Original Research Article

Neglecting Informal Settlement PlanninginaDisaster Scenario in Port Harcourt: A Denied Reality!

Abstract

The formation of informal settlements is increasing rapidly, especially in some developing economies such as the Port Harcourt Municipality in Nigeria. These settlements are vulnerable to several urban challenges from natural and anthropogenic disasters, including the recent COVID-19 pandemic. The landscape of Port Harcourt Municipality is inundated with the proliferation of informal urban settlements, which engendered these settlements to become vulnerable to the vagaries and challenges of the COVID-19 pandemic, which equally presented opportunities for proper urban planning and management. This study will unfold the challenges and opportunities that have threatened the informal population in these settlements and provide sustainable measures that will build resilience and adaptive capacities for the dwellers and government through strengthening governance structures and institutions during the COVID-19 pandemic as urban adversity. However, the identification and characterisation of informal settlements will provide a better understanding and knowledge of the settlements as a resource to improve the social and economic conditions of the dwellers, distribution of infrastructural facilities and services, and wealth, thereby enhancing the quality of life and wellbeing of the residents and the general urban affairs.

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Keywords: Informal Settlement, Planning, Disaster Scenario, Port Harcourt

Introduction

Globally, the population of urban areas is growing at an unprecedented rate, with over 4.2 billion populations as of 2019. It is expected that by 2030, the urban population will reach 5 billion (United Nations (UN), 2018). This rapid urban population growth has brought concern to urban governments and residents as there is an incremental proliferation of informal settlements in most urban areas, especially in developing economies (Muzondi, 2014). Over 25% of the urban population is estimated to live in informal urban settlements (Avis, 2016).

The United Nations Human Settlements Programme (UN-Habitat) (2015) asserts that informal settlements are locations with three primary conditions, including residential areas where the:

i. Inhabitants often have no security of tenure for the land or dwellings they inhabit or occupy;
ii. Neighbourhoods usually lack essential services and city infrastructure; and
iii. The housing may not comply with planning and building codes and regulations and is often situated in geographically and environmentally sensitive areas.

These three scenarios describe the concept of informal settlements, which combines squatter and slum developments. Informal settlements are often characterised by various urban planning and management deficiencies. Informal settlements are described from their characteristics as residential areas that depict unplanned neighbourhoods. Residents do not have legal titles to land and buildings, and there are no basic neighbourhood facilities and services such as healthcare and educational facilities, lack of potable water and electricity supply, poor sanitation and environmental conditions, and lack of recreational and open spaces for inhabitants, lack of access roads, drainages, and inadequate setbacks. Other characteristics include poor housing, overcrowding and dilapidated structures with poor foundation and roofing and poor ventilation and sunlight penetration as a result of poor building orientation and development of land with poor bearing capacity that does not adhere to physical planning

regulations and standards and building codes and regulations (Osrin *et al.*, 2011). All these conditions characterised informal settlements in any country and dimension (Fellmann *et al.*, 2005).

Settlement entails the assessment and the distribution of buildings that people attach themselves to the land (Stone, 1965). Settlement geography highlights the distributions exclusively and emphasises the process, structure, and meaningful interaction between settlements and their surrounding environment. In recent times, settlement study has evolved into the interaction of humans with the ecological and physical environment. The settlement represents a notion used in Geography, Statistics, Archaeology, Landscape Architects, Urban and Regional Planning, and other subjects for a permanent or temporary community where people live, without being specific as to size, population, or importance (Jordan,1966).

Informal settlements are identified by different connotations globally. For instance, in the Latin American Countries region, they are known as *Villas miseria* in Argentina, *barriospopulares* inBolivia, favelas in Brazil, *campamentos* in Chile, *barriosprecarios* or *tugurios* in Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, Honduras, Mexico and Paraguay, *champas* inGuatemala, *asentamientoshumanos* or *tugurios* inPeru,and *categories* in Uruguay, or slums or shanty towns as in Barbados and Jamaica.

At the same time, it is called *waterside* settlements in Nigeria. Notwithstanding these diverse connotations, informal settlements globally share standard urbanisation features in their most extreme state. A large cluster of houses characterises this informal settlement in poor conditions and endemic poverty and are usually located in disaster-prone areas. In these settlements, residents have limited access to public spaces and green areas and are constantly exposed to eviction, disease, and violence (UN-Habitat, 2015c).

