

Relocating Illegal Vernacular Urban Settlements and Fulfilling the Human Needs: An Evaluation of Approaches to Bring Physical Order in Jakarta, Indonesia

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Abstract

This research examines the phenomenon of the increasing number of illegal habitations in cities that has resulted in crowded conditions and several social and economic problems. Various kinds of planning are applied in every region with each differed policy and focus on illegal habitations, with issues on improvement, renewal, and relocation. The issue focused in this paper is the ways in which the human needs are responded to in the relocations of the illegal habitation in the cities.

Human needs of illegal habitations can theoretically be classified into five levels: necessity, i.e., physical needs, security, social needs, self-reward, and self-actualization. The focus of this research is to evaluate the concepts and methodologies of architectural planning in the re-settlement of illegal habitations in Indonesia. It does so by comparing the human needs of the re located illegal habitations to the new habitations through physical order.

The research employs qualitative and analytical methods, based on four criteria, i.e., the habitation, architecture, the inhabitant, and the process. They are related to the five levels of human necessities. The research examines the Kampung Kalijodo, people of which were relocated to the Marunda flats. The research stresses on the crowded habitations for which fulfillment is required, beside the analysis on existing conditions of security, public areas, activity system adaptation on social aspects, and the origin of the relocation process towards the appreciation of the inhabitants.

Keywords: human needs, illegal settlements, relocation, physical order and activity space

Introduction

This study examines the phenomenon of the large number of slum settlements in Jakarta, which was revealed by Edelman (2020) who says that a large part of Jakarta consists of slum areas. Based on research conducted by the Ministry of Agrarian Affairs and Spatial Planning and the National Land Agency in collaboration with the World Bank, 118 out of 267 sub-districts in the city of Jakarta have slums. The Ministry of Agrarian Affairs and Spatial

Planning of The Land Agency of Indonesia (ATR/BPN) states that slum areas were found mostly in North Jakarta with 29%, followed by West Jakarta with 28%, South Jakarta with 19%, East Jakarta with 12% and Central Jakarta with 12%. In addition, they point out that 50% of the slum areas mentioned are located on the river banks. This phenomenon needs an introduction to a definition and the background of the illegal settlements in urban areas.

According to Indonesia's Undang-Undang No. 11 Tahun 2011 concerning the Housing and Residential Areas, settlements are defined as a part of a residential area consisting of more than one housing unit that has infrastructure, facilities, public utilities, and has supporting activities for other functions in urban areas or rural areas. The term 'illegal' according to the Indonesian Biggest Dictionary (KBBI) is defined as without rights, not legal, not according to law or without permission. Moreover, illegal settlements are also categorized as slums, according to Undang Undang No. 11 Tahun 2011 of Indonesia, through the Housing and Residential Areas. Slums in settlements are defined as unfit for habitation, because they are constructed in situations such as in high building density areas, built in an irregular manner, or the conditions of facilities, infrastructure and quality of life do not meet the official requirements.

Koesomodilogo (2014) explains the slum planning and improvement policies in Jakarta, namely the Muhammad Husni Thamrin Project (MHT Project) introduced in 1969 as a rational urban management policy. Vielandy (2017) categorizes Jakarta as the largest metropolitan city in Southeast Asia which experiences major urban problems: overcrowding resulting in the emergence of many illegal settlements. Koesomodilogo (2014) says that the illegal settlements themselves occurred due to social inequalities as seen from the many constructions of trade centers, luxury apartments, malls and parks with statues worth billions as an indicator of high economic growth. However, there are still unoccupied houses, fit to live in. The provision of housing and settlements in urban areas for the needy cannot simply be resolved with finished products, but the role of the community is important in village improvement. The problem of illegal settlements is due to the fact that conflicts extend to various aspects of life such as a decrease of social engagement, the bias of the government policies, differences in political and law orientations, and because of the lack of legal uncertainty (Siregar, 2023). According to Hamdi (1992), there are some issues in the informal settlements, such as the absence of professional methods, control of power and responsibilities.

One of the village arrangements described by Mujiyanti (2012) in Kampung Kali Code Yogyakarta was carried out by Mangunwijaya in 1984. Mangunwijaya was a Indonesian architect and a Catholic religious leader, who was known as the Priest Mangun. He was in charge as a social worker and architect of the redevelopment of the informal settlement in Kampung Kali Code. He together with Willie Prasetya as the Head of the Terban Village provided assistance and coaching to make changes to the settlements on the outskirts of Kali Code which were previously considered as a 'black village'. Eventually, it became a fostered village.

Geographically, Kali Code has an important role for the Municipality of Yogyakarta because the river passes through areas which are centers of activity in Yogyakarta, from the Yogyakarta Palace, Beringharjo, Malioboro and so on. In fact, one of the factors that has made the community to choose a location as urbanized as Kali Code to live is because it is close to the economic center. Needless to say, it is possible to have access to places of business and also the other sources of livelihood from there (Idham, 2018).

Thus, this has led to the emergence of the illegal settlements triggered by periodic flooding during the high rainfall. The high population density and the density of the illegal buildings have created enclaves of substandard quality settlements which have ultimately polluted Kali Code. Moreover, this also causes the erosion of the walls of the banks of the Kali Code river (Nur'aini, 2015).

The revitalization that has been carried out at Kali Code has the goal of improving the quality of life of the people who live there, from a social, economic and cultural point of view. Revitalization has impacted not only the physical aspects of the buildings but also socialization and guidance in living a life with a better quality (Mujiyanti, 2012). The arrangement carried

out has indeed not been the large-scale relocation being carried out in Jakarta today, but was only for housing that was located directly on the riverbank. Most importantly, there was guidance for the residents. This means that this arrangement was based on the community and was expected to lead to sustainable communities (Seftyono, 2012).

The issue of architectural arrangements in the illegal settlements can be linked to a humanistic approach. This is highlighted by Siegel (2008) who says that there are concerns about the existence of contemporary avant-garde architecture that emphasizes materials and technologies but does not have social and human meanings (humanism). According to KBBI, Humanism is defined as an understanding that aims to uphold humanity in order to get a better life goal (2021). At-Toyibi (2020) explains that humanistic architecture is an architectural concept that makes people the goal or the most important aspect of the architectural design process. Rybczynski (2013) has also emphasized that 'humanistic' must be a major consideration in a design process. Maslow in Goble (1985) explains that there are five levels of human needs: physiological needs, security needs, trust and love needs, respect and self-actualization. In fact, Salado (2013) examines Maslow's hierarchy of needs in architecture by translating it into the following five hierarchies: functional requirements, implementation, availability, effectiveness and adaptability.

The focus of this research is two-fold. First, it examines the arrangement of illegal settlements and humanistic values. As previously explained, in the arrangement of illegal settlements, people as residents or the community play an important role that needs to be considered both during planning and even until the arrangement process takes place. The relationship between the occupants of the building and the products of the arrangement of illegal settlements should be able to support each other so that they can answer all the human needs through humanistic values. The humanistic value referred to in this research leads to 'Maslow's Theory' which refers to five levels of human needs: physiology needs, security needs, social needs, esteem needs and self-actualization needs. The arrangement of illegal settlements has four criteria that must be examined: settlements, architecture, the occupants and the processes.

Second, this research will also focus on the intersection of humanistic value needs and the four criteria for structuring these illegal settlements. The benefit of this research is that the learning outcomes can be used as a reference for the resettlements in the future. In fact, they can be used also for further research in other fields of science in fulfilling other human needs. The ultimate goal of this research is to evaluate the process of structuring illegal settlements to cater to all the physiological, security, social, respect and actualization needs of the occupants as an application of humanistic values in architecture.

