

Rusunawa sustainability assessment and the impact to residents' capabilities

Ni Made Wenes Widiyani

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Rusunawa Sustainability Assessment and the Impact to Residents' Capabilities

Rusunawa Jatinegara Barat, Indonesia

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Abstract

Affordable housing in Jakarta in the form of *rusunawa* (a multi-storey rental housing) for the poor is in the massive development. This study aims to reveal and critically assess government policy regarding the provision of the *rusunawa* for the relocated people, who were used to be *kampung* dwellers. This research was carried out through a case study in *Rusunawa* Jatinegara Barat, Indonesia by using the following data collection methods: (1) document analysis; (2) field observation; (3) residents' survey; and (4) interview with the stakeholders. Additionally, the data collected were examined based on the framework of sustainability through selection of sustainable indicators that cover social, environmental, economic, and institutional dimensions. Furthermore, residents' capabilities were examined based on the *Capability Approach*, elaborated by Sen and Nussbaum, which revolves around the concept of freedom, specifically the choice, ability, and opportunity, that the residents have to decide on the function of their homes. This study reveals that the *rusunawa* project's long term sustainability is a challenge for both the government and the residents. Major reduction in the residents' freedom is in their capability to afford the living cost. Their freedom to maintain their social and economic connection has also been reduced and they did not have the freedom to participate in decision making. Moreover, the inflexible and rigid Indonesian bureaucracy makes sustainability goals difficult to achieve. On the other hand, from environmental perspective, the *rusunawa* has been bringing positive impacts in the improvement of health standard of the residents. Similar results also show that people's freedom to live in a healthy environment are considered to be improved significantly. *Rusunawa* also brings opportunity to the residents' capability to achieve tenure security and acknowledgement. This research suggests that provision of a low-income housing project should start from the people through enabling strategies, a policy shift, enabling other actors to take over the role in the development of the affordable housing provision, as well as a better investment in the provision of the affordable housing and land management in macro level.

Keywords: *rusunawa*, affordable housing, *kampung*, sustainability concept, capability approach

Résumé

L'habitation à loyer modéré (HLM) à Jakarta sous la forme de *rusunawa* (une habitation locative à plusieurs étages) pour les pauvres, est en développement massif. Cette étude a pour objectif de révéler et évaluer de manière critique la politique du gouvernement concernant la disposition de *rusunawa* aux personnes déplacées, qui étaient, auparavant, des habitants de *kampung*. La méthode utilisée dans cette recherche est celle de l'étude de cas à *Rusunawa* Jatinegara Barat, Indonésie en utilisant quatre manières de collecte des données: (1) l'analyse des études bibliographiques, (2) l'observation sur le terrain, (3) le sondage des résident, et (4) l'entretien avec des parties concernées. En outre, les données obtenues ont été examinées en fonction du cadre de la durabilité par la sélection d'indicateurs durables qui comprend les dimensions sociales, environnementales, économiques et institutionnelles. De plus, les capacités des résidents ont été examinées selon la théorie de «capabilités», élaboré par Sen et Nussbaum, qui porte sur le concept de la liberté, en particulier le choix, la capacité et l'opportunité, que les résidents doivent décider de la fonction de leurs maisons. Cette étude révèle que la durabilité à long terme du projet *rusunawa* est un défi pour le gouvernement et les résidents. La diminution principale de la liberté des résidents est dans leur capacité à payer le coût de vie. La liberté des résidents pour conserver leur lien social et économique a également été diminuée et ils n'ont pas la liberté de participer à la prise de décision. De plus, la bureaucratie indonésienne institutionnellement inflexible et rigide rend difficile à l'atteinte des objectifs de durabilité. D'autre part, du point de vue de l'environnement, *rusunawa* a des impacts positifs pour l'amélioration du niveau de santé des résidents. Des résultats similaires montrent également que la liberté de vie des gens dans un environnement sain est considérée comme l'amélioration significative. *Rusunawa* offre également la possibilité à la capacité des résidents de pouvoir assurer la sécurité de tenure et la reconnaissance. Cette recherche suggère la disposition du projet d'habitation à bon marché/d'habitation à loyer modéré doit débuter par les personnes par des stratégies habilitantes, un changement de politique dans la gestion de *rusunawa*, permettant à d'autres acteurs tels que le secteur privé, les entreprises gouvernementales, et l'organisation communautaire de prendre le rôle dans le développement de la disposition l'habitation loyer modéré, ainsi qu'un meilleur investissement dans la disposition l'habitation loyer modéré et la gestion des terres à un niveau macro.

Mots-clés: *rusunawa*, habitation à loyer modéré (HLM), *kampung*, concept de durabilité, théorie de «capabilités»

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Acronyms

ADB	Asian Development Bank
Bappenas	National Development Planning Agency *(Badan Perencanaan Pembangunan Nasional)*
BLUD	Local Public Service Agency *(Badan Layanan Umum Daerah)*
BPJS	Social Security Administrator for Health (*Badan Penyelenggaraan Jaminan Sosial)*
BPS	Central Bureau of Statistics (*Biro Pusat Statistik)*
CBO	Community Based Organization
DPRD	Regional People's Representatives Assembly (*Dewan Perwakilan Rakyat Daerah)*
KIP	*Kampung* Improvement Programs
KJS	Jakarta Health Card *(Kartu Jakarta Sehat)*
KJP	Jakarta Smart Card *(Kartu Jakarta Pintar)*
LBH	Legal Aid Institute (*Lembaga Bantuan Hukum*)
MPWH	Ministry of Public Works and Housing (Kementrian Pekerjaan Umum dan Perumahan)
NGO	Non-Governmental Organization
NKC	Ciliwung River normalisation Program (*Normalisasi Kali Ciliwung*)
PAUD	The pre-school (*Pendidikan Anak Usia Dini)*
Perumnas	State Housing Provider Agency (*Perumahan Nasional*)
PKK	Family Welfare Movement (*Pembinaan Kessejahteraan Keluarga)*
Posyandu	Pre- and postnatal health care (*Pos Pelayanan Terpadu)*
Puskesmas	Public health clinic (*Pusat Kesehatan Masyarakat)*
Rusunami	Multi-storey owned housing (*Rumah Susun Milik)*
Rusunawa	multi-storey rental housing (*Rumah Susun Sewa)*
STP	Sewage Treatment Plant
UMK	Local minimum wage (*Upah Minimum Kota*)
UMP	Provincial minimum wage (*Upah Minimum Provinsi)*
UPT	Management Unit (*Unit Pelaksana Teknis)*
WCED	The World Commission on Environment and Development

Chapter 1. Introduction

Jakarta, similar to other cities in developing countries, has faced rapid urbanization. Jakarta's population has grown from 55,000 in 1941 to around 10.177.900 people in 2015 (BPS-Statistics Indonesian, 2010; Surya, 2008). Jakarta, as the capital of the country and also the largest city in Southeast Asia, is financial and administrative center. However, despite being very prominent city, in 2007 almost 60% of Jakarta's urban population reside in *kampung*s, and in 2000 almost 80% of Jakarta's slum dwellers resided there (Steinberg, 2007; Vollmer & Grêt-Regamey, 2013). Terminology of *kampung* literaly means village, but in the urban context the term often refers to a poor neighborhood even though it is an inappropriate meaning. During post-independence era and the new order era (1945-1997), many expansion plans have been undertaken to develop and create the image of Jakarta as a metropolitan city. However, many areas in the city were not properly planned. This is has led to growth outside development plan and the creation of informal settlement

Kampung establishment is partly on public and partly on private land. The land used to be agricultural land, which gradually become urbanized and transferred informally to the new occupants (Steinberg, 2007). A majority of the land which compromise *kampung* neighborhoods in Jakarta, are categorized as illegal settlement and become slum area. *Kampung* tends to be overcrowded and physically lacks of adequate urban infrastructure and amenities. It also has very limited facilities such as water and sewer connections and electricity. In the early 2000s, by total 4,400 Ha of slum settlements in Jakarta, 2,600 Ha is belong to government (Vollmer & Grêt-Regamey, 2013).

Since 1960s slum improvement has become a part of strategy in poverty alleviation by national government. Government set two key targets in housing sector by 2019 which are: (1) Slum alleviation, to improve the living condition of households in slum, and (2) Fulfill the need for affordable housing. Some of the programs in realizing are slum upgrading program (in-situ upgrading) and the provision of *rusunawa* (multi-storey rental housing). In the case of slum resettlement, the targeted population is the squatter settlements on environmentally critical condition or the ones that resided on the land that cannot be released (Bappenas, Ministry of Public Works and Housing, & World Bank, 2015).

In 2013 Jakarta government launched the Ciliwung River Normalisation Program or *Normalisasi Kali Ciliwung* (NKC) to work on the issue of flood in Jakarta. This program objective is to help reducing runoff and waste contamination as a flood prevention measurement by widening of the river and providing inspection roads on each side of the river with green areas in-between. Furthermore, this program is also aimed to improve the quality of health and living condition. Consequently, settlements along the targeted riverbanks need to be relocated following the resettlement policy framework (Arslanian, 2015). People who do not hold legal land certificate are not eligible to have material compensation for their land and building but will be compensated with relocation to *rusunawa*.

1.1 Problem Statement

Marulanda (as cited in Steinberg 2007, p.356) informed that "relocation of riverbanks *kampung* for environmental condition or to make room for real estate developments has been an issue of never-ending

conflict for decades". In 2015, Jakarta government relocated *Kampung* Pulo community in order to repossess the riverbank for NKC projects. Around 500 households were relocated from *Kampung* Pulo to *Rusunawa* Jatinegara Barat (The Jakarta Post, 2016). During the relocation, the people protested and caused a clash between the people and the authorities (Asian Development Bank, 2017). The people refused to be relocated and demanded a fair compensation for their land and property because they have been living in *Kampung* Pulo for years and generations. The provision of affordable housing or *rusunawa* as the compensation for losing the settlement and land seems a very strategic way to solve the problem.

NKC as an ongoing project will continue to clear the river banks, resulting in more relocations. In 2015, the government of Jakarta executed 113 evictions, affecting 8,145 families, and 6,283 businesses and based on the data from the Jakarta Legal Aid Institute (LBH Jakarta), some of the evicted families have been relocated to *rusunawa* (Elyda, 2017). The implementation of NKC projects itself also depends on the availability of *rusunawa* units. Thus, both local and central government fasten the provision of *rusunawa*. The government see that providing *rusunawa* will incrementally put the people in the housing career concept with two advantages: (1) moving vulnerable and poor households from unacceptable housing conditions to more humanized housings, (2) supporting the self-help platform for improvement (Bappenas et al., 2015).

However, many of current resident of *rusunawa* are facing a second eviction because they fail to pay the rent. They fail to pay the rental fees because they have lost their income sources and also their expenses had drastically risen up because of the rent. The people who lost their income are the low-income group who used to run informal businesses to make a living such as selling food, groceries, and other stuff in their old houses in *Kampung* Pulo.

The concerns regarding the latest government initiative in slum upgrading program as well as provision of affordable housing in the form of *rusunawa* for the relocated people is the background of this study. Based on the fast provision of *rusunawa* in Jakarta for the relocated people, an evaluation of *rusunawa* project is needed to reach sustainable living hood. The current strategy should not be only a panacea of the present situation but also to give opportunity to raise people from poverty.

1.2 Research Objectives and Questions

The main objective of this study is to reveal and critically assess government policy regarding provision of *rusunawa* for the relocated people (former *kampung* dweller). Based on the preliminary finding of evaluation on *rusunawa* at the project level, the author will further evaluate the people's (the residents) capabilities or freedom toward *rusunawa* housing functionings. Based on the findings from the overall analysis, the study will yield possible recommendations for the improvement.

Main research question:

1. How sustainable is the *rusunawa* project?
2. How are the residents' capabilities toward housing functionings in *rusunawa*?

In order to address **the research question 1**: *How sustainable is the rusunawa project?*, this study evaluates *rusunawa* project in Jakarta by the sustainability concept that covers social, environmental, economic, and institutional dimensions. The first step is creating a framework of sustainability in the context of affordable housing project by selecting relevant sustainable indicators reflected in the sustainable dimension.

Further investigation is on the impact of *rusunawa* project in the life of the people which answer **research questions 2:** *How are the* residents*' capabilities towards housing functionings in rusunawa?,* resident capabilities will be examined based on Capability Approach which revolves in the concept of freedom (the choice, ability and opportunity) that the residents have to achieve their housing functionings based on what they value. The author composes a housing freedoms framework to set the boundary of residents' capabilities aspects which are analyzed. The previous findings on each sustainable indicator will be used to support the analysis on the residents' 'being', 'doing', and 'having'.

Furthermore, in order to comprehend the *rusunawa* project, it is necessary to look at the general portrayal of housing policy approach in Indonesia. The provision of *rusunawa*, as the discussion of this study, revolves surrounding the issue of relocation *kampung* dweller from the river bank as the result of river normalization project or other environmental reason. Thus it is also important to point out the socio-economic characteristics of former *kampung* dwellers who are now living in *rusunawa*.

1.3 Significance of the Study

By evaluating *rusunawa* project based on sustainable concept, the government could benefit from gaining an understanding of the economic, environmental, social outcomes achieved by particular *rusunawa* project. It also becomes an additional point in decision making. Furthermore, analyzing residents' capabilities using Capability Approach will focus on the information regarding individual's well-being. The sustainability framework and also the housing functionings used in this study could enrich the literature on how to measure the sustainability of an affordable housing in specific circumstances, and the impact to the residents' well beings.

Although residents get better accommodation and with better infrastructure, they are remained in a state of low income. Hence, this research could identify the problems and point towards improvement measures for other similar projects in the future.

Chapter 2. Literature Review

2.1 Development of Urban *Kampung*

Urban *kampung*s have been changing constantly through modernization and urban transformation in social, spatial, and economic aspects. Starting from Dutch colonization, in 17th century, Jakarta's name was Batavia, and was developed following the Dutch (or European) model of fortified city. City dwellers were differentiated based on ethnical affiliation and also the social status of freeman and non-freeman. A majority of native had to live in the surrounding of Batavia, called *ommelanden*. The colonial administration assigned specific location for settlement in *ommelanden*, called *kampung*. Because of the discrimination and limited economic resources, a majority of the native population could hardly get access to colonial facilities. Everyday life in the *kampung*s resembled village life in rural areas, with self-governing and following of traditional law. Thus, the urban *kampung* still has a semi-rural connotation today (Wilhelm, 2011).

Capitalism during New Order regime (1965-1997) brought the issues of urban inequality, social segregation, and serious environmental damages. Peresthu (2015) explained spatial transformation in Jakarta from the perspective of three stages of urban growth during 1970 up to 1990s. First, Jakarta grew by aggregate in 1970s, the shift in the global-economy affected spatial transformation in the form of urban sprawl and socio-spatial transformation of indigenous "old-*kampung*" settlements. As a result, old *kampung*s have been fueled into marginalized area through years. Secondly, Jakarta grew by dispersion by the end of 1980s, the main factors that triggered the urban growth this time were deregulated economic, financial, trade, and industrial policies by the government, leading to privatization. The last, Jakarta grew by polarization in the mid of 1990s, and by this time the government already had less power in controlling spatial development and been overpowered by the capitalist. This implied that government was likely to support and legalize private schemes. *Kampung* settlements then had to give way to modernisation processes, where its inhabitants are spatially and economically marginalized.

This situation specially causes increasing density problems in the *kampung*s, turning them quickly into a slum area (Surya, 2008). During the rapid urbanization, the development relied mostly on private sectors and no industrialized housing construction resulted in a deficiency of providing affordable public housing. People start to subdivide their land and started self-build their dwellings incrementally in the *kampung* area (Peresthu, 2015).

2.1.1 *Kampung*'s Characteristics

There are some classifications in defining the characteristics of *kampung*s by scholars. Setyaningrum' study (as cited in Surya, 2008) defines *kampung* as a typical Indonesian settlement in the city with characteristics such as: located in the city but has an atmosphere of a village, inhabited by low income society, has minimum facilities, has high adaptation capability towards the future, and the inhabitants have a high solidarity even though they come from different social backgrounds. Although most *kampung*s consist of mix of lower and lower-middle class society, and their physical condition often are categorized as a slum, but this definition is inadequate. In many Jakarta *kampung*s, middle class families also live here

permanently (Mccarthy, 2003). Wilhelm (2011) identifies general characteristics of *kampung*s, such as dense settlement structures, unorganized settlement patterns, sub-standard housing, and the absence of legal ownership. As the result of high population density, the community members hold strong social ties among each other which becomes a collective action in social organization.

Tunas (2008) informed that despite being marginalized, *kampung*s exist with the roles of providing accommodation and economic opportunities for the dweller to survive. Wider economic formal and informal activities contribute to the survivability of *kampungs*, such as the demand from formal sector that give opportunity to the informal sector to survive. Tunas also emphasized that local economic activities exist because of the intense social relations which make them creative for possible production, such as opening small shops in front of their houses and offering electronic services for their neighbors. Thus, local economic activities are flexible following the adaptability of the local spatial organization and production, but it is also fragile. Economic activities that take place in informal settlements are strongly related to their location. However, Somantri's study (as cited in Wilhelm, 2011) pointed out that not all *kampung* dwellers survive by doing informal activities, many *kampung* dweller today have a job in the low-income segment of the formal sector.

The economic dependency of the dwellers with their settlement should be one of the main concerns in the program of slum upgrading, especially when relocations occur. Government programs which relocate the dwellers to *rusunawa* can not be a sustainable solution without matching their survival abilities.

2.1.2 Eviction and Resettlement

Briefly, the development of slum in *kampung* was related to the original problems of social exclusion during colonial era. This, was further fueled by neo-liberalism after post-independence, leading to the current problems of urban inequality, social segregation, cultural identity crisis, and environmental damages (Peresthu, 2015). Housing shortage, the urgency associated with climate change, infrastructure adaptation, and the promotion of social justice are the reasons to do something about urban poverty in Jakarta (Simone, 2015). Sheppard (2006) in his report for "Human Right Watch" informed that land disputes are the most common source of problem in Indonesia, and forced evictions are prolonged in Jakarta's history. Government forces carried out massive evictions in order to accommodate the formal urban planning of the city and the national leaders, as well as to support the private interest of privileged developers. The evictions have been occurring from time to time under different leaderships.

Inappropriate land use and urban planning, waste discharge, and climate change contribute to increase in floods mostly affecting riverbank residents (Arslanian, 2015). Flooding causes important economic and social losses; people are forced to stop their normal activities for a while until the condition of their homes getting better, children are unable to go school, people have to close their business temporarily, traffic congestions are everywhere, houses and infrastructures are destroyed, and flood-related diseases are also on the rise (Arslanian, 2015;Cuadra, 2015).

NKC (Ciliwung River Normalization) is one of the mega projects implemented by the current and the previous Jakarta administration, Figure 1 illustrates the overall Ciliwung river catchment area. This

engineering projects to mitigate flood will force remove nearly 400,000 'illegal' residents along the Ciliwung River (Simone, 2015). In order to conduct this project, national and local governments face multiple problems in acquiring the land such as the complicated resettlement issue and the unavailability of land. These problems are normatively linked to the massively ambiguous status of urban land (Simone, 2015). *Rusunawa* is provided for the people who do not have a legal land title. Government will not give cash compensation for land and property occupied by the government, and the people only have to pay the rent after the third month after moving (Asian Development Bank, 2017). Thus, part of the project of NKC is really dependent on how fast government could provide *rusunawa* for the relocated people.