Nevertheless, urban informality not only houses the poor and marginalised but also serves as a form of real estate speculation that directly impacts both high-income and middle-income groups. Land markets and informal urbanisation are closely related and play significant roles for the middle class and even the elites. Often, informal settlements occur in a complex and continuous connection between legality and illegality. These settlements formed through self-built housing and illegal land invasion co-exist with the informal subdivision of land of high value in the market but transferred or legally acquired (Roy &AlSayyad, 2004). These and other elements related to the complex system of cities that include land markets, governance and the participation of public and private actors expose the complexity of the phenomenon, at the same time indicating that the definition of the 'informal' as the opposite of 'formal' entails more research and further reflection (Castro *et al.*, 2015).

Port Harcourt and its Informal Settlements

Port Harcourt in Rivers State is one of the fastest-growing cities in Nigeria. The Rivers State statistical agency put the city's annual growth rate at over 5%. As of 2004, the Port Harcourt metropolis covers an area of 180,000 hectares with a population of 1,017,461. Port Harcourt is one of Nigeria's major seaports and the centre of the nation's oil and gas industry. It was established in 1912 by the British colonial government because its site met the locational requirement for a rail and a port. Like many cities in Nigeria, Port Harcourt has record rapid growth in population and area spread (Anyanwu, 1979). From an estimated population of 5,000 in 1915, it grew to 30,200 in 1944. By 1963, its population was 179,563, and by 1973 it had reached 231,532 persons (Obinna *et al.*, 2010). The Port Harcourt municipality's population is 440,399 by the 1991 national population census.

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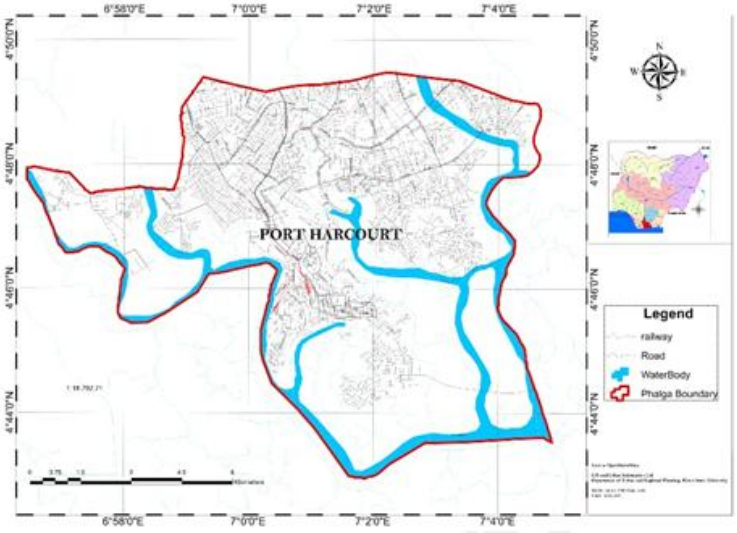

Figure 1: Map of Rivers State Showing Port Harcourt Municipality
Source: Department of Urban and Regional Planning, Rivers State University, 2022

The unplanned nature of informal settlements in Port Harcourt Metropolis is evident as squatter settlements and slums in the form of urban communities. Due to the unplanned nature of these settlements, they are highly vulnerable to any form of disease as it spreads like wildfire, especially during the pandemic. During the pandemic, several persons were affected physically, socially, economically, and psychologically as the living conditions in these settlements became unbearable due to an apparent lack of appropriate facilities and services. This has transformed and changed many informal settlements' residents' lifestyles as the settlements have become breeding and spreading grounds for the pandemic and a potential source of threat to public health. In addition, the non-availability and inadequate provision of basic urban infrastructure and services have increased the exposure of inhabitants of informal settlements to the pandemic and the continuous rapid spreading of the virus.

