Community mapping condition of settlements in Kelurahan Keputih

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Abstract. Based on UU No. 1 Tahun 2011 about Housing and settlements, housing is a group home that serves as a neighborhood of residence or a residential environment that is equipped with facilities and infrastructure environment. Complementary facilities and infrastructure of the settlement area of the need for planning and controlling development. Community Mapping as a means of mapping activity alongside the community tools and methods is an approach already and are being developed in Indonesia. Discussion of the problems of settlements, villages and infrastructure in Kelurahan Keputih will be done socializing with Community Mapping methods with simple mapping through community participation. The problems of the existing housing in Kelurahan Keputih more inclined on the condition of the infrastructure that is not good that are not ready to drink, roads damaged, dirty, drainage and sanitation activities on the river that can trigger environmental pollution. These adverse conditions occur at the slum which is in RW 1, 2, and 8. The priority RW 2 and 8 to handle in terms of fulfillment and settlement infrastructure improvements due to lack of coverage.

Keywords: community mapping; settlements; infrastructure settlements; community participation.

1. Introduction

The Document of Development Plans implemented under Law No. 25 of 2004 on the National Development Planning System (SPPN) and Law Number 32 Year 2004 on Regional Government requires the Regional Government to prepare the Regional Long Term Development Plan (RPJPD), Medium Term Development Plan Regional (RPJMD) and Annual Development Plans better known as Local Government Work Plan (RKPD). Coordination between government agencies and the participation of all development actors is required in the process of preparing the development plan documents through the Musrenbang Development Planning (Musrenbang) mechanism starting from the RT / RW Level, Sub-District, Sub-district up to the City. Law Number 25 Year 2004 in Article 1 paragraph (21) stated that Musrenbang is an inter-group forum in order to formulate national development plan and regional development plan. As for the Village Musrenbang stated in the Minister of Home Affairs Regulation No. 66 of 2007 Article 1 paragraph (11), which states that the
Village Musrenbang is an annual consultative forum conducted in a participatory manner by the village stakeholders to agree on the activity plan in 5 and 1 year village.

One of the proposals in musrenbang activities in the Mayor of Surabaya Regulation No. 27 of 2015 on Regional Development Work Plan (RKPD) Surabaya City 2016 which became the priority of development is the improvement of environmental infrastructure. Urban development through the improvement of the quality of settlements is poured into environmental improvements that can be done on basic environmental infrastructure, such as environmental roads, small channels, and so on.

The community has a role in every development to propose something that suits their needs, so the community participates in every development program [1]. Community mapping as one method of approach in the preparation of a regional planning, is actually also a tool of communication of various parties in the early stages of the development planning process. As a tool to initiate a participatory spatial planning process, community mapping is very feasible to develop. The process of extracting and reviewing information takes place through discussion, and allows the community to know more deeply about the state of their territory as a whole, including the patterns of natural resource use, the links between the various things and circumstances of the region, as well as the various problems and potentials. Surabaya Town Musrenbang process that took place online, people are considered less participate [2]. Therefore, there needs to be a direct approach to the implementation of village level musrenbang.

Kelurahan Keputih, which has various facilities and infrastructures that should be able to meet the needs and scale of services sufficient, but still identified inadequate service from infrastructure both physically and in terms of the preferences of community keputih own. Therefore, it is very important to do the preparation of priority plans for improvements of facilities and infrastructure by considering the condition of Keputih Village settlements through Community Mapping that involves the community directly. By using the Community Mapping method, it is hoped that the problems related to the facilities and infrastructures in Keputih Urban Village can be presented in a concise and clear form of map drawing, enabling decision makers to focus their attention on the real problems formulated with the community as a form of Musrenbang.

2. Identify infrastructures settlement
Source of consumption water in the study area that is sourced from PDAM. Although there is still a well water source. But the quality of well water found in the study area is not guaranteed quality. Often produce dirty, unsteady, smelly and unfit water sources especially in the dry season. In addition, for people's drinking needs generally use water refills.

In addition to good water supply, waste and waste disposal facilities are needed to support healthy and clean housing quality. Overall, each unit has a bathroom for toilet facilities. But in one of the slums of RT 8, 3 houses have not had a permanent bathroom in each house and still throw waste and sewage into the river. This has an impact on river pollution and the surrounding environment. Related to the need for waste infrastructure, each house has a trash can. Most consist of non-permanent bins, but in some major roads there is a permanent dump. This household waste is transported 2-3 days organized by the garbage officer of each RT. Some residents also make empty land around the house to incinerate or burn incineration. Another infrastructure is drainage to drain surface water to water bodies (surface water sources and subsurface) as controlling surface water needs with measures to improve muddy areas, puddles and floods.
The facilities of settlement in Kelurahan Keputih consist of Facilities of Worship, Education Facility, Health Facility, Economic Facility, and Open Space Facility. As for the availability of settlement facilities in Kelurahan Keputih are as follows.

