Comprehensive Exploration of Public Space in Informal Settlement as a Tool for Sustainable Development Strategies

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ABSTRACT

As a human being the poor, who live in informal settlement has also a right to live better than any other well-off persons. Even though the government regards them as illegal, they demonstrate great ingenuity in developing their residential neighbourhoods especially in organizing the open spaces and construction of housing. To regard the poor not as a problem but as a solution requires a great honest heart, because it is quite difficult to appreciate the poor activities and creativities positively. Through understanding the daily life of the poor in informal settlements including their backgrounds, all individuals and institutions are able to be aware that such settlements have special characters which can be explored for generating the development strategies.

Sustainable development strategy for informal settlements can be carried out well, if the inhabitants are involved from the beginning of the process up to the implementations. Public spaces are the living room of the informal settlements - the place where people come together to enjoy the settlement and each other. Public spaces make a high quality life in the settlements become possible - they form the stage and backdrop to the drama of life. With exploring the effectiveness in using public spaces within the informal settlements, a strategy of urban upgrading in informal settlements without destroying the existing settlements can be carried out very well.

Key words: Informal Settlement, Space, Sustainable

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1. INTRODUCTION

In informal housing areas poor people develop their houses first with very simple materials such as pieces of cardboard, plastic, bamboo or wood. During certain times the housing area along the riverbanks grows spontaneously. Because the environmental quality within this area is poor, the government implements revitalization programs which often gets rid of the spontaneous settlements and move the people to other areas. Sometimes if the people refuse to move, the government forces them by burning or bulldozing the settlements. (ACHS, 2003) Since they cannot afford the price of formal houses developed by the government or private developer, they will try to find another vacant area and then build again their huts informally. According to the experiences explained above, it shows that to demolish the informal settlements does not solve the problems, but it stimulates the growth of informal settlements in other areas.

There are many definitions of a squatter settlement or informal settlements. It depends on a variety of defining parameters used in many different countries. In general, it is considered as a residential area in an urban locality inhabited by the very poor who have no access to tenured land of their own, and hence "squat" on vacant land, either private or public. (Srinivas, 2008) In all informal settlements the inhabitants live without having a legal land certificate and building permission for their houses. Nevertheless there are many families, who pay retribution to local government in regard to their living in the area of local government. Therefore they have objections and do not agree, if the government or other institution says that they squat the vacant areas within the cities, because actually the local government knows that the poor and their informal settlements exist in parts of their city.

In 1948 the United Nations declared Universal Declarations of Human Right. With those declarations the United Nations hoped that the world situation including the human right could be improved very well. In reality there are many problems with Human Right created by the governments, institutions, or even by individual person. The worst situation is that the percentage of poverty in the world increase tremendously. To fight the poverty improvement in the world, the United Nations declared United Nation Millennium Declaration in 2000 and afterward the realisation of the declaration is in a form of Millennium Development Goals 2015.

Based on the Millennium Development Goals, the global attention concentrates to overcome the world poverty, starvation, lower education, gender equality, and health problems especially AIDS. Those problems mostly happen in slum areas and squatter settlements, where the poor lives in the cities of developing countries. (United Nations, 2006) Since the worst environmental quality within the city is mostly in slum areas and squatter settlements, many people including the government officers and private
Institutions have an opinion that the slum areas and squatter settlements are the garbage of the city which makes worsening the image of the city. Therefore there are many urban planner and designer, who change the slum areas and squatter settlements into a more beautiful area according to their interpretation.

The interpretation of the worth “beautiful areas” is often influenced by the background knowledge of the experts and their experiences in visiting European and other industrial countries. It is no doubt that the output of the planning and design created by the experts is usually an ideal city planning and design like the cities in Europe, USA, Australia or any other developed countries. Thus the slum areas and the squatter settlements will be destroyed and replaced with the luxurious buildings, supermarkets, garden of the city, which are actually enjoyed only by the people from the middle to upper class.

2. THE CONSIDERATIONS OF INDONESIAN GOVERNMENT FOR THE INFORMAL SETTLEMENT IN URBAN AREAS

The Indonesian government pays attentions to the poor people, who live both in rural and urban areas. Since the poor in urban areas live in informal settlements, the government always try to help them with many housing developments for the poor. According to the written regulations the Indonesian government helps the poor and developing their informal settlements which are developed in the city center. The government attentions can be recognized in Indonesian Constitution 1945 (UUD 1945), governmental regulations, up to district regulations implemented in all of Indonesian areas. It is clearly written in the constitution 1945 section 34 that the poor or the needy and the neglected children will be protected by the government. Besides in the amendment of the constitution 1945 section 28A up to 28J made in 2000 it is clearly written that the human basic right is protected and raised to be a base of making the other government regulations.(MPR – RI, 2000)

