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## Thesis title:

**Acceptability of housing outcomes in slum upgrading intervention: The case of ‘Extreme Poverty Alleviation’ in Kemas Rindo, Palembang, Indonesia**

**Name: Raden Mohammad Bagus Prakoso**

Supervisor: Alonso Ayala Aleman

Specialisation: Urban Housing and Land Justice

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## Summary

Rapid urban population growth and insufficient support for basic needs lead to slum problems. It is estimated one in eight people in the world live in slums or experience similar conditions. In 2022, Indonesia launched the ‘Extreme Poverty Alleviation’ agenda to reduce poverty. One of the programs was done through slum upgrading in Kemas Rindo, Palembang, South Sumatra. However, slum upgrading affects the community differently. It is important to understand the community’s acceptability to ensure the long-term sustainability of the housing and settlement intervention.

This research aims to investigate the relationship between slum upgrading and the acceptability of housing outcomes, and community participation during the process. This research applies the qualitative approach to understand the slum upgrading components, the participation level during the planning and implementation phase, and the community’s physical, socio-cultural, and financial acceptability. Both primary and secondary data collection are used. Primary data was collected through semi-structured interviews with government officials and slum dwellers, and observation in Kemas Rindo. Meanwhile, secondary data was collected from government reports.

The research focused on three findings, slum upgrading components, community participation, and community acceptability. First, slum upgrading was developed with a collaborative approach from the Settlement Infrastructure Agency (BPPW), the Housing Provision Implementation Agency (BP2P), the Regional Infrastructure Development Agency (BPIW), and the community. The upgraded components are water, sanitation, neighbourhood roads, drainage, and housing improvements. Second, the community participation level in the planning phase was identified as consultative level and shared control in the implementation phase. Third, in the physical aspect, the residents feel satisfied due to the upgrades to a permanent condition and better accessibility. In the socio-cultural aspect, the community were closer to each other during the slum upgrading process, they have more sense of belonging and are willing to maintain their house and settlement area. In the financial aspect, they did not feel burdened to pay the monthly charges because of the quality and the reasonable price. However, a few people were unsatisfied because they had not received the water connection yet, the house was not completely improved because of the limited budget and stilt house typology, and the neighbourhood road was not fully upgraded due to limited budget and prioritisation. This research recommends continuing the collaborative approach of slum upgrading and housing improvement programs, especially in Indonesia, since it positively affects community acceptability.

## Keywords

Slum upgrading, housing improvements, participation, acceptability, perception.

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## Abbreviations

| Abbreviation     | Full form                                                                                                                      |
|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>BKKBN</b>     | <i>Badan Kependudukan dan Keluarga Berencana Nasional / National Population and Family Planning Board</i>                      |
| <b>BP2P</b>      | <i>Balai Pelaksana Penyediaan Perumahan / Housing Provision Implementation Agency</i>                                          |
| <b>BPIW</b>      | <i>Badan Pengembangan Infrastruktur Wilayah / Regional Infrastructure Development Agency</i>                                   |
| <b>BPPW</b>      | <i>Balai Prasarana Permukiman Wilayah / Settlement Infrastructure Agency</i>                                                   |
| <b>BPS</b>       | <i>Badan Pusat Statistic / Central Statistic Agency</i>                                                                        |
| <b>BSPS</b>      | <i>Bantuan Stimulan Rumah Swadaya / Self-Help Stimulant</i>                                                                    |
| <b>IHS</b>       | <i>Institute for Housing and Urban Development Studies</i>                                                                     |
| <b>KIP</b>       | <i>Kampung Improvement Program</i>                                                                                             |
| <b>MBR</b>       | <i>Masyarakat Berpenghasilan Rendah / Low-Income Community</i>                                                                 |
| <b>MENKO PMK</b> | <i>Menteri Koordinator Bidang Pembangunan Manusia dan Kebudayaan / Coordinating Minister of Human and Cultural Development</i> |
| <b>NAHP</b>      | <i>National Affordable Housing Program</i>                                                                                     |
| <b>P2KP</b>      | <i>Program Penanggulangan Kemiskinan Perkotaan / Urban Poverty Alleviation Program</i>                                         |
| <b>P3KE</b>      | <i>Pensasaran Percepatan Penghapusan Kemiskinan Eskstrem / Targetting the Acceleration of Extreme Poverty Reduction</i>        |
| <b>PDAM</b>      | <i>Perusahaan Daerah Air Minum / Local Water Company</i>                                                                       |
| <b>PKE</b>       | <i>Penanganan Kemiskinan Ekstrem / Extreme Poverty Alleviation</i>                                                             |
| <b>PUPR</b>      | <i>Pekerjaan Umum dan Perumahan Rakyat / Ministry of Public Works and Housing</i>                                              |
| <b>RAB</b>       | <i>Rancangan Anggaran Biaya / Budget Estimation Plan</i>                                                                       |
| <b>RT</b>        | <i>Rukun Tetangga / Administrative Neighbourhood Unit</i>                                                                      |
| <b>RTLH</b>      | <i>Rumah Tidak Layak Huni / Unhabitable House</i>                                                                              |
| <b>SOP</b>       | <i>Standar Operasional Prosedur / Standard Operating Procedure</i>                                                             |
| <b>SSI</b>       | <i>Semi-Structured Interview</i>                                                                                               |
| <b>TNP2K</b>     | <i>Tim Nasional Percepatan Penanggulangan Kemiskinan / National Team for the Acceleration of Poverty Reduction</i>             |

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# Chapter 1. Introduction

## 1.1 Background

In 2030, sixty per cent of the world's population will live in cities and there will be an additional three billion people residing in cities by 2050. Cities have suffered from a housing crisis due to rapid urbanization which affects population growth and housing demand. Rapid urban population growth along with insufficient support for basic needs, such as housing, leads to another problem which is slums. In many parts of the world, high rates of urbanization have resulted in inadequate planning and governance, stagnating economies, and creating poverty concentrated in slums. Currently, one in eight people in the world is estimated to live in slums or experience similar conditions (UN-Habitat, 2018).

Indonesia's population is growing at a relatively rapid rate, reaching 1.45 per cent per year. The population reaches approximately 278.7 million people, the fourth highest population country in the world (BPS, 2024). Indonesia has. In 2020, around 56.7% of people live in cities. By 2045, 70% will live in cities. Urbanization will create economic growth, however, it has a bad impact such as traffic congestion, pollution, and slums (Rizaty, 2021). Approximately, 22% of people live in urban slums. Studies in Indonesia show that urban slums emerged because of the lack of water, sanitation services, and building disorder (Zubaidah et al., 2023).

Slum upgrading intervention is considered a long-term approach to addressing poverty in cities (Cronin, 2011). This intervention could consist of physical, social, economic, and environmental improvements together with the local communities and local authorities. The component includes the basic infrastructure provision, housing improvement, regularizing security of tenure, etc. (Cities Alliance, 1999 & World Bank, 2000). To achieve the sustainability of housing intervention, understanding the acceptability of the housing outcome is a critical point. It relates to the community's perception of housing outcomes (Ayala et al., 2019). This perception also could be seen as the quality of housing in achieving the physical, social-cultural, economic, and financial aspects (Jaitman, 2012).

## 1.2 Problem statement

In 2022, Indonesia launched the 'Extreme Poverty Alleviation' as a National Agenda to reduce the number of extreme poverty people in Indonesia. The extreme poverty index in Indonesia is 4% or 10.86 million people (TNP2K, 2022). According to President Instruction Number 4 of 2022, the Ministry of Public Works and Housing has a task to improve the quality of housing and settlement, providing water and sanitation. One of the programs had been done in Palembang City, South Sumatra.

Palembang, the capital city of South Sumatra, one of the Metropolitan in Indonesia had a population of 1.7 million (4,717 ppl/km<sup>2</sup>) (Palembang Statistical Agency, 2024). Despite the economic growth, Palembang still suffered from slums and uninhabitable housing problems. The number of Unhabitable House/*Rumah Tidak Layak Huni (RTLH)* reached 8,030 units (*e-RTLH*, 2023), and the number of poor people is 179.45 thousand people or 10.22% of the total population (Palembang Statistical Agency, 2024). Based on the Palembang Mayor Decree Number 325 of 2020 concerning the Slum Areas in Palembang, Palembang has a slum with a total of 1092.30 hectares

One of the slum upgrading programs was held in Kemas Rindo Sub-District. This area is located in the southern part of Palembang City, 6 km from the city centre. Yuliani (2019) explained that the factors of slum problems in this area are the waste problem, sanitation, water access, tenure security, and the strategic location as an industrial area that attracts

people. The slum upgrading program was done in 2022, including the improvement of neighbourhood roads, revitalization of drainage, providing access to water, providing access to sanitation, and housing improvement (BPIW, 2022).

Studies show that slum upgrading affects a community's acceptability differently. *Kampung Deret Program* (KDP) implementation in Jakarta, Indonesia had success in improving housing quality. However, there are some shortcomings, such as lack of budget, delay in the construction phase, tenure security problems, lack of community participation, and the lack of socio-economic development activities. The financial resources and socio-economic condition of residents determined whether the community participated in the slum upgrading process (Nurdiansyah, 2017).

Archer (2011) studied that satisfaction is a vital key to ensuring the success of slum upgrading in Bangkok, as this is done through community-driven. The results show the respondent is satisfied with the physical outcomes which is the improvement of their houses and neighbourhood area, but they are concerned about expenses and debt after the program. Jaitman (2012) emphasized that in improving living standards, water and sanitation interventions have the most immediate effect, especially on health. More studies are needed to investigate the most effective way to promote basic needs for slum dwellers.

Doe et al. (2017) emphasized that the perception of slum upgrading toward sustainability is affected by several factors such as economic, technical, policy, and environmental factors. For instance, a household's capability to afford the cost of materials and quality; the cost of water, sanitation, and electricity; and the condition of road access influenced the perception of the sustainability of the slum upgrading interventions. They also argued that the slum upgrading must involve the participation of inhabitants in ensuring long-lasting intervention. Degert et al. (2017) assessed the sustainability of slum upgrading in Korail, Bangladesh and it enabled the inhabitants to have access to all essential services with strong community participation. However, tenure security still needs to be addressed.

Mesplé-Somps et al. (2020) found slum upgrading in Djibouti improved the slum condition physically, however, it did not improve the economic aspect and employment rate significantly. Cronin (2011) found that there were many misconceptions that slum dwellers do not always see their living conditions as slums. Slum upgrading initiatives must be sensitive to the unique circumstances of the community or culture, and not assume that the people who live in slum areas are unhappy.

In Indonesia, there was a 'Cities Without Slums' or '*Kota Tanpa Kumuh (KOTAKU)*' program that had a variety of results. In Semarang, *KOTAKU* improved the quality of the neighbourhood, but there were some constraint factors such as the lack of socialisation from the government and the lack of participation from the community (Christianingrum & Djumiarti, 2019). In Palembang, the policy network research found challenges in achieving the goal of slum upgrading, such as lack of collaboration, unclear roles of stakeholders in housing policy, and the difficulty of getting trust to collaborate between actors (Zubaidah, 2023).

Although studies on slum upgrading have been done with different perspectives, such as satisfaction, physical conditions after the intervention, participation, perception, sustainability, etc., there are not many studies on the acceptability of housing outcomes including physical, socio-cultural, and financial aspects. Moreover, in Indonesia, there is still a lack of studies on slum upgrading in the context of 'Extreme Poverty Alleviation'. Therefore this research will investigate the relationship between slum upgrading intervention with the acceptability of housing outcomes.

### 1.3 Relevance of the research topic

This research is intended to assess the implementation of slum upgrading in extreme poverty communities, specifically in Palembang, and whether it has effectively supported the 'Extreme Poverty Alleviation' agenda. As the national government has recently issued the President Instruction Number 4 Year 2022 to accelerate the reduction of extreme poverty communities, the study can contribute to the policymaker in evaluating and implementing the policy more effectively to ensure adequate housing.

Further, the study could contribute to the existing body of knowledge about slum upgrading practices, especially in developing countries. The result of this study will provide empirical evidence of the relationship between the slum upgrading program and the acceptability of the outcomes. Moreover, since the program is continued in different cities in Indonesia, this study might suggest evaluation and recommendations for future programs.

### 1.4 Research objectives

This research aims to understand the relation between the slum upgrading intervention with the acceptability of housing outcomes, using the case of Kemas Rindo Sub-District in Palembang, Indonesia. As explanatory research, this study will be guided by existing literature to draw a relationship between the variables. Mainly, this research uses Jaitman & Brakarz's (2013) framework on the slum upgrading components and Ayala et al. (2019) about the 5A's of Adequate Housing concept, especially the Acceptability.

First, the research will explain the components of slum upgrading. Second, this research will identify the community participation level, especially in the planning and implementation phases. Finally, this research will find out the community's perception according to the acceptability of housing outcomes in physical, social, and financial aspects.

### 1.5 Main research questions and research sub-questions

The main question of the research is:

**“How does the slum upgrading intervention affected  
the acceptability of housing outcomes in Kemas Rindo, Palembang?”**

These sub-questions are required to be answered:

1. What are the slum upgrading components that were developed in this area?
2. What was the community participation level in the planning and implementation phases?
3. What are the community's perceptions of housing outcomes?

## Chapter 2. Literature review and hypotheses

This chapter will examine the concept of the slum upgrading approach, the acceptability of adequate housing, and community participation. The explanation began with a general explanation of slums, the slum upgrading approach, slum upgrading in Indonesia, and the context of 'Extreme Poverty Alleviation'. Then, it is followed by the explanation of community participation. This chapter then discusses the Acceptability of 5A's principle of Adequate Housing. Lastly, It concluded with the conceptual framework.

### 2.1 Slum Upgrading

Currently, one in eight people is estimated to live in slum conditions. In the next 15 years, Over three billion people will require adequate housing. Slum continue to be a major contributing factor to poverty in the world. According to UN-Habitat (2018), a slum household is one where any one or more of the following five indicators are present: (1) lack of access to water; (2) lack of sanitary facilities; (3) lack of adequate living area; (4) lack of durable housing that protects from extreme climate; and (5) lack of security of tenure.

Slum areas can be categorized into three categories: Firstly, physical aspects, which could be seen from the lack of water service and sanitation facilities, the absence of waste management, low-quality construction, and hazard-risk areas. Then, the social aspect, which could be seen from the inhabitants' income and education level, disease susceptibility. Third, legal aspects, such as tenure security, unregistered buildings, and buildings on public or private land (Nurdiansyah, 2018). Housing in slum areas is identical to one another, the slum dwellers used temporary materials to evolve it informally over time, gradually improving it to permanent housing with tile floors, roofs, and brick walls. (Tunas & Peresthu, 2010).

#### 2.1.1 Slum upgrading in housing paradigm

The housing paradigm changes over time. From 1950 to the 1970s, housing was provided conventionally. Public housing was constructed by the state with mass housing provision. In the 1970s, informal settlements were considered a solution to the slums problem. The state encouraged self-help approaches by providing services, technical assistance, and materials. John F.C. Turner, the first to introduce the self-help approach and slum upgrading, argued that the community should become the main actors that provide their housing by themselves, rather than providing mass housing by the government. The solution to slums was not to demolish the slum area but to improve the living environment of the inhabitants. The government should minimize the role of housing provision and become the facilitator of the process (Hassan, 2012).

#### 2.1.2 Slum upgrading approach

Slum upgrading is defined as physical, environmental, social, and economic improvement in the neighbourhoods (Cities Alliance, 1999). Moreover, the goal of the slum upgrading approach is to improve the human well-being of low-income communities by providing basic services such as infrastructure and social interventions. (Doe et al., 2020). Slum upgrading could involve tenure security through land registration; basic infrastructure enhancements, including water and sanitation; reduction of environmental risks; incentives related to upkeep; housing improvement, such as material change; relocation; compensation; enhancing the accessibility of public services, education and health care facilities; job opportunities through training; crime prevention; and the establishment of institutions to maintain improvements (Cities Alliance, 1999). Since the 1970s, slum upgrading approaches have become supportive policies that follow *laissez-faire* policies, allowing people to do what their own decisions (Doe et al, 2020). Therefore, The objective of the slum upgrading strategy is to

integrate slum dwellers into the greater urban area to maintain social cohesion while raising their standard of living (Abdenur, 2009).

### **2.1.3 Physical intervention components**

There are main components of physical intervention in the slum upgrading approach, which are housing improvements, basic infrastructure improvements, and land tenure. The slum upgrading approach supports home improvements which include safer housing unit structures and standard quality of building materials (Satterthwaite, 2020; Cohen, 2015; Turley, 2013; Jaitman, 2012; Nurdiansyah, 2018). Basic infrastructure upgrading or provision, such as clean water connection, sanitation facilities provision, solid waste, garbage boxes, drainage, sewerage, neighbourhood roads, footpaths, pavements, electricity, living space, community centres, street lighting connection to city infrastructure, access to public services, risk reduction facilities (such as hydrant, retaining walls) (Jaitman, 2012; Satterthwaite, 2020; Cohen, 2015; Nurdiansyah, 2018; Ayala, 2009). Moreover, slum upgrading often provides more secure tenure with titling or registration (Jaitman, 2012; Turley, 2013; Satterthwaite, 2020; Nurdiansyah, 2018).