Review of Literature

This literature review will explain illegal settlement through 'informal settlement theory' from the oldest until the latest one. It will bring an understanding that will guides the theoretical basis for this research. According to Turner (1972), poor community settlements are formed due to government's legal conditions, which do not provide certainty to the low-income resident's ways of finding shelter. This situation creates the slum areas to increase in terms of quantity to create more slums. Turner (1972) did not mention the term 'illegal settlements' but explained only the causes of informal and slum settlements in terms of needs, priorities, and economic aspects. However, Turner (1972) sees the legal condition of a city as contributing to the numbers of slums themselves (Aziz, 2011). The discussion of housing always brings the meaning of home, according to Dayaratne (1992), who says that there is no general concept that is understandable for all the people except the concept of 'home'. Informal settlements themselves, have the meanings of home for their residents, said Poerbo (1999).

Davis (2006) divides the effects of slum settlements into two aspects, specifically in terms of health and environment. He says that slums are synonymous with contaminated and toxic places that endanger urban life. While on the environmental aspect, slums cause an urban settlement 'a form of a disease' from the part of poverty, and destroying a city's environmental support system. Davis does not directly mention illegal settlements and killings yet points out

that often, there are unlawful killing among the squatters in slums: the places inhabited by illegal communities (illegal dwellers) (Davis, 2006).

According to Suhartini (2019), slum settlements can be seen from several perspectives. In terms of the physical characteristics, criteria are mentioned that directly refer to the slum settlements. They are repetitive, non-geometrical, non-linear patterns. The low-economic facilities and housing are often made independently or autonomously. According to Neuwirth's theory (2016), there is no mention of the term illegal settlements, only informal settlements and slums. Neuwirth (2016) considers informal settlements from a political aspect as the cause and sees the location of emergence from an environmental factor, namely places that are undesirable, dangerous and threaten health.

Dovey (2010) distinguishes between squatters, slums, and informal settlements from different definitions and aspects. Illegal settlements (squatters) are similar to the lack of ownership of land, also causing the status of not being able to own a house or even rent. Slums imply a lack of space, sustainability and even basic sanitation. Indeed, a slum is also defined as a house with three or more people per room without access to proper hygiene and housing. Meanwhile, informal settlements are more related to control which is outside planning, design, and construction.

There are three types of illegal settlements according to the processes and aspects that influence the arrangement. They are related to improvement, renewal, and relocation. According to Danisworo (2000), there are also some stages in reviving such an area. These three stages are: physical interventions, economic rehabilitation and social or institutional revitalizations. A physical intervention means quality improvement of a building physically, involving a green management system and creating an open space area inside a region. The economic rehabilitation stage involves the employment of a physical arrangement of the area to support the local economy. The last step, social revitalization, creates an attractive built environment to ensure that the region has an identity (Nur'aini & Ratna Dewi. 2015).

A renewal arrangement is one of the ways to create good conditions for houses, housing, settlements, or residential environments to protect the occupants, improve safety and the security of the residents and the local communities. In accordance with Undang-Undang No. 1 Tahun 2011, if the existing slum location is not designated for a settlement according to the Indonesian Spatial Plan (RTRW) or is disaster-prone, it can harm the community who live in that location. Efforts that can be made are resettlement by moving people from their previous areas, which need to be carried out in line with the support of the government and local governments who participate in determining the location for resettlement or what is called relocation.

Theoretical Basis

This theoretical basis will discuss two points of perspective which are informal settlement and human needs. Kellett (1995) examines informal housing produced through vernacular theory. He mentions that the poor had constructed their own dwellings in all centers of the urban areas where rich and powerful people live. Kellett (1995) puts those informal settlements as spontaneous activities that were ubiquitously acknowledged by other people as social and visual pollution. Unfortunately, it brings the demolitions and forced relocations because of the economic circumstances. He argues that informal settlement bring great energy because they evaluate their priorities and needs to make architecture.

Kellett (1995) discusses a group of theorists to help understand the spontaneous settlements: Lawrence (1987), Rapoport (1988), Oliver (1986), Stea and Turan (1993). Lawrence (1987) says that a dwelling could be identified as a type by its period and its place. The construction should be acknowledged traditionally. He mentions relations about design and use and divides them into three factors: the physical or material, society and cultural, and individual or human factors. Rapoport (1988) looks at spontaneous settlements as 'cultural landscapes' that can be categorized as their closest contemporary equivalent. He explains spontaneous settlements formed by numerous processes and product characteristics. The process characteristics are identity, intentions, variations and users. The product characteristics

are cultural, place specificity, forms, morphologies, material, texture and environment. Oliver (1986) describes vernacular architecture as the sharing of knowledge, “know-how” or technology. Moreover, he says spontaneous settlement are the extreme and unspecialized types of settlements, where there are self-builders, with their skills, materials and financial needs to meet modernity. Stea and Turan (1993) focus more on ‘placemaking’ when explaining informal settlements as a form of economic activity, combining social, cultural, political and material facets.

Based on the explanations above, this research will use the theoretical formulation from Pojani who adapted her understanding through Kellett. Pojani (2019) discusses self-built city and adapts the theory of Kellet to produce criteria. According to her they are classified into four: settlements, houses, dwellers and processes. The settlement criterion has five sub-criteria: size and location, layout and density, land use, public space, and image and identity. The house criterion has two sub-criteria: architecture and symbolism and material and technology. The dwellers criterion has two sub criteria: condition of existence and place attachment. The process criterion has two sub-criteria: origins and relocation.

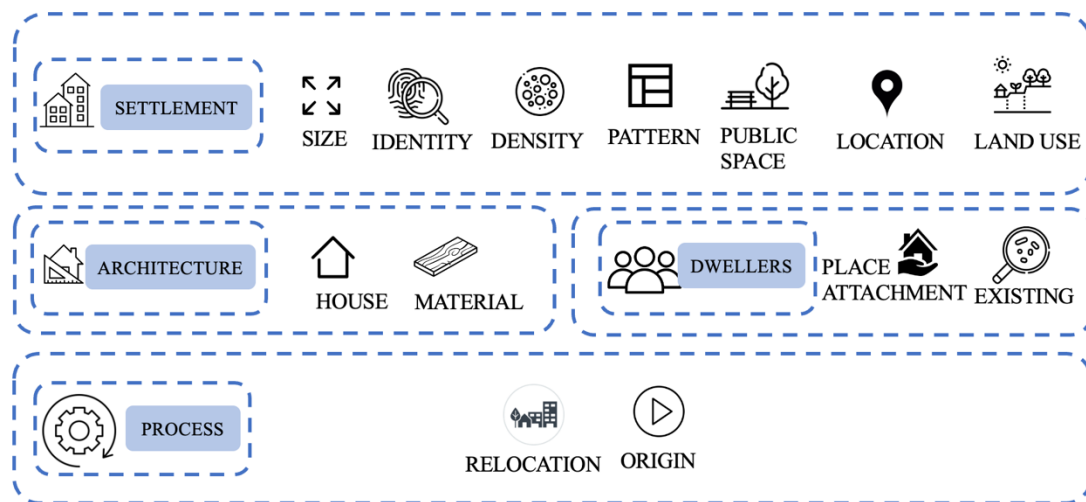


Fig. 1: Criterias of informal settlement diagram adapted from Kellett and Pojani

Source: Authors

According to this analysis, there should be a theoretical position that supports human needs besides the criterion of informal settlements. Goble (1985) points out that Abraham Maslow (1908 – 1970) is a theorist who has greatly inspired personality theory. He is a psychologist who came from America and became a pioneer of humanistic psychology. He is well known for his theory of hierarchy of human needs. Maslow (1954) used a pyramid as a model to visualize his ideas about the hierarchy of human needs. According to Maslow, people are motivated to fulfill their life needs in a hierarchical order. This order starts from the lowest basic/physiological, and then moves upwards to security, social, and respect to the highest need which he refers to as self-actualization.

