Conference Paper

Sub-Neighborhood Housing: An Alternative to Arrange Slums Areas. The Case Study of Kampung Cigugur Tengah, Cimahi

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Abstract

The ongoing slum upgrading program is encouraging to find alternative ways of slum area arrangement that better suit local characteristics. Studies indicate that managing slums in the size of a neighborhood has difficulties in consolidating private assets into communal assets because of particular social cohesion. A neighborhood in a slum area can be split into sub-neighborhoods that can be handled uniquely, and it is more manageable to share shelters and facilities assets because of immediate neighbors cohesion which bonding in a sub-neighborhood area. This sub-neighborhood segmentation is applied as the basis for the residential planning and design of slum dwellings in Kampung Cigugur Tengah, Cimahi City. Planning and designing processes adapt a linear process approach that is supported by contextual models to get special needs from the community. Because of the certainty of land tenure and the possibility of physical improvement of the environment, there is a tendency not to move from improved areas. Sub-neighborhood physical development plans and designs can increase the likelihood of successful implementation of slum improvement programs because of the simplicity of fund management and construction. There is relatively high attention to the design of sub-neighborhoods based on non-transferable asset ownership; the opportunity for increasing occupancy capacity and open space; and a better local environmental change.

Keywords: slum upgrading, sub-neighborhood, land tenure

1. Introduction

Actual Indonesian National Medium-Term Program Plan states that the realization of a city without a policy requires a strategic effort to restructure several areas. Until now, efforts still need to strengthen the collaboration between central government, local government, development partners and the community in handling sustainable slum settlement problems.

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Gilbert [1] indicates that a problem was encountered when slum upgrading in absolute measurement is due to the determination of is not always homogeneous in the form of services and characteristics of the population, resulting in disagreement between the city government and residents resulting in eviction and displacement occupant.

It is known that the upgrading of slum areas in neighborhood units with a relatively large scope is always linked to local livelihood issues. It is intended to minimize the units in the form of sub-neighborhoods so that the effectiveness of the range of development control can be achieved. The question is how do we create a sub-neighborhood where residents can manage their living activities by proper and legal standards.

Planning and design of sub-neighborhoods in the Cigugur Tengan area in Cimahi City, using an action planning and design approach involving target residents, conducted in three sub-neighbors located in one slum area. The planning and design process adopts a linear process of planning and design combined with contextual methods in decision making.

In the case of Cigugur Tengan Kota Cimahi, the handling of sub-neighborhood was conducted on land with ownership rights to create one housing area with multiple families. It is necessary to claim that the lot to be repaired is a legal place so it will not be evicted and the land development is legal according to the municipal act. By studying the various circumstances and possibilities of sub-neighborhood development, it is hoped that the concept of upgrading in certain area can be initiated the improvements without eviction in other slum areas.

2. Literature Review

Regulation of the Minister of Public Works and Public Housing in 2016 on Improving the Quality of Slum Housing and Slum Areas leads three treatments to improve the slum area, namely renovation, renewal, and resettlement. In the process of restoration and renewal of slum areas will be related to the factor of land rearrangement.

Some cases indicate a lack of successful land restoration due to the reduced land area, but this process can increase the value of land due to the availability of residential facilities and infrastructure built in conjunction with the realignment of the land. The process of restructuring the land required the mobilization of resources that provide opportunities for the development of the slum area concerned. The redeployment of land tenure is deemed to have more benefits because in the process it requires the delivery of land for common purposes.

Nakamura [2] reveals that the benefits of legal and formal land are: First, the legal land provides certainty for refusal to be evicted. With the existence of land security, the residents have more motivation to improve the quality and quantity of their homes and environments [3–5]

Second, in the housing market, the legal land will facilitate trade with certainty and uncomplicated. Residents will be eager to improve their houses as the value of assets will increase, while the housing market mechanism provides certainty and ease in obtaining funds from financial institutions [6].

Third, legal and formal lands will have more opportunities in the provision of urban facilities and utilities. So it will add value to the land. At the same time, residents have the chance to get help from the municipality to increase their investment capacity in the form of houses [7].

