Community empowerment strategy by sustainable built environment planning in Urban Kampong

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Abstract. Almost all big cities in developing countries have low-income people who live in Urban Kampong. The poor people live mostly near the city center and occupy vacant areas within the city. It is obvious that the low-income people in urban area have to deal with minimal infrastructure facilities in their settlements. They have to live with bad access to the main road, bad environmental quality, and lack of playgrounds for the children, etc. Many positive aspects that can be found in low-income settlement, if they are observed carefully without having negative prejudice before. Those positive aspects are the creative process of the inhabitant for struggling. Since relationship among the inhabitant is quite close, public spaces are necessary for them, because they use them as a place of communication. Besides, the creativity in building their house mostly with used materials make their housing types unique. As a development approach, the way the poor people develop their housing areas can be formulated as strategic approaches for empowering the inhabitants as well as improving the built environment in which the low-income people live. This paper will explain a research in low-income settlements developed in Yogyakarta city.

Keywords: empowerment, low-income, urban areas, public space, sustainable

1. Background
Globally, there are so many people live in urban area, even more than in rural area. 54 per cent of the world’s population was residing in urban areas in 2014. Continuing population growth and urbanization is projected that by 2050 the world’s urban population will increase 2.5 billion people and 90% of them is concentrated in Asia and Africa. Within those two continents, there are many developing countries including Indonesia in which the growth of their big cities is so fast. Since urbanization continues happened in the world, the challenges of sustainable development will be concentrated in the city specifically in the lower and middle – income countries.[1] The development of cities in Indonesia also cannot be separated from the urbanization process caused by urban attraction and rural driving force. One of the cities in Indonesia influenced by the urbanization process is the city of Yogyakarta. As a city of education, culture, and tourism, Yogyakarta becomes a destination for residents to continue their further study as well as visits to tourist attractions. Thus in certain months, many tourists visit the city of Yogyakarta. Also at the beginning of the new school year, there will be a lot of new temporary migration residents who will continue their education to a higher level. [2]
1.1. Push and pull factors

In general, population growth caused by both birth and migration from rural or small town to big city influences the development of the city. One of the main causal factors underlying the urbanization process is the migration of rural to urban areas often referred to the push and pulled factors. The push factors coming rural area are usually poverty, infertile soil, lack of employment, etc. While the Pull Factors of urban areas is more entertainment, job opportunities. This urbanization process often causes city density becomes higher than before.

Because of push and pull factor phenomena population density within Yogyakarta city increases gradually. The migrants who have enough money and skill they can struggle to live in the city. Whereas the poor migrants who do not have any skill will find the cheapest place to live. They will find the cheapest and smallest house to be rent in Kampong settlement available along the riverbanks. According to field research, there are many low-income housing areas developed along the riverbank which pass the city of Yogyakarta. The environmental quality of those housing areas is mostly bad, especially around the housing areas.[3] Table 1 explain about the poverty development of Yogyakarta Municipality.

| Table 1. Poverty development in Yogyakarta Municipality. |
|----------------------------------------------------------|
| Variabel Kemiskinan (Variable of the Poverty) | Kemiskinan Kota Yogyakarta (Poverty in Yogyakarta Municipality) |
| Garis Kemiskinan (Poverty line) [Rp/Kap/Bln] | 2009 2010 2011 2012 2013 2014 2015 2016 |
| Jumlah Penduduk Miskin Poor (Population Number) (dalam (in) 000) | 45.3 37.8 37.7 37.4 35.6 35.6 36 32.06 |
| Persentase Penduduk Miskin (Percentage of Poor Inhabitants) | 10.05 9.75 9.62 9.38 8.82 8.67 8.75 7.7 |

Source: BPS Kota Yogyakarta (https://jogjakota.bps.go.id/linkTableDinamis/view/id/21)

1.2. General overview of Yogyakarta municipality

Yogyakarta is located in the valley of three rivers: Winongo, Chode, and Gajahwong River. The position of Yogyakarta Municipality is about 112 m above sea level. Although located in the valley, the city is rarely flooded due to a well-built drainage system built by the colonial government, coupled with the intense placement of waterways by the municipal government of Yogyakarta. Based on the Population Census of 2013 the population number of Yogyakarta city was 402,679 people, with the proportion of men (195,712 inhabitants) and nearly equal women (206,967 inhabitants). Yogyakarta is known as a student city, because almost 20% of its productive population are students and there are 137 colleges. The city is colored by students and students from various regions in Indonesia.[4]

