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Chapter 3

HOUSING CHALLENGES FOR URBAN POOR: KAMPUNGS IN JAKARTA, INDONESIA

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ABSTRACT

This chapter focus on the challenges of housing the urban poor in Jakarta as one of the largest capitals in developing countries. The chapter discusses urbanization and population growth issues in Jakarta as a city that has undergone economic transformations during the past decades. Slums, or locally known as '*Kampung*' emerged as a result of the failure of government housing policies to meet the demand of the urban poor. The acquisition of housing units exceeded the economic capacity of the family. Moreover, local housing policies have not provided any housing alternatives that are able to meet the increasing demand. Kampungs are human settlements constructed with the self-efforts of residents to overcome the challenges of access to housing for the urban poor. Descriptive analysis focused on the method of investigation, observation and field visit of the four kampung in North Jakarta. Moreover, local and survey data were compared with reports of international organizations such as UN-Habitat or the World Bank to describe kampung characteristics in Jakarta. (30) interviews were conducted with families residing in kampung to identify the most prominent challenges in living in these environments. In conclusion, the chapter presents policy proposals to address the challenges of housing the urban poor and upgrading the kampung urban environment based on local sources and self-efforts.

Keywords: Housing, Urban, Poor, Kampungs, Challenges, Jakarta, Indonesia

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INTRODUCTION

The housing challenges of the urban poor come as an inevitable consequence of increasing demand for housing stock. More than a billion people live in slums that lack the lowest components of the urban environment (Mahabir, Crooks, Croitoru, & Agouris, 2016). In other words, almost a quarter of the world's population lives in slums or informal settlements (Friesen, Rausch, Pelz, & Fürnkranz, 2018). The housing crisis is accompanied by an imbalance in regional development policies, where urban development is concentrated in major cities at the expense of small and rural cities. Slums arise as a result of poor land management and housing policies for the needs of vulnerable groups. These socioeconomic groups do not have access to the housing market. Slum growth is affected by the housing market dynamics, urban governance, and housing policies. Moreover, spatial, economic and demographic factors influence the spread of these slums in cities (Mahabir, Crooks, Croitoru, & Agouris, 2016). In developing countries, affordable housing remains less than the actual demand due to the limited housing alternatives for the urban poor (Alzamil, 2016). Illegal encroachments on land within the city or those adjacent to cities are growing due to the limited housing units that are compatible with the economies of the urban poor and new immigrants. Providing adequate housing for the urban poor has become the main dilemma facing many developing country governments due to the high cost of construction, land, and building codes (Alzamil, 2011). Many developing countries lack the capacity to tackle the challenges of slum expansion due to lack of infrastructure, facilities, and housing to provide enough for a growing influx of people in cities (Mahabir, Crooks, Croitoru, & Agouris, 2016).

The Habitat Agenda in Istanbul in 1996 focused on governments undertaking to provide adequate housing for all and to enhance security of tenure. These goals also set the frameworks for United Nations policies to support vulnerable groups, adequate and fair access to basic services, and the promotion of urban decentralization (UN-Habitat, 2016, p. 4). According to the United Nations (UN) a slum household is defined as

> "*a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living area, and durability of housing*".

Target 11.1 of Goal 11 of the sustainable development agenda refer to "*ensure by 2030, access for all to adequate, safe and affordable housing and basic services*" (UN-Habitat, 2016, p. 13). However, UN-Habitat indicated that about two million people, most of them slum dwellers, are forcibly expelled every year. Forced evictions of slum dwellers have catastrophic consequences, as the poor do not

remain homeless without providing any suitable housing alternatives. The right to housing does not necessarily require the government to participate in building housing units. Developing equitable housing policies that prevent homelessness, forced evictions, and racial discrimination (UN-Habitat, 2009). Governments can take various measures to help the urban poor such as redevelopment, building new settlement projects, or upgrading their livelihoods (Alzamil, 2011).

The phenomenon of slum or informal housing is one of the popular attempts to overcome the problem housing for the urban poor. These settlements depend on building self-sustaining housing units, according to limited experiences, that do not comply with the urban planning regulations. Mostly, these housing use fragile or reclaimed building materials from the local environment. Slums are growing rapidly where residents developing their urban area through modification of dwilings and replacement of fragile building materials with permanent materials in line with the economic potential of families. Developing successful solutions to the problems of urban housing for the poor requires an understanding of the urban condition of the slums and the social and economic context. Many resettlement or public housing projects have failed in many countries of the world due to the absence of the role of community participation in formulating planning decisions for slums. Many of the new housing projects did not accommodate the needs of the urban poor, which exacerbated the problem of slums (Alzamil, 2011).

HOUSING IN JAKARTA

Housing has become one of the major challenges facing the government of Indonesia, the fourth largest population in the world. The housing issue in Indonesia has emerged as one of the consequences of urbanization and population growth. There are over 60% of the population in Indonesia living in cities (Meilasari-Sugiana, Sari, & Anggraini, 2018). Moreover, the World Bank estimates that by 2025, 68 percent of the Indonesian population will live in cities due to the uneven development between rural and urban areas (Sutanudjaja, Kusumawijaya, & Qisthi, 2018). The average urban poverty rate (7.73%) is lower than in rural areas (13.96%). This apparent disparity in development contributed to an increase in the flow of population migration towards major cities.

The great urbanization of the Jakarta over the past three decades has led to the high demand for housing, coupled with population migrations. The Jakarta metropolitan area which known locally as Jabodetabek, has more than a 30 million population with a total area of 4,384 square kilometers. However, Jakarta alone has a population of over 10.7 million (Jakarta Population, 2019). The demographics of Jakarta are dominated by the workforce category (15-64 years) with 73% of the total population (Putri, Wibirama, Sukamdi, & Giyarsih, 2018). Since the 1960s,

the national strategy has focused on developing the industrial sector to be the main driver of economic growth. However, the role of the agricultural sector in the national economy has recede (Widoyoko, 2007). Development plans focused on major cities and the urban-rural gap widened. Urban growth began in the early 1960s as a result of population migration from rural areas to improve their livelihoods (Alzamil, 2018). As shown in Table (1) Jakarta's population has grown from 2.6 million in 1960 to more than 10.7 million in 2020.