Slum upgrading intervention is considered the long-term approach for dealing with the issue of poverty in urban areas (Cronin, 2011). Slum upgrading practices support safer housing unit structures, water and sanitation provision, infrastructure connection drainage, living areas, electricity, street lighting, public services accessibility, and secure tenure (often with titles) (Satterwhite, 2020). The component typically includes the basic infrastructure provision, housing improvement, regularizing security of tenure, etc. (Cities Alliance, 1999 & World Bank, 2000). Slum upgrading has to ensure all the components of housing are available, as John Turner advocated in the 1970s, including land, building materials, and basic infrastructure services such as solid waste, water, sanitation, drainage, neighbourhood roads, footpaths, electricity, and street lighting (Cohen, 2015). Interventions may also include home improvements and securing land tenure (Turley, 2013). Jaitman (2012) explained interventions for housing outcomes which include housing improvement, infrastructure upgrading, and land titling. Providing housing improvement for slum dwellers will improve the quality of housing and the level of satisfaction of the beneficiaries with their housing. Nurdiansyah (2018) compared the condition of slum areas in Jakarta, before and after the intervention of the *Kampung Deret Program (KDP)*, which included the housing building unit, roads, footpaths, closed drainage, clean water (with monthly charge), hydrant, street lighting, garbage box, and tenure security of the dwellers. In Caracas, Venezuela, Ayala (2009) measured the physical interventions of slum upgrading including the provision of community centres, retaining walls construction, building or upgrading access roads, footpaths, and stairways), water connection, sewerage, public lighting, and housing relocation from risky areas.

Housing upgrade programs should be complemented with comprehensive interventions combining infrastructure upgrading and social components to address the problems that occur in slum areas. Infrastructure upgrades are required to have a significant effect on the quality of life of the inhabitants. The most effective approach is to improve the housing and their habitat conditions involving basic services packages that include clean piped water access, sanitation infrastructure, safe access to neighbourhoods, drainage systems, and protection from environmental disasters (Jaitman, 2012).

### **2.1.4 Slum upgrading history in Indonesia**

Indonesia has a long history of slum upgrading intervention. In 1969, Indonesia had the *Kampung Improvement Project (KIP)* to tackle the slum problem. KIP's target was to enhance

both the physical and non-physical elements to improve residents' quality of life, cleanliness, and state of health (Huda et al., 2023). KIP transformed slums from illegal settlements into part of the urban fabric. It also gave tenure security for slum dwellers. In Jakarta, KIP tried to upgrade slums which is 20% of the Jakarta area through infrastructure upgrading. In Semarang, 56 kampungs were upgraded, improving health conditions, social cohesion, and welfare of inhabitants (Susilowati et al, 2020). In Surabaya, the government received The Aga Khan Architecture Award in 1986, the UNEP Award in 1990, and The Habitat Award in 1991 (Huda et al., 2023).

In 1999-2006, the government of Indonesia launched the *Program Penanggulangan Kemiskinan Perkotaan* (P2KP). P2KP is a program that has a principle of community development to solve poverty problems in urban areas. From 2007-2015, there was a *Program Nasional Pemberdayaan Masyarakat Mandiri* (PNPM). PNPM is a national program to overcome poverty based on community empowerment. The goal of PNPM is to include the community in the development agenda's design and decision-making processes (Huda et al., 2023). In 2016, the *Program Penanganan Kumuh di Kawasan Perkotaan* (P2KKP) was launched to overcome poverty by the Directorate General of Human Settlement, through the Public Works Department in each province. This concept empowers local actors, such as local government and the community. However, there was a misdirect of poor people's assistance (Huda et al., 2023).

In 2017, P2KKP transformed into *Kota Tanpa Kumuh* (KOTAKU) or National Slum Upgrading Program (NSUP). This program is a transformed national program from P2KP, PNPM, and P2KPP that aims to overcome poverty with the empowerment of the community as the basis. KOTAKU aims to reduce the slum area in Indonesia by providing infrastructure and collaboration platforms between the government, private sector, and community participation to increase the income of Low-Income Communities and prevent slum areas from growing (Huda et al., 2023). KOTAKU has contributed to decreasing the slum area of 32,222 hectares in 2015-2019 and 6,872 hectares in the 2020-2024 period. The KOTAKU impact changes the face of the village environment, the community's behaviour change, and the increase in the economic conditions of the community. The challenge is how the local government can continue and manage the slum area reduction since it ended in 2023 as a National Slum Upgrading Program (Kotaku Nasional, 2023).

Besides KOTAKU, there is a regular slum upgrading program with area scale-based. According to Law No. 23/2014 and Ministry of Public Works and Housing Regulations No. 14/2016, the government could upgrade the slum area based on the size of the slum area. The central government has a responsibility for slum areas with more than 15 hectares, provincial governments have a responsibility for 10-15 hectares, and local governments have a responsibility for slum areas that are less than 10 hectares. The size of the slum area was assessed and determined by the local government through the mayor's decree.

There are also different approaches to the slum upgrading program which used the data of extreme poverty people as the basis to determine the slum upgrading location. The program is called 'Extreme Poverty Alleviation'. Extreme poverty people is the condition of people who have an economic level below the low-income people or are categorized in the 0-4 decile income level (TNP2K, 2022). In 2022, MPWH upgraded the slum area in 17 locations with a total budget of IDR 25.43 billion, and in 2023, in 17 locations with a budget of IDR 102.69 billion (BPIW, 2024).

### 2.1.5 Related regulation of slum upgrading in Indonesia

Indonesia has several regulations related to slum upgrading programs. The Ministry of Public Works and Housing is the main actor who has a responsibility to regulate this intervention. Ministry of Public Works and Housing Regulation No. 14 of 2018 concerning the Preventing and Upgrading the Quality of Slum Area explains that there are seven aspects to assess the severeness of slum area, which are: (1) housing and building (disorder of the building, density, quality of the housing/building), (2) neighbourhood street (service to entire neighbourhood, quality of the street), (3) access to clean water (4) drainage, (5) access to sanitation services, (6) waste garbage management, (7) fire protection (Ministry of Public Works and Housing, 2018). So, the government can measure the level of slums and intervene in the slum area based on these seven aspects.

Besides the slum upgrading regulation, there is another regulation related to housing improvement which is the Ministry of Public Works and Housing Regulation No. 7 of 2018 concerning Self-Help Housing Stimulant (BSPS). BSPS is a subsidy from the government for low-income communities to improve their housing condition to become habitable houses including the safety of the building, the inhabitants' health condition, and the adequate size of the house.

Both of these regulations are the basis of slum upgrading interventions since the Ministry of Public Works and Housing promotes the integration of regulations and the involvement of many stakeholders to reduce the number of slum areas and uninhabitable houses.

### 2.2 Community participation

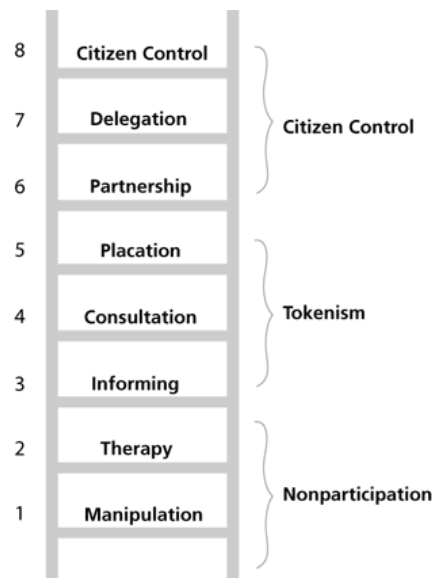
Community participation is related to the engagement of society from the planning, implementation, and evaluation phases (Patel, 2013). Moreover, Hamdi and Goethart (1997) developed the framework of community participation in different phases which are initiation, planning, design, implementation, and maintenance. The planning process is where the community participates in the planning phase, mapping the issue, and outlining their expectations for the program. The implementation process is where the participation of the community could be seen during the program's implementation. The evaluation process measures community participation after the program and prepares for its sustainability (Sari et al., 2018).

Arnstein, (1969) provides an explanation of the degree of community involvement, from the highest to the lowest level. First, *Citizen Power*, which consists of three stages. *Citizen Control* is the term used to describe community involvement in decision-making, and implementation, and frequently involves financial contributions; *Delegated Power* is defined by the community involved in forming a decision to solve the problem; and in a *Partnership*, the community has the negotiating power when making decisions. Second, *Tokenism*, which consists of three stages. *Placation* is the process by which the government selects community representatives to participate in making decisions; *Consultation* is public consultation as community opinion is taken into consideration; and *Informing* is when the community is informed about the program by the government. Third, *No Power*, which consists of two stages. *Therapy* refers to changing the community mindset by involving them in the program; *Manipulation* is a term used to describe that the community does not participate at all (Arnstein, 1969).

Hamdi and Goethert (1997) differentiated the level of participation into five different levels, from the highest to the lowest: *Full Control*, *Shared Control*, *Consultative*, *Indirect*, and *None*. According to *Full Control*, the community is the primary decision-maker, with outside parties serving as resources, supporters, and facilitators. The *Shared Control* level sees the

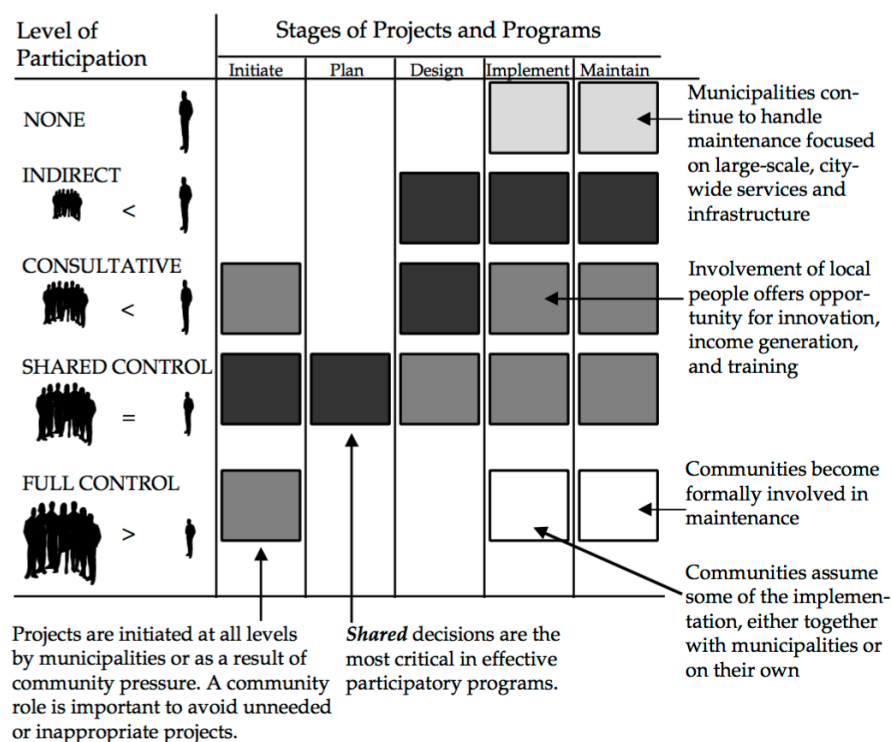
community and the government as equal stakeholders. They can both contribute to the project. At the *Consultative* level, community members are asked for their opinions and feedback. The project owner is still in charge of making the final choice. At the *Indirect* level, the community does not directly participate in decision-making, but it may provide project-related data through the chief of neighbourhoods, community leaders, representatives, etc. Lastly, at the *None* level, there is no community involvement at all. This level has a risk that the project could fail to address the community's needs. But, it can be used if immediate action is required.

**Figure 1: Degrees of citizen participation**



Source: Arnstein (1969)

**Figure 2: Ideal framework of participation**



Source: Hamdi & Goethert (1997); Flinck (2016)

Participation generates a sense of belonging among the inhabitants and it is related to the people's satisfaction because their needs could be considered as part of the slum upgrading intervention (Imperato & Ruster, 2003). Degert et al. (2015) found that the involvement of civil society has become the main strength of the slum upgrading intervention in Bangladesh. In Zwelisha, the community was involved in listing the eligible residents, meeting with other stakeholders, and facilitating the builders and logistics (Patel, 2013). The role of the community is also vital for the logistic movement in upgrading projects (Taylor, 1994). Meanwhile, in Malawi and Ghana, due to the lack of involvement process by the city government, the inhabitants have a low participation level. (Doe et al., 2020).

There are several benefits of community participation, for instance improves program design and effectiveness, enhances the impact and the long-term effect of the program, and can contribute to long-term goals such as poverty reduction (Imperato and Ruster, 2003). With the participation, the community can achieve their basic housing needs, better relationship between community and government, well-being improvement, and tenure security (Patel, 2013). Moreover, participation can reduce the cost of project implementation, promote more accountability of the project, and faster distribution of information and knowledge for project execution (Imperato & Ruster, 2003).

### 2.3 Acceptability of housing outcomes

Access to adequate housing remains a challenge, with homelessness rising, forced evictions, informal settlements, lack of basic infrastructure services, and insufficient housing market for low-income communities (Satterwaite, 2020). The UN Global Strategy for Shelter states, "Adequate shelter means adequate privacy, adequate space, adequate security, adequate lighting and ventilation, adequate basic infrastructure and adequate location concerning work and basic facilities, all at a reasonable cost." (Satterwaite, 2020). The housing enablement approach could not solve these problems and resulted in a housing shortage for low-income people. The housing paradigm is shifting to human rights to ensure housing for all people. Further, this paradigm has become a vision of housing policy development around the world.

**Figure 3:** The 5A's principles of adequate housing



Source: Ayala et al (2019)

The 5 A's principles of Adequate Housing were established as a framework for comprehensively assessing housing policies (Ayala et al., 2019). These principles show a fundamental way to understand and evaluate housing problems from five points of view which are Availability, Affordability, Accessibility, Acceptability, and Adaptability. Availability refers to the number of housing stock that have the right location where people need it. Accessibility is described as access to housing units, programs, finance, and access to

urban infrastructure with eligible criteria. Affordability means the proportion of income spent on housing expenses and related to the tenure models which could be ownership or renting. Acceptability refers to people's perception of the housing outcome to achieve sustainability of housing intervention. Lastly, adaptability refers to housing's contribution to sustainable goals, such as housing design and technology, energy efficiency, and resilience.

From these principles, we will focus on the Acceptability. Acceptability is related to people's perceptions of the housing intervention. It is a fundamental aspect of achieving the long-term sustainability of the project. By understanding people's perceptions, it can measure the contribution of housing intervention in achieving physical, socio-cultural, economic, and financial objectives (Ayala et al., 2019). Moreover, Jaitman (2012) proposed indicators to measure outcomes of slum upgrading program intervention which could be divided into physical aspects (housing and neighbourhood), social, and economic aspects. Providing housing improvement for slum dwellers will improve the quality of housing and the level of satisfaction of the beneficiaries with their housing.

### **2.3.1 Physical aspect**

The physical aspect focuses on the quality of housing construction and access to infrastructure (Jaitman, 2012). Providing better housing unit quality in El Salvador and Uruguay greatly improves the quality of life and improves their satisfaction with the housing unit (Jaitman, 2012). Moreover, this aspect includes accessibility and affordability of urban infrastructure and well-maintained housing (Ayala, et al. 2019). Doe et al. (2020) showed the perception of sustainability in slum upgrading interventions in Malawi and Ghana. They wanted to understand how many people thought that the infrastructure would be sustained in the future. They measured the perception of slum dwellers about their housing units after the intervention, access to water, sanitation facilities, electricity, and road access. Some factors that affect their perception of physical intervention such as low-quality material, high cost of water access, long queues on accessing water, odour from sanitation facilities, and poor quality of road conditions. Archer (2012) used satisfaction with the building unit, open space existence, and the reduction of risk of flood to measure the perception of outcomes of the Baan Mankong slum upgrading intervention in Thailand.

### **2.3.2 Socio-cultural aspect**

The socio-cultural aspect is related to the housing needs of the residents and the space for community interaction (Ayala et al., 2019). Enhancing the settlement area could boost confidence, support community organizations, and improve relationships between the community and the government (Satterwhite, 2020). This aspect focuses on the presence of community groups, participation, perception of safety and security within the neighbourhood, frequency of usage of community spaces, sense of belonging, and health improvements (Jaitman, 2012). In Korail, Bangladesh, slum upgrading intervention aspired to community cohesion through community development. Furthermore, it increased the awareness of the community's rights (Degert et al., 2015). In the Baan Mankong, a slum upgrading intervention in Thailand, which also means "secure housing", Archer (2012) argued that it is also important to understand their perception of tenure security in slum areas because it is related to their security from being evicted.

### **2.3.3 Financial aspect**

The financial aspect is related to the acceptability of financial instruments that households can manage and maintain. This aspect is vital to ensure the long-term sustainability of the housing intervention (Ayala, 2019). From the Baan Mankong participatory slum upgrading, one of the measurements used for measuring the perception is the availability of people to

maintain and pay the additional cost of the services (Archer, 2012). Moreover, Jaitman (2012) explains that many poor households in Latin America were living in neighbourhoods with infrastructure connections such as water infrastructure, however, they were unable to pay the connection fee. Slum dwellers worried about the costs produced by the program such as paying for maintaining the program and the cost of monthly charge services (Schlomo, 1983). Even though, some of the housing units could be seen as an investment asset, because they have opportunities to gain profit by renting or selling the houses (Archer, 2012).