Based on the results of identification of facilities and infrastructure of settlement obtained data problem as follows:
1. Inadequate infrastructure in RT is classified as slums. In general the availability of necessary infrastructure is communal TPS.
2. Means of settlement existence already exist in each kind of facility

3. **Needs and affordability analysis of settlements infrastructure**
   Based on secondary data the location of slums is located in the following locations.
Table 1. Analysis of Utilities and Slum Settlement

| RW | RT | Description |
|----|----|-------------|
| 1  |    | - The condition of the building is not regular and there are still non permanent house building.  |
|    |    | - Some of the road network in a small alleyway in a broken condition  |
|    |    | - Access of water resources is not smooth  |
|    |    | - Drainage network in bad condition and not integrated  |
|    |    | - There are still some garbage piles that are not well maintained  |
|    | 2  | - Network drainage in bad condition  |
| 1  |    | - There are still some garbage piles that are not well maintained  |
|    |    | - Building conditions are irregular and closer together  |
|    |    | - Some road networks are in damaged condition  |
|    |    | - Poor waste management system and still causing pollution  |
|    |    | - Network drainage in bad condition and not integrated with  |
|    |    | - This area is a protected area, so it is not in accordance with the allocation in the spatial plan  |
|    | 3  | - Some road networks are in damaged condition  |
|    |    | - Building conditions are irregular and closer together  |
|    |    | - Network drainage in bad condition and not integrated with  |
|    |    | - Source of clean water is not worth drinking  |
|    |    | - Poor waste management system and still causing pollution  |
|    |    | - High population density  |
|    |    | - Land occupied is not certified  |
|    | 2  | - High population density  |
|    |    | - Drainage network in bad condition and not integrated with other network  |
|    |    | - High density of buildings and unstructured building conditions  |
|    |    | - Some road networks are in damaged condition  |
|    |    | - Poor waste management system and still causing pollution  |
|    | 4  | - High population density  |
|    |    | - Drainage network in bad condition and not integrated with other network  |
|    |    | - Land occupied is not certified  |
|    | 1  | - Some road networks are in damaged condition  |
|    |    | - Building conditions are irregular and closer together  |
|    |    | - Network drainage in bad condition and not integrated with other network  |
|    |    | - The water source of PDAM is not worth drinking  |
|    |    | - Poor waste management system and still causing pollution  |
|    | 3  | - High density of buildings and unstructured building conditions  |
|    |    | - Some road networks are in damaged condition  |
|    |    | - Poor waste management system and still causing pollution  |
|    |    | - High population density  |
|    | 3  | - High density of buildings and unstructured building conditions  |
|    |    | - Some road networks are in damaged condition  |
|    |    | - Poor waste management system and still causing pollution  |
|    |    | - High population density  |
|    | 4  | - High density of buildings and unstructured building conditions  |
|    |    | - Some road networks are in damaged condition  |
|    |    | - Poor waste management system and still causing pollution  |
|    |    | - High population density  |
|    | 8  | - High density of buildings and unstructured building conditions  |
|    | Gang 1 | - Some road networks are in damaged condition  |
| RW RT          | Description                                                                                                                                                                                                 |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| -              | High population density                                                                                                                                                                                     |
| -              | Land occupied is not certified                                                                                                                                                                              |
| Gang 2         | - High density of buildings and unstructured building conditions  
|                | - Some road networks are in damaged condition  
|                | - Poor waste management system and still causing pollution  
|                | - High population density  
|                | - Drainage network in bad condition and not integrated with other network  
|                | - Land occupied is not certified                                                                                                                                                                             |
| Lahan gang 3   | - Drainage network in bad condition and not integrated with other network. As well as high levels of pollution  
|                | - The source of consumption water from the PDAM is not worth drinking                                                                                                                                        |
| Keputih Tegal  | - No fire extinguishers with high building density are available                                                                                                                                             |
| Timur Baru 2   | - Land occupied is not certified                                                                                                                                                                              |
|                | - Includes areas of social and economic vulnerability                                                                                                                                                      |

The analysis of the needs of existing facilities in Kelurahan Keputih is based on the The Indonesian National Standard (SNI) shows more needs than the existing. The less facilities are mosque, local market, and garden, whereas if based from the affordability of settlement facilities using SNI standard, the area which is underserved and underserved as the result of the following analysis.

**Figure 6.** Analysis of Affordability Religious Facilities

**Figure 7.** Analysis of Affordability Wellness Facilities

**Figure 8.** Analysis of Affordability Economic Facilities

**Figure 9.** Analysis of Affordability Open Space Facilities

3. **Formulate direction of addition and improvement of infrastructure**

From the identification and analysis of facilities and infrastructure that exist in Kelurahan Keputih obtained directives as follows.
Table 2. The Direction of the improvement and development of utilities

| RW          | Direction descriptions                                                                 |
|-------------|----------------------------------------------------------------------------------------|
| RW 1,2,3 dan 8 | Improved drainage system. The tertiary drainage created by the residents needs to be integrated with other networks through the improvement of the drainage network. |
| Kelurahan Keputih | Provision of centralized waste bin.                                                     |
| - RW 2 RT 1 | Provision of filter water consumption to be appropriate to use                          |
| - RW 3 RT 1 |                                                                                         |
| - RW 8, Keputih Tegal Timur Baru 2 |                                                                                     |
| All RW    | Road network improvement                                                                 |
| All RW    | Waste and waste dredging that inhibits drainage channels                                 |