Table 1. Population growth in Jakarta

Year	Population	Growth Rate (%)	Growth
2035	13,688,321	1.53%	1,001,565
2030	12,686,756	1.75%	1,052,678
2025	11,634,078	1.55%	863,591
2020	10,770,487	1.24%	131,798
2019	10,638,689	1.12%	465,301
2015	10,173,388	1.11%	547,809
2010	9,625,579	1.38%	637,173
2005	8,988,406	1.39%	598,647
2000	8,389,759	0.16%	67,901
1995	8,321,858	0.36%	147,102
1990	8,174,756	3.12%	1,165,726
1985	7,009,030	3.21%	1,024,774
1980	5,984,256	4.45%	1,171,124
1975	4,813,132	4.21%	897,726
1970	3,915,406	3.50%	618,442
1965	3,296,964	4.24%	618,224
1960	2,678,740	6.32%	706,634
1955	1,972,106	6.31%	520,106
1950	1,452,000	0.00%	0

Source: (Jakarta Population, 2019).

Today, Jakarta faces many environmental challenges related to urban sprawl, slum growth, waste disposal, groundwater pollution, and freshwater shortages (Meilasari-Sugiana, Sari, & Anggraini, 2018). The rapid population growth has led to a variation in supply and demand within the housing market (Alzamil, 2017). The scarcity of land within city limits makes land and housing prices expensive for low-income families (Prayitno, 2005). Population growth exceeded estimated government rates and design capacity, which contributed to a lack of resources and the spread of slums (Jakarta Population, 2019). Home ownership has become unaffordable for low-income people, with real estate developers dominating the needs of the upper class. Meanwhile, kampung or slum areas are expanding because of this land monopoly and control over the real estate market (Sutanudjaja, Kusumawijaya, & Qisthi, 2018).

The Ministry of Settlement and Regional Infrastructure states that the amount of housing demand is estimated at 800,000 units per year. Moreover, there is a need to bridge the gap in housing provision estimated at 5.93 million homes since 2003. More than 25% of agricultural uses have been converted to residential land to meet the shortfall in housing demand (Baker, 2012). The mass migration in Jakarta forced urban poor residents to live in slums called locally kampung (Prathama & Ellisa, 2020). Therfure, 40% of Indonesian families live below or near the poverty line and do not afford housing costs within the limits of their economic capacity (Rukmana D. , 2018). Forethmore, It is expected that one of seven people will live in informal settlements or slums at the beginning of the year 2030 (Janse, 2019). Unsurprisingly, official housing unit is not a possible option for the urban poor in Indonesia without government subsidies (World Bank, 2014).

Figure 1. This family lives in kampung Bandan & Muko. Like other families, they depend on cooperation and self-help to overcome most of the problems they face in the kampung community. Residents are constructing their residences adjacent to the railway line, as it is a public ownership area. Residents suffer from fire hazards, pollution, public health and the difficulty of evacuating in an emergency.
Source: Author.

Types of housing in Indonesia can be divided into formal housing and informal housing. As shown in Table (2) formal housing can be built by the government, private sector, cooperatives, and individuals. However, all units are aconstructed on

owned land in accordance with building laws and urban regulations. Informal housing is a group of housing units constructed by families or individuals without following building laws and urban regulations. This type of housing can be legal or semi-informal, as it is built on owned land, but without building regulations from the city government. This could be when converting agricultural land to residential land and building on it without government approval (Soliman, 2003). Moreover, informal housing can be illegal in the event of infringement of and building on others' lands without following building codes and urban regulations. Many of these housing units may be located in dangerous, inappropriate or unhealthy places. Therefore, policies aimed at the legalization of this type of housing must take into account their suitability for human settlement.

Table 2. Types of housing in Indonesia

Housing type	Development method	Developer
Formal housing	Public housing	Government
	Development companies	Private sector
	Individual	Individual or family
	housing development organizations	Cooperative sector
Informal housing	Legal (semi-informal)	Development on the owned land without following the building regulations.
	Illegal	Development on non-owned land without following the building regulations.

Source: The author depending on (Widoyoko, 2007, p. 7).

As shown in Table (3) the type of residential tenure in Indonesia is self-built housing that constituted more than 62% of the homes produced in urban areas. Whereas, residential units provided by developers constitute less than 9% of the residential stock in urban areas.

Table 3. Type of housing tenure in Indonesia

Tenure type	Urban area (%)
Bought from a developer/builder	8.5
Bought second hand	10
Self-built	62
Other	19.5
Total	100

Other includes inheritance, bequest, administrative allocation, and official housing.
Source: (Rukmana D. , 2018, p. 81).

METHODS

The methodology focused on descriptive analysis of housing case studies in Jakarta. Areas of urban poverty have been identified in North Jakarta (Jakarta Utara) by reviewing the kampung distribution map and its poor urban classification. Government statistics indicate that more than 11% of residents in North Jakarta live in slums (Baker, 2012). Moreover, more than 68% of slums located in North Jakarta are in flood-prone areas (SAPOLA). Therfure, Four kampung sites were identified for the visit, which are:

1. Kampung Bandan / Muko.
2. Kampung Bandan / Lodan.
3. Kampung Luar Batang.
4. Kampung Muara Baru.

Field surveys were conducted to extract the most prominent current urban issues in kampung. Survey data were collected through household interviews, field photography and personal observation. (30) residents in kampung were interviewed to extract economic and social conditions and ways to overcome the difficult urban environment. The residents were asked to explain the main problems they faced in living in the kampung environment. Respondents' answers were summarized under three main issues. Urban issues focused on the status of building structures, roads, and utility supplies. On the other hand, social and economic issues focused on satisfaction with the built environment and living conditions.

The reports of international organizations such as the World Bank and UN-Habitat were reviewed to build a perception about the concepts of slum growth and informal housing in developing countries. Moreover, a number of previous research and studies related to slum development policies have been reviewed. The comparative approach was used to compare the results of the theoretical framework with the current kampungs environment in Jakarta.