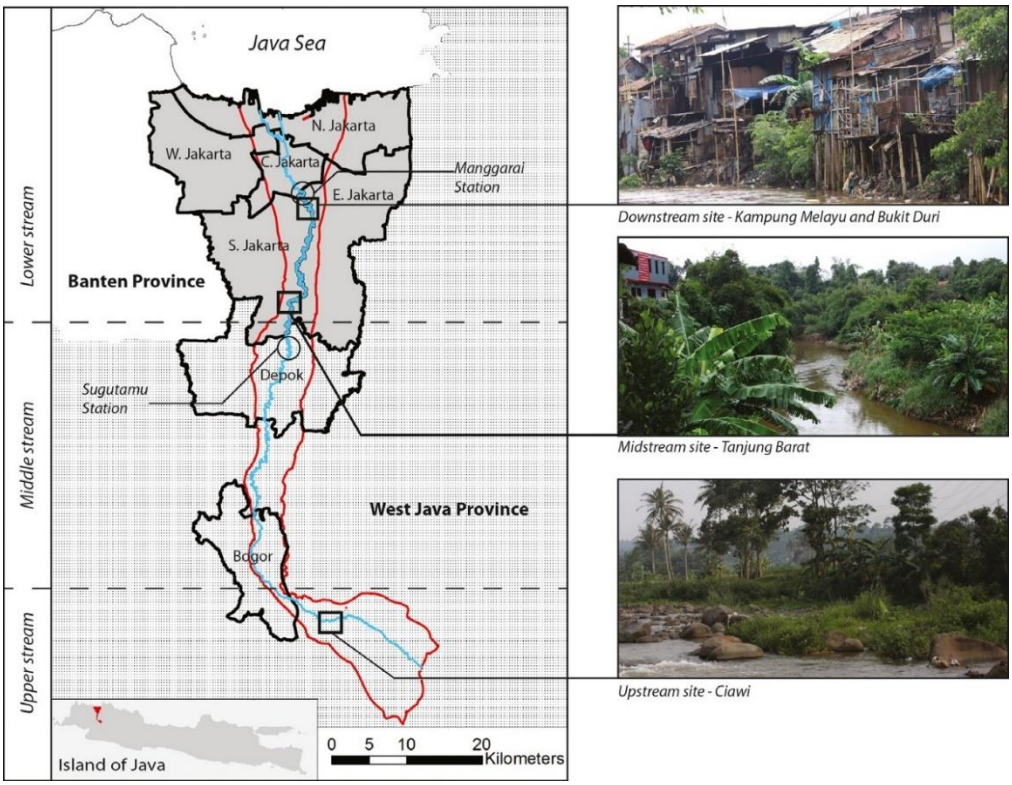


Figure 1. Ciliwung River Catchment Map
(Vollmer et al., 2015 , p.674)

Padawangi et al. (2016) informed that policy makers arguing on relocating a community from the riverbanks would be a better alternative for the people rather than supporting in-situ resilience strategies. Padawangi et al. also pointed out that the housing bureau of the local government acknowledged their incapacity to fulfill the projected housing needs in the city, they have a poor track record of developing and maintaining existing flats. Furthermore, new challenges for some people who reside in *rusunawa* consist of disability to pay the rental cost, the *rusunawa* is located far from their workplace, friends and families, losing source of income, and illegal trading of *rusunawa*'s unit (Sari, 2016). However, the current government is trying to educate the people with various trainings and campaigns to improve their awareness about health as well as program to support their well beings.

2.2 Housing Condition in Indonesia

2.2.1 Housing Backlog and Affordability

Urbanization in Indonesia has created major issues regarding the provision of affordable housing. Almost 70% of the population work in informal sectors without regular salary which restrict them to access formal credit assistance. Thus, they are unable or have limited access to formal housing finance provided by either the State Housing Provider Agency (Perumnas) or private developers (Utomo, 2014;Rukmana, 2015). Those who cannot afford formal housing market start finding various individual solutions such as self-building inappropriate houses, renting, and squatting in slums and squatter settlements, and most of them do not have security of tenure (Tunas & Peresthu, 2010).

In 2015, Indonesia's housing backlog declined by 16 percent to 11.4 million units according to the data from BPS (Koto, 2016). As 64 million Indonesians go into category of low-income households, only 20% of them can purchase home ownership, while 80% of the low-income housing are self-built housing or incremental housing matching their financial ability (Salim, 2015; Utomo, 2014).

Affordability is one of the key challenges to address the housing supply in Indonesia. Land scarcity and high material and building cost make housing price becomes expensive. It worsens by private sectors prioritizing the middle or high end market to ensure the highest possible profit (Tunas & Peresthu, 2010). Based on income distribution estimation, existing market values for standard housing units, and the availability and terms of existing financial products for home acquisition or improvement, Bappenas et al. (2015) created households affordability in housing market, further information is in Table 1. Only deciles 9 and 10 (20% of households) are capable to acquire housing in the formal market. The middle 40% (deciles 5 to 8) of households could afford formal housing but on subsidy enhancements, and the bottom 40% (deciles 1 to 4) households who live under or close to the poverty line cannot afford a basic starter unit valued at IDR 15-30 millions.

Table 1. Estimated Housing Affordability in Indonesia in Market Conditions

Household Decile	Monthly HH Income (m, IDR)	Monthly Payment Capacity (m, IDR)	Estimated Affordable Home Price with Loan Alone (m, IDR)	Estimated Affordable Home Price with Down Payment (m, IDR)	
10	13.9	5.6	463	661	 Can Afford Commercial Units
9	7	2.6	216	309	
8	5.2	1.8	99	110	
7	4.2	1.4	74	82	
6	3.6	1.1	44	49	
5	3.1	0.9	38	43	
4	2.6	0.7	18	19	 Cannot afford even basic core unit
3	2.1	0.5	13	14	
2	1.8	0.4	6.7	6.7	
1	1.2	0.1	2.3	2.3	

Bappenas et al. (2015, p.9)

2.2.2 Indonesia Housing Policy

Indonesia has developed a broad set of policies and institutions to support housing provision, usually with involvement of foreign development aid, but these are not yet effective at improving housing outcomes at the necessary scale (Bappenas et al., 2015). Jakarta started its first slum upgrading programs in 1969, *Kampung* Improvement Programs (KIP), which focused on improving physical conditions by providing basic infrastructure and upgrading housing. However, KIP did not clarify all the *de jure*[1] status of land ownership, but rather the *de facto*[2], with an acknowledgement by the government of their existence, people started to invest in their home, and gradually had a better living condition. However, not many KIP improved *kampung*s still exist until today in the inner city because of land development pressure, gentrification, and property owner change (UN-HABITAT, 2008).

After the fall of New Order era (1997), Indonesia entered Reformation era until present day. The new housing and settlement policy currently reflects the new system of government in Indonesia. Decentralization laws in 2004, was the dramatic shift in Indonesian administrative system where the responsibility of housing affairs has now been transferred from central to regional government[3]. This current government system enables the provincial and local governments having a greater level of responsibility and authority on the housing provision than the central government (Rukmana, 2015; Salim, 2015; UN-HABITAT, 2008). Figure 2 and Table 2 illustrate government intervention concept on housing starting from 2010.

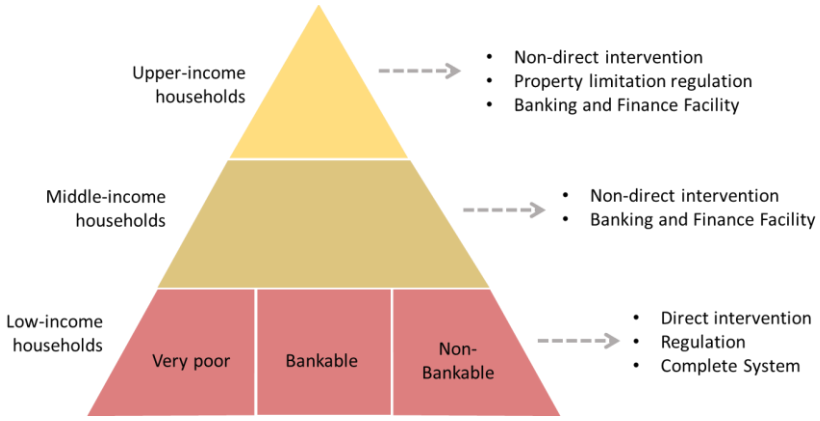


Figure 2. Government Intervention on Housing
(Utomo, *2014, p.4)*

Regulation of the current President of Indonesia, Jokowi (2015-2019), has made the reduction of the housing backlog and the provision of affordable housing as an explicit policy priority. The administration has an objective to meet the new household demand and reacting to housing deficit by providing one million houses annually. This initiative, called *Satu Juta Rumah* (One Million houses) was officially launched on

[1] "de jure rights are given lawful recognition by formal and legal instrumentalities" (Schlager & Ostrom, 2012, p.254).
[2] "de facto rights are originated among resource users. In some situations resource users cooperate to define and enforce rights among themselves, and they are not recognized by government authorities" (Schlager & Ostrom, 2012, p.254).
[3] Law No. 1, 2011 on Housing and Settlement Area.

April 30, 2015. As its name suggests, the program is aimed to produce an average of one million housing solutions annually over the next five years (Anderson, 2015).

Although the number of backlog is reduced gradually, there is an issue about quality of the programs, Utomo (2014) represented Ministry of National Development Planning informed that there is a need of a mismatch between supply and demand. Some of the current housing are considered as substandard, and the market still consider yet to be successful in producing low-income housing because the housing price is overshooting, under supply, or in low quality. He further informed that some intervention are ineffective and mis-targeted. Low-income households still have limited access to housing finance. In the long run, some of government interventions face lack long term financing, which may not be a sustainable strategies (Utomo, 2014).

Table 2. Government intervention for low-income categories household in housing

Category A **Not Affordable to have house**	**Category B** **Affordable to have house**	**Category C** **Self-help housing**
• Multi story low income rental house (*Rusunawa*): land provided by local government, buildings are provided by central government, rental subsidized	• Low-cost housing, ready-to build land parcel • Direct subsidies: public housing mortgage, low interest loans • Indirect subsidies: infrastructure, utilities, and public facility to lower price; incentive for housing developers • Cross Subsidy for private developer: mixed-income residential area referred as 1:3:6 policy and minimum 25% of total residential areas policy	• Stimulates for housing development and housing improvement • Neighborhood upgrading and Shelter project: *Kampung* Improvement Program, infrastructure upgrading, etc • Community-Based Initiative for Housing and Community Development

Adapted from Utamo (2014), Rukmana (2015), UN-HABITAT (2008)

2.2.3 *Rusunawa* in Housing Career and Housing Continuum

Rusunawa as a concept of transitional home is embraced by the government Indonesia who begins to acknowledge the concept of housing career in Indonesia (Bappenas et al., 2015). In the beginning housing career concept was only used in academic world in Indonesia, but gradually become a consideration and influence government's policies. It is the result of structural changes in life that cause difference preferences, affordability, mobility, and habitat transitions of people which effect to the housing products that need to be provided (Putri, 2016). Housing career is a dwelling pattern of general people, who will move from one type of dwelling to another types in order to achieve their ideal type according to their economic-social ability, needs, and biological aspect (life cycle) as well, not only moving, but they could renovate or repair their houses too (Dewi, 2009). Concept of housing career could be illustrated in Figure 3.

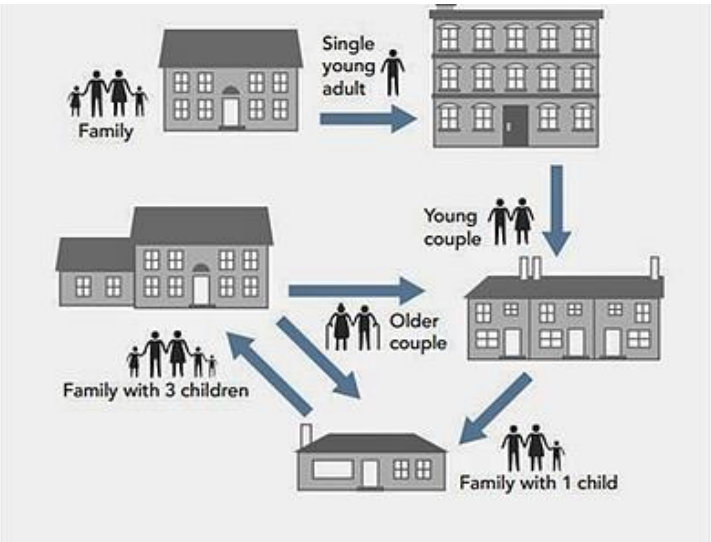


Figure 3. Traditional Housing Career
(Housing Research Center, 2015)

Incorporating the knowledge about the pattern of housing career in the society of a country, would influence the type of housing products that the government should plan. Many developed countries have a plan of housing continuum (a broad range of housing options) as their strategy to answer different needs of the people, for example of Canada's housing continuum which is illustrated in Figure 4. Canada has different typologies of housing and tenure options in responding to different stages in the housing career.



Figure 4. Canada Housing Continuum
(City of Maple Ridge, n.d.)

2.3 Sustainable Development Concept

There are many definitions of sustainability among scholars and practitioners. The term 'sustainable development' was popularized by The World Commission on Environment and Development (WCED) in 1987[4]. They defined sustainable development as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs' (Emas, 2015). Although this concept of sustainable development mostly was driven by economic perspective at that time and has been through a lot of debate

[4] WCED report was entitled Our Common Future. This book is also known as the Brundtland Report.

since then, it provoked and influenced the global agenda and the international community's attitude towards economic, social, and environmental development (Bärlund, 2004).

The concept by WCED promotes strong economic and social development and at the same time highlights the importance of protecting the natural resource base and the environment. We cannot improve economic and social-wellbeing at the cost of the environment, and all development has to consider its impact on the opportunities for future generations (Bärlund, 2004).

Although there is no agreement on the definition and scope of "sustainable development" in academic circles, the key principle of sustainable development is the integration of environmental, social, and economic considerations into all aspects of decision-making (Emas, 2015; Wu, Duan, Zuo, Zhao, & Tang, 2017). However, other scholars also emphasized the importance of incorporating the institutional aspects into the framework of sustainability. Spangenberg argued that the objectives of sustainable development must be complemented by the institutional objectives because institutional dimension could help facilitate the linkage between other dimensions of sustainability and be a supplement to them (Spangenberg, 2002; Wu et al., 2017).

Due to the vague and multiple definitions of sustainability and sustainable development, some scholars argued that a framework is more useful than a specific definition when relating these concepts to housing (Turcotte & Ken Geiser, 2010). Thus, this study is using a framework of sustainability to evaluate *rusunawa*, and the definition surrounding this framework does not limit the scope of sustainability.

2.3.1 Sustainability Assessment System for Affordable Housing Project

There are many definitions of sustainable housing, one of the first definitions is coming from the Declaration of the United Nations Conference on the Human Environment, Principle 15: "Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all"[5] (United Nation, 1972).

Another definition of sustainable housing by Lawrence (as cited in Wiesel et al., 2012) is housing development should not only minimize the disruption to the environment but also considering the social impacts. Derived from the definition in WCED report in 1987, Yates et al (2008, p.7) emphasized that sustainable housing should also put attention in intergenerational sustainability (fiscally sustainable): "that present generations do not impose budgetary burdens on future generations, thus requiring them to bear higher tax burdens than the current generation". Martens (as cited in Larasati, Duijvestein, & Fraaij, 2007) informed the European Union has three perspectives in the sustainable housing development namely construction such as material, social and economic aspects such as affordability, and eco-efficiency such as energy efficiency.

Currently, there are many systems to assess sustainability with the various purposes that are available worldwide, such as such as BREEAM (UK), LEED (US), DGNB (Germany), CASBEE (Japan), and GBTool (Canada) (Wu et al., 2017). In the beginning, most of these assessment tools mainly focus on environmental

[5] The United Nations Conference on the Human Environment, Stockholm, June 1972.

aspects (Turcotte & Ken Geiser, 2010), they put insufficient attention to the social and economic aspects of sustainability. However, over times more researchers have been putting their attentions to other aspects, such as studies for neighborhood sustainability assessment (NSA) tools BREEAM Communities, and LEED for Neighbourhood Development (LEED – ND) (Wu et al., 2017).

Those assessment tools are using weighting system or scoring based on their respective sections. However, in this research, the main point is to evaluate *rusunawa* on the notion of sustainability concept with describing the findings of each dimension. This research is not aimed to find the score of each indicator nor to find the level of sustainability, rather investigate the current state of *rusunawa* project.

2.3.2 Four Dimension of *Rusunawa* Sustainability

Rusunawa will be evaluated based on the four dimensions of sustainability: social, environmental, economic, and institutional. This research will be evaluated based on the foundation of the indicator-based approach, but without putting the score on them. Selection of the indicators also reflects the tension between subjective and objective. Cartwright (as cited in Turcu, 2013) informed that the selection of sustainability indicators should be objective, 'measurable', easy to understand and reflect local circumstances. However, other scholars also acknowledge that sustainability indicators do not need to be purely objectives because they are selected based on a subjective selection process that reflects issues of measurement, rather than what is important (Turcu, 2013). Hence, the indicators in this study are selected subjectively based on the relevance to the design, development, and operation of *rusunawa*.

The dimensions and indicators that are used in this research are:

2.3.2.1 Social Dimension

Referring to the research of Wesel et al. (2012), the indicators for social sustainability in *rusunawa* are based on the principle of wellbeing and inclusion:

a. Sense of community

   In the psychological literature, Mcmillan & Chavis, (1986, p.9) proposed the definition of sense of community as "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together". Inclusive forms of affordable housing could be represented by allowing residents to have a voice in decisions that affect their lives related to the management of their homes, and also providing opportunities for positive social connections and interactions across cultural and socioeconomic differences (Wiesel et al., 2012).

b. Social mix

   Ideally, in a housing project, there should be a mix between income level, tenure, and ethnicity of the tenants. Wiesel et al. (2012) argued that social mix may potentially reduce the stigma that attaches to affordable housing, which usually characterized as a low-income community. However,

they also explained that some affordable housing projects sometimes target a specific group of the population, such as elderly residents and therefore do not aim to achieve social mix within the project (Wiesel et al., 2012).

c. Crime and safety

Cozen (2007, p.189) argued that "sustainability will not achieve its full potential unless it explicitly includes measures to address the ubiquitous problems of crime and the fear of crime within the community". He also stated that significantly, studies have repeatedly found that safety and security are often the first priority of the urban poor in both developed and developing countries. Investigating the residents' perception regarding the safety in their home is considered important.

2.3.2.2 Environmental Dimension

In general, the consideration on environmental performance in *rusunawa* includes:

a. Resource (Energy and Water efficiency)

Features in the housing design could reduce the cost of resources such as energy and water, and good construction material could reduce the cost of building maintenance. Energy efficiency involves active and passive features reduce energy consumption and efficiency involves water storage, conservation and reuse practices (Pullen et al., 2010).

b. Dwelling design

The architecture of affordable housing projects will influence the way residents live (Wiesel et al., 2012). In Indonesia, the space provided in *rusunawa* is based on the regulation from the Ministry of Public Works[6], and most of the houses offered for the resettlement program often show inadequate quality (Rika Kisnarini, Post, Ligny, & Mohammadi, 2015). As *Rusunawa* Jatinegara Barat is occupied by former *Kampung* Pulo dweller, the study will take the consideration how far *rusunawa* design has taken into account the socio-cultural characteristic of *kampung*.

c. Open space

Taking into account the Indonesian communal way of living, according to Silas (as cited in Larasati et al., 2007), one of the problems of social housing in Indonesia is the lack or unavailability of communal space, which has a negative impact towards the dwellers' function in society. The provision of open spaces can increase the frequency and quality of social interaction, promoting community participation at the level of both buildings and neighborhoods (Wiesel et al., 2012).

[6] Indonesian Minister of Public Works Regulation no 05/PRT/M/2007 concerning technical standards of multi-storey housing

d. Tenant satisfaction

The dwelling design itself could affect the experience of the tenant who is living there. Assessing residents experience in their housing situation is important, but it needs a careful approach when considering the findings from residents' satisfaction surveys to measure the quality of housing and services (Wiesel et al., 2012). There are four dimensions of tenant satisfaction that need to be considered: "satisfaction with the dwelling unit; satisfaction with services provided, including repair; satisfaction with the whole package received for the rent; and, satisfaction with the local area" (Varady & Carrozza, 2000, p. 801; Wiesel et al., 2012).

e. Services and facilities

This part is related to the provision of public facilities and its quality such as health service, school, and public transportation. Maher et al. (as cited in Wiesal et al., 2012) stated that having access to public services is considered to be important because if residents have less access to them, they could experience drawback in social and economic participation.

f. Health

The impact of housing could be seen in the improvement of the health condition of the tenants. Although this study acknowledges that changes in health outcomes are likely to occur over relatively long periods of time (Turcu, 2013), the significant difference of the way residents are living currently in *rusunawa* compare to their previous neighborhood in *Kampung* Pulo could be observed in term of their healthy living condition

2.3.2.3 Economic Dimension

a. Affordability

The scope of affordability is more than direct 'housing cost', but other aspects especially location will determine the affordability level of the residents. In theory, a well-serviced location will affect to lower transportation cost. Stone et al. (2011, p.1) suggested a way to measure affordability is by "looking at what different household types can afford to spend on housing after taking into account the other necessary expenditures of living".