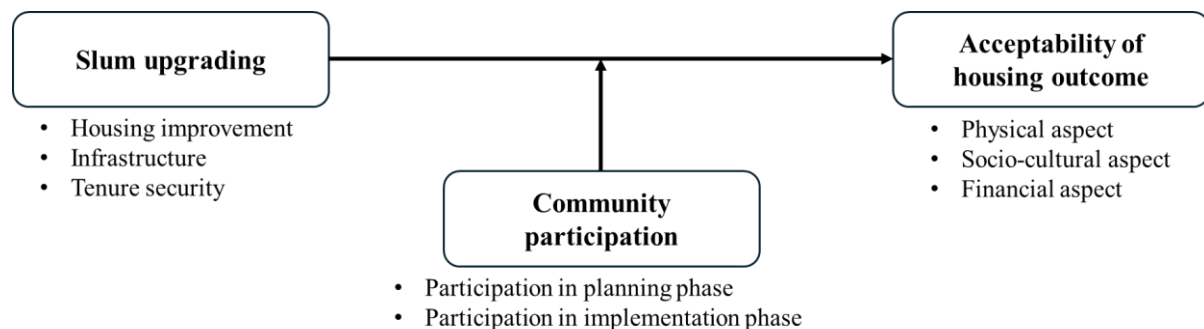
## 2.4 Conceptual framework

The slum upgrading approach is considered one of the long-term approaches to address the problem of urban poverty (Cronin, 2011). Based on the literature, it is important to know the outcome of the slum upgrading intervention to see if the project is going as planned to see the effectiveness of the slum upgrading intervention and to understand how slum upgrading intervention affects housing, neighbourhood, and individual variables through people's perception on the physical, socio-cultural, and financial aspect (Jaitman & Brakarz, 2013).

It is also important to understand that slum dwellers can manage and maintain their housing and neighbourhood area to ensure the long-term sustainability of the housing improvements and slum upgrading intervention. Besides the intervention itself, community participation can influence the acceptability of the community in slum upgrading programs (Imperato & Ruster, 2003). Participation can boost the satisfaction of project outcomes (Russ & Takahashi, 2013). Therefore, involving the inhabitants in the planning and implementation phases, and also considering their opinion on the implementation process may affect the acceptability of housing outcomes.

Thus, this research will investigate the relationship between Slum Upgrading interventions with the Acceptability of Housing Outcomes, and how Community Participation during the planning and implementation phase affects this relationship.

**Figure 4:** *Conceptual framework*



*Source: author (2024)*

## **Chapter 3. Research design, methodology, and limitations**

This chapter will describe the strategy for conducting research including the description of research design and methods, research strategy, data collection methodology, sample selection, data analysis methodology, operationalisation table with the indicators and variables, and the expected challenges and limitations.

### **3.1 Description of the research design and methods**

The strategy in this research is aimed at addressing the research question of how slum upgrading affects the acceptability of housing outcomes. The case study used Kemas Rindo Sub-District, in Palembang, South Sumatra, Indonesia. This location was one of the pilot projects of slum upgrading in the ‘Extreme Poverty Alleviation’ agenda in 2022. This location was selected since it is a newer case and has a different approach compared to the regular slum upgrading programs, so it allows more genuine answers from the slum dwellers.

#### **3.1.1 Research strategy**

The research focused on the perception of the research subject. Therefore, this research used a qualitative method to understand the acceptability of the inhabitants of the slum upgrading intervention. The qualitative method is commonly used to gain an understanding of underlying reasons, beliefs, and opinions on the subject (van Thiel, 2014). In this case, qualitative data collection was used to provide an understanding of the community’s perception of the slum upgrading intervention, the participation process during the planning and implementation phase, and its relation to the physical, social, and financial acceptability of the slum dwellers. Hence, this research aims to comprehensively analyse how slum upgrading affected the acceptability of housing outcomes in Kemas Rindo, Palembang.

#### **3.1.2 Data collection method**

Data collection for this research applied primary and secondary data collection. Semi-structured interviews and observations were used to gather the primary data, meanwhile, secondary data was gathered through the project implementation report. Multiple data sources, including observation, interviews, and report analysis, are frequently used in case studies (Bryman, 2013). The semi-structured interviews were conducted with open-ended questions for the government officials to understand the project implementation process and for the inhabitants to share their perceptions of the slum upgrading interventions. Archer (2012) argued that satisfaction with the physical outcomes of slum upgrading could be measured by interviewing the slum dwellers. Observations were conducted to see, observe, investigate, and take documentation of the physical and environmental changes in the slum area. Lastly, secondary data was collected which is the project implementation report from the government officials to see the details of the slum upgrading intervention.

#### **3.1.3 Sample selection**

As the case study, Kemas Rindo was chosen because it was the pilot project of the slum upgrading in the ‘Extreme Poverty Alleviation’ area. The estimated population of this area, specifically in RT.33 is approximately 400 people (Palembang Statistical Agency, 2023). Semi-structured interviews were conducted with representative persons from government officials and residents of the Kemas-Rindo community. The government officials were selected through purposive sampling based on the responsibility and knowledge of the slum upgrading intervention. Meanwhile, the slum dwellers were selected through a snowballing sampling technique within the area of study to select participants who had an involvement in housing improvement and infrastructure upgrading.

**Table 1:** List of resources and research participants

| Source of data              | Resource                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Size        | Respondent Code |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|
| <b>Government officials</b> | The official government in charge of working in the slum upgrading program <ul style="list-style-type: none"> <li>Housing Provision Implementation Agency Agency Sumatra V (BP2P of Sumatra V)</li> <li>Settlement Infrastructure Agency for South Sumatra Region (BPPW for South Sumatra)</li> </ul>                                                                                                                                                                                                                                                                                                    | 2 person    | G1 - G2         |
| <b>Slum dwellers</b>        | Community who live in the Kemas Rindo neighbourhood area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 13 person   | R1 - R13        |
| <b>Observation</b>          | Kemas Rindo Sub-District                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7 days      |                 |
| <b>Documents</b>            | Law and regulation <ul style="list-style-type: none"> <li>President Instruction Number 4 of 2022 concerning the Accelerating Extreme Poverty Alleviation</li> </ul> Government reports <ul style="list-style-type: none"> <li>Project implementation report from Settlement Infrastructure Agency for South Sumatra Region</li> <li>Project implementation report from Housing Provision Implementation Agency Agency for Sumatra V</li> <li>Monitoring and Evaluation Report of the Extreme Poverty Alleviation Integration in South Sumatra from Regional Infrastructure Development Agency</li> </ul> | 4 documents |                 |

Source: author (2024)

### 3.1.4 Data analysis method

Qualitative data from interviews, observation, and project implementation reports were analyzed to answer the following questions.

- Data from interviews were recorded, transcribed, and analyzed with ATLAS.ti software. This interview data was analyzed using coding analysis to categorize oral into text data accurately (Blaikie, 2010). By categorizing data, the researcher could find important information to answer the research questions.
- Observation was used to see the physical and environmental change and slum dwellers' condition in real-life situations.
- Project implementation reports were collected to understand the components of slum upgrading that were developed in this area. These reports were analyzed using content analysis to identify the phenomenon by establishing specific keywords, especially the component of slum upgrading.

Finally, triangulation between multiple data sources between interviews with the government and dwellers, observations, and project implementation reports is used to conclude the multiple methods and research which made the findings more accurate and reliable (Brymann, 2012).

### 3.2 Operationalization: Variables, indicators

In the conceptual framework, three main variables are used in this research: slum upgrading, community participation level, and the acceptability of housing outcomes. The table below shows how these variables were measured and how to find the data needed.

**Table 2:** Operationalization table

| Sub-Q                                                                                 | Variable                | Sub-Variable                                    | Indicators                                                                                                                                                                                                                                                                                                                                                                | Source of data                                                            |
|---------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| What are the slum upgrading components that were developed in this area?              | Slum upgrading          | Housing improvement                             | <ul style="list-style-type: none"> <li>Housing structure (permanent with concrete, bricks, and tile bricks, and tile /semi-permanent/non-permanent)</li> <li>Design and layout (size, lighting, ventilation)</li> </ul>                                                                                                                                                   | Observations, secondary data reports, interviews with government official |
|                                                                                       |                         | Infrastructure provision                        | <ul style="list-style-type: none"> <li>Availability of water/access to water</li> <li>Source of water (piped, well water, groundwater, etc.)</li> <li>Type of sanitation facilities (communal/ inside the house/etc.)</li> <li>Connected to sewage/ individual septic tank/ etc.</li> <li>Roads/footpath/access condition</li> <li>Drainage condition</li> </ul>          | Observations, secondary data reports, interviews with government official |
|                                                                                       |                         | Tenure security                                 | <ul style="list-style-type: none"> <li>Type of land title (ownership, rent, etc.)</li> </ul>                                                                                                                                                                                                                                                                              | Interview with government officials and residents                         |
| What was the community participation level in the planning and implementation phases? | Community Participation | Participation level in the planning phase       | <ul style="list-style-type: none"> <li>Involvement in the planning process               <ul style="list-style-type: none"> <li>Frequency of meetings</li> <li>Involved in developing infrastructure needs</li> <li>Form of communication with other stakeholders (instruments used)</li> <li>Priorities and needs were incorporated into the plan</li> </ul> </li> </ul> | Interview with the residents and government officials                     |
|                                                                                       |                         | Participation level in the implementation phase | <ul style="list-style-type: none"> <li>Involvement in construction processes               <ul style="list-style-type: none"> <li>Involved in building housing/ infrastructure</li> <li>Level of task (simple task (carrying the material) / involved in the construction process)</li> <li>Fund contributions</li> </ul> </li> </ul>                                     | Interview with the residents and government officials                     |

| Sub-Q                                                    | Variable                          | Sub-Variable          | Indicators                                                                                                                                                                                                                                                                                                                                                                               | Source of data           |
|----------------------------------------------------------|-----------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| What was the community's perception of housing outcomes? | Acceptability of housing outcomes | Physical aspect       | <ul style="list-style-type: none"> <li>• Satisfaction of housing quality</li> <li>• Satisfaction with the infrastructure provision (water supply access, sanitation facility, roads, drainage, garbage)</li> <li>• Willingness to maintain the housing and neighbourhood area</li> </ul>                                                                                                 | Interview with residents |
|                                                          |                                   | Socio-cultural aspect | <ul style="list-style-type: none"> <li>• Perception of the process (How they were approached, how their housing needs were accommodated)</li> <li>• Perception of safety and security in housing and neighbourhood area</li> <li>• Perception of sense of belonging</li> <li>• Perception of community cohesion</li> <li>• Perception of tenure security (threat of eviction)</li> </ul> | Interview with residents |
|                                                          |                                   | Financial aspect      | <ul style="list-style-type: none"> <li>• Willingness to pay for monthly charge services (water, sanitation services)</li> <li>• Perception of housing as an investment asset (rent/sell)</li> </ul>                                                                                                                                                                                      | Interview with residents |

Source: compiled by author (2024)

### 3.3 Expected challenges and limitations

It is important to acknowledge the challenges and limitations to realize this research study. Due to the time and research constraints, the study was conducted only on one pilot project of the 'Extreme Poverty Alleviation' slum upgrading program, located in the Kemas Rindo neighbourhood area in Palembang. However, even if the result is specific and unique, it provides valuable insight into other research studies and policymakers to understand the topic of slum upgrading and housing improvement programs.

This research was conducted with a qualitative research method which has an intensive and iterative process, the researcher needs to focus and engage with participants and have a deep conversation, especially with the slum dwellers, to get significant data. The data collection with government officials was done remotely using video-based online interviews as a data collection method. However, there were technical issues during the interview such as network delay made some questions and the participant's answer had to be repeated and clarified to prevent misinterpretations.

Meanwhile, the researcher conducted observations and interviews with slum dwellers directly in Kemas Rindo, Palembang. There was an issue with the data collection process with the residents which was the use of a mix of Indonesian-Local languages. Some questions and answers had to be repeated and clarified to avoid misinterpretations. To overcome this issue,

the researcher was accompanied by the chief of the neighbourhood unit to help the researcher understand the local language.

In the analysis process, the transcribing and translating process from the Indonesian-Local language to the English language was time-consuming. Hence, the researcher used the Indonesian-Local language transcript as input data for ATLAS.ti and directly coded it. Then, related quotations and findings from the interviews were sorted and translated to put in the thesis writing.

## Chapter 4. Results, analysis, and discussion

This chapter will start with a description of the case study. Then, it explains the slum upgrading components, community participation, and the community acceptability of slum upgrading intervention.

### 4.1 Description of the case study

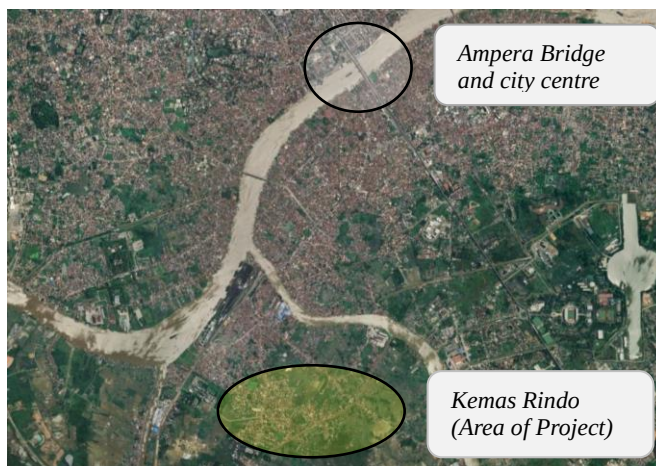
The slum upgrading in Kemas Rindo was part of the ‘Extreme Poverty Alleviation’ agenda. Slum upgrading in the context of ‘Extreme Poverty Alleviation’ is slightly different from regular slum upgrading. The differences lie in the beneficiaries and components of the program (see Appendix 4).

Kemas Rindo is located in the southern part of Palembang,  $\pm 6$  km from the Ampera Bridge, the landmark of Palembang. The primary causes of slum issues are the waste problem, sanitation, water, tenure security, and strategic location as an industrial area (Yuliani, 2019). The location is in a swamp area makes the infrastructure likely hard to build.

In ‘Extreme Poverty Alleviation’, the Ministry of Public Works and Housing used a collaboration approach between the Settlement Infrastructure Agency (BPPW) for implementing the slum upgrading program in the neighbourhood area, the Housing Provision Implementation Agency (BP2P) for implementing housing improvements, and the Regional Infrastructure Development Agency (BPIW) for providing initial data.

*“For the ‘Extreme Poverty Alleviation’, we used a collaborating approach. BP2P works with BPPW and BPIW. BP2P improved the quality of houses. BPPW upgraded the infrastructure. BPIW focused on sorting the beneficiaries’ candidates and location.” (G1, May 2024).*

**Figure 5:** Project location and landmarks of Palembang



Source: author (2024), adapted from Google Earth

### 4.2 Slum upgrading implementation

The slum upgrading program provided basic infrastructure in the Kemas Rindo neighbourhood area. Four components were upgraded, which are water, sanitation, neighbourhood roads, and drainage. The slum upgrading program costs around IDR 2.8 billion ( $\pm$ US\$ 189,000) using the state budget, starting from October to December 2022. Meanwhile, the housing improvement program costs IDR 1.06 billion ( $\pm$ US\$ 71,380) using the National Affordable Housing Program (NAHP) budget, from July to November 2022. The following sections will explain the condition of each infrastructure

### 4.2.1 Water

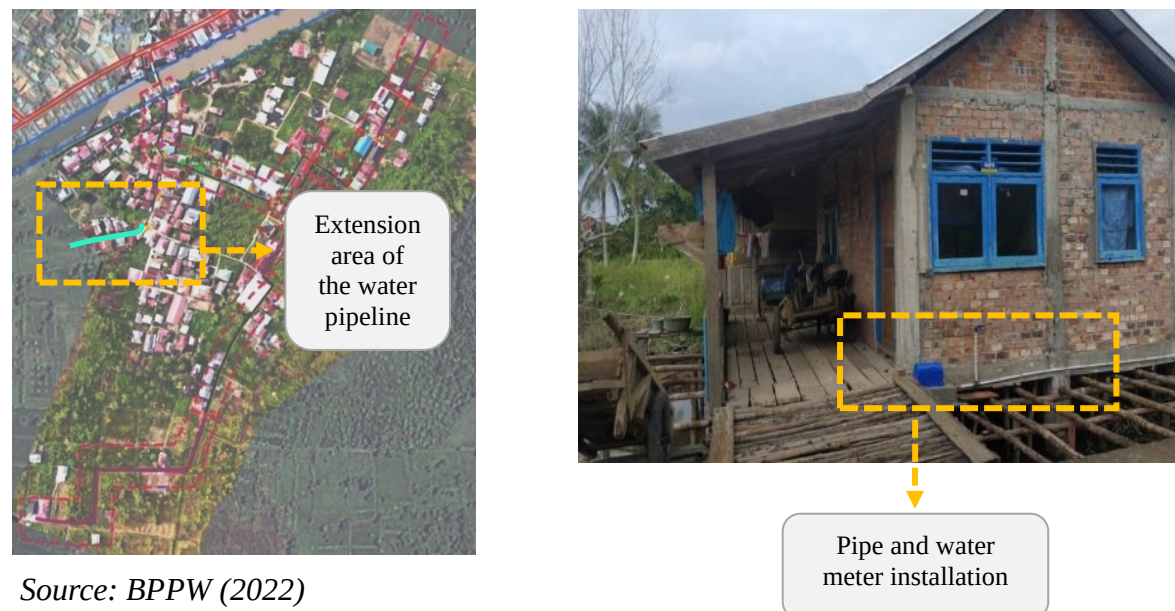
There were 221 households living in this neighbourhood area (R1, June 2024). Some households used well water or rainwater as their water source which was unsuitable, while others already had a water connection. In this case, BPPW upgraded the water network with pipeline installation for 10 households (length  $\pm 105$  m). These households were prioritised due to the density of this segment and budget limitations. Another issue was the hourly system from the water company, so some people still buy water gallons to fulfil their water needs (G2, May 2024). However, there were still 40 households that did not have access to piped water. They already proposed to the local government, but they have not received it yet due to the waiting list of applicants in the city (R1, June 2024).