Based on the observation, the problems of the informal settlement begin to appear when the local government considers the informal settlement as a bad image of the city that must be removed. In fact the informal settlement has been developed up to the second generation or more than 15 years. They have already been root socio-culturally and economically, even psychologically in that area of the settlement. By removing the settlement, in one side the local government tries to beautify the area based on the concept of beauty idealized by the city planner and the staffs of the local government. On the other side, the local government stimulates indirectly the appearance of the informal settlement in the other areas, because the grass root people who are not able to buy a formal
house will look for another empty area in the city centre as their place to build a new informal hut. Besides, the local government self has violated the most basic regulations, the constitution 1945 section 34 and the amendment of the constitution 1945 section 28A till 28J about taking care of the poor and the needy and the implementation of the human right.

For the low income people especially the lowest level group (grass root people), they don’t have any possibility to negotiate with the local government, when their house must be destroyed for the implementation of master plan of the city. They are very poor and most of them just have a basic education. So that it can be understood if most of the grass root people do not have an access to the information and they do not absolutely know about the human right. When there is a forced condemnation of their house, they just accept it without thinking about their right as a human being.

By regarding the poor as partners and not as problems, community responsibility, accountability, and development can be returned to the community itself. Besides a more responsive and sustainable system of urban environmental management implemented can also be returned to them. To regard the poor not as a problem but a solution requires a radical change in thinking, and in expectation, because mostly the experts always think that their knowledge is the best and if the poor follow their instructions, their welfare will be improved well. In reality the poor knows more very well what they need and what they want compared to the experts. Hence to develop informal settlements it is better to involve the inhabitants and try to stimulate them in order to know the problems they face and the potencies they have. It benefits the urban environment, and it benefits every section of urban society. It also provides these sectors with an increased understanding of the pressures and needs under which each much operate. Most significantly, however it makes it clear that every inhabitant of the city is a stakeholder, and as such has something unique and important to add to the process of development in the city. (Cody, 1996)

3. THE CHARACTER OF INFORMAL SETTLEMENT IN THE CITY

The informal settlements grow almost in all big cities in developing countries. The character of these settlements is quite interesting, because they develop spontaneously without any planning. To understand the character of such settlements, it is better, if we know the socio-culture of the people and the spaces in which they carry out their daily activities. The following explanations are taken from several case study in Indonesian cities like Medan, Yogyakarta, Malang and Surabaya.
3.1 The socio-cultural character of the people living on the riverbank

By paying attention to the economical situation of the low income people living in slum area, it can be understood that they are hard workers, who are persevering in looking for their basic necessities of life for their family. Not only the husbands who work for his family, but also the wives work to help their husband for additional incomes. Their dependence to the centre of city bustle is very strong, because from the centre they can get their income everyday. They work as a street vendor, becak drivers, second-hand collectors or sometimes they work as a Barker. Usually their income per day can only be spent by the whole family in one day. This means they cannot save their money for other purposes like buying a new cloth, buying or renting a formal house, and sometimes they cannot send their children to the high education. Therefore there are many young people, who cannot continue their study in higher education, because their parents cannot afford for their school. They have to help their parents and automatically they will work in informal sectors.

In the case of informal settlement along the Deli and Babura riverbanks in Medan, the inhabitants live behind the formal housing and commercial areas. The settlement cannot be seen from the street. From the graphic below it can be seen that the main job of inhabitants both for the husband and wife is in informal sectors. The highest percentage (45%) of monthly income of the inhabitants is about Rp. 250,000,- to Rp. 500,000,- There also families whose income is more than Rp. 1000,000,-, but they are only 2%. [see Figure 31.1]

Figure 1. The Percentages of Job Types and Monthly Income of the Inhabitants living in Informal Settlements along the Deli and Code Riverbanks, Medan – North Sumatra

[Diagram showing the percentages of job types and family incomes]

**EXPLANATIONS:**
- A = < Rp. 250,000,- ( < 25 €)
- B = Rp. 250,000,- (25 €) – Rp. 500,000,- (50 €)
- C = Rp. 500,000,- (50 €) – Rp. 750,000,- (75 €)
- D = Rp. 750,000,- (75 €) – Rp. 1,000,000,- (100€)
- E = > Rp. 1,000,000,- ( > 100 €)
This case is quite interesting because the percentage of wife and husband who work in informal sectors almost similar, but the percentage of housewife in the settlement is more than the retired and unemployed men. This means during the day time, in housing area mostly the woman are more than retired and unemployed men.

The inhabitants in informal settlements are very heterogenic and mostly they come from other cities or regions, which are more than 60 km from the settlement where they live now. Although the people in informal settlement come from different regions, they can live together in harmony. It can be showed, when one family needs help, many other families will extend their hand to give their help. The relationship among the people living in the informal settlement is very close and it is not limited by the difference of ethnic group, religion and race. One condition that can unite the socio-cultural of the inhabitants in informal settlements is that they belong to the low-income group who works in informal sectors.