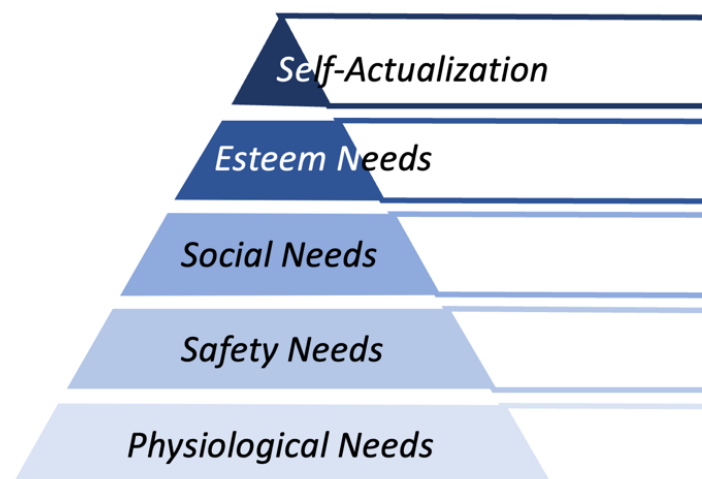


Fig. 2: Pyramid of human needs
Source: Adapted from Maslow (1954)

Based on the explanation of the above, we found a different type of theory from Kellett and Maslow. Those theories are combined as a new perspective that will assist in reading the object of the study in research methodology. There is also a gap from the criteria to the reality of the relocation that might be found in the study, because most of the processes adopted by the governments are without any justification to the dwellers about their ownership of the houses before (Poerbo, 1999). Rawls (1971) mentions about sense of justice that should be understood by the dwellers, it has to be very clear, acceptable and evenly administered in every situation. Mujiyanti (2012) quotes Mangunwijaya's reference to Kali Code, and says that they need to be assisted and supervised in order to understand about the redevelopment and approach their psychological aspect. As a result, we need to add more sub-criteria to the process which are more relevant to the case: justice, ownership and psychology.

Research Methodology

Based on the theoretical basis of this research, this paper employs qualitative research methods. Thus, it involves case studies and comparisons. This is based on the fact that there is a variety of data on architectural arrangements. They are very diverse and do not have a specific pattern. Therefore, it requires mapping first.

The case studies were selected based on the following criteria.

1. Illegal settlements that have grown unplanned and have a history of unlawful occupations.
2. The illegal settlements that have grown with self-development methods in urban areas so that autonomous architecture has emerged with a culture that has appeared from the community itself.
3. Illegal settlements that have been carried out, but not only in the form of physical arrangements but already have a level of humanistic arrangement in terms of social, economic, politics, and cultural aspects.

Both the primary and secondary data were obtained qualitatively in the natural settings. Primary data were obtained through participant observation, in-depth interviews, and documentation such as architectural images. Secondary data were obtained from prior research related to the illegal settlements in urban areas. This qualitative research involves respondents who acted as the resource persons to fulfill the humanistic needs in the relocation arrangements. The criteria employed in selecting the respondents are as follows:

1. Participants are the residents of the flats that have been relocated from the informal settlement.
2. Participants had lived in the informal settlement before for a minimum of 10 years.

3. Participants are considered as active residents in the flats who live, work and socialize in that building from the beginning of the relocation process until this research had been conducted.
4. Because of the limit of the time and scope of the research, participants were chosen as a representation of each level of the flat in the building.
5. Interviews were carried out in Cluster A2, the first flat which had been occupied since relocation in 2015, from the 2 buildings, with 20 respondents (Fig. 3)

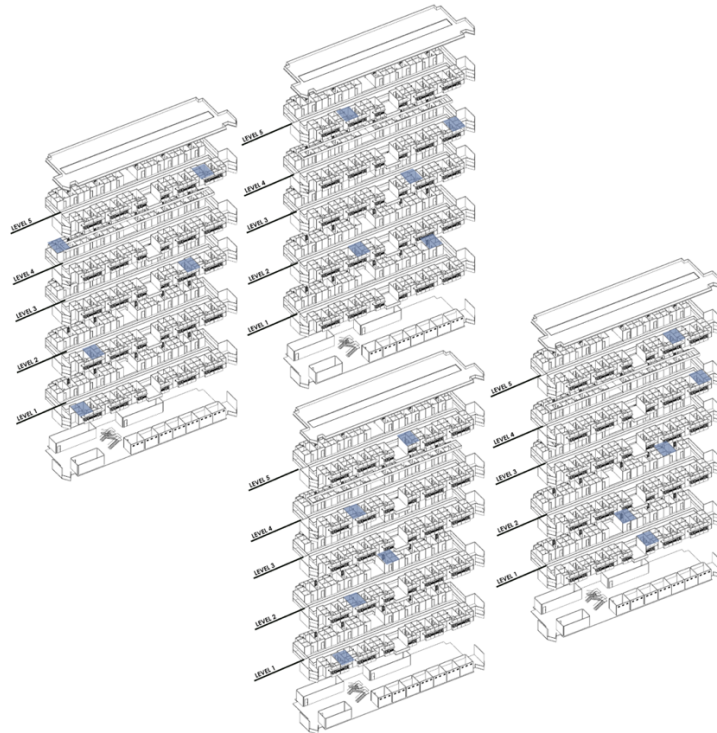


Fig. 3: Units interviewed from Marunda Flats Cluster A2

Source: Authors

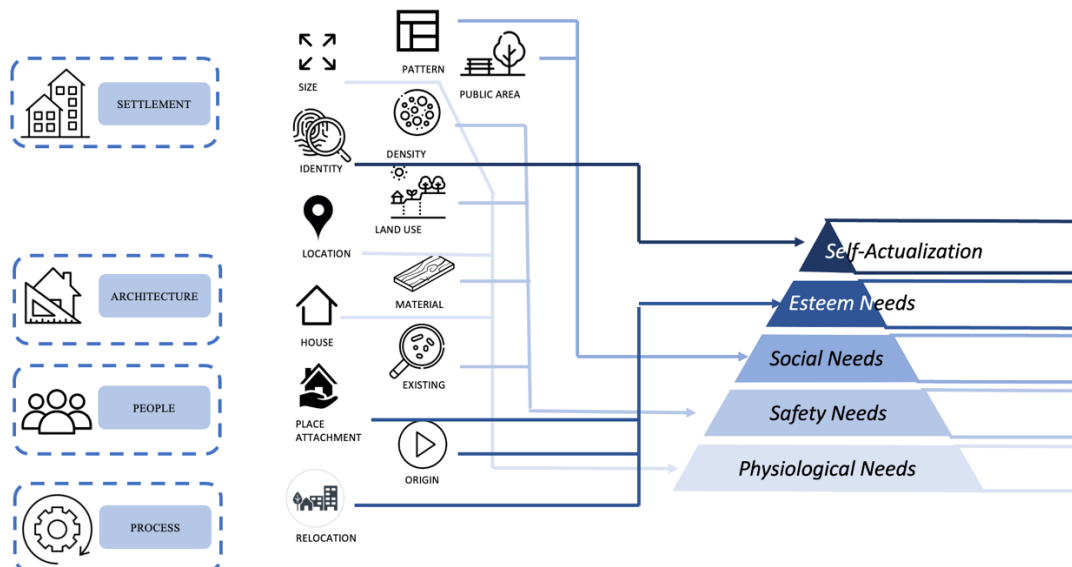


Fig. 4: Connections between the illegal settlements and Maslow's theory of human needs

Source: Authors

The data analysis has been done in accordance with Maslow's hierarchy of humanistic needs. In other words, they relate to physiological, security, social, esteem, and self-

actualization needs which are then connected directly to the elements of the criteria for structuring the illegal settlements. The diagram above shows the placement of each sub-criteria and elements in these criteria against the needs of the Maslow's hierarchy of needs pyramid as shown according to the colors that have been grouped. The correlation between the sub-criteria and the elements on the humanistic needs of value level produces a new pyramid diagram as the level of humanistic value needs in the arrangement of illegal settlements. The physiological needs are represented by housing, sizes of the housing, and location. The security needs are related to density, existing conditions, materials, and land use. The social needs are related to public spaces, patterns and consolidation. Then, the esteem needs are related to attachment to places, relocations, and the origin. Meanwhile, self-actualization is related to the identity of the residents.