Affordability is also related to the rental cost where the tariff is coming from the government. Financial stability of the government also affects the quality of the housing. *Rusunawa* is a highly subsidized program by the government, the rental tariff is calculated based on social tariff (78.3% subsidy) from operational and maintenance cost only (excluding the investment cost)[7].

[7] Indonesian Housing Minister Regulation no 18/2007 concerning multi-storey rental housing tariff

b. Business activity

In the previous neighborhood of *Kampung* Pulo, most of the residents had informal economy activities to support their lives such as the small business of selling groceries and food to their neighbors and surroundings. As they move to *rusunawa*, the current economic situation could be different from the previous, depending on whether they still can do their business as they used to do. Hence, it is important to include this aspect in this dimension.

2.3.2.4 Institutional Dimension

The two aspects of institutional dimension that are adapted from Turcu (2013) are as follows:

a. Local authority service

Local authority performance in providing service to the resident is reflected in the capability of the local government to manage affordable housing project, particularly the *rusunawa*. Whether the local unit is autonomous or dependent to the local government in delivering their service will be analyzed.

b. Policy support

In Indonesia, since *rusunawa* is government's asset, any actions regarding *rusunawa* including the provision, the operation and management, and the actors involved are regularized by a certain level of policies/regulation. Assessing this aspect will give an understanding how the *rusunawa* is designed by the government. The wider public supports such as social welfare program is also benefiting *rusunawa* residents, such as smart card, education card, and more, which need to be analyzed.

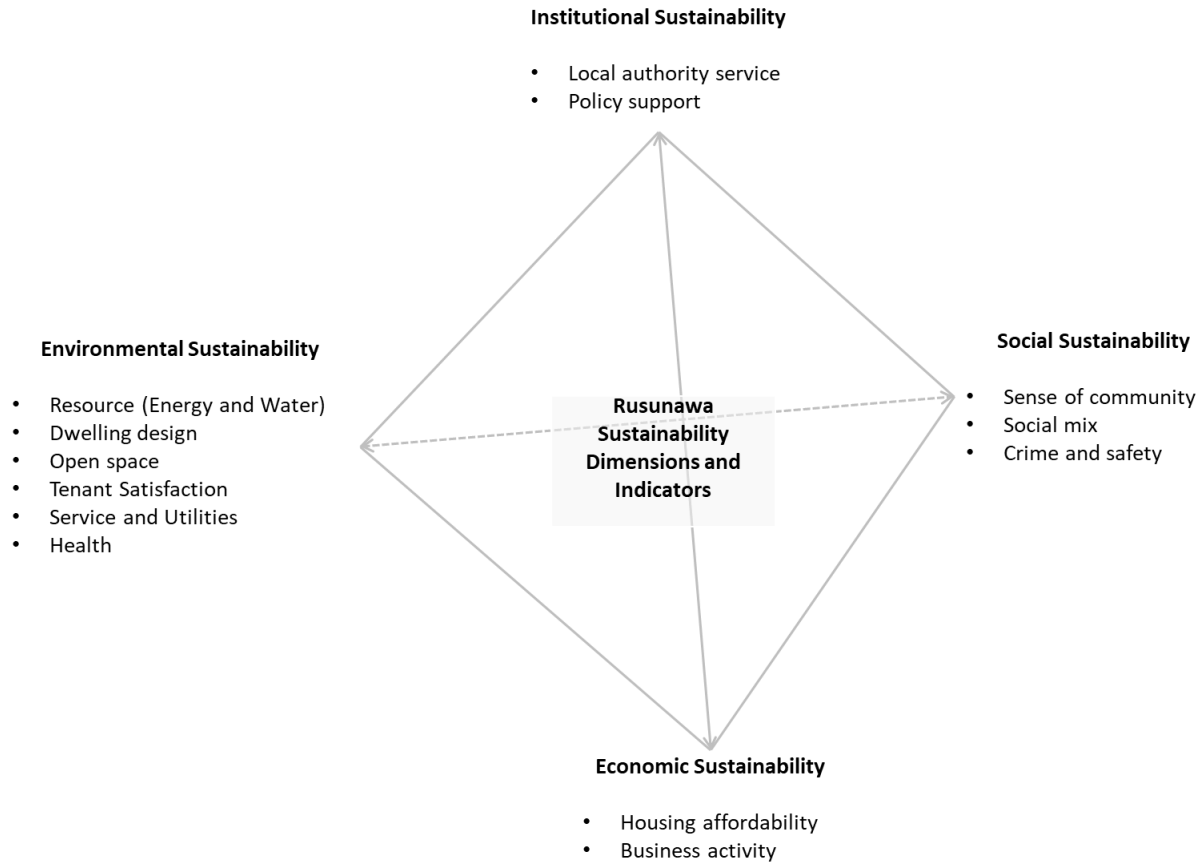


Figure 5. A list of *rusunawa* sustainability dimensions and indicators (Author, 2017)

2.4 Capability Approach in *Rusunawa*

The capabilities approach is an attempt to renew the assessment of wellbeing, elaborated by Amartya Sen and Martha Nussbaum. This approach considers that wellbeing must be evaluated in terms of the freedoms and opportunities to be and to do that residents have reasons to value. These freedoms to be and to do constitute the foundations of quality of life (Ballet, Kof, & Pelenc, 2013).

Sen (as cited in Robeyns, 2003) informed that the capability approach can be used for a variety of purpose, and Robeyns (2016) supported this claim that the capability approach is generally conceived as a flexible and multi-purpose framework, rather than a precise theory of well-being. She also informed that using capability approach, ones can focus on the information they need to make judgements regarding individual well-being, social policies, and so on (Robeyns, 2003).

2.4.1 The Concept of Capability Approach: Freedom, Functioning, and Capability

The two normative claims regarding the theoretical framework of capability approach are the claim of freedom to achieve well-being is of primary moral importance, and that freedom to achieve well-being is to be understood in terms of residents' capabilities, that is, their real opportunities to do and be what they have

reason to value (Robeyns, 2016). Sen (as cited in Robeyns, 2016) clarified the term of freedom which is conceived as real opportunities, freedoms refer to the presence of valuable options or alternatives, in the sense of opportunities that do not exist only formally or legally but are also effectively available.

Focus on the quality of life that individuals could achieve is the main focus of capability approach. Then this quality of life is analyzed in terms of the core concepts of 'functionings' and capabilities' (Wells, 2012). Freedom distinguishes between residents' capabilities (what they can potentially be and do) and what they choose to do with them (their actual functionings, 'beings and doings') (Catherine Locke & Derbyshire, 2013). The distinction between functionings and capabilities is between the realized and the effectively possible, in other words, between achievements, and freedoms or valuable opportunities from which one can choose (Robeyns, 2016).

"Functionings are the "beings and doings" of a person, whereas a person's capability is the various combinations of functionings that a person can achieve. A capability is thus a set of vectors of functionings, reflecting the person's freedom to lead one type of life or another" (Sen as cited in Robeyns, 2003, p.11). This implies that the capability approach evaluates policies and other changes (commodities) according to their impact on residents' capabilities as well as their actual functionings (Robeyns, 2016).

Another distinction in the capabilities approach is between commodities and the functionings, which is illustrated in the Figure 6. An important concept in the Capability Approach is *conversion factors*. Robeyns (2016) explained that conversion factor is "the degree in which a person can transform a resource into a functioning". There are three group of conversion factors that often discussed:

- *personal conversion factors* which are related to the person condition, such as physical condition, intelligence, gender, and so on,
- *social conversion factors* which are coming from the society, such as public policies, social norms, gender, race, caste, and so on,
- *environmental factors* which are defined by the physical or built environment in which a person lives, such as the climate, pollution, and so on (Robeyns, 2016).

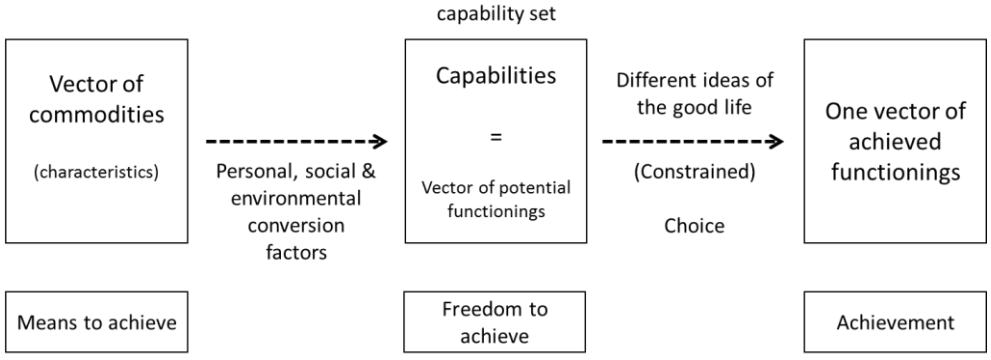


Figure 6. Relationship in the Capability Approach
(Author, 2017, as modified from Robeyns, 2003, p.12)

In order to apply capability approach, one needs to decide which are the beings and doings that matter for the various normative usages of the approach (the selection of functionings and capabilities). Furthermore, it should also be considered of "how each person's various functionings or capabilities are to be aggregated into one overall assessment of well-being or of freedom to achieve well-being (the aggregation of the various dimensions)" (Robeyns, 2016, para. 6). "In other words, those interpersonal evaluations should be conceptualized in terms of residents' functioning (their actual beings and doings) and their capabilities (the real opportunities they have to realise those functionings)" (Robeyns, 2016, para. 11).

The capability approach in principle allows a very wide range of dimensions of advantage to be positively evaluated ('what capabilities does this person have?'). "This allows an open diagnostic approach to what is going well or badly in residents' lives that can be used to reveal unexpected shortfalls or successes in different dimensions, without aggregating them all together into one number" (Wells, 2012, para. 31). Furthermore, Sen (as cited in Wells, 2012, para. 32) described that "the capability approach can be used to examine the underlying determinants of the relationship between people and commodities following, where the diagnosis of capability failures, or significant interpersonal variations in capability, directs attention to the relevant causal pathways responsible".

2.4.2 Capability Approach in Housing Context

This research uses the Capability Approach to reveal the 'beings' and 'doings' that the people value toward the housing. The Capability Approach will be used to evaluate the well-being and the exploration of a set of housing 'functions' (Frediani, 2007a). Sen (2004) argued that the correct focus for evaluating how well off people are is their capability to live a life, ones have reason to value. In order to begin to evaluate how people are performing in terms of capability, ones first need to determine which functionings matter for the good life, or at least one needs to specify a valuation procedure for determining this (Wells, 2012).

This research approach has limitation toward defining the housing functionings since the research was not able to conduct the participatory method to measure the value that residents appreciate based on their aspirations and perspectives. However, analyzing relevant literatures extensively as well as earlier field observation have been done in order to select housing functionings that represent residents' aspiration. Other researchers have explored the functions of housing, and their works contribute to the selection of housing functionings in this research.

> Martha Nussbaum has been one of the most influential capability theory of justice, she developed a list of Ten Central Capabilities[8] that motivated by the concept of human dignity. In this list, she perceive housing *("to have adequate shelter")* as a means to achieve valued functions "*bodily health"*, and also having housing as a functions of *"control over one's environment"* in material sense of environment, which *"being able to hold property"* (King, 2003; Nussbaum, 2011).
>
> "*… if I were asked to name the chief benefit of the house, I should say: the house shelters daydreaming, the house protects the dreamer, the house allows one to dream in peace. Thought*

[8] Creating Capabilities (Nussbaum, 2011, p.32-33)

and experience are not the only things that sanction human values. The values that belong to daydreaming mark humanity in its depths" — Gaston Bachelard[9] (as cited in Gibbons, 2017).

A French philosopher Gaston Bachelard expressed the basic function of housing is as a place for mankind to evolve, the connection between space and freedom where space foster human beings to grow (Frediani, 2007b; Gibbons, 2017).

King (2003, p.671) claims that *"housing is an elemental right upon which other basic human functions depend"*, and he suggests that *"housing can be seen as a freedom right and is thus on a par with the right to property"*. Therefore, he sees housing as a place for a human to flourish and own something.

"…housing is perceived as functions of what housing does in the lives of its users – of the roles which the process plays in their life history – and not in the material qualities of the physical products..." (Turner, 1972, p.159).

John Turner (1972) who was famous for his concept of self-help housing during the 70s that influenced the aid policy regarding housing provision among international agencies. He used a phrase of 'Freedom to Build' as a concept of self-help housing. Some 'functions of housing' that he informed were the quality of shelter, location focus, tenure alternative, and emotional, physical and financial security (Frediani, 2007b; Turner, 1972).

Frediani (2007) in his thesis, introduced the concept of 'housing freedoms' as he explored the relationship between housing and freedom based on the concept of Capability Approach by Amartya Sen. He developed a framework to evaluate housing programmes based on resident's aspiration and perspectives on slum upgrading projects in Novos Alagados, Salvador, Brazil.

The similarity of the study that Frediani (2007ab) has done on his research, helps this research to adopt his findings on *Rusunawa* housing functionings. His argument is shaped on the definition that 'housing freedoms are the capability residents have to achieve their valued housing functionings' and 'such functions, or doings, beings and havings are perceived as housing functionings' (Frediani, 2007b). Furthermore, this research tries to adapt to the context of *Rusunawa* Jatinegara Baru as the study case, which affects to the selection of several housing functionings, please see Figure 7 and Table 3.

[9] The Poetics of Space (Bachelard, 1964)

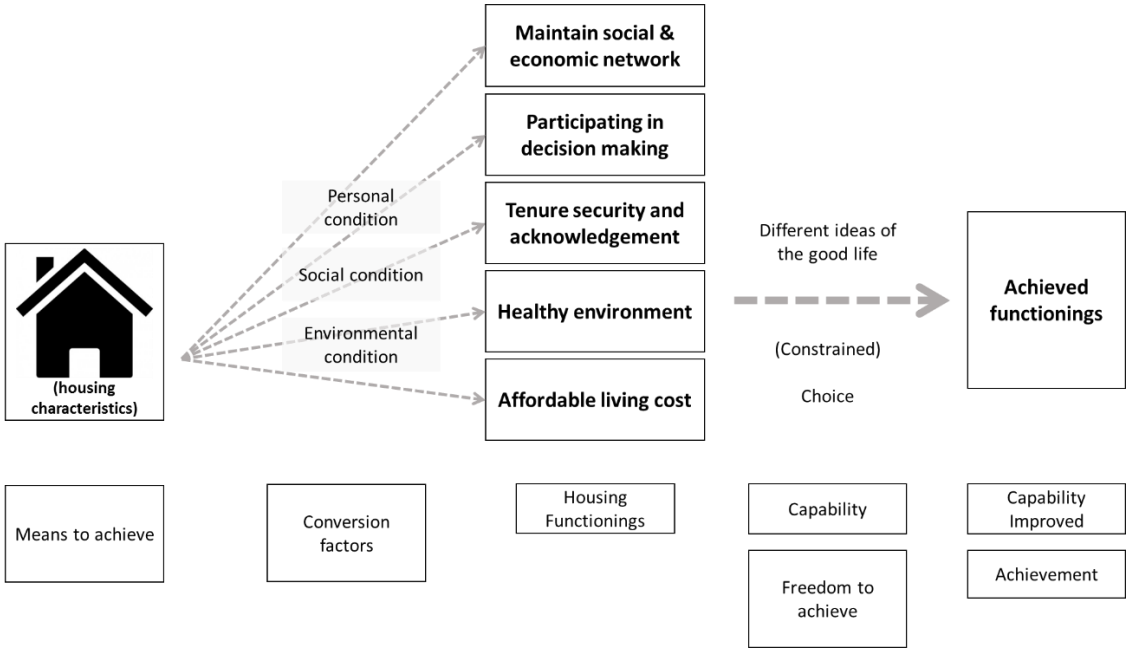


Figure 7. *Rusunawa* housing functionings and the capability approach framework
(Author, 2017, as elaborated from Frediani, 2007a, p.55)

Table 3. Explanation of *Rusunawa* Housing Functionings

Residents' capabilities toward *rusunawa* housing functionings	**Theory**	**Housing functionings aspects, correspondence with sustainability's' indicators**
Freedom to maintain social and economic network	Place to evolve and flourish (Frediani, 2007b; Gibbons, 2017;King, 2003), Quality of shelter, location (Turner, 1972)	a. Dwelling design b. Community facilities and activities c. Business activity
Freedom to participating in decision making	Place to evolve and flourish (Frediani, 2007b; Gibbons, 2017;King, 2003)	a. Process of policy design b. Process of implementation
Freedom to gain tenure security and acknowledgement	"Being able to hold property" (Nussbaum, 2011), right to property (King, 2003), tenure alternative (Turner, 1972)	a. Citizenship status b. Ownership status
Freedom to have a healthy environment	"Bodily health" (Nussbaum, 2011), physical security (Turner, 1927)	a. Physical condition b. Access to health service c. Spaces for leisure and social interaction
Freedom to afford living cost	Financial security (Frediani, 2007b; Turner, 1972)	a. Household costs b. Household income

Author (2017)

2.4.3 Relation with Previous Sustainable Assessment Frameworks

The general idea of sustainability through the definition of Brundtland Report was more focusing on meeting the 'needs' and their 'fulfilment'. Sen (2013) argued that focusing on specifically on need-fulfillment as the basis of evaluating development was not adequate. "Sustaining development with transgenerational concern, should also give freedom for future generation to the way they liked and to what they had reason to value (whether this corresponds to their own conception of their 'needs' or current conception of their 'needs'), then it was better to focus on a freedom-based view of sustainable development" (Sen, 2013, p.9).

Thus, while sustainability framework is used to evaluate *rusunawa* project, the capability approach is used to understand the impact of *rusunawa* on the residents' freedom to choose their way of life. The evaluation of *rusunawa* project based on the sustainable concept will be used as a preliminary assessment on the overall project. The findings on each indicator will be useful to support the evaluation on the residents' 'being', 'doing', and 'having' toward *rusunawa* housing functionings.

2.5 Conclusion from Literature Review

The literature regarding *kampung* gives a general understanding of *kampung*'s uniqueness and problems, and the character of the people who live there. These pieces of information give an understanding for the author to be sensitive and careful in evaluating the challenge that the dweller's face. On the other side, trying to look out the government's effort as a whole strategy to tackle the challenge of housing backlogs as well as to improve the quality life of the people, give the author understanding in bureaucratic and macro-level of government approach.

The literature on sustainability concept is explored in order to define key dimensions and indicators which are relevant in the case of *rusunawa* in this study. There is no absolute set of sustainable indicators, but the selected indicators in this research are the scope of this research. The same rules also apply to the capability approach to evaluate the housing functionings toward the residents. In another case, some indicators that put under certain dimension or functionings could also be placed under a different domain, depending on the view one takes.

Chapter 3. Methodology

3.1 Research Design

The research design has been shaped through a chosen analytical framework discussed in Chapter 2 with regard to sustainable *rusunawa* project and residents' capability using Capability Approach. This research employs a range of quantitative and qualitative methods with a single descriptive case study approach. The research was focused on *rusunawa* project to evaluate the sustainability of affordable housing provision without disregarding the complexities and the divergences of the different approach to measuring the sustainability aspects and different *rusunawa* projects. The research is only focused on one study case to illustrate the thesis. By limiting to one case only, it is expected that research could perform analyses of greater details and deeper focus.

3.2 Selection of the Study Case

Rusunawa Jatinegara Barat was chosen as the study case based on certain grounds:

- *Rusunawa* Jatinegara Barat was built to compensate the former *Kampung* Pulo dwellers, who do not have legal ownership or their land and property. The big relocation occurred in August 2015. It has been around two yearRes since the people living in *rusunawa* which was considered to be a long enough of inhabitancy period to be able to provide a meaningful tenant experience to be assessed.
- As explained in the Chapter 2 that one of the main challenges of affordable housing project is the location, which is usually far from the city center because of expensive land price. *Rusunawa* Jatinegara Barat is considered to be a good example of low-cost rental apartment located in the city center. In addition, the location of *Rusunawa* Jatinegara is less than two kilometers away from the original *Kampung* Pulo. This research was intended to explore if this criteria helps to ease the live of the people.
- *Rusunawa* Jatinegara Barat project represents the typical government strategy of affordable housing provision in the city center, which is characterized by land scarcity. The case could represent similar *rusunawa* projects that have been constructed by the government.