KAMPUNG IN JAKARTA

Jakarta is one of the largest Asian capitals that still suffers from the spread of slums, often called '*Kampungs*'. There is no single concept of kampung, but many concepts that are influenced by the description of physical, social, and economic aspects. The term kampung usually refers to the traditional village (or desa) where indigenous people live, as well as to slums. It is defined as a type of Indonesian residential neighborhood where low-income people live (Sutanudjaja, Kusumawijaya, & Qisthi, 2018). It is also described as unplanned settlements (informal settlements) where the built environment has been independently formed by the residents (Darundono, 2011). However, kampung can be described as rural

spaces within the urban context. Therefore, some authors argue that kampung should not be considered a problem, but an opportunity for a planning approach to empower poor families (Putri P. W., 2019). The Act of Housing and Residential Area of the Indonesian government (2011) indicates that slums are sub-standard areas include irregular building plots, high-density buildings, and poor infrastructure. More than 25% of the Jakarta population lives in 450 kampungs (UN-Habitat, 2003). In general, kampung may be described as slums or informal settlements, depending on land ownership and legal construction. (Baker, 2012). As shown in Figure (2) The continuing urban sprawl has led to entry of the kampungs within the urban boundary of Jakarta. The percentage of kampung that can be as formal housing does not exceed 20% (Widoyoko, 2007). Nevertheless, the kampung concept can be seen as a distinct independent style and space for life in Indonesian cities (Irawaty, 2018).

Kampung accommodates millions of urban poor who do not have access to public housing with high population density and poor living conditions (Tunas & Peresthu, 2010). Kampung areas lack the lowest urban requirements such as clean water supply, energy, sanitation, and waste disposal systems. The inhabitants of these kampungs live in degraded housing units that often built of varying building materials such as iron sheets, bricks, and wood (Alzamil, 2018). The dwellings often consist of one floor, close together, with an unplanned network of narrow roads that lack infrastructure (Irawaty, 2018). Usually, kampungs are located in hazardous areas or not suitable for human settlement, such as the alignment of railways, riverbeds, river banks, and swamp, and next to high voltage power lines. These areas provide a suitable environment for residents to settle as they are public government lands. In addition, these settlements also provide a suitable environment for residents to work in the informal sector as salespeople, workers, and fishers. Residents are forced to settle in areas that not suitable as human settlement, whether on the banks of rivers or flood areas because they do not have access to housing. However, residents prefer to live in these settlements because they provide proximity to the workplace which are the main factor for migrants in choosing a place to live (SAPOLA). In this case, kampung is described as informal housing or squatter area because it does not have secure tenure and its residents try to resist forced eviction policies (Irawaty, 2018).

Kampungs represent a clear example of community's initiative or self-help building away from the government planning authority (Widoyoko, 2007). It has semi-local administration systems that depend on cooperation and self-help, because its residents feel the risks of evacuation. Kampung residents built physical structures to allow the home to grow in the future into a shop or space for rent (Kusno, 2018). Kampung also provides a system of economic support to families such as savings societies, food participation, and local councils (Irawaty, 2018). I

noticed that the residents live like a single family. Their source of strength is that they share to overcome life's hardships.

Figure 2. Spatial distribution of kampung in Jakarta
Source: (Kusno, 2018).

KAMPUNG CHARACTERISTICS

The Act of Housing and Residential Area of the Indonesian government indicates that slums are sub-standard areas include irregular building plots, high-density buildings, and poor infrastructure. These areas suffer from a shortage of water supplies and public utilities as they are usually unplanned areas. The UN-Habitat (2010) has developed five slum indicators describing the housing situation and urban environment. Although slums can include social and economic criteria, they are complex and difficult to measure. As shown in Table (4) slum indicators were limited to urban aspects. These indicators start with infrastructure, residential structures, crowding, and tenure. Infrastructure in slums often focuses on inadequate supplies of drinking water and sanitation.

Table 4. Physical Characteristics of Slums

Characteristic	Indicator	Definition

Structural quality of housing	a. Location b. Permanency of structure	Proportion of households residing on or near a hazardous site. The following locations should be considered: • housing in geologically hazardous zones (landslide/earthquake and flood areas); • housing on or under garbage mountains; • housing around high-industrial pollution areas; housing around other unprotected high-risk zones (eg railroads, airports, energy transmission lines). Proportion of households living in temporary and/or dilapidated structures. The following factors should be considered when placing a housing unit in these categories: • quality of construction (eg materials used for wall, floor and roof); • compliance with local building codes, standards and bylaws
Access to water	Inadequate drinking water supply adjusted MDG Indicator 30)	A settlement has an inadequate drinking water supply if less than 50% of households have an improved water supply: • household connection; • access to public stand pipe; • rainwater collection; with at least 20 litres/person/day available within an acceptable collection distance
Access to sanitation	Inadequate sanitation (MDG Indicator 31)	A settlement has inadequate sanitation if less than 50% of households have improved sanitation: • public sewer; • septic tank; • pour-flush latrine; • ventilated improved pit latrine. The excreta disposal system is considered adequate if it is private or shared by a maximum of two households.
Overcrowding	Overcrowding	Proportion of households with more than two persons per room. The alternative is to set a minimum standard for floor area per person (eg 5 square metres).
Security of tenure	Security of tenure (MDG Indicator 32)	• Proportion of households with formal title deeds to both land and residence. • Proportion of households with formal title deeds to either one of land or residence. • Proportion of households with enforceable agreements or any document as a proof of a tenure arrangement.

Source: (UN-Habitat, 2003, p. 12).

Kampungs in Jakarta shares the most characteristics of slums defined by UN-Habitat due to physical conditions, problems of housing tenure, access to utilities (Adianto, Okabe, Ellisa, & Shima, 2016). The first indicator is structural quality of housing including the lack of permanent housing that protects residents from climatic conditions. Residential structures in slums can be built on dangerous or

unsuitable lands for settlement. Residential units accumulate irregularly, as they are often not subject to building regulations, and the division of land and housing units varies. Although many dwellings are illegal, they provide shelter for many poor families and protect them from displacement. The urban fabric in the slums is irregular and tends to converge with residential units to make the most of the construction spaces, which negatively affects the level of lighting and ventilation (UN-Habitat, 2006). Moreover, many housing units are built using non-durable materials which threatens the structural integrity of the buildings.