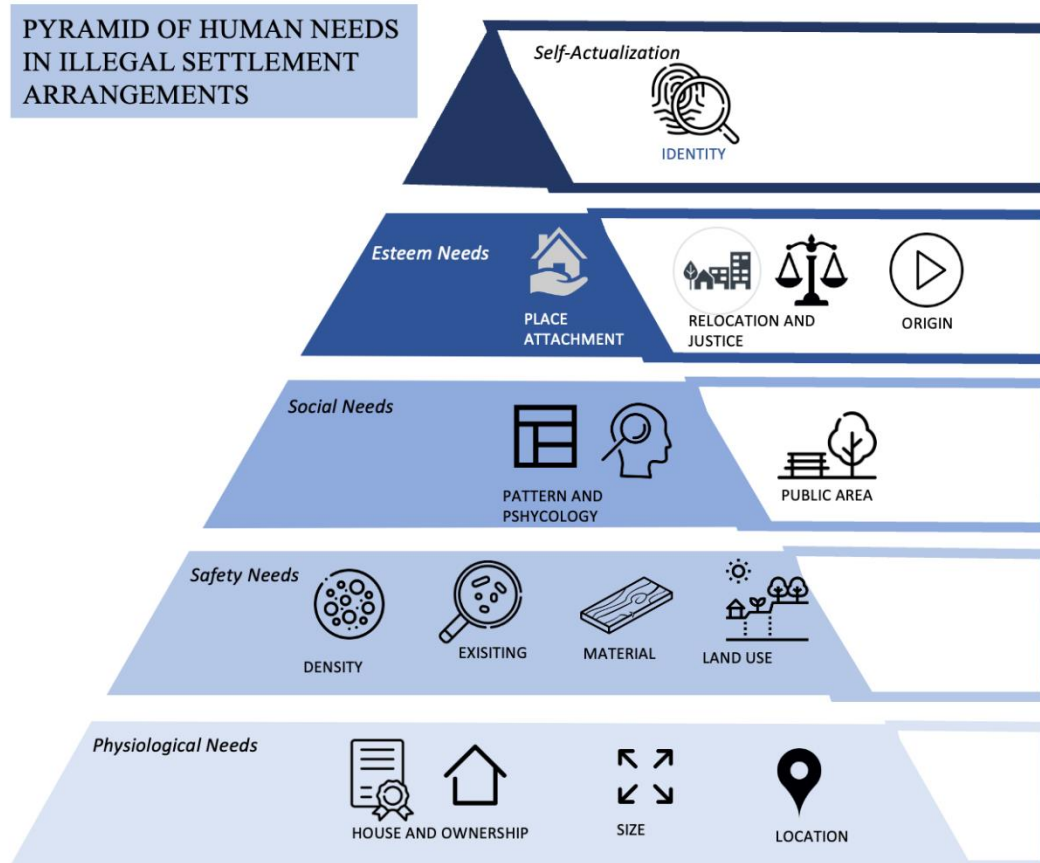


Fig. 5: Pyramid of Human Needs as related to the Illegal settlement arrangements

Source: Authors

The locations were selected based on if they have been reorganized but not completely displaced or relocated. This means that the object of the study still has traces to study in the remaining areas that have not been relocated. Most research locations were on the riverbanks because the relocation carried out has had a significant problem in the capital city of Jakarta. This is the cause of flooding. In fact, the illegal settlements that were relocated had occupied the land: a river catchment area. That was the leading cause of flooding.



Fig. 6: Illegal Settlement in Kalijodo, Jakarta, Indonesia: the object of the study
 Source: Authors



Fig. 7: Transformation of the illegal settlement becoming a public space
 Source: Authors

The selected illegal settlement is in Kalijodo, which underwent relocations and was changed to child-friendly integrated public space (RPTRA). However, there are still remnants across the road. The residents of the Kalijodo illegal settlement were relocated in 2015 while transforming all the illegal settlements into green open spaces. The research examined the settlements that are still on Bridge 2 Street, Angke, Tambora District, West Jakarta. The illegal settlements that have been relocated to become open spaces are Jl. Scouting 2, Angke, Tambora District, West Jakarta. The blue dotted line in Figure 6 indicates the illegal Settlements examined. The area of the illegal settlements studied is around 50,000m². The study focused on areas that still have the culture or the characteristics of the Kalijodo area. The residents have been moved to the Marunda Flats located in Marunda, Cilincing District, North Jakarta. It consists of several clusters and towers, each with 6 (six) floors. The Marunda Flats which is 26 kilometers from the original settlement, purposefully reorganized the arrangements in Kalijodo.

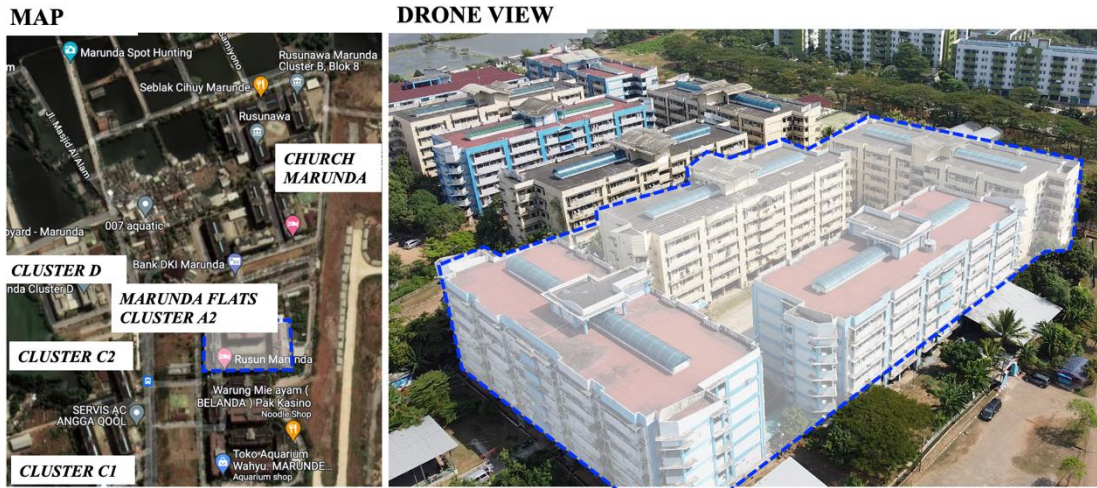


Fig. 8: Marunda Flats as Relocation Housing for Kalijodo People
Source: Authors

Findings and the Analysis

Meeting the building and ownership needs

For the relocation of the houses in Kalijodo village, the Marunda Flats has been chosen. It has a strong physical condition with concrete construction. Even though it has been built in 2008 and has been inhabited by the relocated residents since 2016, physically, the Marunda Flats are still more than adequate in contrast to the previous Kalijodo village. Meanwhile, houses in the Kalijodo illegal settlements appear to have unfit physical conditions because they have used semi-permanent constructions with makeshift roofs and have limited facilities for public bathing, washing and toilets. In addition, 85% of the respondents agreed that the building of Marunda Flats are more decent than their homes in the previous informal settlement.

