 60 | 40 |    |    |    |
| Cost of moving to new location is an issue.         | 30 | 30 | 20 | 10 | 10 |
| Government subsidies are required for new settlers. | 60 | 40 |    |    |    |

### **Environmental Factors**

According to Table 3, the respondents identified six environmental factors that contributed to their decisions. As seen in the Table, waste management facilities and good drainage were the most important considerations, yielding 70 % and 80 % strongly agree responses respectively. Parks and recreation areas and good road design followed in

importance, with equal proportion of responses of 50 %. For noise pollution, 50 % of the respondents gave a ranking of agreed. Waste management and good drainage were highlighted as important considerations as the households expressed their aspiration to avoid residing in poor environmental conditions.

**Table 3: Environmental Factors Influencing Lombard Street Settlement Relocation (percentage)**

| Likert Scale Statements  | 1  | 2  | 3  | 4  | 5 |
|--|----|----|----|----|---|
| Waste management facilities is needed in the new location.             | 70 | 20 | 10 |    |   |
| Good drainage system is required in the new location.                  | 80 | 10 | 10 |    |   |
| Environmental monitoring system is useful in the new location.         | 40 | 30 | 30 |    |   |
| Parks and recreation areas are required in the new location.           | 50 | 30 | 20 |    |   |
| Good road design is necessary to avoid erosion.                        | 50 | 40 |    | 10 |   |
| Buildings should be insulated from noise and other forms of pollution. | 20 | 70 | 10 |    |   |

### **Community Participation Factors**

Table 4 provides data on respondents' participation in discussions with the authorities on the settlement relocation. The most important factor identified is settlers' participation in the early stages of the housing development. This accounted for 80 % (strongly agree) of the responses. This was followed by 40% (strongly agree) who indicated that

prospective settlers should participate in decisions about the settlement. The combined figures under strongly agree and agree amounted to 90 % for each of the two issues. The reason for their position on participation is that quite often, housing designs and location do not cater for the needs of their families.

**Table 4: Community Participation Factors and Settlement Relocation (percentage)**

| Likert Scale Statements   | 1  | 2  | 3  | 4  | 5  |
|---|----|----|----|----|----|
| Informal settlers' views on design and layout of settlement are important.            | 30 | 20 | 20 | 20 | 10 |
| Prospective settlers should participate in decisions about the settlement.            | 40 | 50 | 10 |    |    |
| Informal settlers should participate in the selection of house lots.                  | 20 | 30 | 30 | 20 |    |
| Land use in the area should be the concern of planners only.                          | 30 | 20 | 30 | 10 | 10 |
| Management of the scheme should include occupiers.                                    | 30 | 10 | 60 |    |    |
| Potential settlers should be involved in the early stages of the housing development. | 80 | 10 | 10 |    |    |

### **Infrastructural Factors**

Six infrastructural factors were considered as affecting settlement relocation. According to Table 5, the most significant infrastructure concerns of the respondents were health and recreation, transport network, electricity supply, and reliable communication network. The responses fell under strong agreement, with figures of 80 %, 70 %, 60 %,

and 60 %, respectively. The combined figures under strongly agree and agree for the above - mentioned parameters were 100 %, 90 %, 90 %, and 90 %, respectively. There were no responses in the rankings of disagree to strongly disagree. The concerns were based on their strong desire to improve livelihood conditions which are lacking in their current location.

**Table 5: Infrastructure Factors Influencing Lombard Street Settlement Relocation (percentage)**

| Likert Scale Statements  | 1  | 2  | 3  | 4 | 5 |
|--|----|----|----|---|---|
| Transport networks are necessary in new housing areas.                 | 70 | 20 | 10 |   |   |
| Roads should be in housing areas before occupation.                    | 30 | 40 | 30 |   |   |
| Electricity supply is necessary before occupation of housing areas.    | 60 | 30 | 10 |   |   |
| Waste disposal facility is needed in housing areas.                    | 40 | 40 | 20 |   |   |
| Reliable communication network is important in housing areas.          | 60 | 30 | 10 |   |   |
| Facilities for health, recreation etc. are necessary in housing areas. | 80 | 20 |    |   |   |

**Case Study B: Front Road (West Ruimveldt)****Social Factors**

Table 6 reveals data on the concerns of respondents of Front Road relating to their relocation to new settlement sites. The data revealed that security and proximity to relatives and friends are the most important factors with 100 % and 42.5 %,

respectively, recorded under strongly agree. With respect to relocation near to friends and relatives and land allocation near to shopping facilities, 32.5 % and 52.5 % agree. Additionally, the data indicates that 82.5 % and 60 % strongly disagree that there is no concern for delays in land titling and willingness to accept residence in any area, respectively.