Based on an analysis of the properties of urban environment in kampung, there is a clear deterioration of building structures. The most of analyzed cases are located in dangerous or inappropriate areas for human settlement. In this case, they are described as informal settlements. For example Kampung Bandan is located along the railways, while Kampung Muara Baru is located along the coast in a flood-prone area (Figure 3). Kampung Bandan was subjected to a massive fire and many families lost their homes. The fire spread quickly due to the nature of the area and the building materials used. The fire destroyed more than 400 homes, leaving more than 3,000 people homeless (Atika, 2019). On the other hand, the floods pose an almost daily threat to families residing in Kampung Muara Baru, especially during the rainy season. In fact, a four-meter-high sea wall along the water's edge does not protect the area less than 300 meters from the sea. Families want to move to safe areas, but they cannot afford housing (Loasana, 2019).

In major cities, the sides are along railroad tracks becomes a suitable site for the growth of informal settlements (SAPOLA). Residents choose these areas because they are public land or there are no claims for land ownership. They usually face a number of dangerous conditions such as floods, fires, suffocation, and pollution. However, residents adapt to these challenging conditions by developing self-building solutions and using resistant building materials. Despite the high building density in kampung, the buildings tend to be horizontal rather than vertical due to poor construction techniques or building materials. Most of the buildings in kampung are residential, but there are also illegal shops and small factories (Targowska, 2018). Kampung classification according to the indicators of spatial distribution and urban structures can help in developing housing policies to deal with each case.

Figure 3. Unstable location of Kampung Bandan & Muko. The residents of these settlements take advantage of the areas adjacent to the railway line to build their housing, which does not comply with the building regulations. I noticed during my visit to this kampung that children are playing in the train track area. Fortunately, the train reduces speed when passing through this area!
Source: Author.

According to the field survey, the rate of urban deterioration of housing ranges between 70 to 80% of the total housing in kampungs. Some housing parts are built of fragile materials such as tin and light wood. Housing is often built gradually using temporary materials that will later become permanent materials, according to the family's economic capabilities. Therefore, kampung residents can be exposed to the risk of fire or suffocation due to the lack of safety systems in housing. There is no uniform style for building in kampung, families build their dwellings according to their capabilities and needs. Building materials can also vary in one residence. Urban aspects negatively affect the general environment, as there are no pedestrian paths, squares, green areas, children's playgrounds, and public services. However, I noticed some housing unite and mosques in good physical condition. As shown in Figure (4) some of the modern housing units are in good physical condition, as the housing is replaced and developed according to the economic conditions of the family. These accommodations offer all amenities like electrical

power, water supply, and television. However, kampung's physical environment reflects a stigma that negatively impacts society.

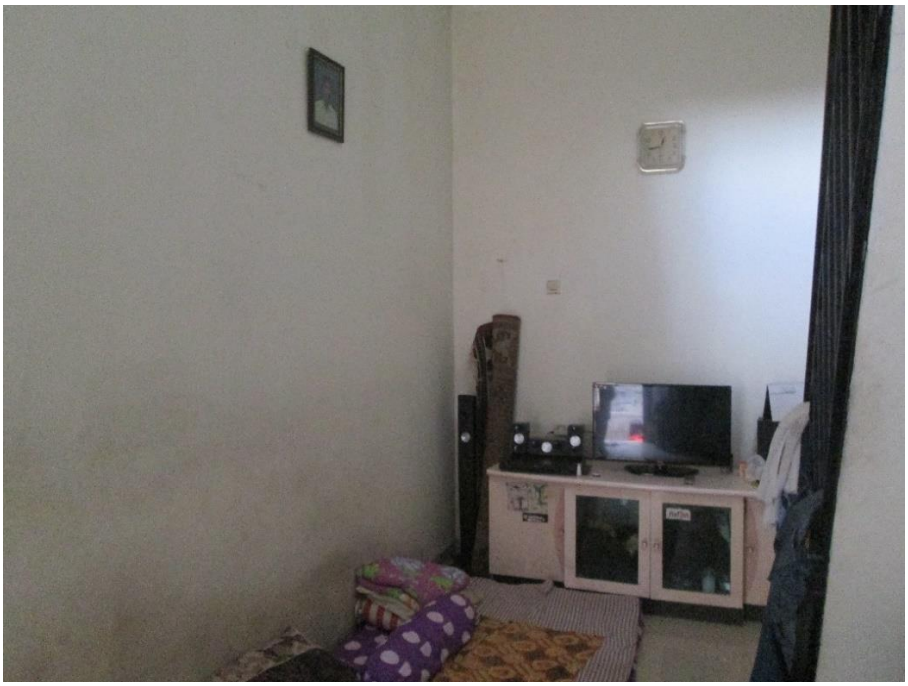

Figure 4. One of the housing units is in good condition, in Kampung Luar Batang. I noticed the durability of the building materials used and the completion of basic services.
Source: Author.

The second indicator is lack or incomplete utilities, especially clean water supplies and sanitation. Moreove, slums lack a system for waste collection, electricity supply, street lighting, and storm water drainage (Alzamil, 2018). Providing infrastructure services in slums has become one of the major challenges facing city governments in developing countries (The World Bank, 2006). Based on kampungs survey in Jakarta, residents rely on mobile tanks to store clean water (Figure 5). Some residents also have access to clean water through public water taps. Often, the source of water used by residents is from groundwater or retail. Public water supplies consume about Rp.50,000 - Rp.200,000 of household income every month (SAPOLA). Clean water may be polluted due to poor conservation and storage, or its mixing with wastewater, which endangers the health of the population. Shared latrines are often used for showering and laundry for a small fee. Despite some improvements in sanitation systems led by international organizations such as shared latrines and septic tanks. However, these improvements remain ineffective due to the huge kampung growth and its socio-

material complexities (Putri P. W., 2019). Sewage disposal is done through sewage channels or rivers or permanent pits. Sanitation is not safe since I noticed the accumulation of swamps and stagnant water in the roads and public spaces around which insects gather and cause unpleasant odors (Figure 6). Moreover, kampung suffers from a constant flood risk due to the lack of a sewage system or rain water drainage. Electricity is connected to residential units via poles in a manner that does not comply with security and safety regulations (Alzamil, 2018). Many residents complain of frequent power outages and poor electrical connections. Kampung is at greater risk of fire from official settlements due to tangled electrical wires and misuse of electrical loads.

Figure 5. Inadequate drinking water supply in kampung Luar Batang. Families use water storage tanks for drinking, cooking or washing dishes. Also used to shower babies sometimes.
Source: Author.