In Indonesia, Sometimes even though the land is already property rights but people still consider land ownership is still illegal. Or an area that is actually illegal but provided legal facilities and infrastructure by the city government. So there is an ambiguous understanding of the slums. Thus, the legal status of the slum is a strong determinant of the price of land and houses in its cluster [8, 9]. Also, the strengthening of investment in housing is in line with the availability of residential infrastructure which will also strengthen the selling point in the urban housing market [10].

In this case, slum dwellers still invest in various home improvements due to the certainty of land tenure — public infrastructure existence. Public authorities hesitate to provide infrastructure support if the settlement is illegal. On the other hand, infrastructure investment has a positive effect on land value. In certain circumstances, there is a negotiation between residents and city government to build facilities and infrastructure of settlements in the slums [11].

A land adjustment will form a common advantage. Owners can take the initiative, participate in the process of re-allocating land and getting their property and home back. The structure of the control of the area is maintained with the improvement of environmental quality and the development of the quality of public services. Also, because residents can live in the same area, then social capital can still be maintained.

In terms of slum area management, community participation can be involved in the process of identifying common problems and community capacities; selection and deciding alternative solutions to deal with slum settlement issues; solving problems, and the process of evaluating the changes. Community participation can be used to strengthen the acquisition of information about the conditions, needs, and attitudes of local communities. The community will trust the project or the development program

if they feel involved in the preparation and planning process, as they will know more about the project and will have a sense of ownership of the project.

The size of slum areas is a problem because the reorganization of land requires the availability of public space. Most of the existing public spaces are not following city standards on public space. The community's rejection of the rearrangement of land in slum areas was also triggered by a reduction in the size of the house for public space so that some of its plots could not meet urban space standards. On the other hand, for people who control large areas of land, it is likely that they will soon build and utilize re-established land [12].

In some cases, local governments have a negative view of slum dwellers. When there is a slum establishment on undeveloped private land, officials are unwilling to recognize the squatters as illegal administrative inhabitants. Currently, slum development is more focused on improving infrastructure and some touching home improvements. Handling land tenure issues are avoided as the land arrangement is still complicated.

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A feature of informal settlements is that they do not have a standard set of rules in terms of building and developing their housing and provision of supporting infrastructure for activity. Inhabitants of informal settlements have an attachment to other residents who are not tied to the limits of the land they own only (the lot) but also the space around the perceived home it can handle [13]. These spatial boundaries form 4 segments of space, namely:

1. occupied the dwelling

2. occupied land (plot)

3. immediate housing environment

4. neighborhood unit.

The neighboring unit of a dormitory, also known as the neighborhood unit, has many different meanings. Galster [14] defines a neighborhood as a place with physical and symbolic boundaries where people easily reach without the means of transportation and residents form a particular social

3. Planning and Design Approaches

The process of housing planning and design uses the linear planning process (Sequential Model) approach by looking at specific contexts (Contextual Model) [15] in Cigugur Tengah area. Sequential Model in the planning process is one of the strategic choice model processes. The process of designing the area begins with identifying the goals and relationships between these goals. Then look for the most priority needs as a strategic need following the priority level. Next, choose a plan to improve the housing environment that is most suitable for the slums in Cimahi City. This selected plan is then juxtaposed with the desired goals and objectives at the beginning. The planning process of the Cigugur Tengah slum area also uses several planning approaches included in the contextual model in planning. Evaluation of the area handling program is carried out in planning and design because the implementation has not been carried out.

The indication phase of the target of improving the slums in Cigugur Tengah is carried out through physical improvement of the environment with participatory decision making between the local government and local community leaders. It is expected that the Cigugur Tengah settlement area can be repaired physically into a decent settlement without eviction. Physical improvement of the building is expected to be a multi-story building that can provide open space and a place for residential facilities and infrastructure. The main priority of regional development is to get adequate housing and can accommodate local social and economic activities.

The selection of plans and designs for slum improvement is carried out in the form of expert discussions which are then informed to the public and city managers to get input and improvement. Contextual model is used in terms of deepening special needs at the site that the community still needs land tenure certainty which implicitly states that they do not want to move and can accommodate the whole family. Then the community in a small group (sub-neighborhood) determines in an open discussion, guided by the planner to determine the physical changes in the housing they want and need.