The result of previous studies indicates that there are forty-one (41) identified informal settlements that have metamorphosed into waterfront settlements within the Port Harcourt municipality. These settlements include Abuja, Afikpo/Abba, Andoni, Akwuzu, Bishop Johnson, Bundu, Baptist, Captain Amangala, Cemetery, Egede/Akokwa, Emenike, Egbema, Enugu/Aggrey, Eastern By-Pass, Elechi Beach, Ibadan/Yam zone, Igbukulu, Marine Base, Ndoki, NEPA, Nanka, Nembe/Bonny, Orupolo, Ogu/Okujagu, Okrika, Ojike/Urualla, Prison, Rex Lawson/Etche, Timber/Okwelle, Tourist Beach, Udi, Witt and Bush (Reclamation Drive) (Kio-Lawson, 2014; Theis *et al.*, 2009). These unplanned settlements have been existing since the inception of the Port Harcourt 1975 Masterplan. However, over the years, some of these informal settlements have been reclaimed and converted to other land uses due to community annexation and government negligence to satisfy the growing demand for land, for economic prosperity and urbanisation. For instance, the trend of urban growth in Port Harcourt is moving in the southerly direction and occurs through the occupation, reclamation, and conversion of unoccupied wetlands for other land use (Brown &Wachukwu, 2015).

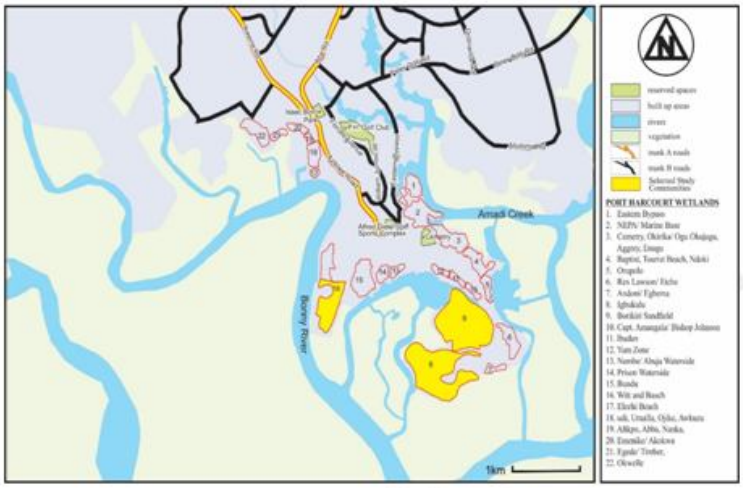

Figure2: Map of Port Harcourt Showing Wetlands (Informal Settlements)
Source: Authors' Adaptation (Theis *et al.*, 2009)

Urbanisation and the formation of informal settlements in Port Harcourt

Urbanisation is a multifaceted concept driven by diverse perspectives ranging from demographic and structural transformation to behavioural transformation. Demographic transformation is an ideology that contextually views urbanisation as the rapid growth of the urban area. It is further perceived to reflect an increase in population with a commensurate increase in the expansion and development of the neighbourhood. At the same time, the structural transformation is perceived to be related to the changes that occur from an agrarian to a more industrialised neighbourhood that reflects a source of livelihood, especially in the construction of buildings and social infrastructure. Also, the behavioural transformation hinges on palpable changes in the circumstances of urban life in terms of economic and social spheres (Alam, 2011).

Based on these perceptions, urbanisation connotes the swift changes in the demographic, economic, social, and structural growth of urban areas with a transition from an agrarian to an industrial means of livelihood. For example, over the years, port Harcourt municipality has witnessed significant surges and trends in in-migration, leading to an exponential spike in the urban population with significant demand for continuous land development (Rivers State Government, 1975). The consequences of rapid urban growth are distorting the urban ecosystem and further altering services to meet the populace's physical, social, economic, and infrastructural needs (Vitousek *et al.*, 1997).

However, there are negative and positive sides of urbanisation on the urban landscape depending on how it is planned out or managed. Urbanisation engenders development with a concomitant rise in income and standards of living. Nevertheless, it fosters urban environmental hazards such as urban pollution, mudslides, and flash floods. Hence, the need to effectively manage such rapid urbanisation (Nyambod, 2010).

Incidences of urbanisation in Port Harcourt municipality have engendered the complete transformation of the urban wetlands through reclamation and conversion, and change of use has tacitly become one significant challenge burdening the effective administration of land use. It is such that planned city expansion in Port Harcourt and other budding cities in Nigeria have similar challenges. Fundamentally, the focus of these challenges in urban land uses revolves around who has access to the land, the acquisition processes and extant laws regulating the use of such land. However, in most Nigerian cities, the challenges inundating land use could be resolved with effective and purposeful planning (Owei et al., 2010).