Figure 6. Swamps arise due to the lack of a drainage system in Kampung Luar Batang. These swamps are extremely dangerous for children, and they are also a major cause of disease and epidemic transmission. I have noticed the spread of waste on these swamps and an unpleasant smell.
Source: Author.

The third indicator focuses on the level of overcrowding in housing units or in the built environment. Slums are characterized by high urban densities or within residential units. The standards estimate the proportion of overcrowding at more than two people per room (The World Bank, 2006). Increased crowding rates affect demand for services, facilities, and quality of life in residential environments.

Overcrowding in housing units is common in kampung, where more than one family lives in a single residence. Overcrowding affects living standards, privacy, and the quality of spaces within residential units. As shown in Figure (7) there is hardly a distinction between public and private spaces within residential units. Some narrow corridors interfere with the residential units, which feel they are part of the residence. Overcrowding in kampung was caused not only by the lack of space, but also by co-residence between families in the same housing unit. However, residents are trying to develop housing unit design to cope with this overcrowding. Residents are trying to use the space outside their homes to do laundry, cooking, playing, and sitting with neighbors (Ellisa, 2016). Residents live

together as a harmonious society and share daily needs. Ellisa (2016) has indicated that 40% of the kampung families live in one room and 33% of them live in two rooms. The average number of people per room is 0.38 rooms / person. Thus, the crowding rate is equivalent 2.6 person/rooms (Ellisa, 2016). This rate is below the European standard 1.25 person/rooms (Edwards, 1994).

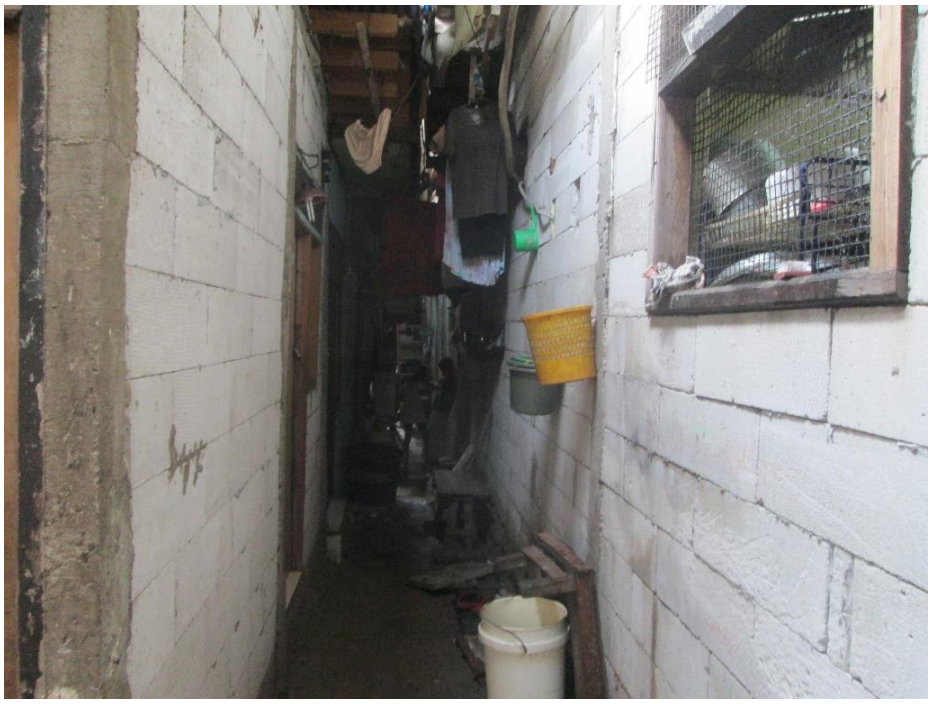

Figure 7. Narrow roads between dwellings of Kampung Bandan & Muko. I noticed the use of public spaces for housework like laundry and hanging housewares. There are narrow, winding places that are difficult to reach. Also, unpleasant smells spread due to the lack of adequate lighting and ventilation.
Source: Author.

There are no children's play areas available in kampung. As shown in Figure (8) residents trying to adapt to these conditions to take advantage of public spaces as playgrounds. In the high-density kampung community, children and teenagers use public spaces as playgrounds. Moreover, some teenagers prefer playing soccer or traditional sports in wide areas such as vacant land or school grounds (Prathama & Ellisa, 2020). However, this land is dirt and contains many waste and is not ready to play. Kampung residents cannot afford the cost of access to the formal playgrounds due to economic and social conditions (Aziz & Said, 2012).

Figure 8. Children use narrow alleys or vacant lands to play in Kampung Luar Batang. I noticed Street vendors are often found in such this places to sell their products.
Source: Author.

The fourth indicator that expresses the characteristics of slums is security of tenure. This indicator measures the percentage of families who have formal title to land or residence (UN-Habitat, 2003). The United Nations Human Settlements Program (2008b) emphasizes that tenure secure is important for achieving human rights and reducing poverty. Residential tenure provides families with a decent and safe livelihood against forced eviction. UN-Habitat (2008a, p. 2) indicats that tenure security faces three forms of human settlements, as follows:

1. slums: an areas that have degraded and become crowded or have been re-subdivided into low-income housing areas.
2. squatter area: an area of poor quality of housing built on lands that are not owned illegally.
3. Irregular settlement: areas that are subdivided into plots in a manner that does not comply with building codes and regulations

Informal settlements may share some characteristics with slums such as lack of tenure security, utilities, and substandard housing (Supriatna, 2017).

Kampung may include informal housing or areas not subject to a clear property law as they do not comply with land use plans or violate the urban land ownership law (Supriatna, 2018). However, these kampungs may be owned but resold, divided, and built upon in a manner that is inconsistent with the regular divisions of the land. Kampung arises as a result of residential construction on public lands or away from urban development or on agricultural lands informally (Steinberg, 2007). Moreover, these areas become within the boundaries of urban development, with all its characteristics that do not consistent with urban context.

Residential tenure plays an important role in choosing the type of policy to deal with kampung. Residents without tenure are at risk of removing their housing and evictions. Also, residential tenure affects the enhancement of belonging and residents' interest in self-development of the place. As shown in Figure (9) there is urban neglect and the spread of waste everywhere, which endangers the health of residents. Some families complain that the cause of the urban deterioration is their lack of security of tenure. They do not know when they will be evacuated to more humanitarian areas.