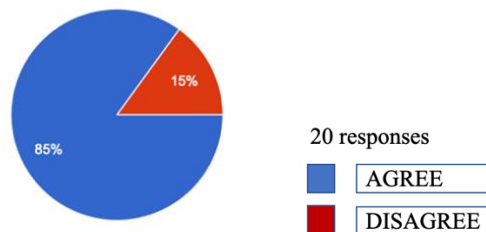


Fig. 9: Result of how many respondents are satisfied with the flats
Source: Authors

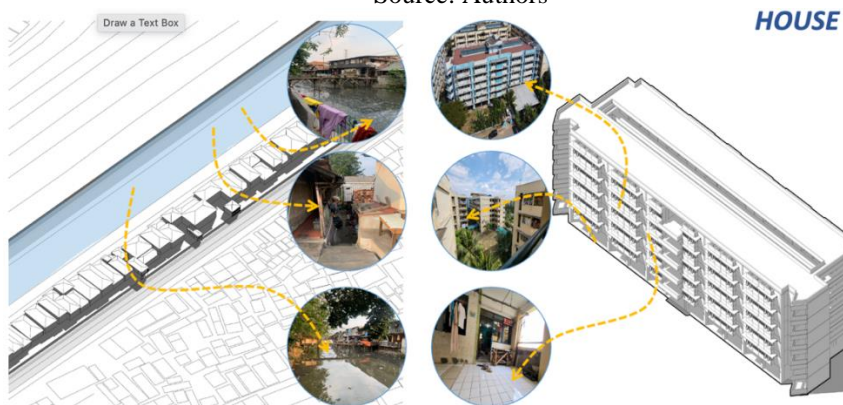


Fig. 10: Physical Transformation of the houses
Source: Authors

70% of the respondents said that they did not have the certification of the houses before in the informal settlement. Only 30% of them had the ownership before, and that might be defective because their houses stood on illegal land. At the current time, they only have lease rights of the flats. Therefore, the ownership of the units changed from the houses before and produce less of an attachment to the building.

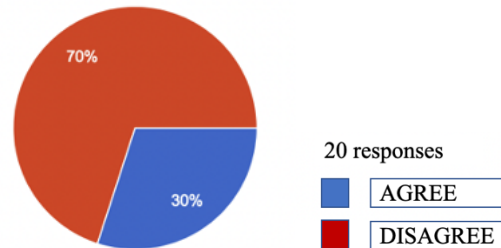


Fig. 11: The number of respondents who have their certificate of the houses at the informal settlement
Source: Authors

Meeting the physiological needs

Marunda Flats also have a large number of similar units comprised of 28m², with two bedrooms inside, a living room, a bathroom, a kitchen, and a balcony for drying clothes. Physiologically, the Marunda Flats meet the humanistic needs of the relocated people. In contrast, the size of houses in the illegal settlements in Kalijodo does not have uniformity. They depend on the economic conditions of each family. Some house sizes are 12m², but some are up to 30m². However, based on the physiological needs, the sizes of most of the houses are adequate for the occupants to meet the humanistic physiological needs. Moreover, 75% the respondents agreed that the size of their new unit is more than their previous house.

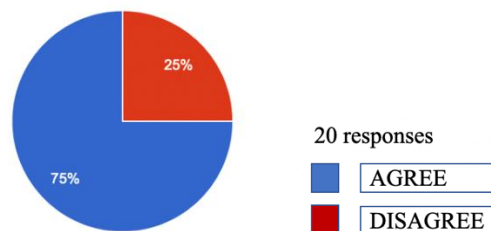


Fig. 12: The number of respondents who agreed that the size of the units are more than their previous house
Source: Authors

Fulfilling the needs of distance of the relocation

The Marunda Flats are 25 km away from the Kalijodo settlement. Although both are in North Jakarta, they are located in different districts, namely Cilincing and Penjaringan, and those areas have dissimilar environmental characteristics. However, since the spaces in the flats do not meet the humanistic needs physiologically, which has caused difficulties for the residents to adapt, they have returned to their hometowns. The government has to prepare the destination of the relocation, 25 km distance of resettlement made a lot of dwellers have changed their jobs, and have transferred their children's schools. Thus, there is a long process to adapt.

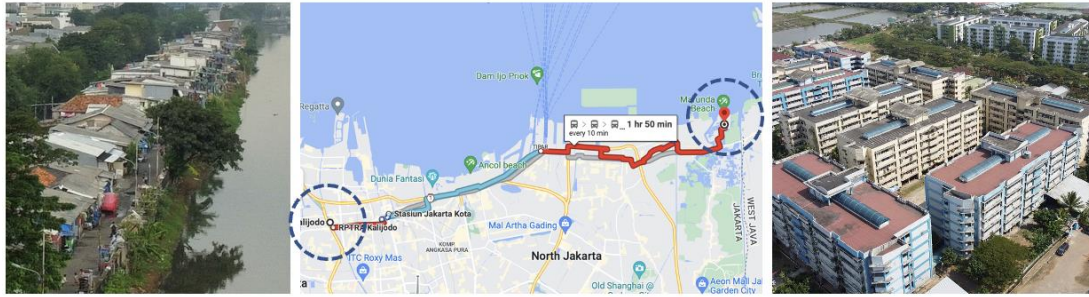


Fig. 13: Distance of the relocation from Kalijodo to Marunda flats
Source: Authors

Meeting the population density needs

The Kalijodo illegal Settlement has had a moderate population density. However, the allotment of land in Kalijodo is green land. In comparison, the Marunda flats have a very low population density because they are located on an appropriate land allotment and the need for open space land is well met.

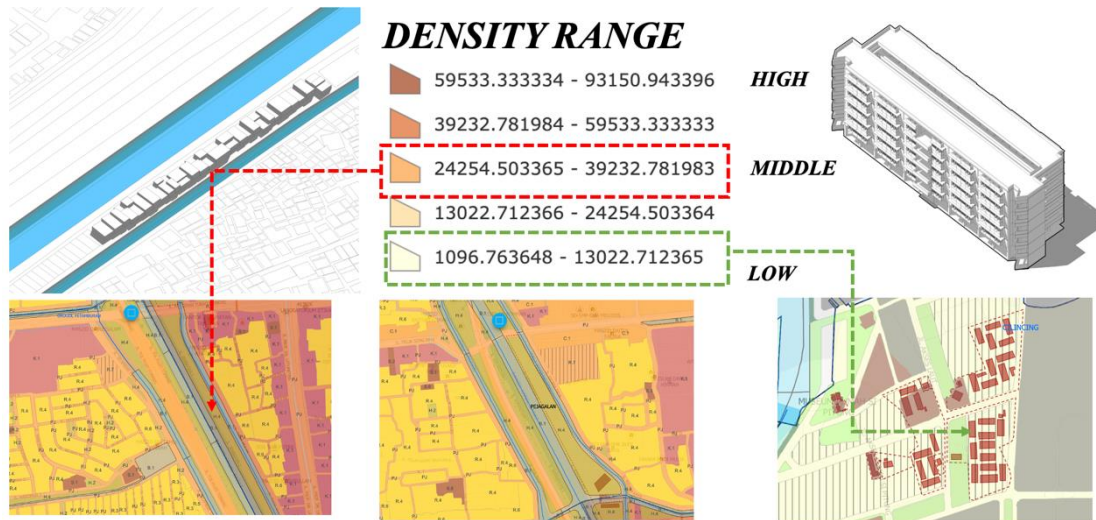


Fig. 14: Population Density of Kalijodo and Marunda Flats
Source: Authors

Fulfilling the needs of the existing condition

It can be seen that the houses in the Kalijodo illegal Settlement have had semi-permanent physical characteristics and have adapted to water according to the needs of the community, which is the riverbank. Communities tend to have social relations across the buildings 1-2 floors high and turn empty spaces into shared spaces. In comparison, the Marunda Flats, as the destination for relocation has physical characteristics that are very much different from the previous condition. On the other hand, 85% of the respondents agreed that the flats are safer and provides properly physically for their lives.