3.2 Settlement Pattern and Building Architecture

Building density in informal settlement is very high and the position of one house to the others is quite close. It is very danger, because if there is a fire in one house, the fire can spread out to the other houses easily. [see Figure 2] Mostly the settlement pattern in the settlements formed from the circulation is seen untidy. There are certain pathways often passed through by the inhabitants. This path could be the main circulation of the settlement. The other small pathways like an alleys or alternative small ways called “mouse path” can connect to main pathways or even to the main roads. The pathways are spontaneously formed as a consequence of house developments in the settlements done without planning.

Figure 2. Several Roof Form of non Permanent Houses Developed along the Riverbanks of Babura River in Medan
Houses in informal settlement have different characters, even though in general it can be distinguished as a permanent, semi permanent and non permanent building. The architectural typology of the houses in informal settlement is relatively simple with a quadrangle ground plan. The building orientation is towards the Kampong’s pathway or to public open spaces. There usually has two entrances to the house; main entrance is located in front of the house and side entrance is located in the back of the house. Because the land is very limited, the people build their houses as efficient as possible and it is adjusted to their needs.

The roof form is dominated by the simple form of Javanese roof style such as “kampong” and “panggang pe” roofs. The other Javanese roof forms like ‘Limasan’, ‘Tajuk’ and ‘Joglo’ can be seen just on few houses. Generally the house with the complicated form of roof is owned by the upper low and middle income people. The wall of the house is made from the very simple material like carton, plastic and bamboo. Several houses have brick walls and sometimes with good finishing. The floor is made from board or from bamboo, cement, tile, ceramic or maybe just from soil without finishing floor.

Rooms inside the house are varied from simple arrangement with only one room till the house with the rooms divided complexity. Generally the room arrangements are divided into a public room, like terrace, and the guestroom in front side; the bedroom, the workroom and dining room are in the middle part; the kitchen, bathroom and washroom are located in the back side of the house. For the grass root people, they use the rooms in their house very flexible, because they have only one or two rooms in their house. They use the front room as a living room, work room, bedroom and also for dining room. If the upper low-income to middle income people have a lot of family members, they will also use the rooms more intensively and very flexible like the grass root people.

### 3.3 Public Open Spaces and the Circulations in the Settlements

The open space in informal settlements has been formed spontaneously, because the houses are developed without any planning. The spaces do not have certain patterns and form, but the inhabitants use the open spaces very effectively. From the field observation, it has been obtained that there are some circumstances, which stimulate the activity of the inhabitants in open spaces or on the Kampong’s pathway. One of them is the availability of the open space as an orientation of some houses. By facing to the one open space, the communication and the social interaction among the families living in the houses can be involved well. [See Figure 3] Generally the open space that explained above will be used effectively by the inhabitants: children, young man and adults. They use the open space within the settlements with time sharing or they use the open spaces by turns.
The availability of infrastructure facilities in open spaces can also stimulate the social interaction of the inhabitants. The technical infrastructure facilities which can stimulate the social interaction are public water tap, public well. Whereas the social infrastructure facilities which stimulate the social interaction too are guarding house, food stall, mushollia (small mosque), etc. Those infrastructure facilities above can often rouse the
activities of the people in order to make a social interaction and communication among them.

Based on the field observation, the open space in the settlement is very important for social living of the people. By observing the socio-culture of the people living in informal settlement, it can be seen that all of the society members like children, young people, women and men, always have social interaction in the open spaces. If there is no open space in the settlement, they will carry out their social interaction on the public pathways near by their houses. For the children the public open spaces have a special meaning, because they play and express their creativity within those spaces. In spite of this, the open spaces are needed very much for the settlement with dense built-up areas, because the spaces have a function as a place for air circulation in the settlement.

The facilities related closely to the public open space in informal settlement are the Kampong’s street connecting the houses and open spaces available in the settlement. Like open spaces in informal settlement, the street have also been formed spontaneously, because of sporadic development of the houses. The streets have no certain form and size. Nevertheless the street often passed through by the inhabitants can be categorized as a main local Kampong’s street. The main Kampong’s street is usually wider than other connecting pathways or mouse paths. The width of the main street is about 1.5 – 3 meter and the connecting pathway is about 0.75 meter. [See Figure 4]

![Figure 4. Typology of Alleys between Houses in informal Settlements](image-url)
In the case of informal settlement along Wonokromo riverbanks, there are not so many informal open spaces, because the houses were developed in linear pattern directly following the kampong street. Small informal open spaces are located between the houses. Since the open spaces are few, the inhabitants use the kampong street as an open space for carrying out their daily activities. In the morning the woman look after their children, who play on the street and the young people playing chess and card also on the kampong street. The out door activity of the inhabitants is always carried out under the shadow of the trees, houses or any other buildings. [see Figure 5]

This situation explains how important the public spaces for the inhabitants in informal settlements.