Figure 9. There is no solid waste management system in kampung. I noticed that the waste in Kampung Bandan & Muko is dumped in swamps, roads or in public spaces.
Source: Author.

The self-development of the kampung settlements cannot take place in light of the lack of security of tenure. As shown in Figure (10) simple materials and deteriorating construction have become a feature of the kampung. Empowering residents is a first step towards developing urban environments in kampung. Residents are able to adapt to difficult living conditions by creating an informal economic system. This economic system can be developed using policies of empowerment and societal participation away from evacuation. As shown in Figure (11) many families work in preparing food and selling to residents. Also, I noticed many families raising poultry. This economic system will be destroyed when applying any policies that evacuate the population and remove these settlements. Residents will not find a way to make a living in new urban environments. Most resettlement projects are far from our understanding of the living conditions of the urban poor. They are projects built only to accommodate the population and not to create a sustainable urban environment.

Figure 10. Housing structure in Kampung Muara Baru. Simple and non-permanent building materials that are reflected in the culture of the place and the level of residential tenure. Note that the vacant land is used for playing. This land contains many pollutants, glass remains, wood, and screws, which threatens the safety of children
Source: Author.

Figure 11. Kampung residents rely on self-sustaining economic resources to adapt to the harsh living conditions. A resident works in a meal preparation store as a source of income for his family.
Source: Author.

CONCLUSION

Housing Policies to deal with informal settlements or slums around the world have changed from non-recognition or marginalization to the urban upgrading (Supriatna, 2017). The most common policies of the 1950s and 1960s in informal settlements were the demolition and replacement of urban structures in order to overcome the problems of informal growth. Later, a fundamental shift towards self-help started by upgrading the slums on the site. These policies included formalizing and granting title deeds in a manner that helps protect the urban poor against forced eviction and integrate them into the urban context. Policies that rely on large-scale slum removal or resettlement have consequences for the social and economic structure of the urban poor (Werthmann & Beardsley, 2008). The proliferation of slums and the limited resources of some developing countries impose on housing policy makers to develop practical mechanisms for these areas that maintain social and economic networks (Alzamil, 2011). The development of housing projects to accommodate the urban poor will not be successful if they are not accompanied by

an analysis of the urban, social and economic conditions of slums. Housing projects are often far from understanding the reality of the needs of the urban poor. Developing countries cannot achieve much when relying on imported housing policies that are inconsistent with the local urban context. However, the solution is to improve the services, infrastructure, and stimulate the provision of housing locally (Turner, 2000).

In Indonesia, the government housing program began in the 1950s when some government ministries and housing cooperatives built public housing (Silver, 2008). The program did not provide mechanisms to accommodate the urban poor due to the expansion of the kampungs. The Kampung Improvement Program (KIP) has been adopted since the 1960s in Jakarta to address urban degradation and infrastructure shortages. KIP contributed to the provision of services and infrastructure, and the transformation of informal settlements into formal areas integrated into the urban context. During the initial stage, 1969-1974, the Jakarta Department (DKI) was able to raise housing stocks and improve living standards for 1.2 million people (Juliman, 2006). Since 1974, The KIP was supported by the World Bank to improve the lives of more than 3 million urban poor. KIP was the first serious housing policy to deal with kampungs in Indonesia that continued to be funded by the World Bank until 1982 (Rukmana D. , 2005). In 1988, the government launched the KIP III program, which focuses on slum upgrading with community participation, whether in the planning or implementation process. The program contributed to improving the urban structures of kampungs relying on criteria such as urban degradation, flood risk, sanitation, and population density (Alzamil, 2018). However, many problems continued, such as overcrowding, ventilation, and lighting, as many kampung were located in unhealthy areas (Juliman, 2006).

In the year 2000 a new Sub-district Society Empowerment Programme (PPMK) was launched focusing on economic development as an entry point for slum upgrading (Juliman, 2006). The program encountered difficulties in realizing the challenges of dealing with the kampung as an integrated dimensional urban environment and maintaining the sustainability of living conditions. In that period, the government sought to implement the "City without Slums" initiative, that supported by the World Bank and UN-Habitat in Indonesia. The government has instituted several programs for this initiative that are literally seeking to forced evictions and the displacement of the urban poor. in 2006, The Ministry of Public Housing (MPH) started the Self-Help Housing Program (BSPS) which aims to assist low-income families in urban and rural areas. The program focuses on developing infrastructure and improving housing quality, or developing new housing within the eligibility criteria (Heripoerwanto, 2012). For now, the government seeks to tackle the slums with its ambitious goal of "slum-free cities"

by 2020, by developing effective programs and policies that address the needs of the urban poor. However, the government faces problems in dealing with the kampung due to the lack of spatial, demographic, social, and economic data. Therefore, the proposed policies usually suffer from the prioritization of programs and financial resources (SAPOLA).

The government implemented several policies to deal with the kampung in Jakarta such as evacuation, resettlement, self-help housing, and urban improvement. The kampung programs have gone through stages of development from the physical dimension to achieving community development and upgrading their lifestyles by supporting residents, institutions and politicians. However, there are no clear criteria for setting appropriate priorities or policy. For example, many kampung located in strategic areas have been evacuated. Many developers and politicians have taken advantage of the uncertainties in registering land to carry out evictions (Irawaty, 2018). On the other hand, many kampung located in marginal or dangerous areas remained without any development. Housing policies did not address the issue of providing housing for the urban poor. Many residents still live in informal settlements because they are unable to meet the requirements of housing markets (Rukmana D. , 2018).

The strategic principles for dealing with the kampungs should focus on analyzing the characteristics of the spatial distribution of slums and the conditions of the physical, social and economic structure. As shown in Figure (12) the development of a national housing data center (NHDC) is necessary for governments to deal with slums or informal settlements in Jakarta. The National Housing Data Center (NHDC) helps to analyze the quantitative and qualitative data of the kampung in terms of spatial distribution, tenure type, area, population, land economics, household composition, environmental and spatial conditions. Moreover, GIS tools can be used to analyze and link data in a spatial context. Analyzing the kampung properties will help housing policy makers suggest the appropriate policy. For example, kampung policies that have problems with residential tenure shluld be differ from those have tenure security. Extremely degraded areas need to be removed or reconstruction, while partial removal or restoration can be used for mid-degraded areas. Moreover, kampongs policy that are located in hazardous or unstable sites are completely different from those in stable environments.