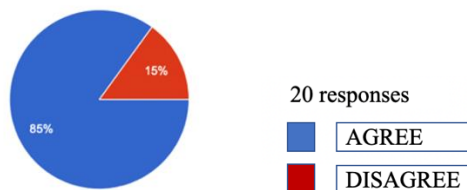


Fig. 15: the respondents who felt safer and proper in their existing condition in the flats
Source: Authors

Meeting the material needs

The houses in the Kalijodo Illegal Settlements have had semi-permanent materials. Some have used bricks but makeshift roof frames and materials. In terms of security, houses with this material are still below standard, especially since the area is a river bank that is prone to flooding and will endanger the safety of the residents. In comparison, in the Marunda Flats, the houses have been built with concrete constructions and fulfills security in terms of the humanistic values through the relocation process. Moreover, the area is not prone to flooding. The high rise, seven floors provide protection from the floods.

Fulfilling the needs of land use

Based on the Indonesian Land Zone, Kalijodo settlement is categorized as a Green Zone and there should be no houses built in that area. The spontaneous settlement occurred in that area because of the lack of surveillance in that area. On the other hand, Marunda Flats are categorized as a Housing Zone. This indicates that this relocation fulfils the needs of land use.

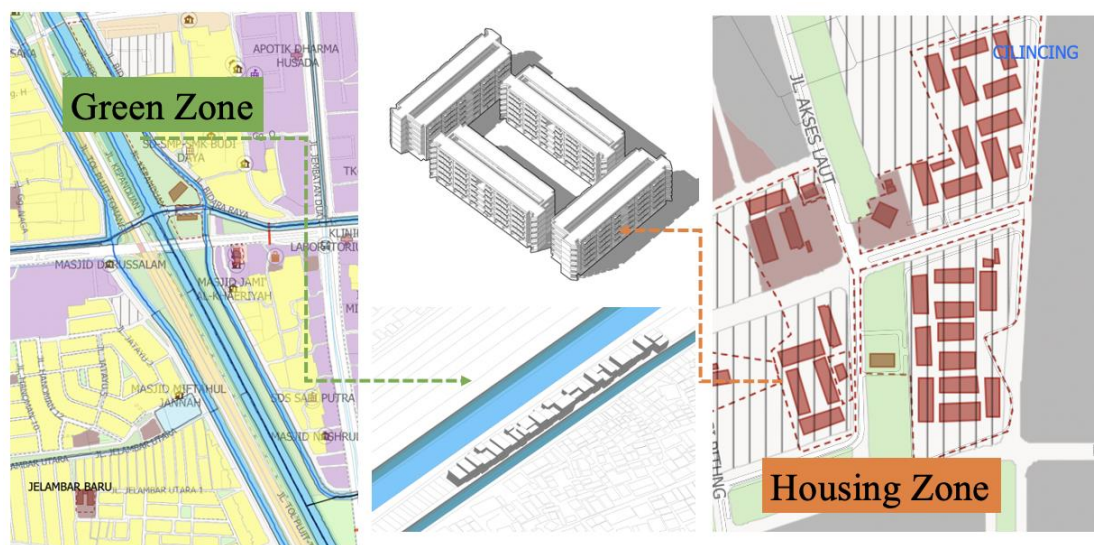


Fig. 16: Land Use Diagram

Source: Authors

Meeting the public area needs

The Kalijodo illegal Settlements do not have any planned public spaces. Still, the community socializes in places with potential interaction, such as places of worship, small empty spaces, and commercial areas such as stalls. Dwellers used the crossing bridge to cross to the other side of the area as an informal public space. The local society used the bridge as a public space in their settlement. This kind of public space is used for trading, chatting, and playing. It also can be considered dangerous because of the risk of spreading diseases and the risk of falling into the river especially for the kids. This is created because of land limitation. For the territories, the street or terrace in front of the house is mostly used for chatting and hangout by the teenagers, adults, and the elders. Meanwhile, the side of the street area near the houses or bridge are used mostly by the kids who play around the neighborhood. Those areas are also used by the packmen who stroll around to do some trading activities with local societies.

In contrast, the Marunda Flats consists of several clusters, and each cluster consists of 4 towers that face each other with the result that a public space is created in the middle. In addition, with the level of differences and the needs of vertical circulation, the open space planning does not function as it should. A big open space, such as a park are important to provide opportunities for physical activities, engagement with Nature, social interconnection and moderation (Jameel, 2023). Unfortunately, this research found the park in the middle of the

buildings does not attract people and activities, because people from Kalijodo are used to interact socially in a small path with small groups of people.

Meeting the activity pattern and psychological needs

The Kalijodo illegal settlement has linear extensions towards the two river banks. There is a linear pattern of activities from the residents but still only horizontally. Activity patterns are created by filling in empty spaces that accommodate shared space needs such as security posts and commercial areas such as stalls.

There are two types of activities in a neighborhood which are formal activities and informal activities. Formal activities include cleaning up, maintaining security in the society, or monthly meetings with communities or hamlets. Meanwhile, informal activities include chatting, playing around, trading, parenting, and others. These activities create territories in some areas, for example chatting with neighbors in front of the house, trading some food on the street, children playing around the neighborhoods, etc. The territory is used at a time that is used by certain circles.

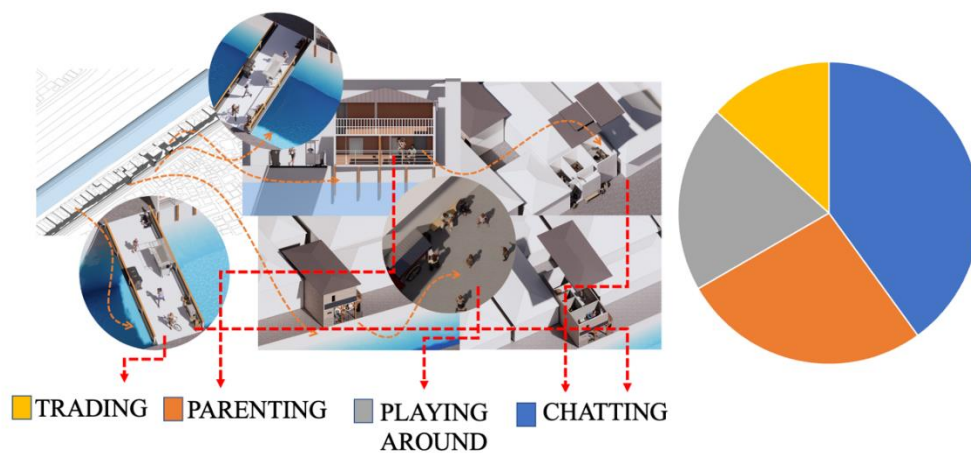


Fig. 17: Activities Illustration and Chart of Kalijodo

Source: Authors

Social activities that are carried out on the side of the street include chatting, playing, hangout, sport, and other activities that can be done while socializing such as selling and shopping from the local sellers. These social activities and social interactions in Kalijodo are happening between the local community, the family itself and its surrounding.

In the surroundings, the local community used the side of the street with a width from two to three meters. The use of this street area is as a social space in the Kampung Kalijodo. The local community has also provided street furniture such as benches in front of their houses. The packmen with their barrow also used in that area to sell something and to socialize with the locals around.

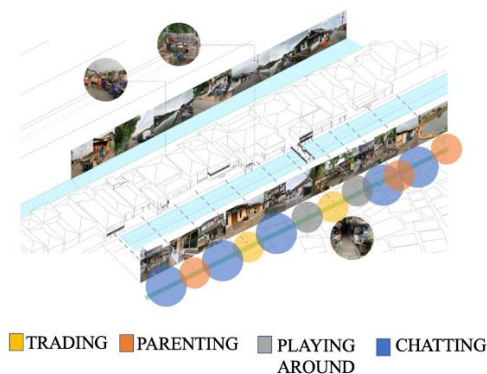


Fig. 18: Activities Diagram of Kalijodo

Source: Authors

In one house, there can be two to three heads of families with three to four rooms. Some houses have up to twelve rooms, so that they can rent it to other people or sell 'services', known as prostitution from them. Because of that, social interaction is also needed and can be created inside the houses. The members of a family can utilize the rooms, corridors, terraces, or balconies to do some activities together inside the house. For houses that are close to the river, they use the balcony or the terrace of the house to socialize with their neighbors, and also use the crossing bridge area.