3.3 Data Collection

The project is assessed based on qualitative and quantitative information obtained through the following process:

3.3.1 Primary Data Collection

- Field Observation
  Field observation was conducted by documenting *rusunawa* including the residents' activities, the

situation in *rusunawa*, the facilities and infrastructures, and other interesting objects related to this research.

- Resident survey
  Questionnaires were given to random households to gain their views on the project and their housing experience. The questionnaires were distributed to random units which targeting the head of the households. The author assisted the respondents to fill the questionnaires. Total sampling collected was 10% from the total unit in *Rusunawa* Jatinegara Barat, 518 units (n=55), 26 respondents in Tower A and 29 respondents in Tower B. The questionnaire form is in Appendix B, p.72.

- Semi-structure interview
  The in-depth interviews were conducted with several government officials who were involved in the study area especially in the provision of *rusunawa* Jatinegara Barat at a different level of influences, as well as *kampung* resettlement program. Aside from government official interviews, this research also conducted an interview with a member of NGO CIliwung Merdeka, who has assisted urban poor and *kampung* communities, especially *Kampung* Pulo, in order to gain more perspective about *kampung*'s lives.

  Further information on the informants list is provided in Table 4.

Table 4. Interviewees list

Code	Institution	Interviewee
1	Ministry of Public Works and Housing: Section Head of *Rusunawa* Provision	Manda Machyus
2	Bureau of City Planning and Environment: Head of Sub Division for Housing and Settlement Jakarta Capital City Government	Zulfikri Alaidrus
3	Housing and Building Agency: Staff of Housing and Settlement Planning Division Jakarta Capital City Government	Ilman Basthian Sucipto
4	Management Unit *Rusunawa* Jatinegara Barat: Head of service unit	I Made Pastiasa
5	NGO Ciliwung Merdeka Leader	Sandyawan Sumardi

Author (2017)

3.3.2 Secondary Data Collection

Secondary data were collected from online resources and some were obtained from relevant institutional bodies and agencies such as from Ministry of Public Works and Housing, World Bank documents, and the Management Unit of *Rusunawa*.

- Literature review

An extensive literature study has been discussed in Chapter 2 in order to get a profound background understanding of the study case and to set the theoretical ground on sustainable *rusunawa* project framework as well as housing functonings based on the Capabilities Approach.

- Documents review
  Document review covered financial and design information, relevant organizational strategies, maps, statistic data, regulations, and media publications. Documents are publicly available or specifically requested to the government.

  A book of "Writing to Remember" translated from Menulis untuk Mengingat (Muhammad, Mariani, Syaharbanu, Fahriza, & Murtadho, 2016) was written by the RJB residents in 2016.

  The book consists of 12 collections of RJB residents' writings in expressing their perceptions regarding the relocation and living in RJB. The book was the final product from a writing workshop held by journalists from the social activist group Islam Bergerak, the nonprofit architecture magazine Ruang Arsitektur and the Jakarta Post in late 2016. Furthermore, due to different language, the author has translated all the key quotes (Appendix A, p. 70, and these are labelled and coded accordingly.

3.3.3 List of Sustainable Measures and Data Collection Tools

Summary of the list of sustainable measures and the tools used for data collection is gathered in Table 5.

Table 5. List of sustainable measures and data collection tools

Dimension and Indicator	Key measures	Assessment tool(s) used
Environmental		
Resource (Energy and Water)	- Effective shading - Lighting system - Renewable energy source - Water capture/recycling system	- Interview - Field observation - Document review - Resident questionnaire
Dwelling design	- Location - Building and units design - Socio-specific design - Building materials - Manual/mechanical system - Access to public transportation - Access to local amenities - Parking lot	- Interview - Field observation - Document review - Resident questionnaire
Open Space	- Garden/Park/Playground	- Interview - Field observation - Document review - Resident questionnaire
Residents' satisfaction	- Key features to tenant satisfaction - Features detracting from tenant satisfaction	- Interview - Field observation - Document review - Resident questionnaire

Service and Utilities	- Health facility - Education facility - Religious facility	- Interview - Field observation - Document review - Resident questionnaire
Health	- The way of living, toilet, bathroom	- Interview - Field observation - Document review
Economic		
Housing affordability	- Features improving and reducing affordable living - Resident's income rate	- Interview - Field observation - Document review - Resident questionnaire
Business activity	- Current business activity in *rusunawa*	- Interview - Field observation - Resident questionnaire
Social		
Sense of community	- Tenant participation in social activities	- Interview - Field observation - Document review - Resident questionnaire
Social Mix	- Tenant income rate - Bedsit units - Communal space	- Interview - Field observation - Document review - Resident questionnaire
Crime and safety	- Tenant perception about safety - Crime events - Safety and security service	- Interview - Field observation - Resident questionnaire
Institutional		
Local authority service	- Local government service level - The role of management unit	- Interview - Field observation - Document review - Resident questionnaire
Policy support	- National and local policy and program - Financial support	- Interview - Document review

Author (2017)

3.4 Research Concept

Summary of the research concept is illustrated in the Figure 8 below.

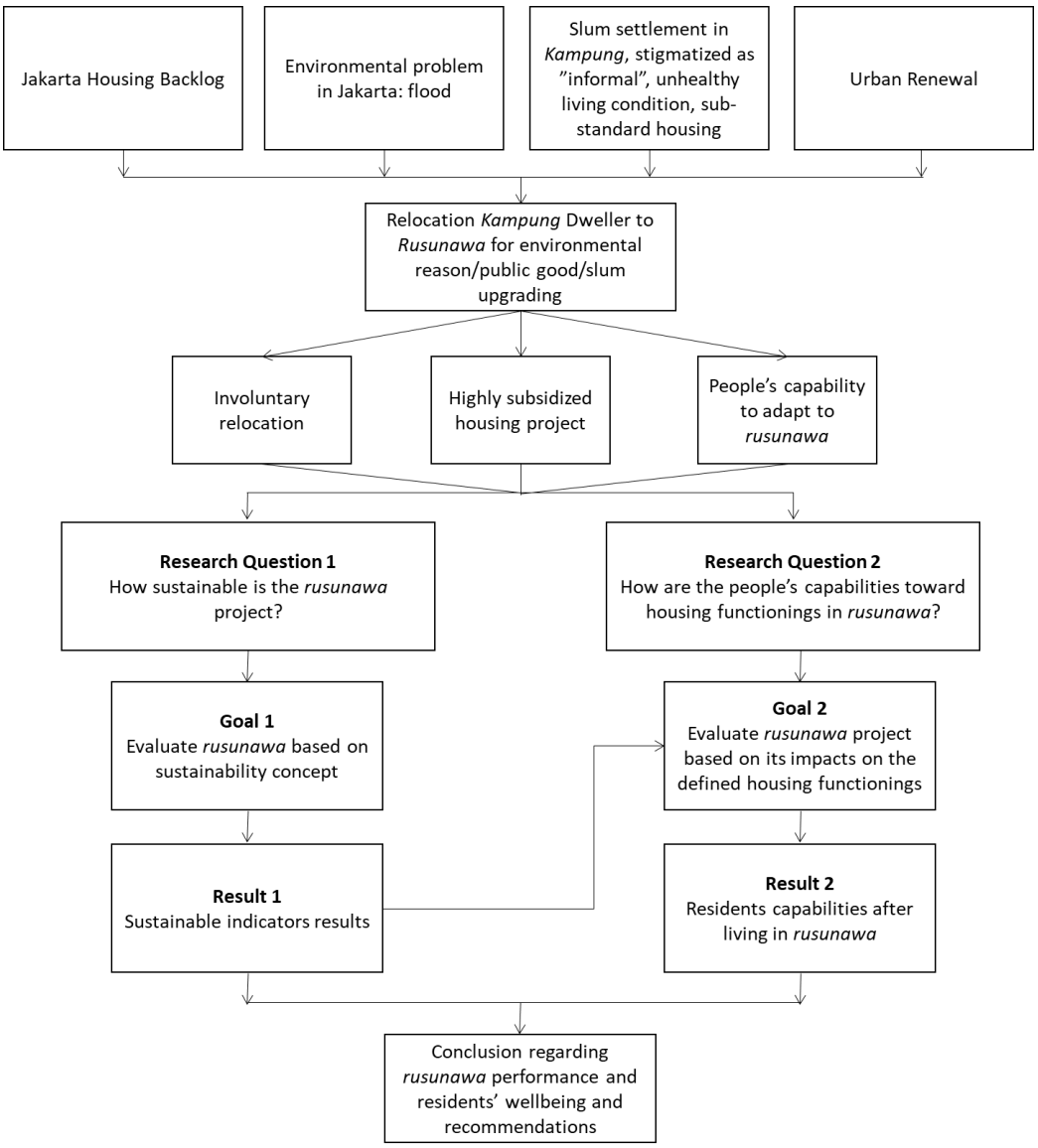


Figure 8. Research Concept
(Author, 2017)

3.5 Scope and Limitation of the Study

- There are many types of *rusunawa* programs, but the study specifically discussed *rusunawa* project which is provided to house the former *kampung* dwellers in Jakarta. Jakarta is a special capital city district (DKI) in Indonesia. Some regulations applied in Jakarta could be different from other cities. However, it does not limit the use of this research for later reference especially on the ongoing projects of *rusunawa* in Jakarta.
- Field works was conducted only in one series. Time and resource limitation did not allow this research to conduct more participatory approach with *rusunawa* residents in investigating the

research questions. However, the book Menulis untuk Mengingat helps to overcome this challenge because it contains the residents' voices.

- Selection of sustainability indicators and housing functionings do not limit the definition of sustainability in broad sense as well as other the possible housing functionings. However, they are the scope of this research. Moreover, they are selected which could show the causal relations or possible impacts and trigger changes in the policy.
- In the development of sustainability indicators and housing functionings, as the study does not involve the community, the indicators and functionings are more defined based on expert-led or top-down approach, which could lead to easily miss what is important for local communities. However, Turcu (2013) informed five complementary methods in defining such criteria and where at least two of them are used. Moreover, this study adopts three of them: (1) existing data, because of data availability; (2) normative assumption, where the selections based on (expert's) explicit or implicit assumptions about what people should (or do) value; and (3) Empirical evidence, whereby indicators draw on empirical accounts of people's values and experiences.
- As informed above, there are risks of biases in the selection of housing functionings, because it has not been through a process of resident's participation. The value that the author used might be different with the value that the residents have. However, in the research, an extensive literature review procedure has been conducted in order to gain proper justification.

Chapter 4. *Rusunawa* Jatinegara Barat, Jakarta, Indonesia

4.1 General Profile

Based on Indonesian Ministry of Housing Regulation Number 18/PERMEN/M/2007, *rusunawa* is defined as a high rise building built in an environment that is divided into parts functionally structured in horizontal or vertical, each unit is used separately, the control status is lease and built by using the state budget funds and/or regional budget with its primary function as a residential (Pancawati, 2013). The aim of the *rusunawa* development is to reduce the proportion of households living in urban slums, henceforth there will be a change in society, from living in slums towards a decent settlement with better quality (Bappenas et al., 2015).

The new strategy of *rusunawa* will give first priority to households displaced by redevelopment activity or necessary slum relocation. Priority is given to resettlement because of development or environmental reason (Bappenas et al., 2015). Thus, the main aim of RJB was to compensate the former *Kampung* Pulo dwellers. RJB was given only for the dwellers who did not own legal right of their former land in *Kampung* Pulo. Tenant income eligibility is set by provincial minimum wage (UMP) instead of local minimum wage (UMK), with a nationwide limit of IDR 2.5 million per month (Bappenas et al., 2015).

RJB was constructed in 2013 and began to be inhabited since August 2015 after the relocation occurred. RJB is located at Jl. Jatinegara Barat No. 142, *Kampung* Melayu, East Jakarta. Design of RJB was gained through public design competition in 2013. According to its location, RJB is considered to be in the city center, the local government managed to develop under-utilized government land for RJB location.



Figure 9. Indonesia map
Modified from https://goo.gl/cUwwvo (2017)

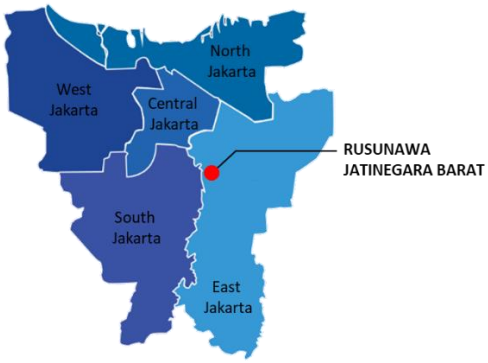


Figure 10. Jakarta map
Modified from https://goo.gl/fa8uWB (2017)



Figure 11. Location of RJB and the surrounding area
Elaborated from google earth (2016)



Figure 12. Bird-eye view of RJB
Retrieved from https://goo.gl/PtJ21s (2015)

- Year of construction : 2013
- Floor area : 7,460 m^2
- Number of unit
  Tower A : 266 dwelling units (3rd -16th floor)
  Tower B : 252 dwelling units (3rd -16th floor)
  Total : 518 dwelling units

Total inhibited unit : 516 dwelling units

- Unit size : Typical 30 m^2

  A typical dwelling consists of two bed rooms, one bathroom, one living room integrated with kitchen, balcony, exhaust fan, and grease trap.



Figure 13. Typical dwelling unit plan
Retrieved from https://goo.gl/zw9xj3 (2013)



Figure 14. Typical room arrangement in each floor
Retrieved from https://goo.gl/AJ6hdk (2013)



Figure 15. Typical room situation
Retrieved from https://goo.gl/eFbqWQ (2015)

- Demographic information
  Total households : 629 households (many units consist of more than 1 family)
  Total inhabitants : 2046 people
  Unit density : 4 people per unit

- Infrastructure
  - Clean water facilities : ground water tank, roof water tank, supply by AETRA (water supply private company)
  - Sewage treatment plant
  - Dwelling and social facilities energy supply by State Electricity Company (PLN)
  - *Rusunawa*' garden energy supply by Industry and Energy Agency, Jakarta Capital City Government
  - Generator set as power back up
  - Deep well
  - Hydrant
  - 12 elevators

- Facilities
  - Education : Pre-school by Rotary Club Indonesia, library and mobile library
  - Health service : public health clinic (*Puskesmas*) and pre- and postnatal health care and information for women and for children (*Posyandu*), public dentist clinic
  - Association : Family Welfare Movement room (PKK)
  - Parking for motorcycle
  - Space for business activity in the 2nd floor of each tower and small part of parking lot
  - Youth center
  - ATM
  - Cooperation
  - Garden
  - Mosque

- Human resource
  - Permanent staff : 7 staffs (government staffs)
  - Supporting staff : 47 daily workers (administrations, securities, technicians, cleaning services)



Figure 16. Health Clinic
(Author, 2017)



Figure 17. Garden
(Author, 2017)



Figure 18. Pre-school
(Author, 2017)



Figure 19. Second floor business space
(Author, 2017)



Figure 20. Mobile Library
(Author, 2017)



Figure 21. Food kiosk in parking lot
(Author, 2017)

4.2 The Role of Central and Local Governments

In general, the current *rusunawa* program such as RJB was built by the central government, MPWH, with a partnership with local government under the category of strategic or priority project (in this case is related to NKC project). Each year, the central government allocate capital subsidy and administrative budget for

construction or units as well as trunk infrastructure. After the construction finished, MPWH will transfer the asset to local government as the long-term owner, but the process of handover will require a long time. During construction, MPWH's role is being a developer for the projects such as acquiring the sites from local government, hiring consultants to design and monitor the projects, and constructing the project on a fee-for service basis, where the MPWH should be the regulator rather than a developer (Bappenas et al., 2015).

Local governments contribute to provide the land, approve land use, issue permits and own and operate the project after construction completion. Their role is also to manage any operating deficits and capital needs, and property management, which have been done through vendors who are supervised by representatives of local units of government (Bappenas et al., 2015).

4.3 Financial aspect and rental policy

The budget that central and local government have depends on their annual state and regional budget proposal. Central government offered 100% subsidy for construction cost of the project and limited administration and project management costs, while local government need to subsidy any deficit management cost which will not be covered from renting revenue.

In general, rental costs are set at 30% of UMP, and not set to actual household affordability, which may be problematic for the lowest-income Indonesians. However, in the RJB, the rental cost is set up for all households flat IDR 300,000,-/month (± EUR 150/month) using social tariff calculation (78.3% subsidy) and excluding the investment cost and land price. The previous government made a special regulation to allow the residents to live free of rental charge for the first three months. Further detail regarding the breakdown calculation is explained in Table 6 and 7. However, Management Unit RJB stated that in fact that the current local regulations (Local Regulation No. 3 2012 and Local Regulation No, 1 2015) do not specifically mention on the determination of rental rates for RJB (Management Unit RJB, 2017).

Table 6. Cost of RJB project per month

No.	Cost categories	Cost per month per unit		in Euro	
1	Investation	IDR	935,443.71	€	62.36
2	Operational	IDR	507,729.92	€	33.85
3	Repair	IDR	788,960.12	€	52.60
4	Maintenance	IDR	85,826.00	€	5.72
	Total	**IDR**	**2,317,959.74**	**€**	**154.53**

Management Unit RJB (2017)

Table 7. RJB tariff calculation per month

Tariff Category	Tariff Amount		Tariff Structure	Subsidy		
				80%	78%	75%
Rental Social Tariff	Maximum tariff/month/unit	IDR 1,382,516.03	Operational, repair, and maintenance cost	IDR 276,503.21	**IDR 300,000.00**	IDR 345,629.01
				€ 18.43	**€ 20.00**	€ 23.04

Management Unit RJB (2017)

RJB handover status is still on going, thus, the asset status is owned by MPWH and not yet by local government. This status influences the management unit under local government in preparing the annual budget. In this case, the local governments could not spend their budget if the *rusunawa* is not their asset, often the staffs need to cover any repair cost by their money. However, starting from the second year after getting Right-to-Manage letter, the local authority can utilize the local budget (Management Unit RJB, 2017).

Aside to monthly rental cost, the households also need to pay for their consumption of energy and water per month. Water tariff is also subsidized 25%/m^3 by local government from IDR 7,300/m^3 to 5,500/m^3 (Rudi, 2017). All household, after registering themselves legally, they will obtain RJB ID card, will allow them to register to several welfare benefits, including Transjakarta card (transportation), health card (BPJS), and the smart card for student education (*Kartu Pintar*).

4.4 Supporting Program

In order to support the welfare of the residents, Management Unit of RJB under Jakarta local government accompanied by the cooperation with other sectors have conducted several activities:

- Empowerment activities (Cakes Making, Hydroponics Plants, Catfish Cultivation, Heart Park)
- Social services (Distribution of Nutrition, free medical service)
- Service activity (Change of family document (KK), RJB ID card, creating Bank DKI account, creating of health card (BPJS), immunization, digitalization of Archive)
- Socialization (Health Counseling, Drug Enforcement, HIV AIDS Prevention)
- Training Activities (firefighting, computer)
- Learning Guidance for the students (school course by High School 8 Jakarta Students)
- Citizen activity (cleaning the environment, aerobic gymnastics)

Chapter 5. The Analysis of *Rusunawa* Jatinegara Barat based on Sustainability Framework

This chapter contains the analysis to respond **the research question 1**: How sustainable is the *rusunawa* project?

5.1 Social Dimension

a. Sense of community

Respondents through questionnaire, were asked about their perceptions regarding social atmosphere and regular community events that take place in RJB. The results show that more than half of the respondents have perception that they were satisfied (Figure 22). However, lack of participation in social activities is found (Figure 23), some respondents informed that they needed to earn a living or taking care of their children, so they did not have time to join such activities, some answered because they lived on quite top floor which make them rarely join activities on the second, first, or ground floor, or simply because they were not interested joining. Moreover, religious group became one of the most frequent attended by the residents, because this activity usually initiated on each floor.