**Photograph 1:** Example of water collection before upgrades



Source: BPIW (2022)

**Figure 6:** Water infrastructure upgrades



Source: BPPW (2022)

### 4.2.2 Sanitation facilities

Before the intervention, there was an existing wastewater pipe network ( $\pm 99$  meters), 6 units of sanitary manholes, and 4 units of grease traps or control tubs that were not working. BPPW maintained the wastewater pipe and the sanitary manholes as part of the slum upgrading intervention to ensure dwellers got access to sanitation facilities.

*“The wastewater treatment plant (SPAL-D) is still working. Several houses still have a connection. We are repairing the network pipe.” (G2, May 2024).*

**Figure 7: The site plan of the wastewater sanitation network**



Source: BPPW (2022)

**Photograph 2: Sanitation facilities upgrades**



**Before**

Source: BPPW (2022)

Moreover, there were three houses that did not have toilets, therefore BPPW provided three private toilets including the toilet room and septic tank. Meanwhile, 53 households improved their existing toilet with the housing improvement program from BP2P (see more detail in sub-section 4.2.5).

*“There are three houses that are being handled for their toilets. Because, from the beginning, there was no toilet.” (G2, May 2024).*

**Figure 8:** Installation of individual toilets for three households



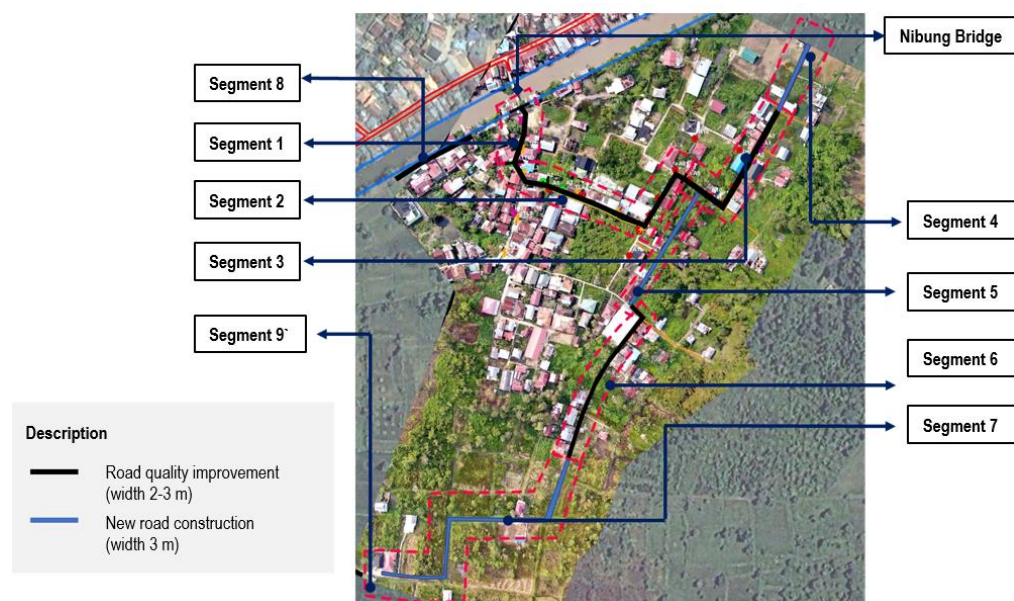
Source: BPPW (2022)

#### 4.2.3 Neighbourhood road

The existing neighbourhood road condition includes concrete roads with slightly damaged, wooden bridges in swamp land, and several houses that did not have road access. BPPW intervened with the road quality improvement of 934 meters. The road quality improvement was done in Segments 1, 2, 3, and 6 (see Figure 9). Meanwhile, the new road was constructed in Segments 4, 5, and 7.

*“The road was planned with the community. We improve what already exists. If it doesn't exist, we open the road, especially at the end of the neighbourhood area. Some roads were made of wooden plank.”* (G2, May 2024).

**Figure 9:** Map of neighbourhood road improvements



Source: BPPW (2022)

**Photograph 3: Neighbourhood road upgrades**



*Before*



*After*



*Before*



*After*



*Before*



*After*

Source: BPPW (2022)

#### 4.2.4 Drainage

The drainage intervention focused on segments 1, 2, and 3. The existing condition was the absence of drainage channels, mud sedimentation, and garbage problems. These conditions caused the flooding since this area is mostly a swamp area. BPPW intervened by providing a closed drainage system in these three segments. Segment 1 has a closed drainage system with a length of 78 meters and a width of 60 cm, Segment 2 has a closed drainage system with a length of 141 meters and a width of 60 cm, and Segment 3 has a closed drainage system with a length of 52 meters and a width of 40 cm.

*“The drainage is located on the entrance neighbourhood area near the bridge. The water comes in and out when it rains, and the flow is moving to the river easier” (G2, May 2024).*

**Figure 10: Drainage intervention**

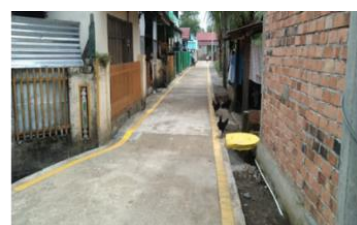


Source: BPPW (2022)

**Photograph 4: Drainage intervention**



**Before**



**After**

Source: BPPW (2022)

**Table 3: Summary of the infrastructure condition (before and after)**

| Infrastructure condition       | Before                                                                                                                                                                                                                                                             | After                                                                                                                                                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water                          | <ul style="list-style-type: none"> <li>Some households used the well water or rainwater or asked other neighbours. Some houses already had a water connection.</li> </ul>                                                                                          | <ul style="list-style-type: none"> <li>Connecting the drinking water pipe for 10 houses with a length of <math>\pm 105</math> m.</li> </ul>                                                                        |
| Sanitation (private toilet)    | <ul style="list-style-type: none"> <li>Some households did not have a toilet. They used their neighbour's toilet.</li> <li>Some already had a toilet, but were in poor condition (without a room or septic tank).</li> </ul>                                       | <ul style="list-style-type: none"> <li>Installation of individual toilets (3 units) from BPPW.</li> <li>53 households upgraded their toilet with the Housing Improvement Program from BP2P.</li> </ul>             |
| Sanitation (wastewater system) | <ul style="list-style-type: none"> <li>There is an existing wastewater treatment plant (neighbourhood scale).</li> <li>The existing wastewater pipe (99 meters), sanitary manholes (6 units), and grease traps/control tubs (4 units) were not working.</li> </ul> | <ul style="list-style-type: none"> <li>Improvement of wastewater sanitation pipe network (99 meters), reparation of sanitary manholes (6 units), and reparation of grease traps/control tubs (4 units).</li> </ul> |
| Neighbourhood road             | <ul style="list-style-type: none"> <li>Cast concrete with slightly damaged conditions.</li> <li>Some roads only used planks over the swam area.</li> <li>Some houses did not have access.</li> </ul>                                                               | <ul style="list-style-type: none"> <li>Improvement of neighbourhood roads by road quality improvements and road construction with a total of <math>\pm 934</math> meters.</li> </ul>                               |
| Drainage                       | <ul style="list-style-type: none"> <li>Some areas did not have any drainage system.</li> <li>Sedimentation and garbage caused flooding.</li> </ul>                                                                                                                 | <ul style="list-style-type: none"> <li>Improvement of drainage channel by providing the closed drainage system in segments 1, 2, and 3 (<math>\pm 271</math> m).</li> </ul>                                        |

Source: author (2024)

#### 4.2.5 Housing improvement program

In the ‘Extreme Poverty Alleviation’ agenda, the housing improvement program was given to households categorized as extreme poverty people. Based on the initial data from TNP2K and BKKBN, 83 households were categorized as extreme poverty people who had the potential to receive this program. However, there was administrative and technical verification before they could receive it. Administrative verification includes the land certificate ownership and identification card, the house was the only house that households had, and they had never received a similar program before. While, technical verification includes the structure components (foundation, columns, etc.) and architecture components (walls, housing façade, etc.). Those criteria were verified by the Housing Provision Implementation Agency (BP2P). Finally, 53 houses were eligible to receive the housing improvements.

*“The verification was carried out technically and administratively, and these two indicators were considered mandatory. For administration, the main thing is the property rights of the house and ID card. For technical verification, there are three indicators, safety, health, and space adequacy.” (G1, May 2024).*

The housing improvement was held from July to November 2022 with a total of IDR 1.06 billion (±US\$ 71,380) using the budget from the National Affordable Housing Program (NAHP). Each of the beneficiaries received IDR 20 million (±US\$ 1,220) with IDR 17.5 million for construction and IDR 2.5 million for labour wages.

**Figure 11:** Household beneficiaries map



Source: BP2P (2022)

**Table 4:** Summary of housing condition (before and after)

| Housing Condition         | Before                                                                                                                                                                                                                                                    | After                                                                                                                                                                                                                                                                                                              |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Housing structures</b> | <p>Most of the houses had a stilt house typology and local wood as a structure which was not strong enough.</p> <p><i>“In Kemas Rindo, most of it is because the land is swampy. So the house typology is usually a house on stilts.” (G1, 2024).</i></p> | <p>Some houses changed the typology into landed housing with river stone as their foundation structure, while others still kept the stilt house typology but improved with concrete piles.</p> <p><i>“So the foundation was from local gelam wood. We replaced it with a concrete foundation.” (G1, 2024).</i></p> |

| Housing Condition                         | Before                                                                                                                                             | After                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Roof, floor, &amp; walls condition</b> | Non-permanent (mostly wood, plywood, or planks).<br><i>“Initially it was a wooden house, mostly planks.” (G1, 2024).</i>                           | The walls were replaced with bricks or using existing wood material which is still in good condition. The roof used a lightweight steel roof. The floor was replaced with cement, tile floor, or using existing wood.<br><i>“We replace them with new ones, there are also those that we change to cast floor. If their old building material might still be usable, we could reuse it.” (G1, 2024)</i> |
| <b>Layout design &amp; size</b>           | The layout design and size were varied.                                                                                                            | The design was adjusted to become adequate, complete with a bedroom, multi-purpose room for kitchen and living room. Some houses have a bigger layout.<br><i>“We adjusted it depending on the budget proportion. Most of them have small houses so we adjusted their space and room needs.” (G1, 2024)</i>                                                                                              |
| <b>Lighting &amp; ventilation</b>         | Less lighting and ventilation. No windows.<br><i>“Most people did not pay attention to the proportion of lighting for their homes.” (G1, 2024)</i> | Windows and ventilation installation. The government also socialised the importance of the health aspect of housing components.<br><i>“We install windows and ventilation. We socialise the importance of lighting, ventilation, and how it relates to their health condition.” (G1, 2024)</i>                                                                                                          |
| <b>Toilet</b>                             | No toilet room and/or septic tank facilities.                                                                                                      | Toilet room improvement and septic tank installation.<br><i>“Besides the structural and architectural, the lighting and ventilation, the third thing is the toilets improvements, which are also mandatory.” (G1, 2024)</i>                                                                                                                                                                             |

Source: author (2024)

**Photograph 5: Housing improvements**



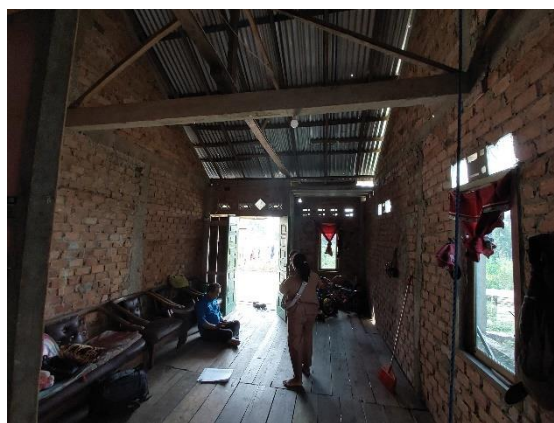
Changing of housing typology from stilt house to landed housing.



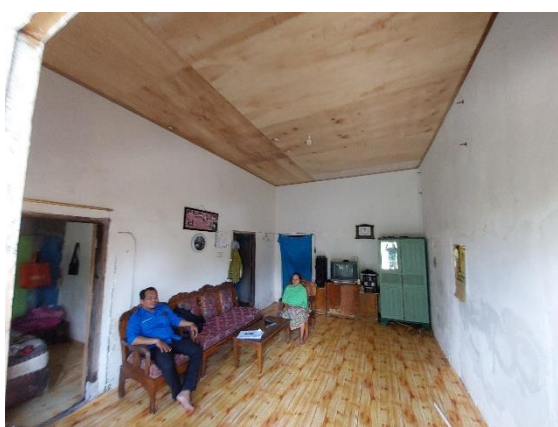
The resident incremented their house gradually after the program.



Housing structure upgrades from wooden to a concrete pile, they kept the stilt house typology.



Upgrade on wall, roof, and windows.



Upgrade on the material, layout, design, and ceiling.



Upgrade on the building material, layout and design, and wall paint.

Source: author (2024)

#### 4.2.6 Tenure security

The government did not intervene in the tenure security because the beneficiaries already had the land ownership certificate. This program required proof of landownership before implementation. In the survey, the community showed their land ownership to the government to ensure a safe administrative process. Since Indonesia uses a statutory private tenure (freehold) as its land tenure system, the government promotes land registration for every household. People were buying land and they registered it to the land agencies to earn the land certificate. However, due to the lack of control from the government, lack of infrastructure provision, and people building by themselves without following the standard regulations, this area became a slum, although they already had the land certificate.

*“It is mandatory that the land ownership must be in the name of the beneficiaries. Their land is unlikely to be threatened with eviction in the future... For administration requirements, the main thing is the ownership of the house, ID card, to check if they truly live in this neighbourhood area.” (G2, May 2024).*

#### 4.2.7 Challenges in implementation

Some challenges occurred during the implementation process. First, limited workers resulted in delayed construction progress. From that situation, they hired workers outside the neighbourhood area. Second, the bridge access to enter the neighbourhood area was too

small, hence the dwellers used a wheelbarrow to move the materials. To overcome this issue, BPPW built a new road in Segment 7 to open access from the next neighbourhood which can be accessed by bigger vehicles and they repaired the entrance bridge after the slum upgrading was done. Lastly, the rainy season and the rising river water delayed the construction process. (G1; G2, May 2024)

*“It was raining during the landfiling process. So, it's a bit difficult when stockpiling” (G2, May 2024).*

**Photograph 6:** Main access to the neighbourhood area



Source: BPIW (2022)

## 4.3 Community participation

### 4.3.1 Participation in the planning phase

#### *Meeting frequency*

At first, the government surveyed the existing infrastructure and identified the eligible households to receive the program. After the survey, there were quite often meetings that were held to discuss between dwellers and the government. The initial meeting was to investigate needs, problems, and potential beneficiaries. Then, there was a meeting to sharpen the idea of the initial survey and discuss the construction method. Moreover, there was a program socialisation to explain more details about the program, scheme, and budget estimation plan.

*“The first meeting was the initial survey, then continued with a sharpening meeting to discuss the construction plan with the community, deciding how we do the construction process. Then there was a socialisation meeting. Quite often.” (G2, May 2024).*

#### *Involvement of the residents and form of participation*

The dwellers participated in the planning phase. Some respondents quite often joined the planning process by accompanying the government in the surveying process, joining the meetings, and socialisation (R1; R2; R5; R6; R7; R8; R11; R12; R13, June 2024). *“We joined the discussion and accompanied the survey process. Quite often. We also coordinated in the government office twice.” (R1, June 2024).*

Two respondents worked with the government to plan their housing and settlement. They stated, *“Yes, I joined the housing design planning.” (R6, June 2024).* *“We were making the plan and survey with the government.” (R11, June 2024).*

There were a lot of topics discussed. *“How was the place condition, housing size, what tools do we need.”* (R2, June 2024). Another respondent stated, *“We discuss the process, funding, housing improvements looks like, and explanation of the settlement upgrading.”* (R6, June 2024). Another participant mentioned, *“What were we discussing... the material resources, how the community could get them, and the funds.”* (R11, June 2024).

Although some respondents (R3 & R4) were not involved in the planning phase, they still followed the updated information from the other residents. *“I didn’t participate in the meetings nor planning but only heard the updated information from neighbours.”* (R4, June 2024).

### ***The role of neighbourhood chief***

The neighbourhood chief was very helpful in communicating with the entire community, so the community became cooperative with the government throughout the process. *“The head of the neighbourhood was very active. He can manage the construction workers and communicate with the community very well, even though the process was complicated.”* (G2, May 2024).

Besides the government, the residents also felt the neighbourhood chief was actively involved. He actively gave updated information on the development, proposed the infrastructure development, discussed with the government, promoted the neighbourhood cleanliness, and took care of the community’s administration files (R2; R7; R8; R9; R13, June 2024). *“He plays an important role, such as promoting cleanliness and supporting neighbourhood development, including the buildings, water connection, lights, electricity poles, etc.”* (R13, June 2024).