In contrast, the Marunda Flats have the same linear pattern, but have a parallel linear pattern created between double sided corridors separated by the building voids. The patterns on each floor come together at one midpoint, namely the space that connects vertical circulation. Every area of the vertical housing are divided into neighborhoods and hamlets. The habit of interacting with neighbors appears not similar from before. They only use the corridors on each level to hangout, meet, or chat with others couple of times. It contrasts with as when they lived in Kalijodo (Fig 18). Even though they provide some benches, tables, and sofas so they can create a little area to socialize, the vertical system of the building separates them more than before. If we compare Fig. 18 and Fig. 20, the trading activities as the anchor of the settlement disappears, because in the Marunda Flats the commercial areas are located only in the ground floor. The retails below were not active anymore, because the location of the Marunda flats was far from the other location, which was very different from Kalijodo. As the result, the activity affects their psychological aspects because they have minimum time to socialize.

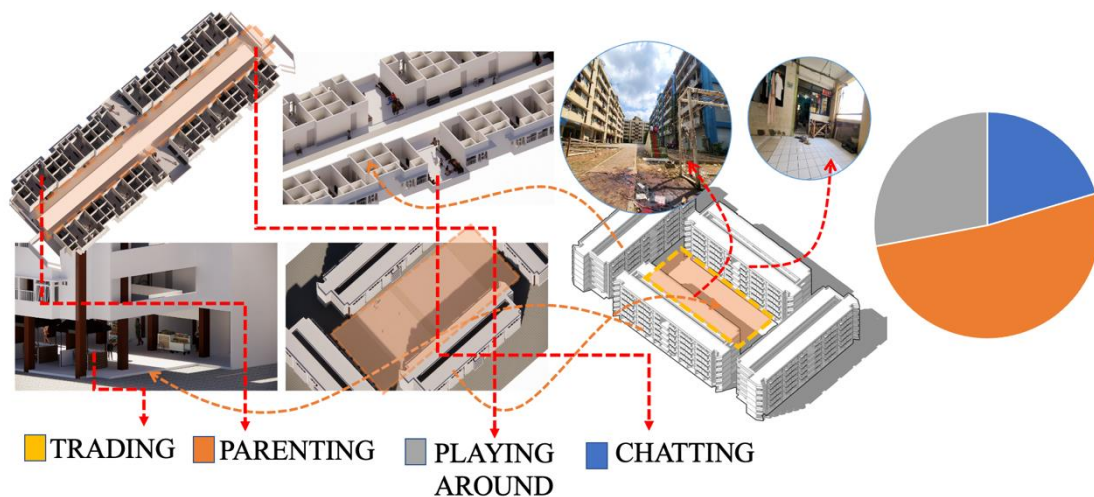


Fig. 19: Activities Illustration and Chart in Marunda Flats
Source: authors

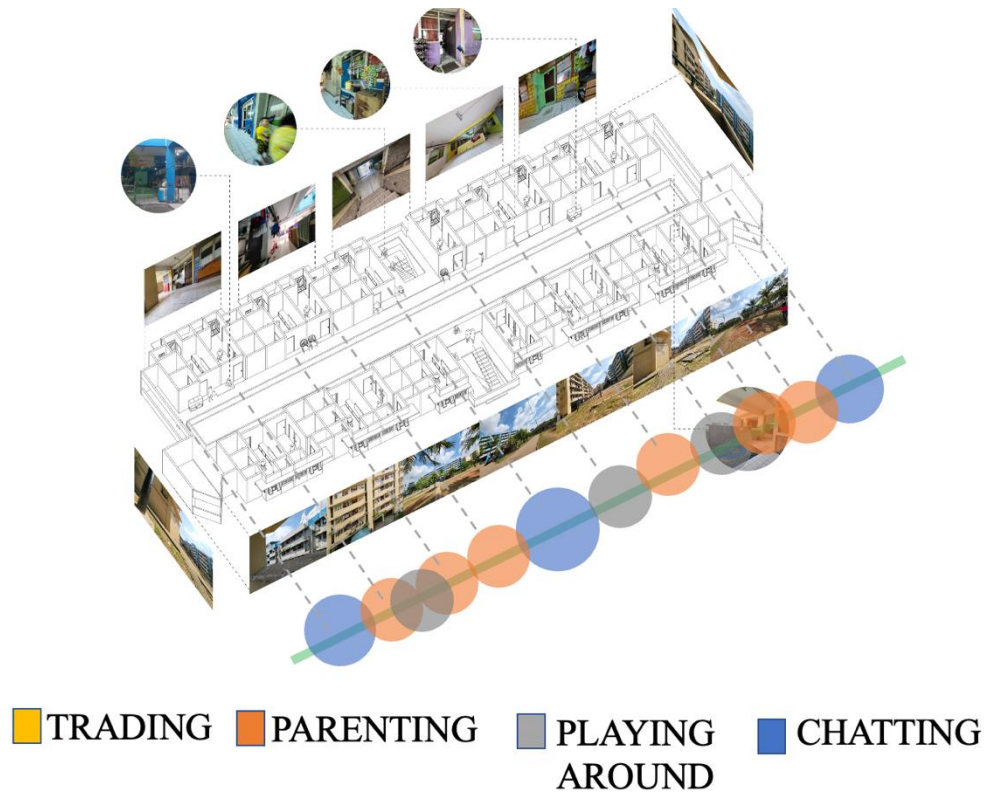


Fig. 20: Activities Diagram in Marunda Flats
Source: authors

Meeting the place attachment needs

The Kalijodo illegal Settlement has the peculiarities of housing along the river and is elongated. This town also has the uniqueness of the Kalijodo area, which is located in the Tambora area and already has close ties to the surrounding areas such as Pejagalan, Penjaringan, Jelambar and Angke. In contrast, the Marunda Flats and Kalijodo Flats are 25 km apart and therefore have different characters from the site, which have caused changes in the attachment to places. Moreover, 95% respondents agreed that their previous informal settlement felt more like home than the flats. Most of them assume it because of the distance of the units and the public space that have massive difference with their actual activities in small spaces.

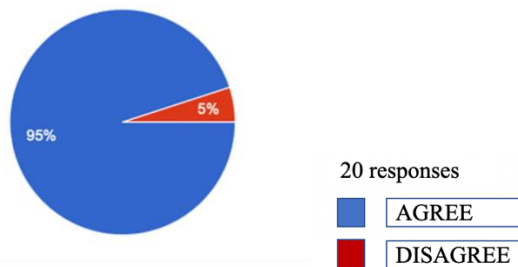


Fig. 21: Result of how many respondents are felt like home in the previous informal settlement than the flats
Source: Authors

Meeting the relocation and justice needs

The Marunda Flats are 25 km from the Kalijodo settlement and have been built since 2008, while the relocation activities have been carried out in 2016. This period shows that the Marunda Flats act only as a physical reservoir for the residents of the illegal settlements in

Kalijodo. The original Kalijodo area itself is considered an unlawful area and therefore has not been used as the basis for the design of the relocation. 90% of the respondents are not satisfied with the compensation of the relocation, only 10% of them have got the fund replacement of their houses. This result indicates that the justification for the dwellers is minuscule, the government promised to give them a full of compensation, but since the relocation, the phase got complicated with no result to them.