**Table 6: Social Factors and Settlement Relocation (percentage)**

| Likert Scale Statements   | 1    | 2    | 3    | 4    | 5    |
|---|------|------|------|------|------|
| Relocation to new areas needs to consider proximity of relatives and friends.             | 42.5 | 32.5 | 25   |      |      |
| Land allocation in new housing areas needs to be within proximity of shopping facilities. |      | 52.5 | 47.5 |      |      |
| Security is an issue for new settlements.   | 100  |      |      |      |      |
| Delays in issuing land titles is not a concern for applicants.                            |      |      |      | 17.5 | 82.5 |
| Informal settlers are willing to accept residence in any area.                            |      |      |      | 40   | 60   |

**Economic Factors**

The five economic factors displayed in Table 7 contributed to the determination of respondents' willingness to relocate. The significance of the parameters varied according to the responses of householders. Under the category of strongly agree, the need for government subsidies, reduction in

building materials cost, cost of land, proximity to workplace, and cost of moving to a new location, recorded responses of 100 %, 100 %, 93.5 %, 72.5 % 52.5 %, respectively. There were no responses under the categories of neutral, disagree, and strongly disagree.

**Table 7: Economic Factors Influencing Front Road Settlement Relocation (percentage)**

| Likert Scale Statements                             | 1    | 2    | 3 | 4 | 5 |
|---|------|------|---|---|---|
| Proximity to workplace is important                 | 72.5 | 27.5 |   |   |   |
| Cost of land is a concern                           | 93.5 | 7.5  |   |   |   |
| Reduction on building material costs is necessary   | 100  |      |   |   |   |
| Cost of moving to new location is an issue.         | 52.5 | 47.5 |   |   |   |
| Government subsidies are required for new settlers. | 100  |      |   |   |   |

**Environmental Factors**

Table 8 focuses on the environmental factors that influenced informal settlers' relocation. Of the 100 respondents, 95 %, 62.5 %, and 55 % agreed that waste management facilities, good road design, and good drainage system, respectively agree that these three factors are most important in influencing their decision. When the scales of strongly agree and agree are combined, the ranking of the respective

parameters amounts to 100 % (5 % strongly agree and 95 % agree), 62.5 % (0 % strongly agree and 62.5 % agree), and 100 % (45 % strongly agree and 55 % agree) and provision of parks and recreation areas accounted for 60 % (37.5 % strongly agree and 22.5 % agree). The data also revealed a figure of 62.5 % under the category of neutral for insulation of buildings from noise and other forms of pollution.

**Table 8: Environmental Factors Influencing Front Road Settlement Relocation (percentage)**

| Likert Scale Statements  | 1    | 2    | 3    | 4  | 5 |
|--|------|------|------|----|---|
| Waste management facilities is needed in the new location.             | 5    | 95   |      |    |   |
| Good drainage system is required in the new location.                  | 45   | 55   |      |    |   |
| Environmental monitoring system is useful in the new location.         | 30   | 45   | 25   |    |   |
| Parks and recreation areas are required in the new location.           | 37.5 | 22.5 | 40   |    |   |
| Good road design is necessary to avoid erosion.                        |      | 62.5 | 17.5 | 20 |   |
| Buildings should be insulated from noise and other forms of pollution. |      | 32.5 | 62.5 | 5  |   |

**Community Participation Factors**

Six community participation factors have been identified by the respondents (Table 9). The factors for which the respondents strongly agree are participation in the design and layout of settlements (100%), settlement development

decisions (82.5), selection of house lots (85%), involvement in land use planning (12.5%), decisions pertaining to settlement management (87.5%), and early involvement in housing development (100%).