Due to the activeness and responsiveness of the neighbourhood chief, the community trust was increased. *“While in the discussion, we followed the chief. If he agreed, we agreed because it was for the common good. If he joins the election, we will vote for him.”* (R7, June 2024).

### ***Involvement in decision-making***

The community were involved by the government and the decision made was the result of a shared decision-making process between the government and the community through the discussion and survey process, even though the final decision was decided by the government.

*“We were involved by the government in making the decision, but the final decision was decided by the government. They allowed us to voice our opinions, although some are accommodated, some are not.”* (R1, June 2024).

Another example of the decision-making process was the material shop appointment. The beneficiaries need to make a group to appoint the local material shop. This group was meant to ensure that the improvements were built properly and that they could monitor the usage of the money together.

*“They had to make a contract with the building material shop. The beneficiaries made a group, like a fund-trust community, consisting of 15-20 recipients. From these groups, a group leader will be appointed to survey, at least three material shops. In terms of price and material availability, they will decide which shop to be appointed.”* (G1, June 2024).

### ***Opinions were incorporated into the plan***

Some residents raised their opinions during the planning phase, such as the neighbourhood road development, construction materials, and house expansion. Some of their opinions were incorporated into the plan, but some were not. (R1; R2; R4; R7; R11; R12, June 2024). For instance, in the road development, the residents wanted to have a 4-meter width in some segments so that vehicles like cars could access this segment, however, due the budget limitations they only built 2 meters. But still, they feel grateful that the government allocated a budget to build the road and now it can be accessed by motorcycle.

*“Back then, we proposed a road, but it was suspended because it did not match the budget estimation, we requested 4 meters but could only be 2 meters, but thank God it was still constructed.” (R4, June 2024).*

Another respondent asked if they could use their old materials that were still in good condition to reduce the construction cost, and the government agreed as long as they had fulfilled the basic requirements of housing improvement (R7, June 2024).

***Photograph 7: Initial discussion between the government and the community about the survey and data collection***



Source: BPIW (2022)

### **4.3.2 Participation in the implementation phase**

#### ***Involvement in the construction process***

Most of the respondents participated in the construction process. They upgraded their own houses, roads and drainage channels. Other tasks were identified, such as bending the steel bar (R7, June 2024), providing water to mix the material (R3, June 2024), carrying materials and keeping them in a safe place (R4, June 2024). Meanwhile, the water connection and the wastewater treatment plant were improved by government workers, since they needed more skilled workers (G2, May 2024).

*“The community built their houses by themselves, they became the construction workers. Neighbourhood roads were also built by the community together.” (R1, June 2024).*

The government had a facilitator to monitor the progress (R10, June 2024). Moreover, they allocated labour wages, so the residents could get additional income from being construction workers. Therefore, the residents and the government were working together in the implementation process.

*“From the Housing Improvement Program, we could earn IDR 2.5 million (±US\$ 150)... meanwhile from developing the neighbourhood road, we could earn a minimum wage of Palembang city (around IDR 3.4 million).” (R1, June 2024).*

### **Social conflict**

The labour wages attracted the community to be the construction worker since most residents work in the informal sector. However, there were not many residents who were capable in the construction sector and it caused the project's delay. So, the chief of the neighbourhood and the government decided to hire workers from other neighbourhood communities. Nevertheless, it caused another problem which was a social conflict between neighbourhoods. The outside workers who came from the next neighbourhood felt unfair because they never received any government assistance in their area. Meanwhile, the beneficiaries felt that labour wages should be given to them. To overcome those issues, they divided the work into 9 segments to manage the conflict.

*“There were quite a lot of social problems. Because they (other neighbourhoods) felt that this neighbourhood already received a program from the government before, and they received another program again... That area is slightly strict and rough... Fortunately, there was good communication from the head of the neighbourhood.” (G2, May 2024).*

Furthermore, one of the residents stated, *“We tried to employ people from the other neighbourhood area and we share segments to reduce the conflict.” (R1, June 2024).*

### **Fund contributions**

The infrastructures provided such as water, sanitation, and roads did not need additional cost from the community. Meanwhile, the housing improvement program had a concept of stimulant self-help housing, so the residents were suggested to add additional funds to their housing construction, although it was not mandatory.

*“Our housing improvements program is a stimulant. The value is 17.5 million, with additional resources from the community. So, the bigger contribution from the community, the more we can adjust it, whether we can repair or maximise, or only the components that are truly urgent are repaired”. (G2, May 2024).*

Fund contributions of the residents were varied since they have different economic levels and housing needs. Some residents contributed additional funds for various purposes, such as hiring additional workers, additional materials, or incrementing their houses to be wider (R2; R6; R13, June 2024). The amount of the contributions from the respondents varied from the range IDR 4-10 million (±US\$ 240~600) (R2; R5; R6; R9, June 2024). Even, two respondents (R8; R13) contributed more than IDR 30 million (±US\$ 1,800).

Meanwhile, some residents did not add any additional cost and only used the given resources (R7; R10, June 2024). One of the respondents contributed by cooking lunch for the construction workers (R7, June 2024).

*“The resources are not only in the form of money. Some of the communities have difficulties in their financial resources, for example, the labour forces.” (G2, May 2024).*

**Photograph 8:** Participation during construction



Source: BPIW (2022)

**Table 5:** Summary of community participation

| Phase                       | Activities identified         | Findings                                                                                                                                                                                                                                                                                                                                                                                     | Participation level (Hamdi & Goethert, 1997)                                                                                               |
|-----------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Planning phase</b>       | Survey                        | <ul style="list-style-type: none"> <li>The residents accompanied the government in the survey process.</li> </ul>                                                                                                                                                                                                                                                                            | <i>Consultative.</i><br><br>This level looks for community feedback and opinions, yet the final decision is still made by the government.  |
|                             | Community meetings            | <ul style="list-style-type: none"> <li>The residents were actively involved in meetings with various topics.</li> <li>The neighbourhood chief was active and communicated very well with stakeholders.</li> <li>Some of the residents raised their opinions, but not all were accommodated.</li> </ul>                                                                                       |                                                                                                                                            |
|                             | Meetings in government office | <ul style="list-style-type: none"> <li>The neighbourhood chief joined the coordination in the government office twice</li> </ul>                                                                                                                                                                                                                                                             |                                                                                                                                            |
|                             | Program socialisation         | <ul style="list-style-type: none"> <li>The government socialise the scheme, the process, funding, etc.</li> <li>The residents joined the socialisation.</li> </ul>                                                                                                                                                                                                                           |                                                                                                                                            |
|                             | Decision-making process       | <ul style="list-style-type: none"> <li>The decision made was the result of a shared decision-making process, even though the final decision was decided by the government.</li> </ul>                                                                                                                                                                                                        |                                                                                                                                            |
| <b>Implementation phase</b> | Construction                  | <ul style="list-style-type: none"> <li>The residents constructed their houses, roads and drainage, monitored by the government facilitator.</li> <li>Other tasks were identified, such as bending the steel bar, providing water to mix the material, carrying, and keeping materials.</li> <li>Social conflict occurred but was solved by the government and neighbourhood chief</li> </ul> | <i>Shared control.</i><br><br>This level observes the community and the government have an equal level, where both of them can contribute. |
|                             | Funding contribution          | <ul style="list-style-type: none"> <li>Some residents contributed additional funds for hiring workers and additional materials. While some others were only using the amount given.</li> </ul>                                                                                                                                                                                               |                                                                                                                                            |

Source: author (2024)

## 4.4 Acceptability of housing outcomes

### 4.4.1 Physical aspect

#### *Satisfaction with housing quality*

The residents were asked about their satisfaction with the improvement in the structure condition, design, and layout of their housing. Most respondents were satisfied, especially because of the material change of the housing structure from wood (non-permanent) to concrete foundation (permanent) (R2; R5; R6; R7; R8; R10; R11; R12; R13, June 2024).

*“Thank God, the government has been able to help the community, which is certainly very helpful, our wooden houses have become concrete permanent.” (R1, June 2024).*

Besides the structure, they also improved the architectural components, such as walls, floor, and roof conditions. Some of the houses have changed the walls with bricks, but some others still maintain their wood for the housing facade.

*“I’m satisfied. It was still board walls and plywood back then, now it has (stone) walls.” (R7, June 2024).*

**Photograph 9:** Walls upgraded with bricks (left) and with maintaining wood as their facade (right)



Source: author (2024)

Moreover, they upgraded the house to become bigger and have proper ventilation. *“It’s higher (the roof), before it was brittle. Regarding the size, I’m satisfied, it’s getting wider. More windows and the sun can enter the house.” (R13, June 2024).*

One respondent was unsure because the housing structure was not fully upgraded due to small fund contributions and a unique housing typology that needs 25 stilt foundations. 20 of them had been upgraded to concrete foundations and the rest were still in the wooden stilt. He wanted to upgrade the structure in the future.

*“I feel unsatisfied because not all of my house structure was upgraded. If the government gives more money, I would like to be like the other houses, more permanent.” (R9, June 2024).*

#### *Satisfaction with water connection*

BPPW provided water connections for 10 households. They were satisfied with the water condition, *“I was very satisfied with the water condition because previously I had to ask neighbours for water.” (R12, June 2024).* Some residents had already received subsidies from the local government and they were satisfied because the previous water condition was rusty.

*“Yes (very satisfied), the well water was rusty and insufficient in the dry season. Now, thank God there is a water connection, even though we have to pay every month.” (R2, June 2024).*

**Photograph 10:** *Beneficiary of water installation*



*Source: author (2024)*

However, not all of the residents received the water connection in the slum upgrading program in 2022 due to limited budget allocation and segment prioritisation. Therefore, 40 households proposed the subsidized water connection, but still waiting for approval from the local government for the last 2 years due to the long queue of applicants from all over the city. Hence, they use well water, buy water gallons, or ask other neighbours (R1; R6; R11, June 2024).

### ***Satisfaction with sanitation facilities***

BP2P and BPPW worked together to provide sanitation services. BP2P upgraded the existing toilets for 53 households through the Housing Improvement Program including toilet room improvement and septic tank installation. Meanwhile, BPPW provided individual toilets for 3 households that did not have toilet facilities before, complete with a room and a septic tank. The residents were satisfied with the sanitation facilities provided, because of better water conditions, a permanent toilet room, and a septic tank. (R2; R3; R4; R7; R9; R11; R12; R13, June, 2024).

**Photograph 11:** *Existing individual toilet improvement*



*Source: author (2024)*

**Photograph 12:** New individual toilet installation



Source: BPPW (2022)

Moreover, BPPW maintained the existing communal wastewater treatment plant. Unfortunately, the researcher could not find respondents who used the communal sanitation system. However, one respondent felt unsure about the condition of the wastewater treatment plant and stated,

*“The current condition of the Wastewater Treatment Plant doesn’t seem functioning.”* (R1, June 2024).

**Photograph 13:** Communal wastewater treatment plant



Source: author (2024)

### ***Satisfaction with neighbourhood road***

The neighbourhood road development was the most influential upgrade for the Kemas Rindo area. They were satisfied because of the material change from wooden plank to concrete roads, wider access, possible access for motorcycles and cars, and easier to do trade and services activities (R2; R3; R4; R5; R6; R7; R8, R11, June 2024). Another reason is that the residents were satisfied because there was no road in some areas before. Moreover, some areas already received road improvements in 2019 (R12; R13), but the existing width is 1.2 meters, enough for motorbike access.

*“We are grateful. In the past, it was difficult for children to go to school, they asked for water to wash their feet when they arrived at school because of the mud.”* (R7, June 2024).

However, 2 respondents (R9; R10) did not receive the road upgrades in front of their house due to limited budget and their locations were not located in the main access. The existing road still uses a wooden plank. Although they still feel satisfied because the main road was upgraded, they hope to get road improvements in the future.

*“Satisfied, but if possible, they should build the road to the front of my house, so vehicles can access my house.” (R9, June 2024).*

**Photograph 14:** Neighbourhood road upgrades



Source: author (2024)

### **Satisfaction with drainage**

The respondents were unsure about the drainage intervention because only some parts of the area were covered. It helped some areas to stream the water faster to the river. However, the neighbourhood's geographical characteristic is a swamp area and it is near from Bendung River. If heavy rain occurs in the city, the river water level rises and the flood is still coming.

*“Some areas are covered with drainage and it helped the water stream to the river. However, If there is a big seasonal flood, the river water will still rise. Last year, it was flooded, the water entered our house and the road was blocked.” (R1, June 2024).*

### **Willingness to maintain**

Residents of Kemas Rindo felt that it was important to maintain their housing conditions. The reason was it was beneficial and they did not want to waste the government assistance. If there is damage, they will repair their house themselves (R5; R6; R7; R8; R10; R11; R12; R13, June 2024).

Meanwhile, the residents also felt important to maintain the infrastructure provided because it is very helpful for their daily activities. However, they felt that infrastructure maintenance still needed government financial assistance, especially road maintenance.

*“That's very important. But, it will be difficult for the community to pay for the maintenance, and it will be a burden. So we hope that the government will provide funding for maintenance, especially road maintenance.” (R1, June 2024).*

Another resident stated, *“I am willing to maintain the existing infrastructure, but if the funding comes from the government. While the residents are willing to help with the construction.” (R8, June 2024).*

However, from the observation, some roads have slight damage and the road markings were faded. This was also caused by the heavy rain in the last 2 years.

**Photograph 15:** Road condition after two years



Source: author (2024)

#### **4.4.2 Socio-cultural aspect**

##### ***Perception of process and housing needs***

At the beginning of the process, the residents were surprised because their neighbourhood area became one of the pilot projects. They are proud and grateful that the government gave the program (R1; R2, June 2024). In the first meeting, the government came directly to each house, surveyed the neighbourhood area, and discussed with the community. The community also welcomed the government initiatives. During the construction, the residents were accompanied by government facilitators to monitor the progress (R6; R11; R12, June 2024).

*“At first I was surprised but grateful to be given this assistance. The government immediately came to survey the neighbourhood area.” (R2, June 2024).*

Furthermore, the residents were asked about their housing needs. Mostly, they demanded basic infrastructure, especially water and neighbourhood roads. (R3; R4; R5; R10; R13, June 2024). They also wanted adequate space and rooms for their families, mostly to have 2 bedrooms, 1 kitchen, and 1 toilet. (R4; R6; R7; R8; R9; R11; R12, June 2024). *“Now, there are 2 rooms, there is a kitchen and a toilet, Thank God, there are enough for our needs.” (R7, June 2024).* Some residents had more available land, so they extended their housing sizes. (R6; R7; R8; R9; R11; R12; R13, June 2024). They also demanded good quality materials for a longer life span of the house (R7; R12, June 2024).

The government were not strict about the housing design and layout, as long as they fulfilled basic requirements such as the quality of materials, structure, and ventilation. *“Instead, the government was happy because now the house is bigger and wider.” (R9; June 2024).* Some residents did not even ask much about their housing needs, they were already happy when the assistance came and tried to follow the government’s requirements based on the given amount. (R2; R5; R6; R10; R11, June 2024). However, one resident (R9) could not fulfil his needs because of the limited funds and housing typology which needed more housing foundation piles, so he focused on the size and room layout.

##### ***Perception of safety and security***

The residents feel safer and more secure due to the improvement of their housing structure and the neighbourhood. Housing structure and toilet improvements made the residents feel safer to live.

*“More comfortable and safer. The foundation of the house is permanent, we are no longer afraid that the house will collapse. The toilet improvements made us no longer afraid of rain.*

*Back then, we used an umbrella in the toilet.” (R7, June 2024). Another respondent stated, “Yes, I’m worried because the door didn’t exist before “ (R11, June 2024).*

The development of roads made the neighbourhood area feel safer. The residents felt that well-built roads and clear visibility make the area safer since it is a swamp area and it could discourage criminal activity. *“Thank God it feels safer now, there is no criminal record in this area, especially now the road is connected.” (R2, June 2024).*

### **Perception of sense of belonging and community cohesion**

The respondents felt that the sense of belonging in the Kemas Rindo was increasing. The slum upgrading was meaningful for the residents. They were very grateful and wanted to stay longer in their neighbourhood area, they felt more comfortable, they were willing to maintain their housing and neighbourhood area, and they also felt that it was for their common good.

*“It feels comfortable, no longer feeling isolated from other people, because our neighbourhood has road, and housing improvements.” (R7, June 2024).*

Moreover, this sense of belonging was also created throughout the slum upgrading process where they worked together. The power of ‘gotong royong’, an Indonesian cultural community effort to help each other, raised the relationship of the community. The residents felt closer and more unified because they participated in the discussions, meetings, and construction process together. They communicated a lot with each other.

*“Definitely ‘gotong royong’, for example, if someone doesn’t have the materials such as stone, I give him, you can help each other.” (R13, June 2024).*

They also hope that the other neighbours to receive this program. *“We hope our neighbours who haven’t been able to renovate their houses will soon get government assistance.” (R9, June 2024).*

However, community cohesion was a bit compromised due to the social conflict, as explained in the social conflict part (see sub-section 4.3.2). Fortunately, the government and the neighbourhood chief could manage the conflict during the process.

### **Perception of eviction threat**

As mentioned in the tenure security in sub-section 4.2.6, the government had to make sure that the dwellers had the legal aspect before the program to ensure a safe administrative process. From the observation, all respondents had the land ownership certificate, thus they did not feel eviction threat.

*“We have the land certificate, so it is safe to live here. It is also the requirement from the government to receive the program.” (R5, June 2024).*

## **4.4.3 Financial aspect**

### **Willingness to pay monthly charges**

The community was required to pay for water services monthly. This was in line with the information from the government that the water was the only service that the residents had to pay, directly to the local water company.