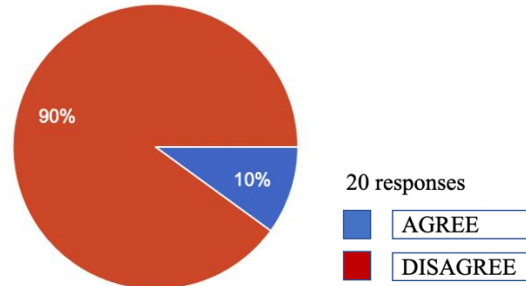


Fig. 22: Result of how many respondents are felt like home in the previous informal settlement than the flats

Source: Authors

Meeting the origin needs

According to literature, people who live in informal settlement have their homes as a result of their evaluation of their priorities and needs. 12 respondents of Marunda Flats are dwellers from the informal settlement more than 20 years before the relocation began. It shows that there is engagement between the dwellers and their origin. 90% of the respondents disagreed about the relocation process which shows that the resettlement of Kalijodo have not met the origin needs.

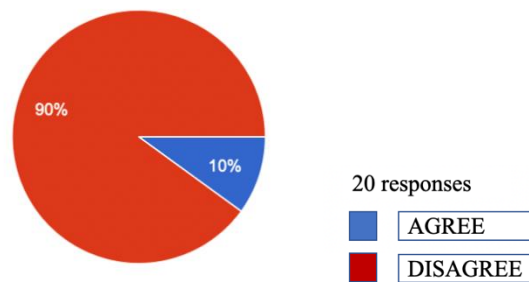


Fig. 23: Result of how many respondents are agreed with the relocation

Source: Authors

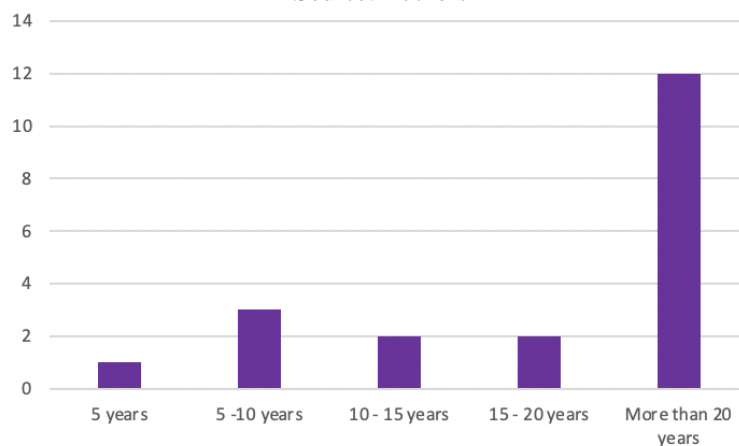


Fig. 24: Chart of the respondents lived in the previous settlement

Source: Authors

Meeting the identity needs as self-actualization

Self-actualization is the culmination of them all. Since some of the criteria are not fulfilled, this indicates the identity needs of the dwellers who are not accomplished at all. The explanation above shows that the dwellers need to be treated with more detail in social and esteem needs so that they will still have the identities before, eventhough they have been relocated. Only, 20% of the respondents agreed that the relocation is suitable for their identity. The different physical and environments change instantaneously; it made them feel that they do not belong there. In other words, not they do not feel like being in their homes.

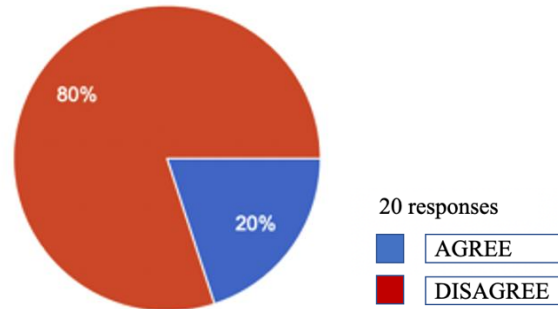


Fig. 25: The respondents who felt contented and liked the 'homes' in the flats
Source: Authors

Conclusions

Based on the analysis above, and by looking at the five levels of fulfilling the needs of the humanistic values in the Kalijodo relocation arrangement, one can see in Fig. 26, the differences in blue color gradations. The white color shows the fulfillments of the values of humanistic needs that are highly fulfilled, such as the building, the size, and land allocation in the Kalijodo relocation. The light blue color indicates that it has been fulfilled. These include aspects such as the density, and material criteria. The blue color indicates that the aspect has not been fulfilled. These are the aspects such as the pattern and place criteria. Finally, the dark blue color shows the highest concentration where many aspects are not fulfilled. These are the location, existing condition, public space, relocation process, and the state of origin.

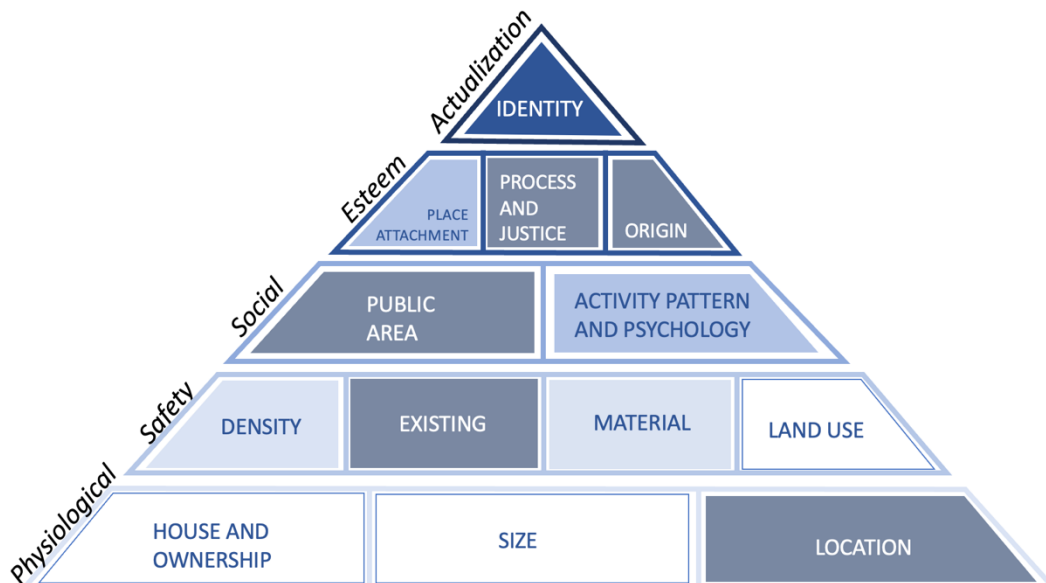


Fig. 26: Fulfillment of human needs in the relocation of the illegal settlement
Source: Authors

Based on the analysis of the arrangement, it can be seen that there are criteria that must be considered in the relocation arrangement. In the Fig. 26, it can be seen that the fulfillment of physiological needs is achieved because physically, the house building, size and location can be easily fulfilled. Regarding the security needs, further attention needs to be given to density because, the number of people to be relocated and the availability of land are interrelated. Ultimately, this will affect the safety of the existing conditions. In the hierarchy of social needs, the two sub-criteria must be considered in the relocation arrangements.

However, the patterns of activities that became the village cultural values have not been investigated further. Thus, the provision of public spaces in these arrangements has not succeeded in relating to the existing activities. Intimate activities and gatherings of small groups cannot simply be recreated in large open areas as public spaces. In terms of fulfilling the need for appreciation, the relocation process was found to be unfulfilled due to the evictions and transfers that did not pay attention to the originality or circumstances of the two villages. The non-fulfillment of the six sub-criteria means that self-actualization in the two relocation arrangements is not entirely fulfilled. Thus, further review is needed in the future relocation arrangement processes.

In the end, self-actualization need is not fulfilled, and there should be more treatment during the process of relocation in order to fulfill social and esteem needs as mentioned above. Hopefully, the benefit of this research is a new guideline for government and other divisions who will engaged into the relocation of illegal settlement, now can focus on social needs, esteem needs and actualization needs of the dwellers in the future. Unfortunately, this research is limited on time and architectural planning scoop, then there should be a deeper experimentation from other studies to be more specific in human activity, psychology and government justification.

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