The land is limited in supply to meet the populace's surging urban infrastructural development and housing needs. This relative absolute scarcity of land has led developers to encroach on the existing wetlands in search of land. Wetlands, as they exist, play significant roles within the cityscape as they help to sustain the urban ecosystem and general wellbeing, health and wealth. Therefore, preserving wetlands amid rapid urbanisation falls within the purview of implementing planning schemes (Wang *et al.,* 2008).

In 2017, the UN-Habitat (2017a) and the 2016 World Cities Report (WRC) (UN-Habitat, 2016) asserted that about 54 per cent of the global population resides in cities that produce around 80 per cent of the global gross domestic product (GDP). Generally, urbanisation is perceived to be a 'transformative force' that has engendered millions of urban dwellers to move away from the scourge of urban poverty through increased employment opportunities, productivity and large-scale investment in infrastructure and services. However, despite the improved quality of life in most urban areas globally, several vulnerable populations still face massive challenges and changes in the urbanscape. Some persistent urban issues in those areas include uncontrolled and unplanned urban growth, changes in family patterns, a growing number of urban residents living in slums and informal settlements, and the challenge of providing urban services for all (UN-Habitat, 2016).

Informal Settlements and Disaster Vulnerability

A global conservative estimate indicates an increase in slum dwellers in most developing countries, given that over 880 million residents lived in slums in 2014, compared to 791 million in 2000 and 689 million in 1990. Implicitly, it would be a daunting task to reduce the noticeable gap between the rest of the urban population who reside in an adequate shelter with access to essential services and those who reside in slums. This gap indicates that the challenges inherent in informal settlements are tenacious issues that require prompt attention (UN-Habitat, 2016).

In the past two decades, there has been a phenomenal increase in vulnerability to disasters and their consequential impacts on cities in the form of damaged homes, affected people or damage to health and education equipment (Davis, 2006).Several researchers posit that the growth rate of the urban population occurs principally in small and medium-sized cities West *et al.,* (2007), where the expansion of informal settlements is often found in disaster-prone areas such as flood plains, watercourses, valleys and marshy areas (De Risi *et al.,* 2013; Satterthwaite, 2011). Incidences of high population density combined with deprived locations of informal settlements as a result of urban growth exacerbate the existing vulnerability of the dwellers of informal settlements.

Therefore, risk represents a function of the disaster, hazard, vulnerability, and exposure (Kron, 2002). Vulnerability in this context negates any form of objective and precise definition.

Vulnerability in this context connotes the degree of susceptibility of a system to a disaster due to its intrinsic characteristics, while exposure refers to the degree and extent to which a system is vulnerable to disaster. The level of vulnerability has made it imperative to assess, analyse and present the risk outline of informal settlements to facilitate an effective disaster risk management paradigm.

However, risk assessment, evaluation and mitigation are critical components of disaster risk management because risk assessment entrenches the basis to kickstart the reduction of the negative consequences of natural disasters like the pandemic and its associated risks to the dwellers of the informal settlements (Usamah *et al.*, 2014). These adverse effects occasioned by disasters necessitate prioritisation, implementation, and maintenance of the appropriate disaster risk-reduction measures recommended by the risk assessment method. Furthermore, some of these recommended actions instituted to mitigate the risk from the assessment are further evaluated to ascertain their effectiveness after implementation. However, disaster risk management in informal settlements has received little attention in research, possibly due to its challenging nature (Zahari, 2013), and besides, these informal settlements are usually located outside the designated planning areas of urban areas.

Reducing the vulnerability of informal urban settlements is a direct and proactive approach to mitigating disaster impacts. Vulnerability to disaster hazards is contextual, requiring stringent assessment and analysis of the characteristics of a given area to reduce the consequences of any disaster. There is a strong linkage between informal settlements' characteristics and vulnerability to disaster's impact (Napier, 2007; Taş *et al.*, 2013). Naturally, informal settlements are heterogeneous and mostly comprised of in-migrants from diverse cultures, orientations, and backgrounds. In addition, people who reside in informal settlements generally have minimal educational qualifications to work in the formal sector of the economy (Maarman, 2009; King and Amponsah, 2012).