First, the resettlement policy in new locations can be effective for the kampung which is located in dangerous and non-human settlement areas such as areas adjacent to railway tracks, rivers, and flood areas. This policy can also be used in settlements that can be invested economically or in the city center. The residents are evacuated in safe settlement locations with a healthy environment and in line

with economic lifestyle. However, this policy must originate from an understanding of the social and economic characteristics of the kampungs. The re-settlement projects such as residential towers will not be feasible because it does not stem from our understanding of the social and economic characteristics of the kampung residents. The residents will refuse to live in these housing projects because they do not provide them with the economic environment and social need that is available in kampung. Second, the urban upgrading policy can be used for kampung located in stable and non-dangerous sites. This policy is based on the principle of preserving the social and economic composition of kampung residents. However, this policy seeks to improve the livelihoods of the population by developing training programs for productive families. The government gives residents the right to residential tenure as a first step in the urban upgrading. Tenure rights will encourage residents to maintain their housing and develop the surrounding built environment. Therefore, this policy should not negatively affect the land economics. Moreover, residents participate in planning, implementation, and follow-up processes to ensure project success. This policy can use several methods such as partial removal of some damaged housing, restoration, and reconstruction. Finally, these policies can be funded through the government, the World Bank, and the private sector, or self-financing.

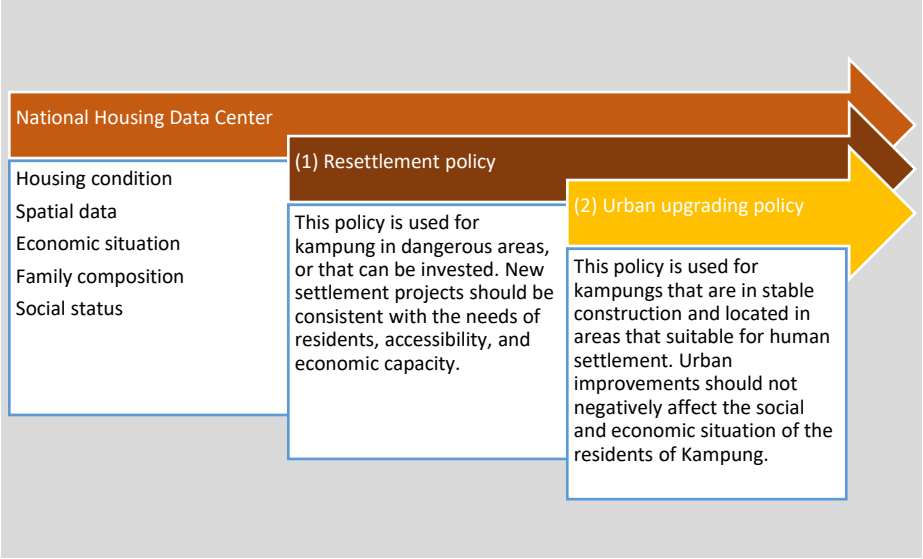

Fig. 12. Kampung Development Principles KDP
Source: Author.

REFERENCES

Adianto, J., Okabe, A., Ellisa, E., & Shima, N. (2016). The Tenure Security and Its Implication to Self-Help Housing Improvements in the Urban Kampong: The Case of Kampong Cikini, Jakarta. Urban and Regional Planning Review, 50-65.

Alzamil, W. (2011). The Experiences of Governments in Dealing with Squatter Settlements. Saarbrücken: LAP LAMBERT Academic.

Alzamil, W. (2016). Evaluation of Affordable Housing and Subsidy Programs in Saudi Arabia. Saarbrücken: LAP LAMBERT Academic Publishing.

Alzamil, W. (2017). The urban features of informal settlements in Jakarta, Indonesia. Data in Brief, 993–999.

Alzamil, W. (2018). Characteristics of Squatter Settlements near Grand Mosque of Mecca: Goz AlNakasa case study. Journal Architecture & Planning, 247-273.

Alzamil, W. (2018). Evaluating Urban Status of Informal Settlements in Indonesia: A Comparative Analysis of Three Case Studies in North Jakarta. Journal of Sustainable Development, 148-173.

Atika, S. (2019, 5 13). Thousands displaced after Kampung Bandan fire. Retrieved from The Jakarta Post: https://www.thejakartapost.com/news/2019/05/13/thousands-displaced-after-kampung-bandan-fire.html

Aziz, N. F., & Said, I. (2012). The Trends and Influential Factors of Children's Use of Outdoor Environments. Procedia - Social and Behavioral Sciences, 204 – 212.

Baker, J. L. (2012). Climate Change, Disaster Risk, and the Urban Poor: Cities Building Resilience for a Changing World. World Bank Publications.

Darundono. (2011, 9 6). JAKARTA KAMPUNG IMPROVEMENT PROGRAM (KIP) EXPERIENCE AN ENVIRONMENTAL APPROACH. Retrieved from Kampung Improvement Program: https://donijw.wordpress.com/2011/09/06/kampung-improvement-program/

Edwards, J. F. (1994). Household Crowding and Its Consequences. Colorado: Westview Press.

Ellisa, E. (2016). Coping with crowding in high-density kampung housing of Jakarta. International Journal of Architectural Research, 195-212.

Friesen, J., Rausch, L., Pelz, P. F., & Fürnkranz, J. (2018). Determining Factors for Slum Growth with Predictive Data Mining Methods. Urban Sci, 1-19.

Heripoerwanto, E. D. (2012, 8 30). Perencanaan Bantuan Stimulan Perumahan Swadaya (BSPS). Retrieved from https://www.academia.edu/5441998/PERENCANAAN_BANTUAN_STIMULAN_PERUMAHAN_SWADAYA_BSPS_

Indonesia Government. (2011). Undang-Undang Perumahan dan Kawasan Permukiman Nomor 1 Tahun 2011 (Act of Housing and Residential area). Jakarta: Government of Indonesia.

Irawaty, D. T. (2018). Jakarta's Kampungs: Their History and Contested Future. Los Angeles: University of California.

Jakarta Population. (2019, 8 27). Jakarta Population 2019. Retrieved from World Population Review: http://worldpopulationreview.com/world-cities/jakarta-population/

Janse, D. (2019). An Incremental Tamansari: A proposal for a new kampung development system in Bandung, Indonesia. Delft, Netherlands: Delft University of Technology.