*“The water connection needs a registration fee. And the monthly charges will be paid from the community to the local water company afterward. As for the other infrastructure, nothing is charged.” (G1, May 2024).*

Moreover, the residents received subsidies from the local government for the water services. They paid around IDR 50-150 thousand per month ( $\pm$ US\$ 4-9/month), which was still

reasonable for them. Therefore, they have no burden in paying for the water connection (R2; R3; R4; R5; R8; R9; R12; R13, June 2024).

*“There is a monthly charge after the water installation. Around 50-70 thousand rupiahs. I don't mind paying because it suits my usage and needs.” (R12, June 2024).*

### ***Housing as an investment asset***

The residents did not consider their houses to be rented or sold. Most respondents wanted to stay longer and considered that their house was their only asset. *“Our house is for ourselves. We have a lot of children. If we rent or sell it, where do we go? We are already old, it feels like we'll live and die here.” (R7, June 2024).*

Furthermore, due to the upgrades, the land value and housing prices are increasing. *“The land value and the housing price are increasing since the housing and settlement upgrading, especially the neighbourhood road development.” (R1, June 2024).* Another respondent stated, *“Land is more expensive, land is more valuable here after the intervention.” (R8, June 2024).*

### ***Photograph 16: Road development in Segment 7***



Source: author (2024)

## **4.5 Summary of findings**

The physical, socio-cultural, and financial acceptability of the community is shown to be related to slum upgrading intervention. Housing improvements and neighbourhood roads mattered to the people most. Although some components did well, some did not.

***Table 6: Summary of findings***

| Slum upgrading components  | Findings related to the community's acceptability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Housing improvement</b> | <p>Physical aspect</p> <ul style="list-style-type: none"> <li>• The residents were satisfied due to structural and architectural changes.</li> <li>• They are willing to maintain their houses by themselves (resource and manpower).</li> </ul> <p>Socio-cultural aspect</p> <ul style="list-style-type: none"> <li>• The housing needs were accommodated, such as the housing size, room layout for families, and the quality of materials</li> <li>• It increased the sense of belonging of the dwellers. They were grateful, willing to maintain, and wanted to stay longer in their neighbourhood.</li> <li>• The residents built their houses together, resulting in increasing community cohesion.</li> </ul> |

| Slum upgrading components | Findings related to the community's acceptability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | <ul style="list-style-type: none"> <li>Structural upgrades made the dwellers feel more safer.</li> </ul> <p>Financial aspect</p> <ul style="list-style-type: none"> <li>Housing and land prices increased due to the improvements.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Water</b>              | <p>Physical aspect</p> <ul style="list-style-type: none"> <li>The residents were satisfied with the water quality, the previous water condition was poor and rusty.</li> <li>However, some households still waiting for the proposal approval to receive subsidised water connections.</li> </ul> <p>Socio-cultural aspect</p> <ul style="list-style-type: none"> <li>It was related to the basic needs of housing.</li> </ul> <p>Financial aspect</p> <ul style="list-style-type: none"> <li>There was an additional monthly charge for the water, but they were not burdened since they got subsidies.</li> </ul>                                                                                                                                  |
| <b>Sanitation</b>         | <p>Physical aspect</p> <ul style="list-style-type: none"> <li>The residents were satisfied due to the toilet room and septic tank installation.</li> </ul> <p>Socio-cultural aspect</p> <ul style="list-style-type: none"> <li>It was related to the basic needs of housing.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Neighbourhood road</b> | <p>Physical aspect</p> <ul style="list-style-type: none"> <li>They were satisfied because the roads were connected, wider, and possible access for vehicles.</li> <li>They are willing to maintain if the government give financial assistance.</li> </ul> <p>Socio-cultural aspect</p> <ul style="list-style-type: none"> <li>It created a sense of belonging and community cohesion due to the community participation in road construction.</li> <li>It is related to housing needs.</li> <li>Well-built roads and clear visibility increase the security of the neighbourhood area.</li> </ul> <p>Financial aspect</p> <ul style="list-style-type: none"> <li>Housing and land prices were increased due to the new road development.</li> </ul> |
| <b>Drainage</b>           | <p>Physical aspect</p> <ul style="list-style-type: none"> <li>The residents felt unsure because the drainage was built in a few segments, if heavy rains occurred, the flood would still come to the neighbourhood area.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Tenure secure</b>      | <p>Socio-cultural aspect</p> <ul style="list-style-type: none"> <li>The residents did not feel eviction threat because they already had the land ownership certificate, as for the requirement for assistance.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

Source: author (2024)

## Chapter 5. Conclusions

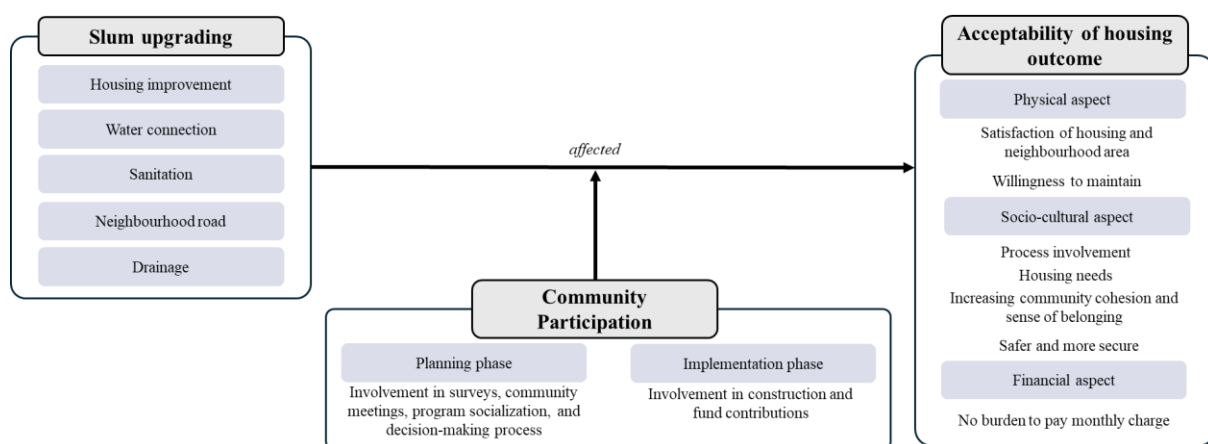
This last chapter outlines the conclusion based on the findings and data analysis, correlated with the literature review. Then, it presents some practical recommendations regarding the implementation of slum upgrading.

### 5.1 Conclusion

#### 5.1.1 Main question: Slum upgrading and community's acceptability

This study seeks the relationship between slum upgrading and the acceptability of housing outcomes in terms of physical, socio-cultural, and financial aspects, specifically in Kemas Rindo, Palembang. The result of the study confirmed that the slum upgrading affected the community's acceptability. This relationship is in line with the conceptual framework.

**Figure 12:** Summary of the study



Source: author (2024)

Slum upgrading aims to integrate slum dwellers into larger urban contexts, so it can preserve social cohesiveness while raising their living standards (Abdenur, 2009; Jaitman, 2012). Slum upgrading in Kemas Rindo included housing improvements, water connections, sanitation facilities, neighbourhood road development, and drainage. The findings showed that the housing improvement and neighbourhood roads mattered to the people most. Although some components did well, some did not.

Understanding people's acceptability can measure the housing intervention in achieving physical, socio-cultural, economic and financial aspects (Jaitman, 2012; Ayala et al., 2019). The result indicates that slum upgrading positively affected the community's acceptability. Most residents were satisfied due to the upgrade to a permanent condition and better accessibility. They were closer to each other during the process. They had more sense of belonging and were willing to maintain their housing and neighbourhood area. Moreover, they did not feel burdened to pay the monthly service charges because of the quality and reasonable price. These findings are important to achieve the long-term sustainability of the intervention (Archer, 2012; Ayala et al., 2019).

Moreover, community participation affected this relationship, especially the socio-cultural aspect, where they discussed, worked together, and kept the quality of construction for their common good. As a result, the community can achieve basic housing needs, better relationships, promote more accountability, and faster distribution of information and knowledge (Imperato & Ruster, 2003; Patel, 2013).

### 5.1.2 Sub-question 1: Slum upgrading components

There were two government agencies implemented the slum upgrading, which are the Settlement Infrastructure Agency for South Sumatra (BPPW) and the Housing Provision Implementation Agency for Sumatra V (BP2P). BPPW provided **water connection, sanitation facilities, neighbourhood roads, and drainage**. Meanwhile, BP2P worked on a **housing improvement** with a self-help housing scheme. These components were in line with the literature regarding the physical intervention of slum upgrading. The slum upgrading approach supports housing improvements (Satterthwaite, 2020; Cohen, 2015; Turley, 2013; Jaitman, 2012; Nurdiansyah, 2018) and basic infrastructure, such as water connection, sanitation, drainage, neighbourhood roads, footpaths, and risk reduction facilities (Jaitman, 2012; Satterthwaite, 2020; Cohen, 2015; Nurdiansyah, 2018; Ayala, 2009). However, other infrastructure components were not provided, such as garbage and fire protection facilities due to budget constraints and needs prioritisation.

### 5.2.2 Sub-question 2: Community participation level

In the planning phase, there were quite often meetings with various instruments used, such as surveys, community meetings, and program socialization. The meeting topic had a variety of topics, such as the planning of the housing and infrastructure, the slum upgrading process, the funding disbursement, etc. The community, especially the neighbourhood chief, was actively involved. Furthermore, the government allowed the community to participate in the discussion and planning, however, the final decision was still made by the government, and some opinions from the community were not accommodated, mostly due to budget limitations. Thus, **the level of participation in the planning phase** was identified as *Consultative* level. According to Hamdi & Goethert (1997), the *Consultative* level seeks community feedback and opinions, yet the final decision is still made by the government.

Meanwhile, in the implementation phase, the residents were involved in the construction process, especially the housing construction and road development. The tasks varied from keeping the materials to transporting the materials, bending the steel bar, or constructing their own house and infrastructure, with the assistance of the government facilitator who intensively monitored the progress. Moreover, The government encouraged the residents by giving them incentives for additional income. Some of the residents also added additional fund contributions. Thus, **the level of participation in the implementation phase** was identified as *Shared Control*, which sees the community and the government have an equal level, where both of them can contribute (Hamdi & Goethert, 1997).

### 5.2.3. Sub-question 3: Community's acceptability of housing outcomes

**From the physical aspects**, respondents were satisfied because of the material change of the housing structure to become permanent. They upgraded the house to become wider and have proper ventilation. However, one respondent was unsure because the housing structure was not fully upgraded due to limited funds. Providing better housing unit quality improves the quality of life and improves their satisfaction with the housing unit (Jaitman, 2012). Furthermore, neighbourhood road development was influential for the residents because of the change from wooden planks to concrete roads, possible access for motorcycles or cars, and easier daily activities. Residents were also satisfied with the water and sanitation facilities, due to the water condition, toilet room, and septic tank, although not all area was covered. The physical aspect focuses on the construction quality, access to infrastructure, and well-maintained housing (Jaitman, 2012; Ayala et al., 2019). In terms of maintenance, the residents will maintain their housing and settlement area, yet, they still need government financial assistance for maintaining the neighbourhood road. The willingness of households to maintain is important to ensure long-term sustainability (Ayala et al., 2019).

**From the socio-cultural aspect**, the residents were proud and grateful because their area became one of the pilot projects. The government came directly to survey and discuss with slum dwellers. Most residents demanded basic infrastructure services, bigger spaces and rooms for families, and quality materials. The socio-cultural aspects are related to the housing needs of the residents (Ayala et al., 2019). The power of '*gotong royong*', an Indonesian cultural effort to help each other, increased the relationship. The residents felt closer because they participated in the process together. Moreover, the role of the neighbourhood chief was vital. He communicated with the stakeholders very well, and the community's trust was increasing. Upgrading could strengthen the community and build community government relations (Satterwhite, 2020). The respondents also felt that the sense of belonging in their neighbourhood was increasing because they built their own neighbourhood. Housing structure, toilet improvements, and road development made residents feel safer. In terms of tenure security, the respondents did not feel the threat of eviction because they already had land ownership. The socio-cultural aspect focuses on the presence, participation, safety and security within the neighbourhood, and a sense of belonging (Jaitman, 2012).

**From the financial aspect**, the residents did not feel burdened to pay the charges because of the water quality and reasonable price. The capability to maintain and pay the service cost is important to ensure long-term sustainability (Archer, 2012; Ayala et al., 2019). Moreover, housing has opportunities as an investment asset (Archer, 2012). Indeed, the land value and the housing price in the area were increased due to the upgrading. However, the residents did not consider renting or selling, instead, they wanted to stay in their house for a longer period.

## **5.2 Recommendation**

### **5.2.1 Practical recommendation**

There are some practical recommendations that the researcher found that is useful for the projects and policymakers:

1. The government should continue to integrate the housing improvement program and slum upgrading since it positively affects community acceptability. Regularly, the slum upgrading program and housing improvement program in Indonesia were implemented by two different agencies, the Settlement Infrastructure Agency and the Housing Provision Implementation Agency. Thus, they should work their programs together focusing on the same location. Based on the findings, the community felt that housing improvement and neighbourhood road development were the most significant interventions in their area.
2. The community needs to be trained on the importance and how to maintain their housing and infrastructure regularly, thus they can reduce their dependence on government programs.

### **5.2.2 Further research**

The researcher recommends that others who are interested in the slum upgrading topic to conduct a comparison research of the community's acceptability between the neighbourhood area that received the housing improvement, or infrastructure upgrading only, and the area that received integrated programs. Therefore, we could see how they affected the slum area, especially in Indonesia. Further, other researchers could look at the economic aspect in the longer term and the community participation in the maintenance phase.

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## **Laws and Regulations**

Law No. 23/2014 concerning *Local Government*.

President Instruction Number 4 of 2022 concerning *Accelerating Extreme Poverty Alleviation*.

Ministry of Public Works and Housing Regulation No. 14 of 2018 concerning *Preventing and Upgrading the Quality of Slum Area*.

Ministry of Public Works and Housing Regulation No. 7 of 2018 concerning *Self-Help Housing Stimulant / Bantuan Stimulan Rumah Swadaya (BSPS)*.

Palembang Mayor Decree Number 325 of 2020 concerning *the Slum Areas in Palembang*.

# Appendix 1: Interview guidelines

## Semi-Structured In-Depth Interview for Settlement Infrastructure Agency (BPPW)

### Opening

Hello. Good morning/afternoon Sir/Ma'am.

First of all, thank you for the time to take part in this interview. My name is Raden Mohammad Bagus Prakoso. I'm a student of Urban Management and Development from Erasmus University Rotterdam, Netherlands. Currently, I'm conducting research about the acceptability of the slum upgrading project, particularly in Kemas Rindo Sub-District, Palembang as part of the '*Extreme Poverty Alleviation*' agenda in 2022. I would like to know your perspective on the slum upgrading intervention in this area. The interview will take approximately 20-30 minutes. If you don't understand the questions, please do not hesitate to ask for clarification. If you feel uncomfortable please let me know. I will not say your name and I can assure you that the data will remain anonymous and your information will be used for academic purposes only.

Before starting the interview, I would like to ask for permission to record this interview. This recording will be used for my analysis and once it is done it will be erased. Do you mind if I record this interview? As you know the purpose, privacy, and technicalities, do you give your consent for this interview? Is there anything you want to ask before we start the interview? (After receiving consent), let's begin the interview.

### Questions

#### *General Questions*

1. How was the division of responsibilities of the government for this slum upgrading project?
2. How long did the planning process and the implementation process last?

#### *Slum Upgrading Components*

3. What were the slum upgrading components that were being developed in this area?
4. How was the infrastructure condition before the intervention?
  - a. Water supply: access to water, source of water;
  - b. Sanitation facilities: communal/inside the house, Connected to sewage system/individual septic tank, waste collected system;
  - c. Roads/footpaths condition;
  - d. Drainage;
  - e. Garbage facility.
5. Did you face any challenges during the construction process?
6. What are the financing sources used for the slum upgrading?
7. How was the tenure security of the slum dwellers? Did you provide the tenure security for the slum dwellers?
8. Is there any housing-related cost that is being paid by the community? Such as water, sanitation, etc.

#### *Community Participation*

9. Did you organize a meeting with the community before the slum upgrading process?
10. How did you involve the community in the slum upgrading process? Were they actively involved in this slum upgrading intervention?
11. Did you face any challenges related to the participation process?

### Conclusion and Remarks

Thank you for sharing your experience and perspective. Do you have anything to add?

## **Semi-Structured In-Depth Interview for Housing Provision Agency (BP2P)**

### **Opening**

Hello. Good morning/afternoon Sir/Ma'am.

First of all, thank you for the time to take part in this interview. My name is Raden Mohammad Bagus Prakoso. I'm a student of Urban Management and Development from Erasmus University Rotterdam, Netherlands. Currently, I'm conducting research about the acceptability of the slum upgrading project, particularly in Kemas Rindo Sub-District, Palembang as part of the '*Extreme Poverty Alleviation*' agenda in 2022. I would like to know your perspective on the slum upgrading intervention in this area. The interview will take approximately 20-30 minutes. If you don't understand the questions, please do not hesitate to ask for clarification. If you feel uncomfortable please let me know. I will not say your name and I can assure you that the data will remain anonymous and your information will be used for academic purposes only.