Generally within Yogyakarta Municipality, there are 3 groups of society namely high, middle and low income groups. [5] Middle to high income groups have no problem with their settlements, because they have enough money to buy a house in a formal housing market. While low-income people do not have enough money to buy a house in the market. Therefore they often occupy vacant areas along the riverbanks or rent rooms in the urban kampong settlements that thrive also along the riverbanks. Currently along the 3 riverbanks that pass through the city of Yogyakarta many houses are developed in urban kampong settlements inhabited by low-income communities.[6]
Based on residential research in some parts of the riverbank in Yogyakarta municipality, a lot of families working in informal sector. In accordance with the statistical data obtained from the questionnaire, the largest percentage of the average population living on the riverside is those who earn less than 1 million per month. While the second largest percentage is the people who have income between 1 million to 1.5 million rupiah per month. Most of them, both husbands and wives, work in the informal sector. With limited knowledge of economics, education and information, people develop their housing areas along the riverbanks. Since the environmental quality of riverside settlements is very bad, the local government is trying to improve the environmental quality of their settlement. Development programs implemented in some parts of the city's existing riverfront areas are known as Neighborhood Development or Penataan Lingkungan Permukiman Berbasis Masyarakat [PLPBK].

2. Characteristics of Urban Kampong Settlement in Yogyakarta

Almost all urban kampong settlement inhabited by low-income people cannot be seen directly from the main street, because the settlement is developed behind a formal housing or/and shopping areas.
and can be seen clearly from the bridge. The pattern of the settlement is linear following the flow of the river. All houses faced the kampong street and the back of the houses were facing the River. With this situation the inhabitants could easily throw away their garbage directly to the river. Therefore the environmental qualities of the riverbanks, in which the settlement exists, were very bad. There was so much garbage under the back of the houses.

Based on the field observation in several urban kampong settlement in Yogyakarta, the public open space in the settlement is very important for the social life of the people. All of the society members like the children, youth, women and men, always have social interaction in the public space. Especially for children, the public open space has a special meaning for them to play and express their creativity. Sometimes if there is no informal public space within the settlement, they carry out their activities on the kampong road or pathways. Besides, the open spaces are very necessary for the settlement with dense built-up areas, because they function as a place for air circulation.

![Figure 3. An example of densely housing areas along the riverbanks in Sub-district Gowongan – Yogyakarta Municipality.](image)

The characteristic of urban kampong settlement is high building density, and the position of one house to the others is quite close. Sometimes sunlight cannot through the houses, because the roof of the houses are connected each other. There are certain pathways often passed through by the inhabitants. The other small pathway like alleys or alternative small ways called “mouse path” can connect to main pathways or even to the main roads. The roof form is dominated by the simple form of “kampong” and “panggang pe” roofs. The other forms, like Limasan, Tajuk and Joglo, have been found only on a few houses.

In the case of low-income settlement in Sub-district Ngampilan developed along Winongo riverbanks, there are few informal open spaces within the settlement which are used intensively by the inhabitants. Since the open spaces are few, the inhabitants use the kampong street as an open space for carrying out their daily activities. Social interactions were carried out in informal public open spaces. Some small open spaces developed spontaneously can be seen within the settlement and the inhabitants use the open spaces very intensively. The architectural typology of the houses in the low-income settlement is relatively simple with a quadrangle ground plan and the building orientation is towards the kampong’s pathway or to public open spaces.

![Figure 4. Some facilities like kampong road, alley, and informal public space available in urban kampong settlement in sub-district Ngampilan, Yogyakarta Municipality.](image)
3. Development Approach in Urban Kampong

The development planning approach implemented in Urban Kampong Settlement in Yogyakarta is a development approach which empower the community. This approach is done by inviting the community to jointly identify the problems and find a common solution as outlined in the planning development of urban kampong settlements.[7] In this planning process the community is accompanied by facilitators who are expert in engineering, social and economic. Since the local community has been involved from the beginning of the process, it is hoped that after the program has been completed, the community will independently maintain the facilities that have already built and also continuing the development process which has not been implemented yet.[8]

In general, this planning approach is focused on two main aspects called physical aspects of settlements and social aspects of the community. By the physical aspect of settlement, planning process that empowers the community is done to build infrastructure and waste treatment, repair and development of roads, and develop public open spaces. In this physical aspect, long-term planning is focused on large infrastructure works that require a greater cost also. Funds for this long-term program are expected to be derived from the national level (APBN). While short-term planning is focused on the simpler things that do not require large funds such as renovation of bad quality houses, small-scale infrastructure improvements. Funds for short-term programs are obtained from self-help communities and development funds from local governments (APBD).