Similarly, most of the inhabitants in the informal settlements in Port Harcourt municipality are primarily involved in low-income activities such as handicraft production, small-scale commercial activities (kiosks) and product delivery agents to artisanal refinery operators. These Inhabitants have a precarious livelihood and limited sources of income. Such financial incapacitation limits them from rebuilding their houses, let alone bouncing back to near normal after any disaster. Prior to their existence, some of these informal settlements were left as vacant areas within the urban environment due to their inherent risk of various forms of disaster (Alexander, 2005; Doberstein *et al.*, 2013).

The demarcation of such unplanned areas gives credence to why informal settlements are often associated with poor environmental conditions, inadequate infrastructure, poor planning and zoning, and insecure tenure and holdings. There usually is a frequent threat of eviction of informal settlers by the government through the local planning authorities Williams (2012), and their low-income levels often reinforce the perception of these settlers to construct low-quality housing. These dwellers often perceive spending enormous money on building houses as not rational, as they may be demolished during an eviction. Besides, the characteristics of the insecure tenure in these informal settlements further induce the construction of low-quality housing units that are prone to disaster (Vargas-Hernandez, 2011).

Furthermore, these informal settlements are often exposed to high levels of vulnerability with minimal coping and resilience capacity. Against this background, this paper tries to identify

why Rivers State, Nigeria's government, cannot prioritise managing disasters like the pandemic in its informal settlements.

Methods

The study adopts a qualitative research approach that applied Individual In-depth Interview (III) design as it tries to identify the challenges inundating informal settlements in Port Harcourt Municipalityspecifically from three (3) informal settlements namely: Okrika Waterside, Nembe Waterside and Ibadan Waterside through key informants as it relates to proper planning and disease control in times of the COVID-19 pandemic. Sample was drawn purposively, and the data was collected using semi-structured interviews to interview residents in these selected informal settlements to ascertain their perceptions of government responses during the pandemic. In addition, photographs of these selected informal settlements were taken to characterise the situation during the pandemic period.

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Narratives from Interviewees

Drawing from the narratives of random respondents in some select informal settlements in Port Harcourt Municipality, most respondents have traumatic experiences during the COVID-19 pandemic and the subsequently forced lockdowns (see Figures 3 and 4).

One of the respondents who happens to be a female and a petty trader whose family depends on her daily sales for their survival narrates thus:

> *'Nobody came to inform us about COVID-19; all we hear is that nobody should go out to do anything (forced lockdown), and we just saw policemen and soldiers forcing us to stay home. They forgot that we live on our daily gains to care for ~~my~~ our family ….'*
>
> Respondent 1 from Okrika Waterside

Figure 3: Okrika Waterside showing Forceful Lockdown by Government
Source: Authors' Field Survey, 2020

Another respondent who is a male artisan:

> *'See me, I survive from my daily hustle as a mechanic ~~in that garage~~. We were just surprised that the governor (Rivers State) decided to lock us down here with nothing to support us, no food, no money no other help. Even the palliatives were given to their boys (political loyalists) and the left us here to*

die. How did they expect us to take care of our families? This government is very wicked to poor people like us….'

Respondent 2 from Nembe Waterside

Figure 4: Nembe Waterside showing Informality in Outlook
Source: Authors' Field Survey, 2020

Another female respondent narrates thus:

'During the COVID-19 lockdown, all the markets, shops, and slaughter (abattoirs) were closed and nowhere to buy foodstuffs, meat, or fish. So, we usually go to makeshift markets between 3am and 5am before daylight and continue with their lockdown. That was how we survived that time….'

Respondent 1 from Ibadan Waterside

Government Attitude Towards Informal Settlements and the Challenges for Planning These Settlements

Over the years, the attitude and responses of the government of Rivers State towards informal settlements in the urban areas in Port Harcourt have been grossly abysmal. The governments and their planning agencies adopt ~~the~~ little or no concern approach related to those settlements. Non-provision of basic urban infrastructure and services has increased their exposure to disasters such as the COVID-19 pandemic and other diseases spreading rapidly like wildfire. Although the nature and form of the development of informal settlements cannot promote social and physical distancing as buildings are clustered together without setbacks, multiple families live under one roof with no space for individual interaction, socialisation, and recreation.