**Table 9:** Community Participation Influencing Front Road Settlement Relocation (percentage)

| Likert Scale Statements   | 1    | 2  | 3    | 4  | 5  |
|---|------|----|------|----|----|
| Informal settlers' views on design and layout of settlement are important.            | 100  |    |      |    |    |
| Prospective settlers should participate in decisions about the settlement.            | 82.5 | 15 | 2.5  |    |    |
| Informal settlers should participate in the selection of house lots.                  | 85   | 15 |      |    |    |
| Land use in the area should be the concern of planners only.                          | 12.5 |    | 12.5 | 25 | 50 |
| Management of the scheme should include occupiers.                                    | 87.5 | 5  | 7.5  |    |    |
| Potential settlers should be involved in the early stages of the housing development. | 100  |    |      |    |    |

**Infrastructural Factors**

Five infrastructural factors were considered by the respondents. These are the necessity of transport networks, presence of roads, electricity supply, waste disposal facilities, communication networks, and health and recreation before the commencement of the occupation of housing areas (Refer

to Table 10). According to the data, electricity supply, transport networks, and roads are the leading factors of concern with 87.5 %, 80 %, and 60 %, respectively strongly agreeing. Cumulatively, those who strongly agree and agree constituted 100 %, 100 %, and 85 %, respectively.

**Table 10:** Infrastructural Factors Influencing Front Road Settlement Relocation (Percentage)

| Likert Scale Front Road Statements                                     | 1    | 2    | 3    | 4   | 5 |
|--|------|------|------|-----|---|
| Transport networks are necessary in new housing areas.                 | 80   | 20   |      |     |   |
| Roads should be in housing areas before occupation.                    | 60   | 25   | 35   |     |   |
| Electricity supply is necessary before occupation of housing areas.    | 87.5 | 12.5 |      |     |   |
| Waste disposal facility is needed in housing areas.                    | 42.5 | 30   | 20   | 7.5 |   |
| Reliable communication network is important in housing areas.          | 25   | 2.5  | 72.5 |     |   |
| Facilities for health, recreation etc. are necessary in housing areas. | 57.5 | 17.5 | 10   | 15  |   |

**Discussion on settlement relocation issues**

The importance of the factors affecting the households surveyed in Lombard Street and West Ruimveldt Front Road are largely similar and are combined into five main categories based on the social, economic, environmental, community participation and infrastructure.

**Social Factors**

Access to Services, Proximity to Friends & Relatives and Security

The primary concerns expressed by the respondents in both settlements are access to services such as health, education, and shopping facilities. It was observed that if these services were outside of the new settlement areas, they would negatively impact the travel cost of schooling for their children. In addition, proximity of the new settlements to their friends and relatives is considered important, as they often rely on these individuals to perform the role of caretakers of their children, as they often work irregular hours. Moreover, security was seen as an issue since they lived in overcrowded conditions. Also, observation revealed that the respondents have been living under unhealthy conditions.

**Economic Factors**

Costs of Housing & Journey to Work, Job Opening & Employment Prospects & Land Tenure

The economic factors identified are among the most concerning for the respondents, given the impoverished conditions in which they live and their low - earning capacity. In this context, they expressed apprehensions regarding housing, travel to work, job openings, employment prospects, and land tenure. This data suggest that the economic factors have not been sufficiently articulated by the authorities.

**Environmental Factors**

Pollution, Reliable Waste Management System, Flood - free Zone & Green Open Space

Most of the respondents have been living in depressed conditions affected by poor housing and continue to be

affected by flooding and improper disposal of solid waste. In both communities, concerns about these issues were expressed as factors that determine their willingness to relocate.

**Community participation**

Involvement in Home Design, Recreation & Site Selection Participating in their future development is deemed important to respondents as the building of homes with respect to designs and locations in proximity to recreation amenities. In many of the proposed relocation sites, provisions were not made to address these issues. Further, the respondents expressed the view that their participation in the early decisions about the proposed settlements was of major importance. Some respondents suggested that upon relocation, they would alter their buildings to accommodate private business.

**Infrastructure**

Drainage & Road Network, Waste Management System, Communication & Energy Supply

Many households surveyed and targeted for relocation have experienced decades of living conditions with poor drainage and road networks, as well as a lack of proper waste management and electricity supply. As such, they expressed concerns about these issues, indicating their unwillingness to return to a similar situation, if they were to accept relocation. There is evidence that after several years, occupation has not taken place in many newly established housing settlement areas.

**Proposed Action Plan**

The proposed action plan is based on a grouping of the main factors identified by the survey respondents, interviewees, and observation. The plan identifies four (4) areas to be addressed. These are relocation factors, actions to be addressed, implementation timeline, and beneficiaries of the actions.