Before starting the interview, I would like to ask for permission to record this interview. This recording will be used for my analysis and once it is done it will be erased. Do you mind if I record this interview? As you know the purpose, privacy, and technicalities, do you give your consent for this interview? Is there anything you want to ask before we start the interview? (After receiving consent), let's begin the interview.

### **Questions**

#### *General Questions*

1. How was the division of responsibilities of the government for this slum upgrading project?
2. How long did the planning process and the implementation process last?

#### *Housing Improvement Program Components*

3. What were the housing improvement components?
4. How was the housing structure condition before and after the intervention? How were the design and layout conditions before and after the intervention?
5. How many houses that eligible to get an improvement in this area? What was the scheme and requirement for getting the housing improvement?
6. Did you face any challenges during the construction process?
7. What are the financing sources used for the slum upgrading?
8. How was the tenure security of the slum dwellers? Did you provide the tenure security for the slum dwellers?
9. Is there any housing-related cost that is being paid by the community? Such as water, sanitation, etc.

#### *Community Participation*

10. Did you organize a meeting with the community before the slum upgrading process?
11. How did you involve the community in the slum upgrading process? Were they actively involved in this slum upgrading intervention?
12. Did you face any challenges related to the participation process?

### **Conclusion and Remarks**

Thank you for sharing your experience and perspective. Do you have anything to add?

## Semi-Structured In-Depth Interview (for slum dwellers)

### Opening

Hello. Good morning/afternoon Sir/Ma'am.

First of all, thank you for the time to take part in this interview. My name is Raden Mohammad Bagus Prakoso. I'm a student of Urban Management and Development from Erasmus University Rotterdam, Netherlands. Currently, I'm conducting research about the acceptability of the slum upgrading project, particularly in Kemas Rindo Sub-District, Palembang as the part of 'Extreme Poverty Alleviation' agenda in 2022. I would like to know your perspective and perception about the slum upgrading intervention.

The interview will take approximately 20-30 minutes. If you don't understand the questions, please do not hesitate to ask for clarification. If you feel uncomfortable please let me know. I will not say your name and I can assure you that the data will remain anonymous and your information will be used for academic purposes only.

Before starting the interview, I would like to ask for permission to record this interview. This recording will be used for my analysis and once it is done it will be erased. Do you mind if I record this interview? As you know the purpose, privacy, and technicalities, do you give your consent for this interview? Is there anything you want to ask before we start the interview? (After receiving consent), let's begin the interview.

### Questions

#### **General Questions**

1. How long have you been living in this neighbourhood area? \_\_\_\_\_
2. How many people live in your house? \_\_\_\_\_

#### **Acceptability: Physical aspect**

##### **Satisfaction of housing quality**

3. How was your housing condition before and after the upgrading intervention?

| Housing condition           | Before | After |
|-----------------------------|--------|-------|
| Housing structure condition |        |       |
| Roof, floor, wall condition |        |       |
| Design                      |        |       |
| Size                        |        |       |
| Natural light               |        |       |
| Ventilation                 |        |       |

4. On the scale of 1 to 5 (1 is very dissatisfied and 5 is very satisfied), are you satisfied with your housing condition?

| Housing Conditions          | Very dissatisfied | Dissatisfied | Unsure | Satisfied | Very satisfied | Reasons |
|-----------------------------|-------------------|--------------|--------|-----------|----------------|---------|
| Housing structure condition | O                 | O            | O      | O         | O              |         |

| Housing Conditions          | Very dissatisfied | Dissatisfied | Unsure | Satisfied | Very satisfied | Reasons |
|-----------------------------|-------------------|--------------|--------|-----------|----------------|---------|
| Roof, floor, wall condition | O                 | O            | O      | O         | O              |         |
| Design                      | O                 | O            | O      | O         | O              |         |
| Size                        | O                 | O            | O      | O         | O              |         |
| Natural light               | O                 | O            | O      | O         | O              |         |
| Ventilation                 | O                 | O            | O      | O         | O              |         |

***Satisfaction with infrastructure provision***

5. How was your infrastructure condition before and after the upgrading intervention?

| Infra-structure condition                                                   | Before | After |
|-----------------------------------------------------------------------------|--------|-------|
| Availability of water                                                       |        |       |
| Source of water (piped, well, groundwater, etc.)                            |        |       |
| Sanitation facilities (communal / inside the house)                         |        |       |
| Sanitation (Connected to sewage/ individual septic tank/ collection system) |        |       |
| Neighbourhood road                                                          |        |       |
| Drainage                                                                    |        |       |
| Garbage facilities (waste collection system)                                |        |       |

6. On a scale of 1 to 5, are you satisfied with the infrastructure provision (water supply, sanitation facilities, road/footpath provision, drainage, and garbage facilities)?

| Infrastructure                                        | Very dissatisfied | Dissatisfied | Unsure | Satisfied | Very satisfied | Reasons |
|-------------------------------------------------------|-------------------|--------------|--------|-----------|----------------|---------|
| Access to clean water (Availability, source of water) | O                 | O            | O      | O         | O              |         |

| Infrastructure                                                      | Very dissatisfied | Dissatisfied | Unsure | Satisfied | Very satisfied | Reasons |
|---------------------------------------------------------------------|-------------------|--------------|--------|-----------|----------------|---------|
| Sanitation facilities (Connected to sewage, individual septic tank) | O                 | O            | O      | O         | O              |         |
| Neighbourhood road                                                  | O                 | O            | O      | O         | O              |         |
| Drainage                                                            | O                 | O            | O      | O         | O              |         |
| Garbage facilities (waste collection system)                        | O                 | O            | O      | O         | O              |         |

***Willingness to maintain the housing***

7. Do you think it is important to maintain your housing? Why?
8. Would you like to maintain your house? How will you maintain your house?

***Willingness to maintain the infrastructure provided***

9. Do you think it is important to maintain the infrastructure? Why?
10. Would you like to maintain the infrastructure provided (water, sanitation facilities, neighbourhood road, drainage, garbage facility)?
11. Who do you think should maintain the infrastructure that has been provided, such as clean water, sanitation, and neighbourhood roads? Why?

***Acceptability: Social-cultural aspect***

***Perception of the process***

12. What do you think about the slum upgrading intervention process? How were you approached by the government?
13. Were your housing needs accommodated?

| Housing Needs                                             | Unfulfilled | Partially fulfilled | Fulfilled | Reasons |
|-----------------------------------------------------------|-------------|---------------------|-----------|---------|
| Quality of housing                                        | O           | O                   | O         |         |
| Size / Minimum standards / household number composition / | O           | O                   | O         |         |
| Space needs / layout rooms                                | O           | O                   | O         |         |
| Financial assistance/ ability to pay                      | O           | O                   | O         |         |
| Individual tastes, lifestyles, and identities             | O           | O                   | O         |         |
| Basic needs for shelter (water, sanitation)               | O           | O                   | O         |         |
| Infrastructure (Roads, garbage, drainage)                 | O           | O                   | O         |         |

| Housing Needs        | Unfulfilled | Partially fulfilled | Fulfilled | Reasons |
|----------------------|-------------|---------------------|-----------|---------|
| Location             | O           | O                   | O         |         |
| Safety and Security  | O           | O                   | O         |         |
| Other needs<br>..... | O           | O                   | O         |         |

***Perception of safety and security***

14. What do you think about the safety and security in housing and neighbourhood areas after the slum upgrading intervention?

***Perception of sense of belonging***

15. How does your feeling of belonging to your neighbourhood (re: sense of belonging) after the upgrading project? Do you think it increasing?

***Perception of community cohesion***

16. How does the relationship between your community (re: community cohesion) after the upgrading project? Do you think it increasing?

***Perception of tenure security***

17. Have you ever felt the threat of eviction while living here? Do you feel that you have a more secure tenure after the upgrading intervention?

***Acceptability: Financial Aspect***

***Willingness to pay for monthly charges***

18. What do you think of housing costs after slum upgrading intervention, such as water charges, sanitation charges, garbage, maintenance, etc.? Are there any additional expenses after the intervention? Were you bothered by these additional expenses?

***Perception of housing as an investment asset***

19. Do you think is it possible to consider your housing as an investment asset such as for rent or sale? How was the housing or land price after the slum upgrading?

***Community participation: planning phase***

20. Were you involved in the planning phase? What kind of involvement? (Discussion/planning/design/site survey/land allocation/funding/design/scheduling/etc.)
21. Were there any meetings before the slum upgrading intervention? How often did you join the meeting?

| Frequency                     | Never | Rarely | Sometimes | Often | Always | Reasons (Why were not involved / what are the discussion topics) |
|-------------------------------|-------|--------|-----------|-------|--------|------------------------------------------------------------------|
| Meeting at the planning phase | O     | O      | O         | O     | O      |                                                                  |

22. Did you feel like your opinions and needs were taken into consideration in the slum upgrading process?

| Feeling of consideration                                                   | Un-considered at all | Less considered | Partially considered | Considered | Very considered | Reasons |
|----------------------------------------------------------------------------|----------------------|-----------------|----------------------|------------|-----------------|---------|
| The feeling of priorities and needs were incorporated into decision-making | O                    | O               | O                    | O          | O               |         |

23. Did you feel like government officials were informing or involving you in decision-making? What kind of communication forms did the government use? (surveys/focus group/public information campaign/community meetings/demonstrations/)?

24. How long did the planning phase last? Did you face any problems or different opinions in this process?

### ***Community participation: implementation phase***

25. Were you involved in the implementation phase? What kind of task did you do during the implementation phase? (carrying material / engaged in construction (labour) / etc.)

26. Were there any fund contributions during the implementation process? (material cost/increment/etc.)

### **Conclusion and Remarks**

#### ***Closure***

27. Do you feel this slum upgrading intervention affects the housing outcomes (physical, social, financial)?

28. Do you feel your participation affects the housing outcomes (physical, social, financial)?

29. Do you have any additional comments or suggestions regarding the slum upgrading intervention?

### **Conclusion and Remarks**

Thank you for sharing your experience.

## Appendix 2: Coding analysis with ATLAS.ti

Thesis-analysis-709985 - ATLAS.ti

File Home Search & Code Analyze Import & Export Tools Help Codes

New Edit Comment Color Show in Network Global Filter Rename Delete Analyze Tools Export Filter Code Groups View

**Explore**

Search

Thesis-analysis-709985

- Documents (15)
  - D 1: R1 (66)
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  - D 5: R5 (32)
  - D 6: R6 (36)
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  - D 12: R12 (36)
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- Memo Groups (0)
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- Multimedia Transcripts (0)

**Code Manager**

Search Entities

| Name                                         | Grounded | Density | Groups | Created by                   | Created          | Modified         | Modified by                  |
|----------------------------------------------|----------|---------|--------|------------------------------|------------------|------------------|------------------------------|
| A1_Housing improvement                       | 70       | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 13:05 | 03/07/2024 20:20 | Raden Mohammad Bagus Prakoso |
| A2_Slum upgrading                            | 75       | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 13:04 | 03/07/2024 19:58 | Raden Mohammad Bagus Prakoso |
| A3_Tenure security                           | 15       | 0       |        | Raden Mohammad Bagus Prakoso | 19/06/2024 11:20 | 03/07/2024 22:17 | Raden Mohammad Bagus Prakoso |
| B1_Participation in the planning stage       | 79       | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 13:10 | 03/07/2024 19:58 | Raden Mohammad Bagus Prakoso |
| B2_Participation in the implementation stage | 48       | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 13:10 | 03/07/2024 19:58 | Raden Mohammad Bagus Prakoso |
| C1_Physical acceptability                    | 111      | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 12:59 | 03/07/2024 19:58 | Raden Mohammad Bagus Prakoso |
| C2_Socio-cultural acceptability              | 115      | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 13:01 | 03/07/2024 19:59 | Raden Mohammad Bagus Prakoso |
| C3_Financial acceptability                   | 33       | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 13:03 | 03/07/2024 19:59 | Raden Mohammad Bagus Prakoso |
| Challenges in implementation                 | 4        | 0       |        | Raden Mohammad Bagus Prakoso | 03/07/2024 21:38 | 03/07/2024 22:08 | Raden Mohammad Bagus Prakoso |
| Collaborative approach                       | 2        | 0       |        | Raden Mohammad Bagus Prakoso | 03/07/2024 19:53 | 03/07/2024 22:30 | Raden Mohammad Bagus Prakoso |
| General info of households                   | 40       | 0       |        | Raden Mohammad Bagus Prakoso | 20/06/2024 13:07 | 20/06/2024 13:07 | Raden Mohammad Bagus Prakoso |
| Overall conclusion                           | 38       | 0       |        | Raden Mohammad Bagus Prakoso | 19/06/2024 11:50 | 19/06/2024 11:51 | Raden Mohammad Bagus Prakoso |

**Code Distribution by Document**

Diagram Preview Comment

70 codes

### Appendix 3: Coding and quotations from interviews

| Variable       | Variable Code | Sub-Variable             | Sub-Variable Code | Indicators                                                                                                   | Coding                        | Quotation Example                                                                                                                                                                                                                                                                                        |
|----------------|---------------|--------------------------|-------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Slum upgrading | A             | Housing improvement      | A1                | Housing structure (permanent with concrete, bricks, and tile bricks, and tile /semi-permanent/non-permanent) | A1_BP2P_Housing structure     | <i>"So the foundation before was made from wood. We replaced it with a concrete foundation."</i>                                                                                                                                                                                                         |
|                |               |                          |                   |                                                                                                              | A1_BP2P_Housing structure     | <i>"We replace them with new ones, there are also those that we change to cast floor."<br/>"If their old building material was wood and the wood might still be usable, we could reuse it."</i>                                                                                                          |
|                |               |                          |                   | Design and layout (size, lighting, ventilation)                                                              | A1_BP2P_Design and layout     | <i>"After the upgrade, some residents have the size of 7x8, 8x10, 5x12, 6x8."</i>                                                                                                                                                                                                                        |
|                |               |                          |                   |                                                                                                              | A1_BP2P_Design and layout     | <i>"Indeed, most people did not pay attention to the proportion of lighting for their homes."<br/>"We install windows and ventilation. We socialize the importance of lighting, ventilation, and how it relates to their health condition."</i>                                                          |
|                |               | Infrastructure provision | A2                | Availability of water/access to water<br>Source of water (piped, well, groundwater, etc.)                    | A2_BPPW_Water infrastructure  | <i>We upgraded the water infrastructure with the additional water network for 10 houses</i>                                                                                                                                                                                                              |
|                |               |                          |                   | Type of sanitation facilities (communal/ inside the house/etc.)                                              | A2_BPPW_Sanitation facilities | <i>"The SPAL-D (communal sanitation treatment installation unit) is still working. Several houses still have a connection. What we are repairing is the network pipe"</i>                                                                                                                                |
|                |               |                          |                   | Connected to sewage/ individual septic tank/ etc.                                                            | A2_BPPW_Sanitation facilities | <i>"BPPW stepped in to handle the sanitation of several houses. There are three houses (that got a housing improvement program) that are being handled for their toilets. Because from the beginning it was built, there was no toilet."</i>                                                             |
|                |               |                          |                   | Roads/footpath/access condition                                                                              | A2_BPPW_Neighbourhood road    | <i>"The road was planned in Kemas Rindo with the community. We improve what already exists. If it doesn't exist, we open the road, especially in at the ends of the neighbourhood area. Some of the roads were made of wooden plank."</i>                                                                |
|                |               |                          |                   | Drainage condition                                                                                           | A2_BPPW_Drainage              | <i>"The drainage is located in front of the entrance road of the neighbourhood area from the bridge. The water comes in and out when it rains, so the flow is easier when moving to the river"</i>                                                                                                       |
|                |               | Tenure security          | A3                | Type of land title (ownership, rent, etc.)                                                                   | A3_BP2P_Tenure security       | <i>"It is mandatory and important that the land ownership must be in the name of the beneficiaries. Their land is unlikely to be threatened with eviction in the future... For administration requirements, the main thing that is looked at is the ownership of the house, in terms of the ID card,</i> |