The general lack of basic social infrastructure such as healthcare and educational facilities, potable water supply, and inadequate electricity supply has encouraged the inhabitants to interact physically without proper observation of physical and social distancing during the pandemic. Furthermore, the poor educational and economic background of inhabitants of these settlements make them live life from their daily hustling (hand to mouth) through informal trading and unskilled job activities. These scenarios expose them to contact viruses and spread them faster amongst them. This situation affects the local economy of these settlements and the city generally. Furthermore, lack of understanding seems to help the spreading of the virus as the inhabitants do not adhere to government and healthcare experts' advice, regulations and measures put in place to contain the spreading of the virus.

The challenges of planning informal settlements are enormous in our society. The government of Rivers State and, by extension, Nigeria gives priority attention to the emergence of formal settlements. This palpable dereliction of planning services poses an immense concern to urban planning and urban dwellers. There is a palpable inconsistency in urban policies toward urban development, especially regarding sustainable land use management. This lacklustre planning approach has promoted the formation of informal settlements in our cities and other urban areas. Besides, Avis (2016) identified weak governance systems in developing countries as the primary driver of the historical proliferation of informal settlements.

Regular changes in the political class and governance structure expose many parts of the urban areas, especially public open spaces, marginal lands and urban fringes (peripheries), to the formation of informal settlements (De Risi*et al*., 2013; Satterthwaite, 2011). Furthermore, inadequate funding is a bane to informal settlement planning as the government does not consider them equal to other city citizens and does not contribute much economically through tax to the local economy. Consequently, the limited capacities of local governments, planning authorities, and legal and budgetary deficits are pre-eminent parameters hindering the potential solutions to urban informality (Avis, 2016). The poor organisational structure of the planning agencies in Port Harcourt municipality and the inadequate human resources (quantity and quality) to manage the urban environment are other challenges impeding the proper planning of informal settlements.

Expected Government Responses

i. Regulation of informal settlements by legalising the right to ownership of lands and property they occupy.

ii. Government leadership should provide leadership roles from the national to local levels by formulating and implementing policies to improve the quality of the settlements.

iii. Encourage an equitable and sustainable land use management system in urban areas by involving all stakeholders, especially inhabitants of informal settlements where lands have been misused and abused in an unsustainable manner.

iv. Establish a good governance framework that will allow all urban stakeholders, especially inhabitants of these informal settlements, to be part of urban areas' policy and decision-making processes. This process will enhance effective and efficient public participation, increase inclusiveness in the system and build confidence in the inhabitants of the informal settlements.

v. Provide adequate and affordable housing, upgrading of buildings, secured tenure status, provision of basic urban infrastructure and services and improved livelihood and employment opportunities in informal settlements through urban renewal programmes and schemes; and

vi. Profiling residents of informal settlements to seek their knowledge and opinions and prioritise their needs through need analysis.

Conclusion

The emergence of informal settlements in urban areas in most developing countries is very difficult to curtail, especially where there are no appropriate policies to check the growth of the urban population. Moreover, an increase in the population density of informal settlements engenders these settlements to become hotspots for disasters such as pandemics. It further

increases the vulnerability indirectly or directly the chances of residents' exposure in these informal settlements and makes them disaster traps. Although instances of an outbreak of any disaster are difficult to predict and prevent in these informal settlements, it is crucial to minimise residents' exposure and vulnerability levels. Thus, there is the need to create an enabling policy environment (landuse, social, commercial, and environmental policies). It will provide a firm footing that would engender the effective implementation of credible environmental, landuse, social, and communication policies that would genuinely alter the characteristics of informal settlement to reduce further the degree of exposure and vulnerability to reduce the risk associated with any disaster consistently.

Recommendations

i. Proper education of the residents on the dangers and implications of the rapid spread of diseases by not adhering to guidelines and measures to curb the effects and spread of the virus;

ii. Evaluation and profiling of residents and settlements to ascertain the basic needs and other challenges faced in the settlements to improve quality of life and curtail the effects and spread of the virus;

iii. Carry out urban renewal programmes and schemes in the settlements that will provide essential physical, social and economic facilities and services that will rejuvenate the settlements socio-economically and environmentally;

iv. Planning of the settlements for easy movement and accessibility of goods and services and human flow; and

v. Involve residents of these informal settlements in the physical planning, development and effective implementation of sound environmental, landuse, social, and communication policies and provide an implementable good governance framework.

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