**Table 11: Proposed Plan of Action for Settlement Relocation**

| What are the main settlement relocation factors?  | What actions are required to address them?  | What is the timeline for implementation? | Who are likely to benefit from the settlement relocation?                   |
|---|---|--|---|
| <i>Access to Services, proximity to friends &amp; relatives and security</i>                            | - Establishment of community groups.<br>- Engage communities in meetings,<br>- Develop a collaborative plan                                       | Short - term & Medium Term               | Informal settlers,<br>Government of Guyana<br>Neighboring communities       |
| <i>Costs of housing &amp; journey to work, job opening &amp; employment prospects &amp; land tenure</i> | - Provide subsidies, make available community transport system,<br>- Implement regulations to issue land titles                                   | Medium & Long - term                     | Informal settlers,<br>Neighbourhood communities<br>Private sector employers |
| <i>Pollution, reliable waste management system, flood - free zone &amp; green open space</i>            | - Establish a committee to monitor pollution,<br>- Undertake surveys to ensure area is flood free,<br>- Incorporate open areas recreation in plan | Long - term                              | Informal settlers,<br>Neighbourhood communities<br>Private sector employers |
| <i>Involvement in home design, recreation &amp; site selection meetings</i>                             | CHPA to develop and share house designs with households, engage households in site visits   | Short - term & Medium - term             | Informal settlers,<br>Neighbouring communities                              |
| <i>Drainage &amp; road network, waste management system, communication &amp; energy supply</i>          | Drainage & Irrigation Board (D&I), EPA, Guyana Power & Light (GPL), GT&T)   | Medium & Long - term                     | Informal settlers,<br>Neighbouring communities                              |

## 5. Conclusion

Informal settlement relocation is a controversial public policy matter in Guyana related to social, economic, environment, infrastructure, and community participation issues. These issues include land tenure, security, poor housing quality, proximity to services and employment opportunities, among others. Several attempts have been made over the past decades to address the problem of informal settlement through regularization and relocation. While attempts at regularization have been relatively successful, relocation remains problematic for the authorities.

This study has revealed a number of issues relevant to the relocation of informal settlers in two housing areas: Lombard Street and West Ruimveldt Front Road. In the two settlements studied, households have expressed a reluctance to relocate despite the poor conditions under which they live. Their resistance to relocation is based on a number of social, economic, environmental, community participatory and infrastructure factors. Related to these factors are issues pertaining to the households' desire to reside close to relatives and friends, social services (schools, health, and recreational facilities), being in proximity to employment opportunities, living in a pollution - free environment, and good infrastructure (roads, drainage canals and electricity). Further, households were concerned about the costs of relocation, rebuilding, and land tenure issue. In relation to land tenure, many of the households were dissatisfied with the lengthy waiting period for the issuance of land titles, despite promises by the authorities that the delivery of titles would have been expedited.

Overall, the issues expressed by the households sampled has brought a new spotlight about the manner in which the relocation of informal settlements in Guyana should be addressed. Stakeholders' participation and concurrence with the relocation process are perceived as key requirements for successful implementation of a sound housing policy.

## References

- [1] Abbott, J. (2001). Use of spatial data to support the integration of informal settlements into the formal city. *International Journal of Applied Earth Observation and Geoinformation*, 3 (3), 267 - 277.
- [2] Abbott, J., Martinez, I., & Huchzermeyer, M. (2001). *An analysis of informal settlements and applicability of visual settlement planning VISIP in South Africa*. University of Cape Town, Department of Civil Engineering.
- [3] Akirso, N. A. (2021). Exploring causes and consequences of squatter settlement in Jimma Town, Oromia Regional State, Ethiopia. *International Journal of Sociology and Anthropology*, 13 (2), 58 - 63.
- [4] Brown - Luthango, M., Reyes, E., & Gubevu, M. (2017). Informal settlement upgrading and safety: experiences from Cape Town, South Africa. *Journal of Housing and the Built Environment*, 32, 471 - 493
- [5] Central Housing & Planning Authority (2001), List of Squatting Areas and their Categories 1st September, (Draft Document).
- [6] Cities Alliance. (2020). About slum upgrading: Why is slum upgrading important? <https://www.citiesalliance.org/about-slum-upgrading#>
- [7] Devicienti, F., Groisman, F., & Poggi, A. (2009, December). *Informality and poverty: Are these processes dynamically interrelated? Evidence from Argentina* (No.146) Society for the Study of Economic Inequality, ECINEQ 2009 - 146.
- [8] Fullilove, M. T. (2016). *Root shock: How tearing up city neighborhoods hurts America, and what we can do about it*. New Village Press.
- [9] Gulyani, S., & Bassett, E. M. (2007). Retrieving the baby from the bathwater: Slum upgrading in Sub - Saharan Africa. *Environment and Planning C: Government and Policy*, 25 (4), 486 - 515.
- [10] Imparato, I., & Ruster, F. (2003). *Slum upgrading and participation: Lessons from Latin America*. World Bank. <http://dx.doi.org/10.1596/0-8213-5370-5>
- [11] Iweka, A. C., & Adebayo, A. K. (2015). Global slum upgrading practices: Identifying the contemporary