**Figure 5.** Spontaneous Public Spaces within Informal Housing Areas along the Riverbanks
4. SUSTAINABLE DEVELOPMENT BY THE URBAN POOR

Understanding the activities of the poor in architectural space within the informal settlements is very useful for arranging development strategy based on the character and capability of the inhabitants. (Khudori, 2002) They can live with minimal basic infrastructure and they use all facilities very effective and creative. The examples mentioned in previous discussion shows how the people in informal settlements live with minimal facilities. Besides the poor people in informal settlements are mostly hard workers and usually they work with high motivation and perseverance, even though their income is very low.

Listening to the community may provide ways to improve the understanding about the socio-culture of the people and give bright ideas how to develop their settlement. Indigenous people demonstrate great ingenuity in developing their residential neighborhoods and in organizing the open spaces and construction of housing. Therefore their ways, plans, designs and building materials are often far better suited to local needs, incomes, climatic conditions and resources than the official, legal standards demanded by governments. To develop the informal settlements it is much better to involve the inhabitants in the development process.

To a large extent, the future city will be financed, built and shaped by people with low incomes—garbage collectors or scavengers. Shoemakers, peddlers, those making clothes, foods and crafts in their homes, maids, low-paid factory workers, shoe-shiners, market sellers and others. The people provide cheap labor and cheap goods and services on which much of the city's economy depends. But they are excluded from legal land and housing markets, legal health services and very often legal markets for water and transportation. (Hardoy, etc., 1990. p. 232)

Poor people demonstrate great ingenuity in developing these new residential neighborhoods and in organizing the construction of housing— even if government regards them as illegal. Their ways, their plans, their designs and their building materials are often far better suited to local needs, local incomes, local climatic conditions and local resources than the official, legal standards demanded by governments. Like in previous discussion, this is usually because official standards are derived from western models which have little relevance to local circumstances and take no account of local climate, local preferences and availability of local building materials. (Hardoy, 1989)

According to Indonesian regulation discussed earlier, the government should pay attention to the poor people including their settlements. Especially if the local government wants to make a master plan of the city, they must consider the informal settlements as a special area which has potencies to be developed. In other word the development strategies with
eviction or destroy the informal settlements have to be left behind. Of course other strategies to restrict or to limit the development of informal settlement in the city should be implemented, because it is better and cheaper to anticipate the development of informal settlements than to improve them.

If the urban poor in informal settlements is given a chance to develop their settlement, it is quite interesting to consider Seven specific recommendations on how to improve the human settlements of the world's urban poor. (UNHCS, 1996) Those recommendations are:

a. The supply of residential land
b. Sources of institutional housing finance
c. Improving access to, and affordability of, building materials for the urban poor
d. The opportunities for employment generation
e. Encouraging the availability of accommodation for rent with very cheap prize
f. Acknowledgement of the role of shelter also as a workplace
g. Encouraging partnership between governments, local authorities and communities

The first step to carry out sustainable development in informal settlements within the city is to change negative perception and opinion in seeing the informal settlement including their inhabitants.(Ribbeck, 2002) Afterwards the government or other institutions should have a good will to think that the informal settlement is a part of the city that has a specific character and has to give more attention. If the opinion and perception have been changed, the development strategy with standing beside the poor in facing their problems, understanding their potencies and capabilities can be implemented. Finally sustainable development for improving environmental quality in informal settlement can be achieved by the urban poor together with the local government or/and other institutions.

5. CONCLUSIONS

As a conclusion, there are several statements and ideas for improving the informal settlements derived from the discussions and explanations above. Those statements can be used for improving sustainable development strategy in informal settlements around the city center. Those statements are:

- The development program with demolishing the informal settlements cannot solve the poverty problems of inhabitants. In one side such development program solves only a part of the city, but in the other side the program stimulates the new informal settlements in other part of the city.
• The opinion which sees that the informal settlement is garbage of the city should be changed in the other way around; it should see that the informal settlement is a special housing area that has to be developed specifically.
• If the inhabitants are involved in the whole process of development program in informal settlements, the program will be sustainable.
• Transforming the spatial experiences of the poor into sustainable development strategy can be carried out well, if the inhabitants are involved in the whole process of planning.
• Using the spatial form of informal settlements as an orientation of making a plan for sustainable development strategy can make the process of planning faster and easier.
• 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.
• The environment quality within the informal settlements can be improved with planting several types of vegetation in public open spaces, and spaces in front of the houses.

6. REFERENCES

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