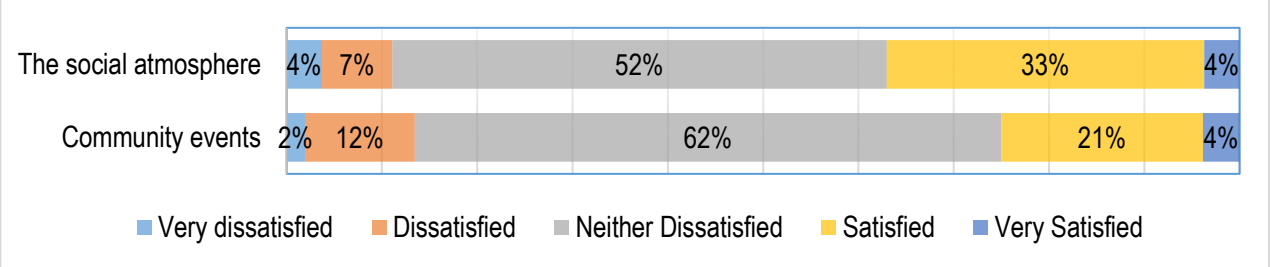


Figure 22. Residents' satisfaction regarding social atmosphere and community events in RJB
Author's analysis (2017)

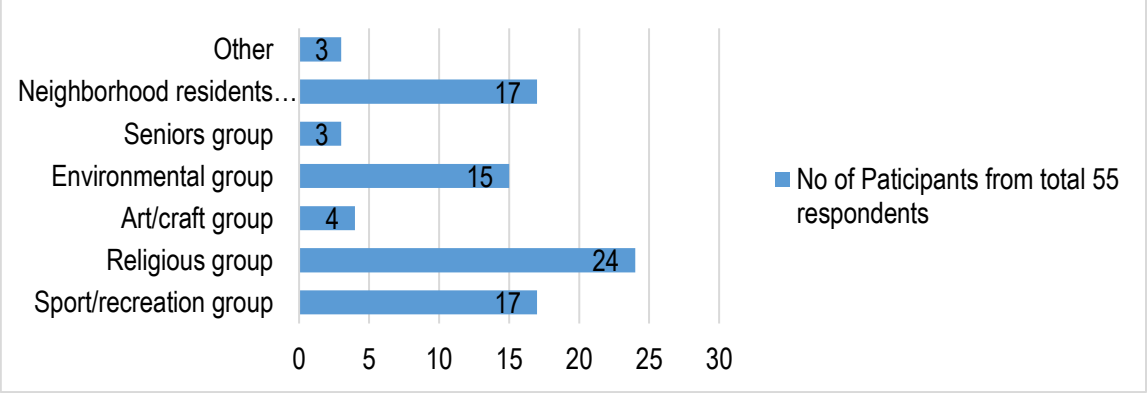


Figure 23. Residents' participation in RJB activities
Author's analysis (2017)

The interactions between the residents were found to be more individualized. Children were also found it difficult to find friends to play together like they were used to do in *kampung.*

> *"Usually our neighbors were always open like we ate "bancakan" together. Now, something like that is just a memory. When I needed to go somewhere, we could leave our children to each other to my left and right neighbors…Neighborly relationships are already rather formal."* –Heriyaneppi (A1:1) in Writing to Remember, 2016.

> *"When I was in Kampung Pulo, I studied together. Many children studied together. Now, I study by myself in rusunawa."* – Zulfa Zam Zami (A2:1) in Writing to Remember, 2016.

The 85% of the respondents are originally coming from Jakarta, even 41% born and grew up in *Kampung* Pulo. This strong attachment to their original neighborhood, residents attempt to create a self-help forum which aim to strengthen their social life and empower each other, although in the process they do not always get positive responses from other residents.

> *"We create resident forum to gather residents … We want to unite the residents between the two towers … All of the things that we have doing are for the people benefit, but there are many obstacles … The forum is going very hard. Slandering each other … conflicts between residents. But we believe all these are the beginning of the step for kindness and success steps to unite the residents in RJB."* – Koko Wahyu (A3:1) in Writing to Remember, 2016.

b. Social mix

There are no mix in term of income levels in RJB, because RJB is aimed for low-income community. RJB resident income rate based on questionnaire distributed on average was IDR 1,200,000,-/month or equals to EUR 80/month. Furthermore, based on the interview with management unit, RJB is exclusive for former *Kampung* Pulo evictees, because there was strong demand from the residents regarding this matter and agreed by the local government.

The unit size is only one type, 30m^2 left no other option to the residents who have many family members. Current unit density is 4 residents per unit, even though some units have more than one family living there. Thus, some units are overcrowded because inhibited by more than 8 people. The age mix is achieved since most family often consist of parents, children, and grandparent. RJB design on the 1st and 2nd floors is functioned as public space. Through field observation, author noticed that many interactions happened on the 1st floor where public facilities are located, such as mosque, clinic, management offices, library, and so on. On each floor, there is a communal space (big corridor) which is intended to accommodate resident's social interaction. Although author found that there was not much interaction in this space because most family was in their own units.

c. Crime and safety

Management Unit RJB hires 12 staffs (some of the staffs are residents) to maintain the security condition and installed CCTV on every floor. Respondents felt that RJB was a safe place to live and they also could maintain their own privacy (Figure 24).

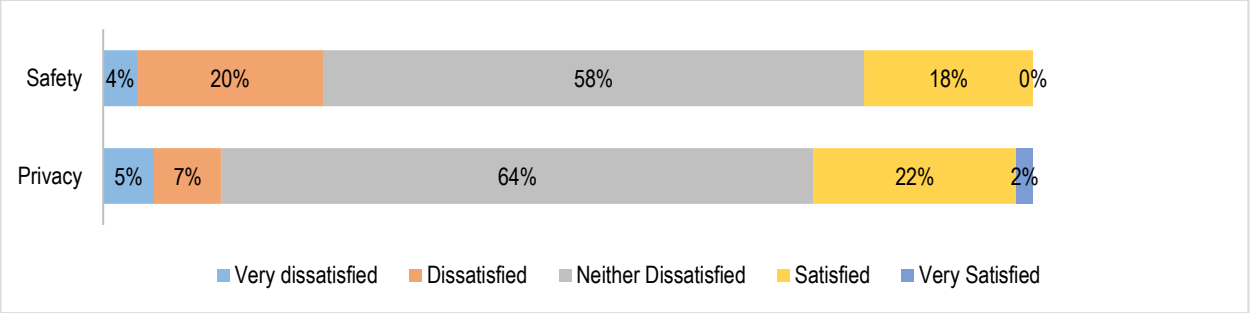


Figure 24. Residents' satisfaction regarding their safety and privacy in RJB
Author's analysis (2017)

Unfortunately, there were criminal occurred in RJB recently. Some residents lost their motorcycle. Since then Management Unit tightens the security check for in and out for motorcycles and unfamiliar faces to prevent this event happen again, which results RJB is perceived like a gated community.

5.2 Environmental Dimension

a. Resource (Energy and Water efficiency)

RJB does not practice recycling water system. All water supply rely on the water company, both for domestic use and landscape irrigation. Dependency on water supply from third party causes residents expenses increased. Furthermore, some of residents complained that the water made their body itchy. They had to buy water gallons for daily consumption. Interview result with Management Unit and document review showed that RJB has Sewage Treatment Plant (STP) which was not functioning since the beginning of operation, and is still waiting to be repaired. If the STP could function well, would be able to recycle the water from Ciliwung river, rain water, as well as grey and black water from households.

> *"… Living in this beloved rusunawa, we have to think about the rent, electricity, and water for cooking and drinking (one gallon worth IDR 18,000 for one week's use) … water in rusunawa is obtained from the distillation process, it taste less good. When the water is used to bathe, my skin is itching. … Yet in Kampung Pulo I never had a problem with the skin. Despite the flood, ground water in Kampung Pulo was very clean and tasty to be cooked or drunk. I also have never experienced problems with the skin if the water was used for bathing. Is the water in rusunawa really appropriate for bathing, washing and cooking?"* – Ade (A4:1) in Writing to Remember, 2016.

"Water in rusun smells chlorine although we pay. The water also cannot be used for cooking. So, we have to buy gallon water for drinking. We have to use the water less so we can save. While in Kampung Pulo, the water was free and could be used for cooking." – Fara Difa Ramadhani (A5:1) in Writing to Remember, 2016.

RJB building design achieves quite good utilization of wind and sunlight orientation (Figure 25). Residents find that their unit's windows and balcony allow them to have natural light for air circulation as well as drying the clothes, and 55% from total respondents perceived satisfied with this condition (Figure 26). Although on the top floor they expressed the temperature was quite hot. Another factor that contributes to the strong wind circulation is because currently, RJB becomes the only high rise in the surrounding.

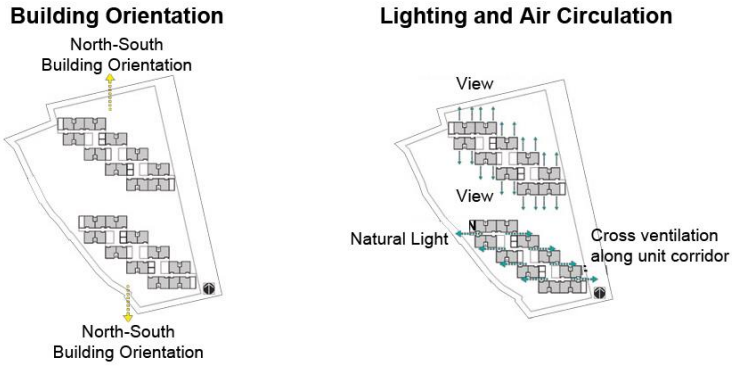


Figure 25. Orientation, Lighting and Circulation Concept in RJB
Modified and translated from https://goo.gl/AJ6hdk (2013)

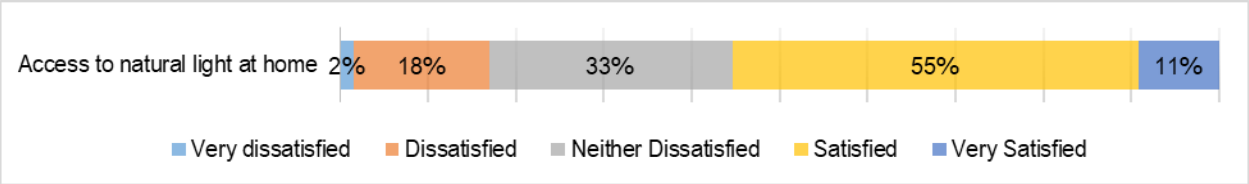


Figure 26. Residents' satisfaction regarding access to natural light
Author's analysis (2017)

b. Dwelling design

One size type (30 m^2) unit left no option for the residents to choose what is adequate according to the number of their family member. As informed in the previous chapter, there are some units that are occupied for more than 8 people. Although the design of RJB tried to incorporate some of *kampung* characteristic, as the rigid type of the building block, very typical for high-rise building, RJB design eliminates some spatial *kampung* characteristics which make a vibrant community, illustrated in Figure 27 and 28.

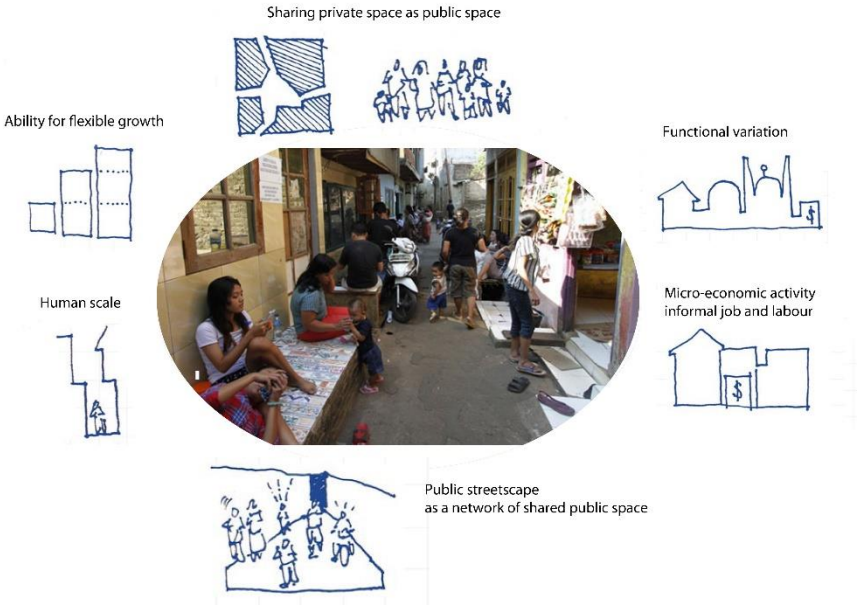


Figure 27. Socio-cultural physical characteristic of *kampung*
Elaborated from https://goo.gl/9USwQD (2014) and *Kampung* Value (Connor & Rosmarin, 2016)



Figure 28. Concept design and real condition of RJB
Modified from https://goo.gl/AJ6hdk (2013) and combined with field observation (Author, 2017)

Through questionnaires, it is found that residents were quite satisfied with RJB location (Figure 29). Local Government did a good work in this aspect as the land is not far from the previous *Kampung* Pulo. This also brings a positive impact to access public transportation, RJB is located right to big street and *Kampung* Melayu Bus Station. However, related the flexibility to make changes in their unit when needed, residents found it difficult to make any significant and improvement changes in such small space. The changes that the residents could do were only after the approval by Management Unit without obstructing the main construction. RJB only provides motorcycle parking area, and it is understandable considered the limited

space available and also the income rate of the residents, based on the questionnaire distributed, none of the respondents owned a car, but 62% owned motorcycle. The small carparks were only exclusive for management unit staffs, none of the residents and their guest could park here.

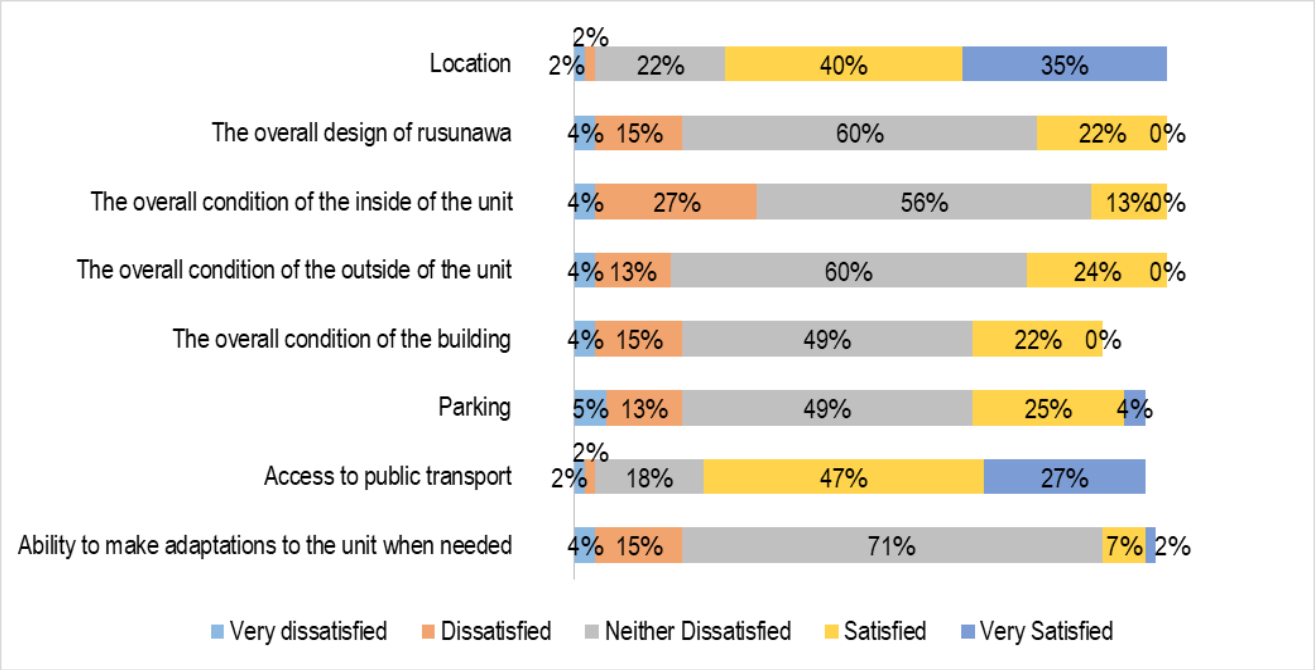


Figure 29. Residents' satisfaction regarding dwelling design
Author's analysis (2017)

From the interview result, it was found that RJB construction material was quite good material, but it was suspected that the construction needed to be finish in such short period of time, made the quality of the building reduced, many units have leak problems from the water splash during raining events and the concrete slab from the top floor (17th floor). According to data July 2017, there were 13 units in each Tower A and B that have leak problems, and Management Unit is working to solve this problems (Management Unit RJB, 2017). Furthermore, maintenance of the building and landscape is done manually, which explained the need for many human resources.

Questions related to physical aspects of RJB received more positive rather than negative responses by the respondents in general. However, residents' relatively positive opinions regarding RJB physical aspects were not correspondence on what they need.

> *"I think of life in the new towers compared to our previous life in Kampung Pulo as like taxis compared to* bajaj *(rickshaw). As soon as you open the taxi door, the meter starts running – but with bajaj you can always bargain…My life in the new housing is more luxurious, like in a castle. … My income has fallen sharply. In the kampung, we could trade freely. There were no rules. There are so many rules here."* – Iwan (A6:1) in The Guardian (Michael & Aziz, 2016) based on the Writing to Remember, 2016.

"We had a simple house, but we owned it – rather than a tall and luxurious building which we rent. … Now we are given a warning letter and are banned from trading in front of the house we live in. But the majority of Pulo's citizens are traders!" – Koko Wahyu (A3:2) in The Guardian (Michael & Aziz, 2016) based on the Writing to Remember, 2016.

c. Open space

As the land size of RJB is very limited, a small portion of open space were located at the welcome area and at the backyard (Figure 30). Initial concept plan for the backyard was the residents will have direct connection with the river and their former *kampung*, but the current RJB is surrounded by wall.

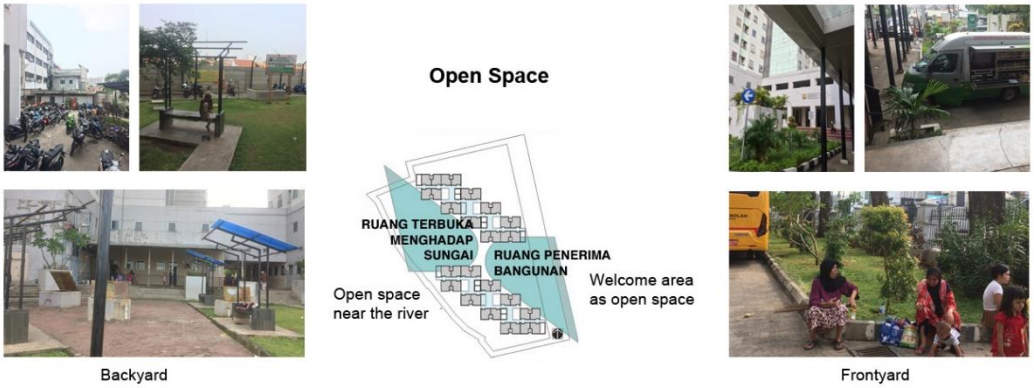


Figure 30. Open space concept and current condition
Modified from https://goo.gl/AJ6hdk (2013) and combined with field observation (Author, 2017)

"Children need a place to play outdoors, like we had in the old home, where they can run free. Though there are playground facilities provided by the organizer, they are not maintained and protected." – Koko Wahyu (A3:3) in The Guardian (Michael & Aziz, 2016) based on the Writing to Remember, 2016.

"...I also cannot play. I used to play jumping rope in Pulo. But until now, I never play anymore…I want to touch the ground again like in Kampung Pulo. I cannot running around in rusunawa because there are many columns." – Zulfa Zam Zami (A2:2) in Writing to Remember, 2016.

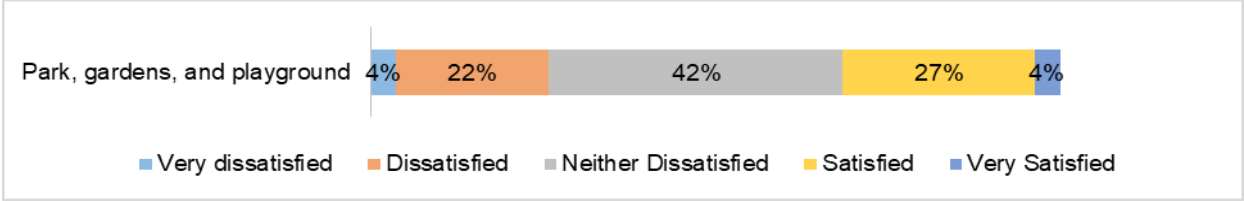


Figure 31. Residents' satisfaction regarding open space
Author's analysis (2017)

The available open space on the ground floor which were observed during field work did not indicate a vibrant activity compare to the number of the residents living in RJB (Figure 31). It is identified that the higher floor residents live, the less they will join activity or event on the ground floors. Residents also complained that the back park smelled bad from the STP, make it not comfortable to stay longer there.

d. Tenant satisfaction

Residents' satisfaction related to dwelling units as well as the local area context (location) have been discussed in the indicator of 'dwelling design' which received relatively positive response or residents remained neutral about them (Figure 32). In general, residents felt satisfied with the service that is provided by the Management Unit. RJB has 24 hours standby technicians, although some respondents complained that the Management Unit took quite long time to repair the problem.