- challenges. *Journal of Construction Project Management and Innovation*, 5 (1), 1034 - 1044.
- [12] Kaieteur News (2017). Residents share concerns over relocation of squatters to Mocha. <https://kaieteurnewsonline.com>
- [13] Keivani, R., & Werna, E. (2001). Modes of housing provision in developing countries. *Progress in Planning*, 55 (2), 65 - 118.
- [14] Keivani, R., & Werna, E. (2001). Refocusing the housing debate in developing countries from a pluralist perspective. *Habitat International*, 25 (2), 191 - 208.
- [15] Khalifa, M. A. (2015). Evolution of informal settlements upgrading strategies in Egypt: From negligence to participatory development. *Ain Shams Engineering Journal*, 6 (4), 1151 - 1159.
- [16] Koroso, N. H., Zevenbergen, J. A., & Lengoiboni, M. (2018). *Land institutions' credibility: Analyzing the role of complementary institutions*. <https://doi.org/10.1016/j>.
- [17] Koroso, N. H., Lengoiboni, M. & Zevenbergen, J. A. (2021). Urbanization and urban land use efficiency: Evidence from regional and Addis Ababa satellite cities, Ethiopia. *Habitat International*, 117, 102437.
- [18] Matamanda, A. R. (2020). Battling the informal settlement challenge through sustainable city framework: Experiences and lessons from Harare, Zimbabwe. *Development Southern Africa*, 37 (2), 217 - 231
- [19] Medvedev, D. & Oviedo, A. M. (2013). *Informality and profitability: Evidence from a new firm survey in Ecuador*. World Bank; American University.
- [20] Napier, M. (2007). *Informal settlement integration, the environment, and sustainable livelihoods in sub-Saharan Africa*. Council for Scientific & Industrial Research in South Africa.
- [21] Okeke, F. O., Eziyi, I. O., Udeh, C. A., & Ezema, E. C. (2020). City as habitat: Assembling the fragile city. *Civil Engineering Journal*, 6 (6), 1143 - 1154.
- [22] Parliament of Guyana.1934. *Public Health Act*. <https://parliament.gov.gy/. . . /public-health-act-1934>
- [23] Rigon, A. (2014). Building local governance: Participation and elite capture in slum-upgrading in Kenya. *Development and Change*, 45 (2), 257 - 283.
- [24] Rajack, R. & S. Barhate (2004). Urban poverty and habitat precariousness in the Caribbean, Sustainable Development & Human Settlement Division, CEPAL, Santiago, Chile, April.
- [25] Roy, A. (2009). Why India cannot plan its cities: Informality, insurgence, and the idiom of urbanization. *Planning Theory*, 8 (1), 76 - 87. <https://doi.org/10.1177/1473095208099299>
- [26] Satterthwaite, D. (2023). *A new urban agenda?* World Economic Forum.
- [27] Smith, T. A., & Brown, A. (2019). Community - led housing and urban livelihoods: Measuring employment in low - income housing delivery. *Habitat International*, 94, 102061.
- [28] UN - HABITAT. (2008). Quick guides for policy makers 1; Urbanization: The role the poor play in urban development. UN - Habitat ([unhabitat.org](http://unhabitat.org)).
- [29] UN - Habitat. (2015). *Progress Report*. <https://unhabitat.org>.
- [30] UN - Habitat.2020. *Annual Report*. UN - Habitat - Annual Report 2020 ([unhabitat.org](http://unhabitat.org)) .
- [31] Vahapoğlu, L. (2019). Strategies for improving informal settlements. *Global Health Equity*, 2, 02\_Final\_Policy Brief\_Smith\_NCL. pdf ([buffalo.edu](http://buffalo.edu)).
- [32] <https://www.buffalo.edu/content/www>
- [33] World Economic Forum Annual Meeting 2023, Davos World Economic Forum ([weforum.org](http://weforum.org)) . UN - Habitat <https://unhabitat.org/annualreport>