| Variable                | Variable Code | Sub-Variable                                 | Sub-Variable Code | Indicators                                                       | Coding                                                     | Quotation Example                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|---------------|----------------------------------------------|-------------------|------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         |               |                                              |                   |                                                                  |                                                            | whether they truly live in this neighbourhood area”                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Community Participation | B             | Level of participation in the planning phase | B1                | Involvement in the planning process:                             | B1_R2_Involvement in the planning process                  | "Yes, we do a compromise with the government. The government is guiding us, but they always ask us to discuss the plan first"                                                                                                                                                                                                                                                                                                                                              |
|                         |               |                                              |                   | Frequency of meetings                                            | B1_BPPW_Frequency of meetings                              | "The first meeting was the initial survey, then continued with a sharpening meeting to discuss the construction plan with the community and the chief of the neighbourhood unit, deciding how we do the construction process will happen whether it's a type 4 contract or a different type.... Then there was another meeting to discuss with the community, the sub-district government officials, and the local government in socialization meetings..... Quite often." |
|                         |               |                                              |                   |                                                                  | B1_R1_Frequency of meetings                                | Yes quite often. Besides in our location. We also have a coordination in the government office twice.                                                                                                                                                                                                                                                                                                                                                                      |
|                         |               |                                              |                   | Form of communication with other stakeholders (instruments used) | B1_BP2P_Form of communication                              | "We meet with the community at the beginning, to do the socialization. So the things that we discussed are what is housing improvement program (BSPS program) is, what is the system like, who prepares the proposal, how to prepare the technical plan, calculate the budget estimation plan (RAB), housing needs, and how we socialize through these activities."                                                                                                        |
|                         |               |                                              |                   |                                                                  | B1_R10_Form of communication                               | "Survey of the housing condition, and the neighbourhood area and much discussion."                                                                                                                                                                                                                                                                                                                                                                                         |
|                         |               |                                              |                   |                                                                  | B1_R6_Form of communication                                | "We are working together with the government to make a design."                                                                                                                                                                                                                                                                                                                                                                                                            |
|                         |               |                                              |                   | Priorities and needs were incorporated into the plan             | B1_R4_Priorities and needs were incorporated into the plan | "In the road development, in some segments, the residents wanted to have 4-meter width, however since the limitation of the budget from the government they only built 2 meters. But still, they feel grateful that the government allocated their money to build the road"                                                                                                                                                                                                |
|                         |               |                                              |                   |                                                                  | B1_R1_Priorities and needs were incorporated into the plan | "Yes, we are involved by the government in matters, the decision remains at the center, but the community continues to voice their opinion, although some are accommodated, some are not."                                                                                                                                                                                                                                                                                 |
|                         |               |                                              |                   |                                                                  | B1_R7_Priorities and needs were incorporated into the plan | "Another respondent asked the facilitator if they could use the secondary materials that were still in good condition to reduce the cost of the construction, and the government agreed with their opinion since they still fulfilled the basic requirements of improving their housing quality"                                                                                                                                                                           |
|                         |               | Level of participation in implementation     | B2                | Involvement in construction processes                            | B2_R1_Involvement in construction process                  | "The people themselves build their houses, they become their own craftsmen. Neighbourhood roads are also built by the community together."                                                                                                                                                                                                                                                                                                                                 |

| Variable                          | Variable Code | Sub-Variable    | Sub-Variable Code | Indicators                                                                                                            | Coding                                                        | Quotation Example                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------|---------------|-----------------|-------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   |               | phase           |                   | Level of task                                                                                                         | B2_R7_Involvement in construction process_task                | "Bending the steel bar."                                                                                                                                                                                                                                                                                                                                                                                               |
|                                   |               |                 |                   |                                                                                                                       | B2_R3_Involvement in construction process_task                | "Providing water to mix the material for road construction"                                                                                                                                                                                                                                                                                                                                                            |
|                                   |               |                 |                   |                                                                                                                       | B2_R4_Involvement in construction process_task                | "Carrying and transporting the construction materials, and keeping the construction materials in a safe place."                                                                                                                                                                                                                                                                                                        |
|                                   |               |                 |                   | Fund contributions from the community                                                                                 | B2_G2_Fund contribution                                       | "Our housing improvements program is a stimulant. So, in planning the house, we always adjust to the budget. The value of our assistance is 17.5 million, with additional resources from the community. So, the bigger contribution from the community, the more we can adjust it, whether we can repair or can be maximized, or only the components that are truly urgent or important are repaired". (G2, May 2024). |
|                                   |               |                 |                   |                                                                                                                       | B2_R6_Fund contribution for construction                      | "Quite a lot, almost 4-5 million rupiahs for additional worker and the toilet."                                                                                                                                                                                                                                                                                                                                        |
|                                   |               |                 |                   |                                                                                                                       | B2_R7_Fund contribution                                       | "No additional cost, but we provide only lunch for the construction worker. We try to maximize the government's funding                                                                                                                                                                                                                                                                                                |
| Acceptability of housing outcomes | C             | Physical aspect | C1                | Satisfaction of housing quality ·                                                                                     | C1_R1_(+)_Satisfaction to housing quality_material            | "Thank God, the government has been able to help the community, which is certainly very helpful for those who have houses, our wooden houses have now become concrete and permanent."                                                                                                                                                                                                                                  |
|                                   |               |                 |                   |                                                                                                                       | C1_R2_(+)_Satisfaction to housing quality_floor               | "Now the floor has been cast, from ordinary wood to a cement floor."                                                                                                                                                                                                                                                                                                                                                   |
|                                   |               |                 |                   |                                                                                                                       | C1_R7_(+)_Satisfaction to housing quality_wall                | "Yes, I'm satisfied, before it was still board walls and plywood. Now it has (stone) walls."                                                                                                                                                                                                                                                                                                                           |
|                                   |               |                 |                   |                                                                                                                       | C1_R9_(-)_Satisfaction to housing quality_structure           | "I still feel unsatisfied. Not all the structures were upgraded to concrete material. If the government gives more aid in the future, I would like to, so my house can become more permanent, funds are limited."                                                                                                                                                                                                      |
|                                   |               |                 |                   |                                                                                                                       | C1_R13_(+)_Satisfaction to housing quaility_design and layout | "Yes, regarding the size, I'm satisfied, it is getting wider. I'm satisfied because more windows and the sun can now enter the house."                                                                                                                                                                                                                                                                                 |
|                                   |               |                 |                   | Satisfaction with the infrastructure provision (water supply access, sanitation facility, roads, drainage, garbage) · | C1_R12_(+)_Satisfaction to water                              | "Very satisfied with the condition because previously we still shared clean water with neighbors."                                                                                                                                                                                                                                                                                                                     |
|                                   |               |                 |                   |                                                                                                                       | C1_R2_(+)_Satisfaction to water                               | "Yes (very satisfied), the well water is rusty, in the dry season there is insufficient amount of water, now thank God there is water infrastructure connection, even though we have to pay every month."                                                                                                                                                                                                              |

| Variable | Variable Code | Sub-Variable          | Sub-Variable Code | Indicators                                                                                      | Coding                                                                                                                      | Quotation Example                                                                                                                                                                                                                                                          |
|----------|---------------|-----------------------|-------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |               |                       |                   |                                                                                                 | C1_R2_(-)_Satisfaction to water                                                                                             | <i>"For those who are waiting for subsidies, they need to wait, it has been 2 years until now it has not been realized, there are around 40 houses that are currently submitting proposals."</i>                                                                           |
|          |               |                       |                   |                                                                                                 | C1_R11_(+)_Satisfaction to sanitation                                                                                       | <i>"I am satisfied because now we have the toilet room and septic tank"</i>                                                                                                                                                                                                |
|          |               |                       |                   |                                                                                                 | C1_R7_(+)_Satisfaction to neighbourhood road                                                                                | <i>"We are grateful, thank you for building this road. In the past, it was difficult for motorbikes, it was difficult for children to go to school, they asked for water to wash their feet when they arrived at school, (because the soil was dirty from flood mud)."</i> |
|          |               |                       |                   |                                                                                                 | C1_R9_(-)_Satisfaction to neighbourhood road                                                                                | <i>"Unsure, they (the government) need to expand the road in front of my house"</i>                                                                                                                                                                                        |
|          |               |                       |                   |                                                                                                 | C1_R1_(-)_Satisfaction to drainage condition                                                                                | <i>"Quite satisfied, because only part of the area is covered. If there is a big seasonal flood, the river water will still rise."</i>                                                                                                                                     |
|          |               |                       |                   | Willingness to maintain the housing and neighbourhood area                                      | C1_R1_Willingness to maintain housing                                                                                       | <i>"It's very important, first of all, the condition of the house, which hasn't been built yet, sir, doesn't have the funds, so the roof is leaking and the floor is broken. With this housing assistance, it is very helpful for the community."</i>                      |
|          |               |                       |                   |                                                                                                 | C1_R8_Willingness to maintain infrastructure                                                                                | <i>"I am willing to maintain and maintain the existing infrastructure, but if the funding comes from the government. While the residents are willing to help the construction and join the discussions." (R8, semi-structured interview, June 2024).</i>                   |
|          |               | Socio-cultural aspect | C2                | Perception of the process (How they were approached, how their housing needs were accommodated) | C2_R2_Perception of the process                                                                                             | <i>"At first I was shocked, but I was grateful to be given this assistance. The government immediately came to the survey." (R2, June 2024).</i>                                                                                                                           |
|          |               |                       |                   |                                                                                                 | C2_R9_Physical acceptability: Government wants the housing improvements<br>Socio-cultural acceptability: Housing needs      | <i>"Instead the government official (BP2P of Sumatra V) is happy because now the house is bigger and wider." (R9; June 2024).</i>                                                                                                                                          |
|          |               |                       |                   |                                                                                                 | C2_R4_Participation in the planning stage: Opinion taken into consideration,<br>Socio-cultural acceptability: Housing needs | <i>"We proposed for a road with a width of 4 meters, but the government did not approved due to budgent constraint. But, thankfully, they still build the road with a width of 3 meters."</i>                                                                              |

| Variable | Variable Code | Sub-Variable | Sub-Variable Code | Indicators                                                            | Coding                                                          | Quotation Example                                                                                                                                                                                                                                                                                                                                                                 |
|----------|---------------|--------------|-------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |               |              |                   |                                                                       | C2_R7_(+)_Housing needs                                         | <i>"There are 2 rooms, there is a kitchen and a toilet, Thank God, there are enough for our needs." (R7, June 2024).</i>                                                                                                                                                                                                                                                          |
|          |               |              |                   | Perception of safety and security in housing and neighbourhood area · | C2_R7_(+)_Perception of safety                                  | <i>"More comfortable and safer. Now, the foundation of the house is permanent, we are no longer afraid that the house will collapse. The toilet improvements also made us no longer afraid of getting caught in the rain. Back then we used an umbrella in the toilet if it rains." (R7, June 2024).</i>                                                                          |
|          |               |              |                   |                                                                       | C2_R7_(+)_Perception of safety                                  | <i>"Thank God it's safer now, there is no criminal theft record in this area, especially now the road is connected." (R2, June 2024).</i>                                                                                                                                                                                                                                         |
|          |               |              |                   | Perception of sense of belonging ·                                    | C2_R7_(+)_Perception of sense of belonging                      | <i>"It feels comfortable, no longer feeling isolated from other people. because our neighbourhood has received road construction, and assistance to improve the quality of houses. In the past, oh my God... how difficult this road is." (R7, June 2024).</i>                                                                                                                    |
|          |               |              |                   | Perception of community cohesion ·                                    | C2_R13_(+)_Perception of community cohesion                     | <i>"Definitely 'gotong royong' (Indonesian cultural social action to help each other), for example, if he doesn't have the materials, he doesn't have enough stone, I give him stones. If I don't have enough iron, he helps. If someone doesn't have enough materials, you can help each other to be sufficient." (R13, June 2024).</i>                                          |
|          |               |              |                   |                                                                       | C2_R7_(+)_Perception of community cohesion                      | <i>"While taking part in the discussion, we followed the chief of the neighbourhood, if he agreed, we agreed because it was for the common good. The existing community is also united, we proposed together to the chief. Even though, if the chief joins the election again, we will vote for him. He is always present, even if there is hot weather or rain." (R7, 2024).</i> |
|          |               |              |                   |                                                                       | C2_R9_(+)_Perception of community cohesion                      | <i>The chief of the neighbourhood unit always participates from the beginning, giving permission and updated information." (R9, June 2024).</i>                                                                                                                                                                                                                                   |
|          |               |              |                   |                                                                       | C2_G2_social conflict                                           | <i>"Yes, there were quite a lot of social problems. That area is slightly strict and rough, so sometimes there is a social conflict between the construction workers and the community. Fortunately, there was good communication from the head of the neighbourhood unit." (G2, semi-structured interview, May 2024).</i>                                                        |
|          |               |              |                   |                                                                       | C2_R9_(+)_Perception of community cohesion                      | <i>"We hope our neighbors who haven't been able to renovate their houses will soon get the government assistance." (R9, June 2024)</i>                                                                                                                                                                                                                                            |
|          |               |              |                   | Perception of tenure security (threat of eviction)                    | C2_R5_(+)Perception of tenure security<br>A3_R5_Tenure security | <i>"Yes I have the land ownership certificate, so it is safe to live here. It is also the requirement from the government to receive the program."</i>                                                                                                                                                                                                                            |

| Variable | Variable Code | Sub-Variable     | Sub-Variable Code | Indicators                                                                  | Coding                                                | Quotation Example                                                                                                                                                                                        |
|----------|---------------|------------------|-------------------|-----------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |               | Financial aspect | C3                | Willingness to pay for monthly charge services (water, sanitation services) | C3.1_R7_(+)_Willingness to pay for monthly charges    | <i>"I don't mind the monthly payment, because it suits my usage and needs"</i>                                                                                                                           |
|          |               |                  |                   |                                                                             | C3.1_R13_(+)_Willingness to pay for monthly charges   | <i>"I don't think this is an objection, because we are subsidized, I think we are subsidized by the government. It's been a long time since we first got it. Thank God, thank you."</i>                  |
|          |               |                  |                   | Perception of housing as an investment asset (rent/sell)                    | C3.2_R1_(+)_Perception of housing as investment asset | <i>"Yes, the land value and the housing price are increasing since the housing and settlement upgrading, especially the neighbourhood road development." (R1, semi-structured interview, June 2024).</i> |
|          |               |                  |                   |                                                                             | C3.2_R7_Perception of housing as investment asset     | <i>"Our house is for ourselves. We have a lot of children. If we rent or sell it, where do we go? Moreover, we are already old, it's like we'll live and die here."</i>                                  |
|          |               |                  |                   |                                                                             | C3.2_R8_Perception of housing as investment asset     | <i>"Land is more expensive, land is more valuable here after the intervention."</i>                                                                                                                      |

## Appendix 4: Difference between the regular slum upgrading program and the slum upgrading program in the context of Extreme Poverty Alleviation

| Aspect                        | Regular Housing Improvement Program                                                       | Regular Slum Upgrading Program                                                                                                                                     | Slum Upgrading Program to Support 'Extreme Poverty Alleviation' Agenda                                                                                                                                                                                                                                                                                                                          |
|-------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Regulation</b>             | Ministry of Public Works and Housing Regulation No. 7 / 2018                              | Ministry of Public Works and Housing Regulation No. 14/2018                                                                                                        | President Instruction No. 4 / 2022                                                                                                                                                                                                                                                                                                                                                              |
| <b>Object</b>                 | Low-income people (for Housing Improvement Program/Self-Help Stimulant)                   | Slum Area based on the Decree from the Mayor (for Slum Upgrading)                                                                                                  | Extreme Poverty People (Decile 1 - 4 based on the data from the Coordinating Ministry for Human Development and Cultural Affairs)                                                                                                                                                                                                                                                               |
| <b>Data source</b>            | Local government (verified by the Housing Provision Implementation Agency technical team) | Mayor decree concerning the slum area size in cities/regencies ( <i>SK Kumuh Kabupaten/ Kota</i> )                                                                 | Acceleration of Extreme Poverty Reduction Data / <i>Data P3KE (Pensasaran Percepatan Penghapusan Kemiskinan Ekstrem)</i> from Ministerial Decision of Coordinating Minister of Human and Cultural Development ( <i>Kepmenko PMK</i> ) No. 30/2022, National Team for the Acceleration of Poverty Reduction ( <i>TNP2K</i> ), and National Population and Family Planning Board ( <i>BKKBN</i> ) |
| <b>Program</b>                | Self-Help Housing (Stimulant for low-income households)                                   | Slum Upgrading with 7 aspects: building condition, neighbourhood street, access to water, access to sanitation, drainage, garbage management, and fire protection. | Self-help housing, water access, and sanitation (mandatory based on the President's Instruction 4 / 2022).                                                                                                                                                                                                                                                                                      |
| <b>Actor(s)</b>               | Housing Provision Implementation Agency ( <i>BP2P</i> )                                   | Settlement Infrastructure Agency ( <i>BPPW</i> )                                                                                                                   | Settlement Infrastructure Agency ( <i>BPPW</i> ), Housing Provision Implementation Agency ( <i>BP2P</i> ), Regional Infrastructure Development Agency ( <i>BPIW</i> )                                                                                                                                                                                                                           |
| <b>Integration with other</b> | Not integrated with the slum upgrading program.                                           | Not integrated with the housing improvement program.                                                                                                               | Integrated between the housing improvement and slum upgrading program, and have the potential to get social/economic help from other ministries/ agencies                                                                                                                                                                                                                                       |

## Appendix 5: Research timeline table

| Process                                          | March |   |   |   | April |   |   |   | May |   |   |   | June |   |   |   | July |   |   |   | August |   |   |   |
|--------------------------------------------------|-------|---|---|---|-------|---|---|---|-----|---|---|---|------|---|---|---|------|---|---|---|--------|---|---|---|
|                                                  | 1     | 2 | 3 | 4 | 1     | 2 | 3 | 4 | 1   | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1      | 2 | 3 | 4 |
| <b>Proposal Preparation</b>                      |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Proposal preparation                             |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| 1 <sup>st</sup> proposal submission              |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Proposal feedback                                |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Proposal revision                                |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Proposal submission (revised)                    |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| <b>Fieldwork Preparation and Data Collection</b> |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Fieldwork preparation (survey tools)             |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Interview with BP2P                              |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Interview with BPPW                              |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Observation and Interview slum dwellers          |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| <b>Data Analysis and Thesis Writing</b>          |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Transcript interviews                            |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Data Analysis with ATLAS.ti                      |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Thesis writing                                   |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| <b>Draft Thesis Submission</b>                   |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| 1 <sup>st</sup> draft thesis submission          |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Draft thesis feedback                            |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Thesis revision & finalisation                   |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| <b>Final Thesis Submission</b>                   |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| 1 <sup>st</sup> final thesis submission          |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |
| Final thesis evaluation                          |       |   |   |   |       |   |   |   |     |   |   |   |      |   |   |   |      |   |   |   |        |   |   |   |

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