![Development Approach in Urban Kampong](image)

**Figure 5.** Development approach with the strategy of “Advocacy Development Planning for and with the Poor” implemented in urban kampong settlement of Yogyakarta Municipality. Source: Private Documentation

The social community development plan focuses on the empowerment of people living in urban kampong settlements. Long-term planning is focused on assisting primary school-aged children from early childhood to junior high school. Planning for early-stage school children is preparing children to live in settled neighborhoods. Matters relating to the maintenance and development of settlement facilities are the focus of facilitation in early-stage school children. This long-term mentoring process takes place indefinitely until children reach adulthood. As they grow older, they already have a high awareness to live in a healthy, sustainable environment. Short-term planning for social community focuses on the empowerment of the mature community in terms of maintenance of built-in facilities and the development of the family economy tailored to the skills and expertise of the adult community. It is expected that with the improvement of the family economy, the ability of the
community is high enough to send their children to higher education level until undergraduate degree. Thus the insight of children who have been accompanied early on become more widespread and can maintain a residential environment where they are familiar to the environment.[9]

4. Empowering the Community through Sustainable Built Environment Plan

The process of community empowerment carried out in several urban kampong settlements in Yogyakarta is done simultaneously by making the development plan of urban kampong settlement. This empowerment process is done through the Ministry of Public Works - Directorate General Cipta Karya with the name of Neighborhood Development [PLPBK]. This PLPBK program involves all community who are willing to work for the development of their own settlements. This PLPBK program begins with socialization of the program, build vision and mission, self-help mapping, planning development, implementation and then marketing the plan that has already made by facilitators and community. In this program there is no development assistance after completing the whole program. So after the implementation has been completed, then the community should independently care for and develop a residential area without any assistance.

![Figure 6. Empowering the people through sustainable development plan focusing in community organisation in order to support any activities followed. Source: Presentation Mr. Parwoto – World Bank 2012](image)

From the diagram in Figure 5 it can be seen that the main achievement that must be obtained is the community organizing described in 3 big things, respectively: Financial Support and Social Marketing, Technical Assistance, and Legal Assistance and Management. Of the three great things the assistance and empowerment of the community is done in detail through Infrastructure Development, Renovating the Houses, Developing Institutions and Urban Renewal. In the four major activities undertaken in conjunction with the community, the facilitator must be creative in outlining the four major activities into applicable programs and able to encourage people living in Kampong Kota.[10]

There are some examples available in several Sub-Districts within Yogyakarta Municipality, Indonesia... In addition, housing development strategies done by low-income communities around the city center will be described including the methodology of Community Based approach that advocates the housing development from and for low-income people who live in urban areas. Through the approach above the inhabitants in low-income settlements may make design decisions as well. In principle, low-income people will be able to develop their housing areas in a sustainable way, if they are given a chance and also accompanied at the whole planning process.
5. Conclusion

Based on discussions that have been done on the previous chapters, it can be taken some conclusions related to community empowerment strategy by sustainable built environment in urban Kampong of Yogyakarta city. The conclusions that can be drawn among others are as follows:

- Community Based Approach with the strategy of “Advocacy Development Planning for and with the Poor” can give a guarantee that the involvement of the community is able to carry out the development plan for low-income settlement;
- Through Neighbourhood Development program, low-income communities in urban kampong settlements can easily recognize and understand the potencies and problems of their settlement;
- The opinion which thinks that a low-income settlement is the garbage of the city should be changed the other way around; it should see that the low-income settlement is a special housing area that has to be developed specifically;
- A development program by demolishing the low-income settlements cannot solve the poverty problems of inhabitants. On the one side such development program solves only a part of the city, but on the other side the program stimulates new low-income settlement in other parts of the city;
- The whole stakeholders should have a good hearth in order to help the poor in low-income settlement. Their involvement can help to implement the Community Driven Approach;
- The Creativity in handling the problems can be used as a basic strategy for improving the environmental quality;
- Transforming the spatial experiences of the poor into a sustainable development strategy can be carried out well, if the inhabitants are involved in the whole process of planning;
- The improvement of individual house qualities follows the development of public open spaces and infrastructure facilities which are developed earlier;
- Social infrastructure facilities are needed by the inhabitants for carrying on their social interactions.

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