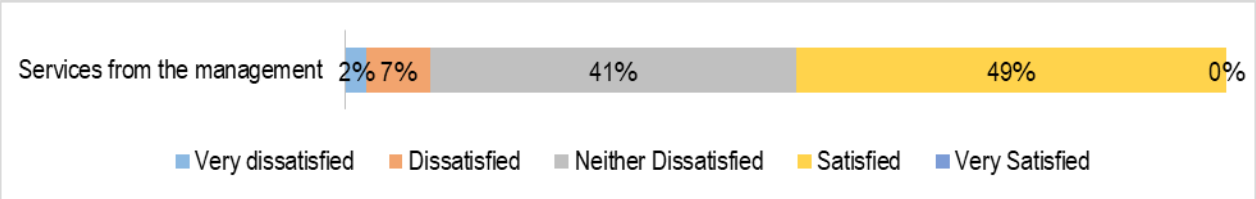


Figure 32. Residents' satisfaction regarding services from the management
Author's analysis (2017)

Element of 'satisfaction with the whole package received for the rent' was analyzed from the residents' personal opinions.

> *"Living in rusunawa is much more difficult. I no longer have a job, especially at the age of 60s. Every day, I just rely on the help of my children."* – Uming (A7:1) in Writing to Remember, 2016.

> Uming tried to work on unskilled jobs such as repairing a neighbor's house for a year after his coffee shop was evicted by the Civil Service Police Unit in 2014. But after moving to RJB, he did not know what to do anymore considering all the improvements made by the manager (*eds.* Muhammad et al, 2016).

> *"Our lives is so hard now and we have to spend so much money. But we also feel comfortable here because it is far from the flood.… It is not our intention to mourn our difficult lives. But we want to have a better live."* – Ida (A8:1) in Writing to Remember, 2016.

> *"…On the media, government looked improving the welfare of the people. But we are as the victims of the eviction, have different experiences. In the previous place, we are very easy to make a living without many difficult rules. Just open the door and put the table, money can be generated. It is different case now. In rusunawa, it is very difficult to make a living by selling because too many burdensome rules."* – Koko Wahyu (A3:4) in Writing to Remember, 2016.

Author is aware that two years is still a short period of time to measure residents' satisfaction because all the residents still relate very much to their previous lives in *Kampung* Pulo. Changing people lives into normative way that defined dramatically, especially with the eviction trauma still in their mind, is not an easy adaptation. Their strong memory and nostalgia living in *Kampung* Pulo and the adaptation living in *Rusunawa* with the strong economic challenges they face, make they do not perceive satisfied with their current living condition, although their home now is upgraded compare to previous one in *Kampung* Pulo.

e. Services and facilities

As listed in Chapter 4, there were several services and facilities that were provided in RJB to support the residents' lives. Figure 33 shows the findings from the respondents' satisfactions regarding public facilities in RJB. Most respondents gave positive response related to the provision of mosque and health service. BPJS from Jakarta government allows the residents to have reduced price for health service. Respondents also thought that the library room and mobile library were good for their children.

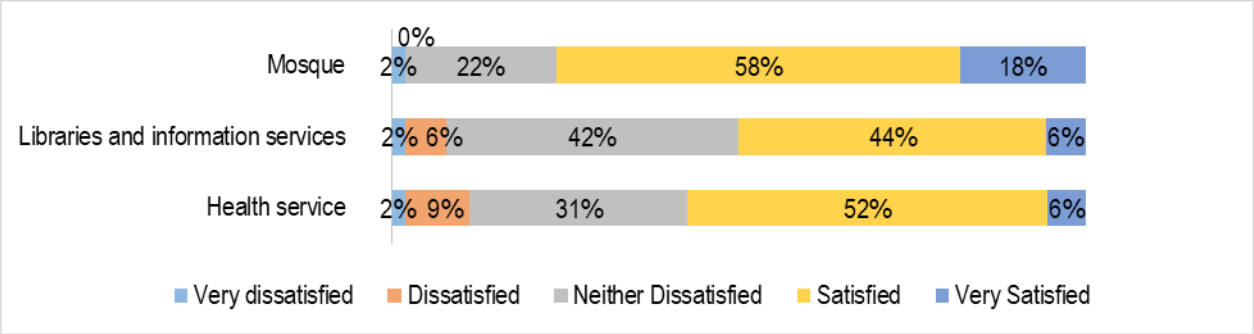


Figure 33. Residents' satisfaction regarding services and fascilities from the management
Author's analysis (2017)

Access to public transportation has been discussed in indicator 'dwelling design' related to RJB strategic location. Furthermore, there is regular school bus (yellow bus) that students can use to go to their school every day for free. The pre-school (PAUD) inside RJB brings very positive impact for the child's education. Currently there are 65 playgroup students in RJB. It was also observed that RJB had elevators problems. They often stop working which caused residents have to use the stairs to their unit. For elderlies this event made it very hard for them to move (there are 122 of senior residents in RJB, aged more than 60 years old).

f. Health

One of the obvious positive impacts living in RJB is that the residents do not experience regular flood anymore, which avoid them to be prone to water-based disease during the flood event. Each unit is equipped with a proper bathroom and toilet which oblige the resident to live healthier in term of sanitary aspect. Interview result with Management Unit revealed that it was challenging to educate residents about how to live in proper way intern of health. Many residents still thrown their domestic garbage at the

emergency stairs, although Management Unit already made a collecting garbage system. Management Unit was using a persuasive approach (door to door) to remind the residents to keep their environment healthy. There were also various socialization programs that were conducted to give health counseling. However, author acknowledge that health aspect in this research was not analyzed based on psychological aspect, rather more to identify that changes happen in the residents' habit. Previous findings in indicator 'Resource (Energy and Water)' find that the residents have problem regarding the quality of the water that caused their body itchy.

5.3 Economic Dimension

a. Affordability

The study reveals that the characteristic of income and expenditure of the RJB households based on the distributed questionnaires. Most of the respondents have monthly wages and in average, every households earn IDR 1,200,000,-/month, which is far below Jakarta UMP 2017 IDR 3,355,750,-. Moreover, in average total households' expenditure is IDR 3,722,115/month,- (Figure 34 and 35). There is a big gap between household's income and their expenditure, since living in RJB the residents have more expenses to pay every month and less income (or even lose their income for some residents).

However, in order to get a reliable data regarding household expenditure, it is needed further investigate on how the residents calculate their expenses, it was assumed that the respondents that were questioned only calculated their main family income based on the head of family's income only, and also some units have more than one family and source of income (the child often working as well), but they shared the unit bill (electricity, water and rent cost).

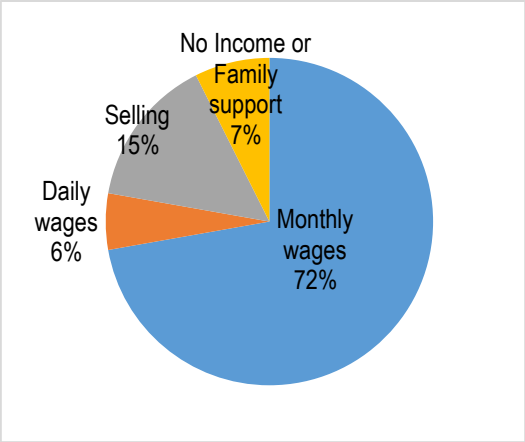


Figure 34. Household's main source of income
Author's analysis (2017)

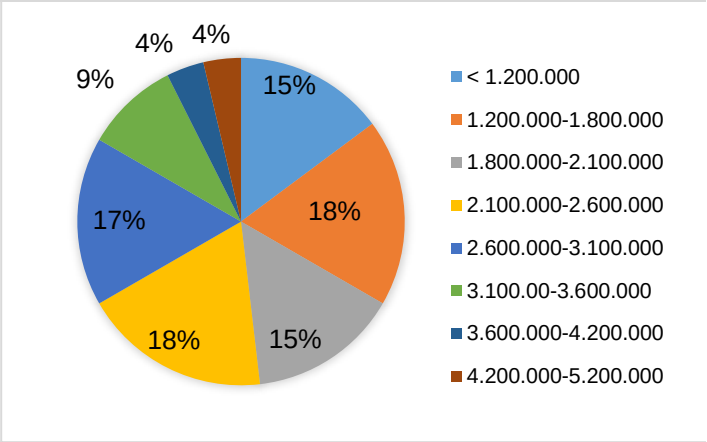


Figure 35. Household's income per month (IDR)
Author's analysis (2017)

The main type of expenditures that the family's spent in average on water, electricity, and transportation were:

- spending on water is IDR 157,745,-/month
- spending on electricity is IDR 116,091,-/month
- spending on transportation is IDR 366,244,-/month

Total expenditure for housing (rent, water, and electricity) is IDR 573,843,-, which is spending 47% of total household's income per month. This situation shows that even rental cost already subsidized to the social tariff IDR 300,000,-/month, but living in *rusunawa* is still unaffordable for most of the residents, Unit Management reported that there were around 135 units that have not paid the rental (Management Unit RJB, 2017) based on data July 2017.

Based on the questionnaires data, 61% respondents answered that the rental cost was not affordable for them, while 39% answered it was affordable, but leave no savings for them. It is interesting to point out that the amount household spend on transportation is quite high, even though they have free ride Trans Jakarta bus and free school bus for the students. It was predicted that many residents use their motorcycle to move around or using *angkot* (microbus or public car, these type of transportation mode is not part of free ride Trans Jakarta facility).

> *"I am a private employee and I am grateful that I am still able to work and gain some money. But whereas my salary used to be enough for daily expenses and I still had some for savings, since my family and I moved to this housing my salary is used up in rent, electricity and water. If you do not pay, you get a warning; after a third warning letter, you will be evicted. If that happens, where would we stay? Would we have to live on the street?"* – Ade (A4:2) in The Guardian (Michael & Aziz, 2016) based on the Writing to Remember, 2016.

> *"I hope that the government can make this rusunawa become rusunami (ownership) where the rent that we pay each month will also be our installments for the payment. Water and electricity bill has become our responsibility, although the water tariff of IDR 5,500 per cubic is very burdensome."* – Heriyaneppi (A1:2) in Writing to Remember, 2016.

Ade' and Heriyaneppi' opinions represent other RJB households. They wished that RJB status could be converted from leasing to ownership through installment mechanism per month. Representative from MPWH during interview also informed the possibility to develop this scheme (renting-installment) for *rusunawa*, although this is still under discussion. However, if we further highlight what constitutes the RJB rental tariff by the government (further detail is in Chapter 4), IDR 300,000,- per month is only to cover the operation and maintenance cost of RJB. The cost of the resources is just to maintain RJB existence.

b. Business activity

Initial plan of RJB was designed to accommodate the small home business (groceries and food) at the second floor in each building. However current condition shows that there were not so many sellers open their business here, many residents choose to open their business in their unit or in front of RJB (on the

pedestrian) illegally. However, it has been identified in the previous indicators that some residents complain about how hard it is now to do their business, including there were many restriction rules as well as non-strategic location which does not attract many customers. Figure 36 to 30 show the current business space situation in RJB.



Figure 36. Second floor business space condition
Author (2017)



Figure 37. Ground floor business space condition
Author (2017)

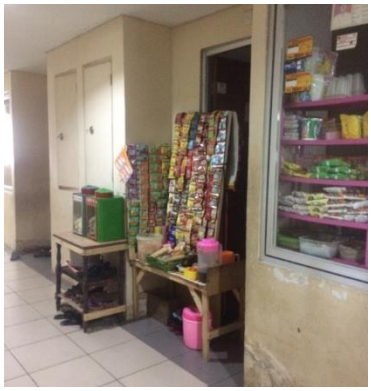


Figure 38. Small business in the unit
Author (2017)



Figure 39. Small business in the unit
Author (2017)

Through Interview with Management Unit, it is revealed that they were aware about the problems. There were no kiosk or stalls provision yet on the second floor which make the space become disordered and prone to theft. Management unit is proposing this to Jakarta Housing Agency. Management unit also tries to give alternative location for business space on the ground floor at the exit gate. However, it was observed that all the business activities in RJB did not illustrate a lively economic activity, where there were many economic transactions and customers. Current business space was occupied by the residents with free of charge at the moment because there was no official regulation from local government that regulated this activity.

5.4 Institutional Dimension

a. Local authority service

Figure 40 illustrates local government position in *rusunawa* provision and management. Currently the management type of *rusunawa* is by Management Unit under Housing and Building Agency, Jakarta Capital

City Government. Through interview with representatives of Bureau of City Planning and Environment and Management Unit, revealed that management of *Rusunawa* in the type of Management Unit was facing several challenges such as relying on local annual budget for their operation and maintenance (Chapter 4). The rental revenue would go to local budget (retribution), and there was a time gap between when the annual budget available (March) and the annual closing time (December), and any non-budgeting repair or damage which was not proposed in the current financial year, often staffs need to use their personal resources to solve the problems. Another challenge is Management Unit is not an autonomous in making decisions such as policy of management, utilization space, and rental tariff. Target group decision would have to wait the official regulation from the local government and legalized by Regional People's Representatives Assembly (DPRD), and often it took long time to enact a regulation.

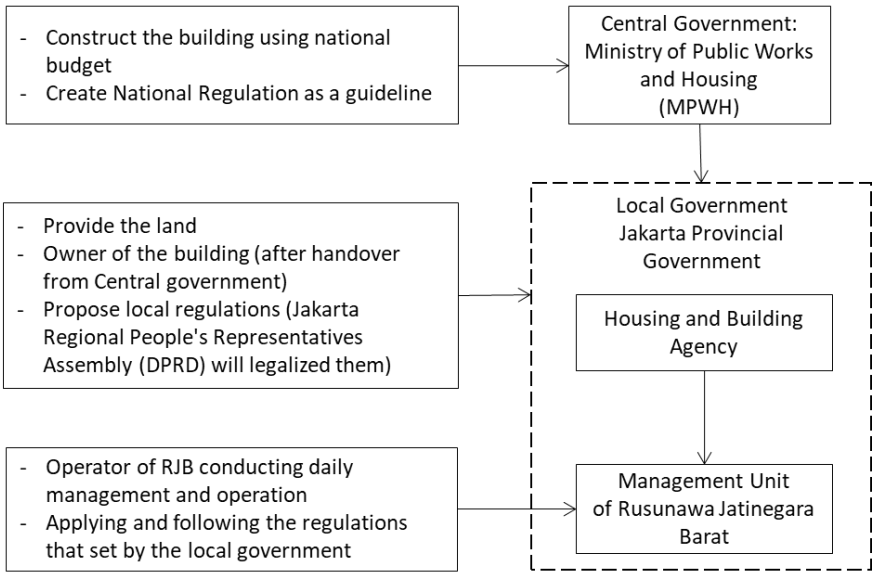


Figure 40. Institution involved in RJB Project
Elaborated by Author (2017)

Previously *Rusunawa* were managed with a type of Local Public Service Agency (BLUD) which the service principle was based on quasi-public goods. The budget was gained partially from the local budget as well as from its service offered, but not-profit oriented. Hence, using this type of agency, the management could utilize directly the revenue from the rent for *rusunawa* operation and management. BLUD had the right to manage its finance independently and it was also allowed to run certain business activities in order to gain more revenue such as renting some business space to other parties. However, this scheme was considered ineffective and very difficult by the local government because *rusunawa* BLUD was not capable to be independent financially (as explained before, the amount of budget needed per year is so high) and the capability of the human resources to manage *rusunawa* by themselves was still far from adequate. Furthermore, as *rusunawa* is targeted for low-income community, *rusunawa* is considered to be a social project without intention to make revenue, even though the revenue is for the purpose of *rusunawa* operation and management and not make profit like private sector.

b. Policy support

Rusunawa residents as they registered themselves to get identity card which now legalized them to be Jakarta habitants. By possessing *rusunawa* identity card, they have some benefits which are supported by national state program and local government program. The first one, *Rusunawa* residents will be registered to have KJS which not only contain health subsidy but also compensation for elderly. The second one is national working insurance for any type of occupations under certain rules. The third one is KJP for students until high school to study for free in public school as well as subsidy for books and other supporting materials. The fourth one is free ride for Trans Jakarta bus in all corridor in Jakarta. Jakarta government collaborates with DKI Jakarta Bank issued Jakarta One card which is not only used as ATM card to pay *rusunawa* rent every month, but it also contains the benefit of Trans Jakarta and groceries subsidy for low income people. Social welfare program in RJB is illustrated in Figure 41.

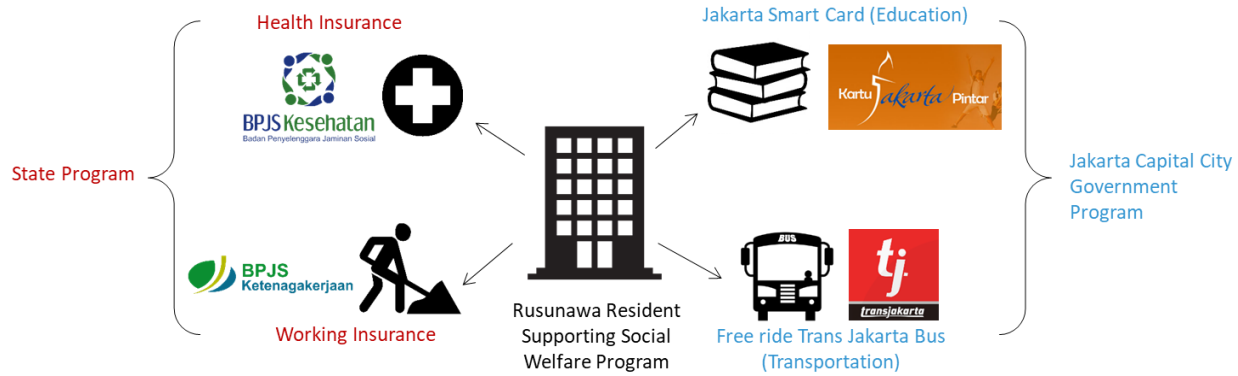


Figure 41. Supporting Social Welfare Program in RJB
Elaborated by Author (2017)

Good intensions from the government both national and local to improve the quality of residents' life were integrated to *rusunawa* project. However, Jakarta Legal Aid informed in their 2016 report regarding the ownership of KJS and KJP (based on their survey of 250 residents who lived in *rusunawa* after the resettlement program in 18 *rusunawa*s across Jakarta), there were only 40.2% of the respondents owned KJS and KJP and the rest 59.8% did not have ones (Januardy, Al-Ghazali, Prayogy, Fortuna, & Hasan, 2016). This number could represent the level of fulfillment and implementation of the right to health and education for the residents of *rusunawa*.

5.5 Discussion on the Findings of *Rusunawa* Sustainability Assessment

a. Social sustainability

RJB is exclusive to resettlement victims of *Kampung* Pulo, who are mostly low-income residents. This factor has stigmatized RJB as a low-income neighborhood since there is no social mix in term of income level in this vertical housing. This led to the creation of "exclusion and disadvantages where the public see the residents as welfare dependent" (Atkinson & Jacobs, 2008, p.4). Mccormick, Joseph, & Chaskin (2012,

p.288) informed that the “label of ‘public housing resident’ carries information about the presumed nature of the individual, rather than the information regarding place of residence”.

Francis et al. (2012) informed that the frequent use of public space, given passive, face-to-face contact of repeated and increasing length is found to be one component of developing friendships. Residents in *rusunawa* are not used to an individual way of living. Although RJB design provides some communal spaces on each floor as well as on the first and the ground floor, most of these spaces are deserted and there is not much interaction. One of the reasons is most residents do not have much time to use communal space because they are busy working or taking care of their children. Another reason that the author finds is due to the quality and the typology of *rusunawa* building which not correspondent to the socio-culture of Indonesian people, especially the low-incomes.