Juliman, D. (2006). The world's first slum upgrading programme. An international Un-Habitat event on urban sustainability. Vancouver : UN-HABITAT.

Kusno, A. (2018). Middling Urbanism and the Contradictory Space of the Kampung in Indonesian Capitalism. Retrieved from PLATFORM: https://www.platformspace.net/home/middling-urbanism-and-the-contradictory-space-of-the-kampung-in-indonesian-capitalism

Loasana, N. A. (2019, 12 6). Jakarta sinks at slower pace, but more areas affected. Retrieved from The Jakarta Post: https://www.thejakartapost.com/news/2019/12/06/jakarta-sinks-slower-pace-more-areas-affected.html

Mahabir, R., Crooks, A., Croitoru, A., & Agouris, P. (2016). The study of slums as social and physical constructs: Challenges and emerging research opportunities. Regional Studies, Regional Science, 399–419.

Meilasari-Sugiana, A., Sari, D. A., & Anggraini, R. (2018). Housing and resettlement of Jakarta's urban poor: case study of Kampung Pulo's slum revitalisation in Jakarta, Indonesia. Human Geographies – Journal of Studies and Research in Human Geography, 2067–2284.

Prathama, D., & Ellisa, E. (2020). Sustainability in High Dense River Bank Kampung: The Playground as the Responsive Space Utilization. The 1st International Conference on Urban Design and Planning (pp. 1-10). Bristol, United Kingdom: IOP Publishing.

Prayitno, B. (2005). THE CONTINUED LIVING ADAPTABILITY FROM TRADITIONAL KAMPUNG TO MULTISTORY HOUSING. Informal Settlements and Affordable Housing. Surabaya: Department of Architecture ITS and the International Council for Research and Innovation in Building and Construction (CIB).

Putri, P. W. (2019). Sanitizing Jakarta: decolonizing planning and kampung imaginary. Planning Perspectives, 805-825. doi:10.1080/02665433.2018.1453861

Putri, R. F., Wibirama, S., Sukamdi, & Giyarsih, S. R. (2018). Population condition analysis of Jakarta land deformation area. IOP Conference Series: Earth and Environmental Science (pp. 1-10). IOP Publishing.

Rukmana, D. (2005). Empowerment and housing provision for urban poor. Journal of Environmental, Cultural, Economic & Social Sustainability, 62–71.

Rukmana, D. (2018). Upgrading Housing Settlement for the Urban Poor in Indonesia: An Analysis of the Kampung Deret Program. In B. Grant, C. Y. Liu, & L. Ye,

Metropolitan Governance in Asia and the Pacific Rim (pp. 75-94). Berlin, Germany: Springer. doi:10.1007/978-981-13-0206-0_5

SAPOLA. (n.d.). DKI JAKARTA: INFORMAL SETTLEMENT MAPPING. Cities Alliance Project Output.

Silver, C. (2008). Planning the megacity: Jakarta in the twentieth century. New York: Routledge.

Soliman, A. (2003). A Possible Way Out: Formalizing Housing Informality in Egyptian Cities. University Press of America.

Steinberg, F. (2007). Jakarta: Environmental problems and sustainability. Habitat International, 354-365. Retrieved from http://dx.doi.org/10.1016/j.habitatint.2007.06.002

Supriatna, A. (2017). Analysing Land Tenure Security of Urban Kampung in Jakarta. St Lucia QLD 4072, Australia: The University of Queensland, School of Earth and Environmental Sciences.

Supriatna, A. (2018, 4). The Land tenure security issues: the case of urban kampung in Jakarta. Retrieved from The University of Queensland, School of Earth and Environmental Sciences: https://sees.uq.edu.au/project/land-tenure-security-issues-case-urban-kampung-jakarta

Sutanudjaja, E., Kusumawijaya, M., & Qisthi, M. Z. (2018). Strategy for a Social City in Indonesia Case studies in Malang, Cirebon, and Jakarta. Bonn, Germany: Friedrich Ebert Stiftung.

Targowska, K. A. (2018). Reinterpretation of the Indonesian Kampung idea, based on the residential transformation concept in the city of Surabaya. (Doctoral dissertation, Zakład Podstaw Kształtowania Architektonicznego i Urbanistycznego).

The World Bank. (2006). Monitoring What Matters. Washington, DC: The World Bank.

Tunas, D., & Peresthu, A. (2010). The self-help housing in Indonesia: The only option for the poor? Habitat International, 315–322.

Turner, J. (2000). Housing by People: Towards Autonomy in Building Environments. New York: Marion Boyars Publishers Ltd.

UN-Habitat. (2003). Global Report on Human Settlements 2003, The Challenge of Slums. London: Earthscan.

UN-Habitat. (2003). The Challenge of Slums: Global Report on Human Settlements. London : UN-Habitat.

UN-Habitat. (2006). STATE OF THE WORLD'S cities. Sterling, VA : UN-Habitat.

UN-Habitat. (2008a). Low Income Housing: Approaches to help the urban poor find adequate. Nairobi: UN-Habitat.

UN-Habitat. (2008b). Secure land rights for all Global Land Tools Network. Nairobi: UN-Habitat.

UN-Habitat. (2009). The Right to Adequate Housing. New York: United Nations Human Settlements Programme (UN-Habitat).

UN-Habitat. (2010). state of the world's cities 2010/2011. Nairobi, Kenya : United Nations Human Settlements Programme (UN-HABITAT).

UN-Habitat. (2016). Urbanization and development. Nairobi, Kenya : United Nations Human Settlements Programme (UN-Habitat).

UN-Habitat. (2016). World Cities Report 2016. Nairobi, Kenya : United Nations Human Settlements Programme (UN-Habitat).

Werthmann, C., & Beardsley, J. (2008). Improving Informal Settlements: Ideas from Latin America. Retrieved from Harvard Design Magazine: http://www.harvarddesignmagazine.org/issues/28/improving-informal-settlements-ideas-from-latin-america

Widoyoko, D. (2007). Good Governance and Provision of Affordable Housing in DKI Jakarta, Indonesia. Loughborough: Water, Engineering and Development Centre Loughborough University UK.

World Bank. (2014). Indonesia a roadmap for housing policy reform. Washington, DC: The World Bank.