4. Sub-neighborhood Establishment

Sub-neighborhood planning and design were carried out in the "Cigugur Tengah" slum area which was one of the slums that received priority handlers from Cimahi City, Indonesia. The Cigugur Tengah has already received various slum upgrading programs. Hence the negative experience of these programs has led to resistance to new slum development programs. Land ownership which is a very strong individual right, causes the slum development process to get difficulties.

In several discussion sessions with the community and local government, it was concluded that the agreement to build the entire area would have problems in the management of land tenure, and the involvement of residents in the process of improving the area. The community still needs direct participation from the city government which becomes a property management. Some community groups who are enthusiastic about changing their residential environment and having legal land tenure access have priority in environmental improvement through planning and designing sub-neighborhood. The socio-economic characteristics of these inhabitants are as a basis for determining the community group, for the possibility of forming an institution that has special authority over the place it controls. Each sub-neighboring is a unique entity so that the handling is following the state of the properties it has.

The sub-neighborhood dwelling planning and designing method is based on the simultaneous adaptation of Participation Action Research [16]. Planners together with the community actively mapped the root of the problem, the search for solutions; planning and designing and then performing the act of construction [17]. The target population wants the integrity of the family's attachment to one area that is controlled jointly because their land is inherited from parents. Then, they need a legal document stating that they control the original land simultaneously. In terms of the composition of residential buildings, they want their own authority for one family to control one house, but for the components of services, the occupancy can be communal. At the time of the discussion on the determination of building designs from groups of dwellers who wanted to participate in sub-neighborhood residential planning activities, they wanted the building of houses to be built in the form of multi-storey buildings on the grounds of desire for open space.

Sub-neighborhood formation obtained 3 groups of families with unique group characteristics (Table 1). The land is a family-owned land with one source of clean water. This neighborhood segmentation in the base of one clean water sources is already well known in the local culture of Indonesia. In "*Tatar Sunda*" (West Java, Indonesia)

is known a thought about the level of shelter that can be managed by a person or family [18]. The level is "*batur sasumur*" with which can be defined as a family group that is bound by a clean water infrastructure in the form of a water well. This group has an agreement to get the program using a sub-neighborhood design method through several discussions and negotiations.

TABLE 1: Sub-neighbourhood characteristics.

	land Aspects	Physical Aspects
Location I	- 8 families (40 persons)	- shared clean water well
	- 3 active workers	- every family has a septic tank
	- Tanah girik (traditional ownership certificate of land)	- less lighting
	- no building permit	- Building quality is good
		- Density: 12 m^2 / person
Location II	- 4 families (14 persons)	- shared clean water well
	- 3 active workers	- every family has a septic tank
	- Tanah girik (traditional ownership certificate of land)	- less lighting
	- no building permit	- Building quality is not good
		- Density: 15 m^2 / person
Location III	- 4 families (16 persons)	- shared clean water well
	- 4 active workers	- No domestic sewage treatment
	- Tanah girik (traditional ownership certificate of land)	- Building quality is good
	- no building permit	- Density: 15 m^2 / person

Source: Field survey [17]

Houses design agreed with the occupants are: at Location I, the occupants agreed upon the change on the ground floor, from 483 m^2 to 288 m^2 so that there will be free space that can be used as open space. The residual land is also used for widening roads for primary access and widening of drainage channels. In the new design, there is room on the 1st floor that can be used as a small shop. The 3rd floor can be rented as a boarding house, helping residents to pay the installment financing installments. The second floor that can be used as a family residence, is planned to have an area of 288 m^2 while the 3rd floor is planned to have an area of 252 m^2.

At Location II, jointly agreed to change the ground floor area of 204 m^2 and 52.8 m^2 on the 2nd floor, turning to 136 m^2 on the 1st to 3rd floors. The residual land is used as a green lawn and open space. There is also a widening of a road on the main access road to the location. On the ground floor, there is a commercial area that can be used as a small shop. The 3rd floor can be rented as a boarding house as an investment.