Table 3. The Direction of the improvement and development of facilities

| RW | RT | Improvement Facilities | Plan for Improvement Facilities                                      |
|----|----|-------------------------|---------------------------------------------------------------------|
|    | 1  | Open Space Facility     | Playground                                                           |
|    | 2  | Open Space Facility     | Playground                                                           |
|    | 3  | Educational Facilities  | Kindergarten                                                          |
|    |    | Health facility         | Clinic                                                               |
|    |    | Economic Facilities     | Shops                                                                |
|    |    | Open Space Facility     | Playground                                                           |
|    | 4  | Educational Facilities  | Junior high school                                                   |
|    |    | Health facility         | Clinic                                                               |
|    |    | Economic Facilities     | Shop                                                                 |
|    |    | Open Space Facility     | Playground                                                           |
|    | 5  | Open Space Facility     | Playground                                                           |
|    |    | Educational Facilities  | Kindergarten                                                          |
|    |    | Health facility         | Clinic                                                               |
|    |    | Economic Facilities     | Shop                                                                 |
|    |    | Open Space Facility     | Playground                                                           |
|    | 1  | Health facility         | Clinic                                                               |
|    | 2  | Open Space Facility     | Playground                                                           |
|    | 3  | Health facility         | Clinic                                                               |
|    |    | Open Space Facility     | Playground                                                           |
|    | 2  | Educational Facilities  | Kindergarten, elementary school, junior high school                  |
|    |    | Health facility         | Clinic                                                               |
|    |    | Economic Facilities     | Shop                                                                 |
|    |    | Open Space Facility     | Playground                                                           |
|    | 4  | Health facility         | Clinic                                                               |
|    |    | Economic Facilities     | Shop                                                                 |
|    |    | Open Space Facility     | Playground                                                           |
|    | 5  | Health facility         | Clinic                                                               |
|    |    | Open Space Facility     | Playground                                                           |
|    | 6  | Educational Facilities  | Kindergarten                                                          |
|    |    | Health facility         | Clinic                                                               |
|    |    | Economic Facilities     | Stall                                                                |
|    |    | Open Space Facility     | Playground                                                           |
| RW | RT | Improvement Facilities | Plan for Improvement Facilities |
|----|----|------------------------|--------------------------------|
| 7  |    | Educational Facilities | kindergarten                   |
|    |    | Health facility        | Clinic                         |
|    |    | Economic Facilities    | Stall                          |
|    |    | Open Space Facility    | Playground                     |
| 8  |    | Educational Facilities | Kindergarten                   |
|    |    | Health facility        | Clinic                         |
|    |    | Economic Facilities    | Shop                           |
|    |    | Open Space Facility    | Playground                     |
| 9  |    | Educational Facilities | Kindergarten, elementary, junior high school |
|    |    | Health facility        | Clinic                         |
|    |    | Economic Facilities    | Shop                           |
|    |    | Open Space Facility    | Playground                     |
| 3  | all| Open Space Facility    | Playground                     |
| 4  | 1  | Economic Facilities    | Shop                           |
|    |    | Open Space Facility    | Playground                     |
| 5  | all| Educational Facilities | Kindergarten                   |
|    |    | Open Space Facility    | Playground                     |
| 6  | all| Open Space Facility    | Playground                     |
| 7  | 1  | Economic Facilities    | Shop                           |
|    |    | Open Space Facility    | Playground                     |
|    |    | 1                      | Open Space Facility            | Playground                     |
|    |    | 2                      | Open Space Facility            | Playground                     |
|    |    | 3                      | Open Space Facility            | Playground                     |
|    |    | 4                      | Open Space Facility            | Playground                     |
|    |    | 5                      | Open Space Facility            | Playground                     |
|    |    | 6                      | Economic Facilities           | Store                          |
|    |    | 7                      | Open Space Facility            | Playground                     |
|    |    | 8                      | Economic Facilities           | Store                          |
|    |    | 9                      | Open Space Facility            | Playground                     |
|    |    | 10                     | Educational Facilities        | Junior high school             |
|    |    | 11                     | Health facility               | Clinic                         |
|    |    | 12                     | Economic Facilities           | Shop                           |
|    |    | 13                     | Open Space Facility           | Playground                     |

4. Conclusion
Settlement problems in Kelurahan Keputih tend to poor condition of infrastructure such as water not ready to drink, road damaged, dirty drainage, and sanitation activities in the river that can trigger environmental pollution. These bad conditions occur in slum areas in Kelurahan Keputih in RW 1, 2, and 8. In addition, the availability of settlement facilities compared with the number of population is still less is the mosque, local market, and park. While the affordability of facilities in whitish settlements are still many that have not been reached. The lack of facilities are education facilities
(kindergartens, primary schools, junior high schools), health facilities, economic facilities (stall, store, shop), and playground facilities. RW 2 and RW 8 become priority handling in terms of fulfillment and improvement of settlement infrastructure due to lack of coverage of settlement facilities and slums.

5. References
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