Furthermore, it is analyzed that residents in RJB have a strong bonding toward each other because they share same *Kampung* Pulo background and traumatic relocation experience. However, with the new building typology, most residents including children feel losing of sense of community like they had in *Kampung* Pulo because now in RJB, residents tend to be more individual. This result is supported by the argument of Cernea, (2000) that displacement tears apart the existing social fabric and the existing patterns of social organization.

However, interesting study by Hartanto (2015), shows a contradictory result on the social condition in RJB and in *Rusunawa* Marunda. *Rusunawa* Marunda is also housing the resettled community in North Jakarta. Hartanto found that the impact of resettlement of different communities in *Rusunawa* Marunda on social capital generally has a positive impact. The majority of households of Marunda confirmed that they have a better social life compared to the previous location. Author is aware that the contradictory findings could be derived from the differences of circumtances, especially the communities tenant and design scale between the two *rusunawa*s. Author wants to emphasize that the development of *rusunawa* should be contextual wise because the other *rusunawa* case showed the increase of social cohesion under certain circumstances and arrangements. However, De Wet (as cited in Hartanto, 2015, p.7) stated that although there were few which has positive results attributes to people after the relocation, but the sustainability aspect is remain unclear. Hence, particular attention should be given to the design of communal space to strengthen the relationship between residents especially with limited unit, space, and privacy.

The research finds that the higher floor the residents live, the less they will participate to the community events which often take place on the 2nd floor, 1st floor, or ground floor. Gehl (2011, p.98) informed that “meaningful contact with ground level events is possible only from the first few floors in a multi-story building and anything and anyone above the fifth floor is definitely out of touch with ground level events". Furthermore, he also explained that “low buildings along a street are in harmony with the way in which people move about and the way in which the senses function” (Gehl, 2011, p.99), as opposed to tall buildings (illustrated in Figure 4 and 43). This argument could rationalize the reason why higher residents tend to have less participation on social activities that are hold on the ground level.



Figure 42. *Rusunawa* Jatinegara Building
(Author, 2017)

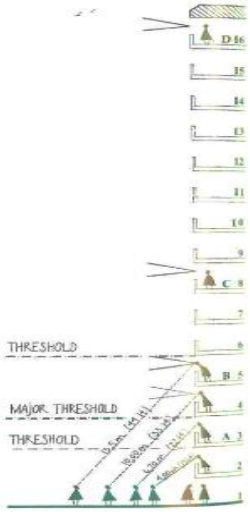


Figure 43. Level of interaction treshold in high rise
(Gehl, 2011, p.98)

Residents have some initiatives such as creating social organization or group to strengthen their social life, although such initiative face many challenges. There is a general sense of distrust among residents because of the perception of different access to information or opportunity or nepotism between leader and their close relatives or residents. This situation is explained by Sueca (2017) that adjacent residential units with high tension within the crowd could ignite friction, misunderstandings and problems on communal live. Such problems may be occurred for some time, but the residents will try to make adaptation mechanisms within the *rusunawa* to get a balance between the needs and realities and they will try to avoid interfering among each other. Sueca's thesis can be applied to RJB where the residents are possibly still trying to adapt and to harmonize their social relationship among them.

Religious activity is found out to be the most attended activity because it is often hold on each floor by resident's neighborhood association. RJB also has a mosque as the main destination for the residents to do Friday prayer. Religious activity can enhance the social cohesion between residents by opening the opportunity to interact with each other. Although there may be religion-based cohesive communities, "there are circumstance where the stronger the ties binding such communities, the greater may be the social, racial or religious conflict between them" (Forrest & Kearns, 2001, p.2134). Therefore, other type of social activities that can unite the whole residents, not limited to their personal attribute such as race or religion, are needed.

Residents have neutral satisfaction regarding safety and privacy in general which can be interpreted as a positive aspect because residents feel safe in *rusunawa*. Management unit applied a quite strict security service in RJB, such as high wall surrounding RJB and concealed entrance.

Integration means that various activities and people are permitted to function together, it is not only the case of formal integration of the buildings, but integration with the surrounding area (Gehl, 2011). The high wall which intended to maintain the security of the neighborhood. RJB have an environment of gated

community and physically separated from the surrounding, especially to the river that connect to their old *Kampung* Pulo. In fact RJB has a great potential to be opened to its surrounding by its many food and groceries sellers and other small businesses. Residents who work as grocers can generate money from the market activity if they are able to have more and wider customers.

In conclusion, there are some positive social aspects that the residents experiencing in their environment. The government also attempts to accommodate the characteristic of the social life of the residents. However, the research finds that replacing a vibrant community such as *Kampung* to a rigid vertical housing could create certain degree of alienation and isolation to the residents. It is measured by their lack of interaction and participation through community events, and their dissatisfaction with their community interaction. Thus, above analysis shows that RJB has not yet to be sustainable in the social aspects.

b. Environmental sustainability

Killbert and Carpenter (as cited in Wiesel et al., 2012) informed that a building which perform well environmentally often also has good economic sense on a life-cycle cost, although the capital cost will be more costly than standard buildings. They further explained that environmental sustainable design features may reduce the long-term demand for resources such as electricity and water. This study revealed that energy and water consumption in RJB is very high. The dependency to water and energy supply from the third party creates a high bill for individual households as well as the Management unit. There is lack of recycling technology in RJB as an alternative energy and water resource to reduce the cost. Current condition revealed that the key feature which could reduce the operation cost, the STP, is not working properly.

All building will require reinvestment in maintenance over time, but because of RJB was built in such a rush and some damages are appeared and require major repairements. The damages affected to the quality of residents' lives. Aside to major repairements, many residents also encounter minor issues with plumbing, lifts, drainage, and internal fittings, which consider to be a normal situation in daily operation, although it is not a decent experience.

RJB is appeared to pay attention in the quality of wind and air circulation flow as well as access to natural light. This criteria fulfills the requirement of passive design strategy which involves the interaction of daylight, radiation and ventilation (Larasati et al., 2007).

RJB also has a strength point regarding its location that is well located to city center and less than 2 miles from their original *Kampung* Pulo. Despite the land scarcity in the Jakarta, local government managed to utilize the nearby available land for RJB. Furthermore, unlike other similar *rusunawa* projects which are located very far away from resettled community's original location, RJB is at a well-located site which provide residents with good access to public transport, local amenities and services. This characteristic is informed by Kisnarini (2015), unsuitability of location and unsynchronized with the infrastructures could influence the success of *rusunawa* program.

Size of the unit is only suitable for a family consist of 4 members, but many families have more than 4 members, which resulting to overcrowded situation in the unit. Objective overcrowding (as measured by persons per room) and subjective overcrowding (as indicated by (1) excessive social demands and (2) a

lack of privacy) are strongly related to poor mental health, poor social relationships in the home and poor child care; and are less strongly, but significantly related to poor physical health, and to poor social relationships outside the home (Gove, Hughes, & Galle, 1979). Hence, the units that are inhabited by more than its capacity, their condition should not be ignored. After all, *rusunawa* is aimed to move the vulnerable and poor households from unacceptable housing conditions to more humanized housings (Bappenas et al., 2015).

RJB design tries to accommodate some *Kampung* characteristics such as communal spaces to facilitate social interaction and economic activity. However, high-rise building typology could not achieve the high social-cohesion as previous settlement. Furthermore, *rusunawa* building typology closes the possibility and the ability of the residents to growth incrementally for each household space. It has been recognized by many scholars that "the recognition of incremental development process where households can obtain or improve a basic unit that they can expand and improve over time is a sensible approach which is widely adopted by the poor themselves" (Payne & Majale, 2004, p.18).

The residents expressed relatively positive opinions or remain neutral to the physical design, service and facilities in RJB. However, achieving avant-garde physical quality should not be the main priority for affordable housing by the government, particularly when it increases the costs of living. High rise typology does not consider the relation of what people need and what they can afford. Residents are still highly comparing between their former social and economic lives in *Kampung* Pulo and the current situation in RJB, resulting in negative satisfaction to their current living condition.

Although *Kampung* has many certain values which embedded to the social lives of the people, author is aware that the situation cannot be romanticized. Some improvement need to be done in people's lives, especially who used to live in sub-standard housings. RJB obviously succeeds to keep the residents from the annual flood that they used to experience during the annual rainy season. Furthermore, residents also have changed toward healthier habit. Provision of proper sanitary facility such as toilet and bathroom can make them live healthier in proper standard of sanitary. Although we can further question whether this could also be achieved in the previous settlement, without necessarily moving them into *rusunawa*.

In conclusion, the high cost of building operation and maintenance because of *rusunawa* fails to fulfill energy efficiency strategy is hindered the environment sustainability of *rusunawa* and also affected the livelihood of the residents. However, in the other side, *rusunawa* also has some positive impacts to the residents, such as improvement in the health standard of the residents, the project is also well-located, and managed to accommodate good quality of wind and air circulation flow as well as access to natural light. Therefore, the environmental sustainability aspects of *rusunawa* are partly achieved but other aspects are not yet to be reached, which make *rusunawa* has not yet to be environmentally sustainable in the long run.

c. Economic sustainability

The effectiveness of rental flat's management can be measured through the financial of operational cost management compared to revenue. Financial system is consider to be effective if it is independent in the operation and maintenance of rental flats (Christanti, 2017; Ramadhani, Yusuf, Kisnarini, Septanti, &

Santosa, 2017). *Rusunawa* project is proved to be a very high capital and high maintenance project of government which its sustainability in the financial dimension is really questionable. There have been many subsidies (direct and indirect) poured in *rusunawa* project, but the economic balance still remains difficult to achieve both by the government and also by the residents.

The rental tariff is flat for all income level in RJB, where the policy could have been better by applying cross-subsidy between tenants, depending on their incomes and affordability levels. Interview with Management unit revealed that there are few families who actually above the categories of low-income community and can afford to pay more than IDR 300,000,- per month. Furthermore, "as most of subsidy projects require that tenants to pay a fixed percentage of their income for rent, inviting of more affluent households could lower the cost of subsidized housing by increasing the amount of rental income collected from affluent tenants and reducing the need for government funding" (Schwartz & Tajbakhsh, 1997, p.74). Hence, *rusunawa* development ideally should be integrated in the wider urban planning such as development of public housing complex with mixed-income development, not a concentrated low-income building blocks.

Most residents feel burdened by the amount of their monthly expenses living in RJB, led to an unaffordable way of living. Author observed that there are few options of how the residents should live such getting water and energy. Residents could not really save the expense because in order to gain those resources residents need to buy from the third party. There is no alternative sources such as deep well or ground water. If *rusunawa* management has an alternative of resource such as investing in recycling water, the cost of water could be probably reduced. Turner (1972, p.171–172) informed that government's analyses and "evaluation of policy makers will be greatly influenced by their political biases or assumptions, and those who assume that they know residents' demands better than the users themselves, or those interests are best served by this assumption, will naturally favor authoritarian rules". This is the case in *rusunawa*, where residents are left with no option based on their affordability.

Business space was observed did not reflect a vibrant commercial place. Residents could not generate much money because of the location or their higher expense. Author argues that living in *rusunawa* gives the perception that the price of legal status to be a citizen in the city and to be acknowledged in the eyes of bureaucrats, cost the people something that they cannot afford. Furthermore, all the residents expressed their insecurity in the tenure type of *rusunawa*.

The analysis shows that in the economic aspects, *rusunawa* has not yet to be sustainable for the residents particularly and also for the government. Instead of having better wellbeing, the residents remain in low-income state or even burdened with their living cost. As Cernea (cited in Hartanto, 2015, p.7) argued "the dominant outcome of displacement worldwide is not income restoration but impoverishment".

d. Institutional sustainability

There have been improvement and renovation of sectoral programs in health, social security, school subsidies, job creation, and housing in the last decades. "The integration of these domains, which necessary in order to reduce poverty, is constantly tenuous and subject to institutional fractures and delivery gaps" (Tambunan as cited in Simone, 2015, p.s21). There are some welfare policy supports coming from national and local programs to improve the quality of lives of the residents in general and *rusunawa*

residents in particular. However, in the implementation, it faces some challenges such as delay in the distribution of the health and education cards.

Management unit is not an autonomous institution who can decide their own regulation and financial regarding *rusunawa* management and operation. There is time and financial gap in managing and operating *rusunawa* in daily basis that the management face. Management unit could not have flexible initiatives without approval from local government and the DPRD, which make *rusunawa* is very dependent to local budget and direction from the its superior. The current regulations are rigid and inflexible. It complicates the sustainability of *rusunawa* project including the inhabitants.

In conclusion, there are many requirements to do on *rusunawa* project to be sustainable in the institutional aspects. Government has been exerting to get thing 'rights', but current situation is showing some regulation are yet to be effective to maximize the function of *rusunawa* nor the *rusunawa* itself is the only solution for the resettlement people.

Chapter 6. The Analysis of Residents' Capabilities in *Rusunawa* Jatinegara Barat

After analysing the *rusunawa* sustainability in the previous chapter, the findings analysis in this chapter in will respond **the research question 2**: *How are the* resident*'s capabilities toward housing functionings in rusunawa?*

This analysis is aimed in unfolding resident's perceptions toward the impacts of *rusunawa* project on their five housing freedoms: to maintain social and economic network, to participating in decision making, to gain tenure security and acknowledgement, to have a healthy environment, and to afford living cost.

6.1 Freedom to Maintain Social and Economic Network

The features identified in the sustainability indicators associated with the freedom to maintain social and economic networks are related to three aspects: dwelling design, community facilities and activities, and business activity.

a. Dwelling design

Findings on the dwelling design aspects revealed that people did not have the privilege to choose what kind of housing they need, want nor the type of unit they live. Furthermore, current unit is not adjustable for improvement related to residents' business activity. Interestingly, RJB is well located in the city center with easy connection to public transportation but it does not support residents' freedoms to apprehend this opportunity. The residents still spend high transportation expense because they have to ride motorcycle or mini-bus to move around rather than using transjakarta. Some of their destinations are not covered or convenient to use by transjakarta.

As discussed in the findings of' sense of community' and 'open space' indicators (further information is on page 35 and 41), Heriyaneppi (A1:1) expressed her perception that her relationship with her neighbors in her current situation seems to be formal. Zulfa Zam Zami (A2:2), expressed how she missed jumping rope with her friends in Pulo. Zulfa now never plays it again because she loses her connection with her friends and she cannot play freely in *rusunawa*. She also expressed that she used to have many friends to study together, but now she just studies by herself in her unit.

b. Community facilities and activities

RJB as discussed in the chapter 4 as well as 'service and facilities' indicators has several social infrastructures to support and empower resident's lives located on the second, first, and ground floor. On each floor, there is also multipurpose space for communal activities in the form of wide corridor to accommodate the neighborhood's activity on each floors. Community facilities such as children playgroup, mosque, health service, library, park, and training skills events created by the institution, community, private sectors, foundations, or the residents themselves are potential to strengthen residents' social network.

However, this research reveals that some residents choose not to attend some community activities because they are busy, do not get information, or simply reluctant to go down from their high floor unit

(further information of 'sense of community' indicator is on page 35). Religious activity is found to be the most attended by the residents based on the questionnaire survey.

Some features such as children playground and park in RJB perceived by Koko Wahyu are not maintained and protected (further information is on page 41). This research also finds that condition of the park which is located on top of STP is polluted by inconvenient smells and discourage the residents to use them. Limited space of open space and playground lead to limited activity choices that the children could play.

Empowering activities such as training skills could also improve the social and economic network of the people but this research could not present any empirical data in this part about how far it gives people the opportunity to expand their social and economy networks. However, document from Management unit reveals that all precedent and current programs and training are still very much in need in order to educate and empower the people. The residents still need both social support as well moral support in order them to be more independent and empowered (Management Unit RJB, 2017).

c. Business activity

The 'business activity' indicator analysis reveals that RJB concept accommodates small home business such as groceries, food, and other stuffs on the second floor in each buildings. The analysis reveals that business space in RJB does not create a lively economic activity, where there are many economic transactions and customers. Koko Wahyu (A3:2) expressed his opinion that trading in *rusunawa* now is very difficult, because there are many burdensome rules (further information is on page 38-41). As most of the resident in RJB was small seller, current business space and situation in *rusunawa* degrade residents' freedom to maintain their economic activities to have a better lives.

6.2 Freedom to Participate in Decision Making

The influences on *rusunawa* project on residents' freedom to participate in decision making is analyzed through two aspects: process of policy design and process of implementation. This thesis does not explore on the aspect of participation mechanism because there is insufficient data taken during field work.

a. Process of policy design

In September 2015, after the eviction of *Kampung* Pulo occurred, NGO Ciliwung Merdeka as the people's facilitator together with a number of architects and scholars from the Urban Academicians Forum presented a concept design of *Kampung Susun* (a community-based vertical village) to the government of Jakarta, as an alternative solution in order to keep the right of the people for their land and property. This idea got a positive response from the government (Ciliwung Merdeka, 2016; Wardhani, 2015). However, due to the failure in the communication system that was built during his leadership, the idea was never realized (Ciliwung Merdeka, 2016; Nailufar, 2016), and the people is still continuing living in RJB because there is no other option.

An interview with Bureau of City Planning and Environment and Housing and Building Agency Jakarta reveals that *rusunawa* design most likely follow a standard template of apartment building, emphasizing the

building density efficiency, mass production, and customized design. Thus, such a process of participation in defining housing design did not take place and the policies were designed by policy makers. Moreover, housing options other than *rusunawa* is probably do not exist for *Kampung* Pulo resettlement evictees.

b. Process of implementation

The process of implementation including the construction and maintenance of *rusunawa* and their individual units do not consider the involvement of residents. During allocation of the units, people also did not have a freedom to choose which unit they want to live, because unit allocation was based on lottery. A story from Ade who wishes to have the same floor units with his parent presented below.

> *"I lived beside my parent's house in Kampung Pulo. Now, I live so far with my parents, I live on the top floor, while my parents are in the below floor. I am so worry about my parent, when they are sick or his asthma attack happen, I am so worry that I would not know… and the elevators often break down as well."* – Ade (A4:3) in Writing to Remember, 2016.

Furthermore, another story from Uming (further information of 'tenant satisfaction' indicator is on page 42), who used to repair his neighbor's house, and now he could not do the same activity anymore as the maintenance made by the management.

6.3 Freedom to Gain Tenure Security and Acknowledgement

Possession of housing can provide someone an acknowledgement by the society both *de jure* and *de facto*. Two aspects that contribute to the freedom to gain tenure security and acknowledgement are the citizenship status and the ownership status.

a. Citizenship status

Around the event of relocation, people were regarded as illegal occupant in *Kampung* Pulo. This legality conflict was the perspective produced because of the land use conflict between the government and the people (Mardaningrum, 2016). The people claimed that they have a legal right to occupy their land based mostly on their customary traditional land tittle such as *Verponding*[10] and *girik*[11] that inherited from generation to generation. However, the incapability of the people to convert their traditional land tittle into certified tittle because of the regulation framework and procedure which not pro to the poor, should not necessary or automatically take away their ownership of their land (Mardaningrum, 2016). Thus, the label of illegal occupant that stick on themselves is the results of the failure in the regulatory framework by the government.

In the current situation, analysis in the 'policy support' indicator reveals that after living in *rusunawa*, people will be able to gain *rusunawa* ID card, which also function as their citizenship card. *Rusunawa* ID card will give the holder access to several government welfare programs.

[10] *Verponding* is old version land tax bill during the Dutch colonial era (Mardaningrum, 2016).

[11] *Girik* or *petok* or *pipil* is the old version of the land tax bill, as compared to the modern bill called SPPT-PBB now. However, *girik* is considered a land title and can be the basis of a transaction (Appriasal Indonesia, 2010)

b. Ownership status

Rusunawa tenurship is given to the people for twenty years long period, with an option for renewal in every two year. *Rusunawa* gives the people legal right to occupy their unit on rental basis. As per concept of housing career, government idea is to empower the people to have their own house and *rusunawa* acts as a transitional home. However, with the current economic power of the people in *rusunawa*, this idea probably have a long way to be realized. Koko Wahyu (A3:2) expressed his perception that he preferred to have a simple house like he had before, rather than a tall and luxurious building which he rents.

> *"How long will we all have to stay in this housing and pay rent? Our whole lifetime? The contract contains a clause stating that the use of this building is only for up to 20 years, and every two years we have to sign an extension. After 20 years, would we be moved again?"* – Ade (A4:4) in The Guardian (Michael & Aziz, 2016) based on the Writing to Remember, 2016.