Location III is an area located in the river border so that some of the lands must be used as a river. There was a reduction of ground floor area which was 219 m² to 114 m². The 2nd floor, which had an area of 92m², was reduced to 90m². The 3rd floor has the same extent as the 2nd floor. The remaining land is used for widening the road on the main access and open space in the form of a yard. On the 1st floor, there is a commercial area that can be functioned as a small shop. The 3rd floor can be rented as a boarding house for investment.

Three examples of sub-neighborhood restructuring provide opportunities for group economic development by providing the possibility of space and commercial space leases. The social and environmental development opportunity is the creation of an open space that provides opportunities for social interaction and environmental improvement. The opportunity for family economic development for family income sources can be used as a reference for regional economic development so that this region is possible to develop in line with the overall development of the city. The positive impact of handling the local economy in the sub-neighborhood is that residents do not need to move and can have the opportunity to live decent lives.

The land that was reorganized was a land with the status of traditional ownership certificate (tanah girik) of land which legally had high ownership security. If this land is used in accordance with the city plan, built legally and provided by residential infrastructure, it will have the opportunity to increase the value of the land. This fact causes residents to live safely on land with little risk of being evicted.

Land re-arrangement will regulate all previously unregulated landforms in terms of shape and location. This arrangement is done by shifting, merging, splitting, exchanging, arrangement, and construction of settlement facilities and infrastructures. This arrangement will establish a pattern of tenure, land use plan, operation and land use. [19].

By looking at the slum community activities, generally, the family only exist in one unit house. In fact, there is a family attachment between the nearest neighbors and forming smallscale domesticity of the inhabitants [20]. There is a direct relationship between the inhabitants who are in a narrow segment and then widen in accordance with the intensity of the indirect relationship with increasingly loosened links [21].

Agreement in small groups "sub-neighborhood" is not as difficult as the deal process in the slum area as a whole. The control of this case only involves a maximum of 8 families. Making a deal is very important because people tend to be pessimistic about the prospects of the arrangement and have a sense of whether it is worth spending their efforts in planning, especially if it is considered not to be direct benefits [17]. Because of the mutual benefits, there is an attraction for the location to stay in their place of origin.

Then the residents do not want to move, because there is a certainty that they will stay on their own land, so there is no concern to be forced to move.

The handling of occupancy groups within the scope of sub-neighborhood creates opportunities for residents and city managers to obtain settlement design in stages. This stage of development provides municipal opportunities to estimate the stages of construction and financing. The first stage is handling groups that are ready to be involved in the improvement of slum areas, even though only a few houses. This first group will be a reference for planning and designing other slums. However, Government involvement is expected to be very intense in the early stages. Then the sub-neighborhood itself establishes an investment return mechanism that already invested in the area. The inhabitants can gain shared land tenure (condominium principle) within the scope of one sub-neighborhood. This requires a method to create a common understanding between the inhabitants, by establishing a right and obligation rule in occupying the sub-neighborhood

5. Conclusion

Participatory planning approaches have the advantage of getting the data and information and knowing the existing environmental problems from the direct source. Mixed with action research thinking approach in the contextual model, the results of the plan and sub-neighborhood design are not only the slum settlement problem but the solution of the problem [22]. The process of planning and designing slum areas that involve occupants can reduce rejection from the occupants themselves so that the reconstruction of slum areas can be easily carried out.

The construction of small residential groups can be more easily controlled, so the program success rate is expected to be higher. The willingness of residents to be directly involved in the formation of community groups that are accommodated in a sub-neighborhood can increase the level of success in the management of residential environments if this group has sufficient ability to manage its sub-neighborhood.

Because this sub-neighborhood becomes legal and habitable, the pressure to move will be reduced. This must be supported by opportunities to increase family income. However, improving the quality of the housing environment which directly increases the value of land, there is external pressure for the occurrence of land acquisition. This will lead to gentrification and changes in land tenure.

The concept of planning and design of sub-neighborhood still needs further proofing in different locations and proceeded to the process of regional development, development utilization and maintenance of slum development.

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