As explained in the previous point, the people used to have ownership status on their land and property in *Kampung* Pulo, but now they have a rental contract, followed with the obligation to pay the rental fee every month.

6.4 Freedom to have a Healthy Environment

The aspects that associated with the freedom to live in a healthy environment are; physical condition; access to health services; and spaces for leisure and social interaction.

a. Physical condition

This research analyses the effects of *rusunawa* building typology and the physical features in the indicators of dwelling design, open space, as well as health indicators to the people's health condition. The result reveals that people are now safe from flood and avoided from the water-based diseases that usually happen during the flood season because of the stagnant water. Flood and slum condition was one of the main physical challenge that the people used to have in *Kampung*. Moreover, each units are equipped with proper sanitary features, which also support the people to have a better and clean sanitary situation.

b. Access to health service

As discussed in the previous chapter, *rusunawa* provides health services such as *Puskesmas/Posyandu* and Dental clinic on the first floor. Furthermore, BPJS card from Jakarta government allows the people to have reduced price or even free health service and medicine. Residents can easily access these services in *rusunawa*.

c. Spaces for leisure and social interaction

Analysis in dwelling design and community facilities and activities aspects reveals that *rusunawa* provides some spaces to accommodate leisure activities and social interaction both for adult and children. However, the design, the allocation, and the use of these spaces reduce the freedom of the people to have a more

positive leisure and social interaction compared to their previous living environment in *kampung*, which could affecting not only their physical but also their mental health.

6.5 Freedom to Afford Living Cost

The freedom to afford living cost is analyze based on household costs and household income aspects.

a. Household expenditure

Analysis in 'affordability' indicator unfolds that the people now have more expenses than they used before. In the current situation, people need to pay the monthly rent, with additional cost for water and electricity bill very month. These three main expenses contribute to the largest household expenditure. Moreover, aside to housing rent, people also have to fulfill their daily expenses such as food and transportation.

b. Household income

Most people who work in the informal sector are selling food or operating small grocery store in their unit. People are facing some challenges to conduct their business in RJB which resulting in reducing their income. Iwan (A6:1) who is a trader, expressed his feeling that his income has fallen sharply in RJB because he cannot trade freely ('dwelling design' indicator, page 40).

Suhendi, revealed that his two children have to drop out of senior high school to work as a stall waiter in Jatinegara Market since 2016. Suhendi said the school for his two children is just an old story (Sutari, 2017).

> *"Anyway he cannot go to school, I must pay Rp 500,000- to live here, and not yet for food and others, I cannot afford to pay the schools."* – Suhendi in CNN Indonesia (Sutari, 2017).

Ade (A4:2) expressed feeling that he felt grateful that he has secure job and can gain money regularly, but his current salary is just enough for his expense per month and leave nothing for saving (indicator 'affordability' page 44). Analysis in the 'affordability' and 'dwelling design' indicators reveal that the people have to struggling in order to pay their current expenditure, because either their current income is not enough or leave no room for saving. Furthermore, they feel insecure about their future on how they could continue to live once they could not pay their rental.

6.6 Discussion on the Findings of Residents' Capabilitis

The data analysis drawn from the *rusunawa*'s design features and applied regulations are affecting individual's lives across generations and resulting to the breaking of collective social and economic networks. This research revealed that the building typology of *rusunawa* and inadequate facilities have undermined the residents' freedom to maintain their social and economic connection. Furthermore, these findings affirm that dwelling deficiencies could produce a negative effect on housing satisfaction and that the physical condition such as provision of sufficient living space and the presence of attributes such as open space and community facilities particularly are important in this regard (Coates, Anand, & Norris, 2015a; Diaz-serrano, 2006). "The development of relationships and the importance of inter-dependence

and belonging within the hierarchy of human needs – and as a functioning in the capability framework – means that residents will also reach outside of the home for interaction and social networking" (Coates, Anand, & Norris, 2015b, p.19), and breaking this networks could lead to more disappointment of the residents, which make them easier to be provoked in many aspect and vulnerable to be steered by many political agendas.

The analysis in the freedom to participation process reveals that the institutional procedure who neglect to empower the residents could jeopardize the sustainability of the project. Residents participation in defining their built environment could strengthen their social network. Local activities, participation and social engagement are some of the factors that relate to a capabilities approach to quality of life and determine the housing satisfaction (Coates et al., 2015a). The findings could not fulfill what Bachelard (1964) stated that creation of home was also a creation of warm, 'welcoming spaces that served to foster human beings and community growth' (Gibbons, 2017). Therefore, *rusunawa* project that missed the residents' participation in the process of policy design and implementation hinder the freedom of the residents to participate in decision making.

The analysis on the housing functionings on the residents' freedom to gain tenure security and acknowledgement revealed that *rusunawa* project enables the residents to have the capability to gain security of tenure and acknowledgment based on the current standard of Indonesia law and legal. This result confirms Coates et al. (2015a, p.6) findings that "housing (and homeownership) is interwoven with self-esteem and a sense of control and can also play an important role by means of fulfilling expectations and conferring status". However, at the same time, this project undermines their capability on their previous freedom to claim their old land and property, and acknowledge as legal citizens. As Turner (1972, p.174) stated that "the reason for the failure of conventional housing action-of programs and projects for the replacement of substandard dwellings- were shown to lie in the mismatches between residents' need and the housing supplied by institutions" and *rusunawa* project is not an exceptional.

People freedom to live in a healthy environment are considered to be improved in term of they are now safe from flood and have proper sanitary facilities. Furthermore, they also have easy access to health clinic, as well as some health support benefit. The findings corresponds on what Nussbaum (2011) composed as one of the ten Central Capabilities that the human should have is 'bodily health, of being able adequate shelter and good health'. However, in the aspects of their leisure and social interaction, it is argued whether *rusunawa* has increase their freedom to have a healthy life mentally. As informed also in the previous chapter, in order to measure the effect of housing environment on health, one should conduct further research in the long term.

The significant increasing household expenditure and the changing in people spatial environment in *rusunawa* made the people feel the burden to pay their living cost every month. This findings confirm Coates et al. (2015b, p.8) statement that for most people, "housing is the largest consumption and investment item of their lifetime", and housing also oftentimes is the largest single item of consumption for households which can constrain the resource for others expenses. Thus, RJB has encumber people freedom to afford living cost. However, the impact of vocational or training skills opportunities that offered in *rusunawa* occasionally

would probably have contribution to improve residents' income, but unfortunately these factors is not yet included in this analysis.

Chapter 7. Conclusion and Recommendation

7.1 Overall Conclusion

The Jakarta Government will continue their program of urban revitalization and upgrading the slum area by resettling the people from the riverbank and public land. *Rusunawa* seems to be an ideal solution to answer the problem of housing backlog, slum alleviation, as well as to compensate the people for their land and property. This study reveals that the *rusunawa* project's long term sustainability is a challenge for both the government and the residents. Key challenge of *rusunawa* is adopting the 'one type fits all' approach in the housing development where the decision was undertaken from the top rather from the bottom. This approach particularly is challenging in meeting the need of the people, and the people are now dependent to subsidy and assistance.

The social outcomes in RJB shows that people' social network is reduced through the relocation, people tend to be more individual and having less participation in the community activities although some communal spaces have been designed. Environmentally, *rusunawa* is bringing positive impacts in the improvement of health standard of the people. The project is also well-located, and managed to accommodate good quality of wind and air circulation flow as well as access to natural light. However, the high cost of operation and maintenance from the building design and features, risks the affordability aspect of *rusunawa*. Economically, RJB requires a high amount of subsidy from the government daily expenses and residents remained in low-income state or even burdened with their living cost. Most people also experiencing income reduction in RJB because of the difficulties to run economic activities. Institutionally, *rusunawa* program is supported by various government bodies directly and indirectly. In respect to the management of *rusunawa*, some opportunities to improve the wellbeing as well as reducing the government subsidy could have been done. However, inflexible and rigid Indonesian bureaucracy makes the attempts difficult to realize.

The decision and the policy settings made by the government will create trade-offs in social, environmental, economic, and institutional aspects of *rusunawa*. Moreover, the analysis illustrated the implication of *rusunawa* in residents' capabilities after relocated. Residents' freedom to maintain their social and economic connection is reduced. During the policy design and implementation of *rusunawa*, the process missed the residents' aspiration, people did not have the freedom to participate in decision making which it is actually concerning their lives. Major reduction in residents' freedom is in their capability to afford living cost, as previously discussed that most people are now struggling in paying the rental cost. On the other side, *rusunawa* brings opportunity to the residents' capability to achieve tenure security and acknowledgement, although it is observed that the tenure type is not something the people desired. Similar result also shows that people freedom to live in a healthy environment which consider to be improved.

From the analysis, the conclusion is inevitable, provision of affordable housing should correspondent to the characteristic of the target group. Moving people to *rusunawa* who used to live in *kampung* and have social and economic dependency to their spatial arrangement, is considered to be unsuitable. The aim of

resettlement should be to improve the living standard above pre-location situation and the government will need to keep empowering the people to get back on their feet.

However, this research is not intended to undermine the government efforts but rather to highlight the points which are not yet effective in the provision of *rusunawa* as the only solution to resettle the people who labeled as 'informal settler'. There are many programs that have been done to empower the people, but to get the intended result, will need time, patient, collaboration, and commitment from all stakeholders. The problem of affordability, security of tenure, access to service and opportunities can be addressed if the strategy is looking at the greater investment in housing, land, and urban planning in general, and in public housing in particular.

In order to address the problem of informal settlement, it is beyond providing better living environment. The challenge of resettlement or slum upgrading is to provide living space that enable the people to produce within their limited resources. Resettlement of *kampung* dwellers from their original site, will displace their economic context which affects to their livelihood. The failure of similar housing provisions around the world has suggested to start the project by listening to the people. This is the reason why more developments especially in the provision of low-income housing are trying to start from the people rather than by top-down approach policy.

7.2 Recommendation

The study reveals positive and negative impacts of *rusunawa* in the life of the people. Therefore, the author draws recommendations below to improve current policy and action:

- Adopting enabling strategies regarding the provision of affordable housing. It promotes participation of all actors, especially the citizen, NGO, CBO (Community Based Organization), and the government itself, and also ameliorate the issue of the land title. The process to empower people requires a serious commitment from the government. The level of people participation should not only a symbolic as a token of participation, it should involve the community in defining the concept of housing that accommodates the needs of both the people and the government.
- The policy shift in *rusunawa* provision and management, as in the case of RJB, it offers a great business opportunity to rent out the commercial space, if the authority is willing to open to the surrounding and plan accordingly. Some examples are creating cafeteria on the second floor to attract the general customer or renting some space for offices or shops to the third party like police office for issuing driving license services or other institutional service offices. This plan could generate more profit to the management and possibility to reduce the operational cost.
- Greater and integrated planning of affordable housing in the urban development is necessary, such as mixed-income development (cross subsidy project), job creation, density control, and securing urban land for slum upgrading and affordable housing. Furthermore, a better investment in the provision of the affordable housing and land management in macro level is also necessary. In the

case of relocation, the land was the key asset for the *kampung* dweller, as such, the land dispute has been one of the major problems in Indonesia.

- Enabling other actors in the affordable housing sector, actors such as private sector, government enterprises, CBO, to participate in the role of providing housings. The role of MPWH and local government could be the regulator, finance stimulator, and supervisor instead of being an active developer. However, commitment from the private sectors with financial support and law enforcement from the government is necessary.
- Improving the research on the design of affordable housing that meets the characteristic of the target groups, an alternative solution of low cost and sustainable building material and technology. Design and culture are interrelated, application of cultural approach in designing housing typology that encompasses the traditions, beliefs, complex ways of living, value systems, and habit of the community, could produce something humanized and valued by the people.
- Affordable housing for the low income, particularly for the case of resettlement people, could vary in design typology and not just *rusunawa*. Adopting housing continuum concept to respond different phase in the housing career, means there should be options or an alternative of housing supply that meet the demands or the needs of the people, such as different typologies and tenure options.
- Empowering programs should be continued, especially the business or training skills which can create job opportunities.

7.3 Research Approach Limitation

Author used two approaches in this study: (1) Sustainability assessment, and (2) Capabilities approach by Sen. As discussed in Chapter 3 that, this study did not conduct more in depth-interview or other participatory method with the residents which could legitimate the study findings.

Using sustainable framework is a simplification of the multidimensional reality of people lives and the *rusunawa* development. Another limitation is the questionnaire with likert scale questions have bias on respondents' perceptions. Respondents could have different higher appreciation or expectation on certain aspects.

The use of Capability Approach is focused on the impact of *rusunawa* toward residents' capabilities or housing freedoms. However, this study does not explore the attempts or interventions to improve the residents' capabilities or their alternatives for the new freedoms, although the interventions or improvement strategies are mentioned briefly in this study. Therefore, the nature of this research is more on previous and current state.

Author is aware that the data collected are not enough to draw a conclusion about the overall success of *rusunawa* project. Nevertheless, the data analysis could give reflection with the impact and trends that have identified in certain extent

7.4 Possible Research in the Future

Future research should elaborate the involvement of residents in the evaluation of *rusunawa* based on Capability Approach. The housing freedoms could be tasted to gain what housing functionings that the people really value. As discussed in the Capability Approach limitation, to deepen the study on how the people coping the situation or intervention would give a better understanding about the well-being of the people and the effectiveness of *rusunawa* program.

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Appendix
Appendix A

Table 1. Key Quotes of from the book *Menulis untuk Mengingat: Catatan Penghuni Rusunawa Jatinegara*, translated into "Writing to Remember: Note from *Rusunawa* Jatinegara Residents"

No	Author	Age	Code	Page in the book	Key Quotes
1	Heriyaneppi	early 50s	A1:1	18	*"Usually our neighbors were always open like we ate "bancakan" together. Now, something like that is just a memory. When I needed to go somewhere, we could leave our children to each other to my left and right neighbors…Neighborly relationships are already rather formal."*
			A1:2	19	*"I hope that the government can make this rusunawa become rusunami (ownership) where the rent that we pay each month will also be our installments for the payment. Water and electricity bill has become our responsibility, although the water tariff of IDR 5,500 per cubic is very burdensome."*
2	Zulfa Zam Zami	12	A2:1	23	*"When I was in Kampung Pulo, I studied together. Many children studied together. Now, I study by myself in rusunawa."*
			A2:2	23	*"...I also cannot play. I used to play jumping rope in Pulo. But until now, I never play anymore…I want to touch the ground again like in Kampung Pulo. I cannot running around in rusunawa because there are many columns."*
3	Koko Wahyu	40	A3:1	45	*"We create resident forum to gather residents … We want to unite the residents between the two towers … All of the things that we have doing are for the people benefit, but there are many obstacles … The forum is going very hard. Slandering each other … conflicts between residents. But we believe all these are the beginning of the step for kindness and success steps to unite the residents in RJB."*
			A3:2	44	*"We had a simple house, but we owned it – rather than a tall and luxurious building which we rent. … Now we are given a warning letter and are banned from trading in front of the house we live in. But the majority of Pulo's citizens are traders!"*
			A3:3	45	*"Children need a place to play outdoors, like we had in the old home, where they can run free. Though there are playground facilities provided by the organizer, they are not maintained and protected."*
			A3:4	44	*"…On the media, government looked improving the welfare of the people. But we are as the victims of the eviction, have different experiences. In the previous place, we are very easy to make a living without many difficult rules. Just open the door and put the table, money can be generated. It is different case now. In rusunawa, it is very difficult to make a living by selling because too many burdensome rules."*
4	Ade	30	A4:1	48	*"… Living in this beloved rusunawa, we have to think about the rent, electricity, and water for cooking and drinking (one gallon worth IDR 18,000 for one week's use) … water in rusunawa is obtained from the distillation*

					process, it taste less good. When the water is used to bathe, my skin is itching. … Yet in Kampung Pulo I never had a problem with the skin. Despite the flood, ground water in Kampung Pulo was very clean and tasty to be cooked or drunk. I also have never experienced problems with the skin if the water was used for bathing. Is the water in rusunawa really appropriate for bathing, washing and cooking?"
			A4:2	49	*"I am a private employee and I am grateful that I am still able to work and gain some money. But whereas my salary used to be enough for daily expenses and I still had some for savings, since my family and I moved to this housing my salary is used up in rent, electricity and water. If you do not pay, you get a warning; after a third warning letter, you will be evicted. If that happens, where would we stay? Would we have to live on the street?"*
			A4:3	48	*"I lived beside my parent's house in Kampung Pulo. Now, I live so far with my parents, I live on the top floor, while my parents are in the below floor. I am so worry about my parent, when they are sick or his asthma attack happen, I am so worry that I would not know… and the elevators often break down as well."*
			A4:4	49	*"How long will we all have to stay in this housing and pay rent? Our whole lifetime? The contract contains a clause stating that the use of this building is only for up to 20 years, and every two years we have to sign an extension. After 20 years, would we be moved again?"*
5	Fara Difa Ramadhani	11	A5:1	28	*"Water in rusun smells chlorine although we pay. The water also cannot be used for cooking. So, we have to buy gallon water for drinking. We have to use the water less so we can save. While in Kampung Pulo, the water was free and could be used for cooking."*
6	Iwan	40	A6:1	40	*"I think of life in the new towers compared to our previous life in Kampung Pulo as like taxis compared to* bajaj *(rickshaw). As soon as you open the taxi door, the meter starts running – but with bajaj you can always bargain…My life in the new housing is more luxurious, like in a castle. … My income has fallen sharply. In the kampung, we could trade freely. There were no rules. There are so many rules here."*
7	Uming	60	A7:1	15	*"Living in rusunawa is much more difficult. I no longer have a job, especially at the age of 60s. Every day, I just rely on the help of my children."*
8	Ida	Mid 40s	A8:1	36	*"Our lives is so hard now and we have to spend so much money. But we also feel comfortable here because it is far from the flood…. It is not our intention to mourn our difficult lives. But we want to have a better live."*

Appendix B

Questionnaire to Household

1. Block/Unit No
2. How long have you been living here?
3. How many people live in the unit?
4. How long is your current contract?
5. How many people (including yourself) in your household fit in the following age groups?
   - 0-4
   - 5-17
   - 18-34
   - 34-54
   - 55-64
   - 65 older
6. Where do you come from originally?
7. How long have you been living in Jakarta?
8. What is the main source of income of your household?
   - Wages/salary
   - Age pension
   - No income
   - Other (please specify)
9. What is your household's earn per month?
   - < 1.200.000
   - 1.200.000 - 1.800.000
   - 1.800.00 - 2.100.000
   - 2.100.000 - 2.600.000
   - 2.600.000 – 3.100.000
   - 3.100.00 – 3.600.000
   - 3.600.000 - 4.200.000
   - 4.200.000 – 5.200.00
10. What is your household's monthly rent?
11. Is the rental cost affordable for you?
12. What is your household's expenditure per month?
13. What is your household's spend on water per month?
14. What is your household's spend on electricity per month?
15. What is your household's spend on transportation per month?
16. Do you or any other member of your household own a car/motor cycle?
17. Do you or any other member of your household own AC?
18. How satisfied are you from the following features of *rusunawa*:

Questions	Very satisfied	Satisfied	Neither satisfied	Dissatisfied	Very dissatisfied
The way you are treated by the housing provider's staff					
The overall design of *rusunawa*					

The overall condition of the inside of your home					
The overall condition of the outside of your home					
The amount of privacy your home has					
Safety in your home					
Exposure at home to noise from outside					
Access to natural light at home					
The overall condition of the building, including public areas					
The maintenance service you have received since moving					
Ability to make adaptations to the inside of your home when needed					
The social atmosphere in the housing project					
Your overall satisfaction with the location of your home					

19. How satisfied are you from the availability, accessibility, and quality of the following services in your local area?

Aspect	Very satisfied	Satisfied	Neither satisfied	Dissatisfied	Very dissatisfied
Security					
Community events					
Health service					
Libraries and information services					
Park, gardens, and playground					
Sport and recreation					
Mosque					
Parking					
Youth services					
Public transport					

20. In the last three months, have you been involved in any of the following activities?

- ☐ Sport/recreation group
- ☐ Religious group
- ☐ Art/craft group
- ☐ Environmental group
- ☐ Seniors group
- ☐ Neighborhood residents association or committee
- ☐ Other (specify)

Thank you for your time!