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A Study on Core House as Housing Reconstruction Program after the Central Java-Yogyakarta Earthquake 2006 in Kasongan Village Indonesia

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Abstract. This paper is a result of study on core house as one type of post disaster housing reconstruction program in Indonesia. The aim is to explore the role of core house in restoring the beneficiary's condition after the earthquake disaster. Core house is a starter house provided with basic rooms that could be occupied directly and then developed incrementally by the occupants. This kind of house has a long history in housing development in Indonesia, which then implemented it as one type of post disaster housing reconstruction program. The case study is core house built in Kasongan Village after the Central Java-Yogyakarta Earthquake in 2006. Qualitative method was carried out according to the aim of the study. Long-term view is needed to conduct housing reconstruction program after disaster. Therefore, giving attention toward physical aspect needs to be balanced with nonphysical aspect.

Keywords: Core house, post-disaster housing reconstruction, Central Java-Yogyakarta earthquake 2006

3 Introduction

An earthquake of 6.3 on Richter scale struck Central Java Province and Special Region of Yogyakarta, Indonesia, in May 27th 2006. According to Bappenas [1] the earthquake took over about 5.700 lives and injured more than 40.000 people. In the housing sector approximately 154.000 houses were completely destroyed, 260.000 houses were slightly damage, and 600.000 people were homeless. There were supports and assistances from local and international institutions to conduct the post disaster activities.

Various types of housing reconstruction efforts were conducted, started from repairing assistance until donation of readily built starter house, and in-situ houses development until resettlement. One of the housing reconstruction activities was the provision of core houses in Kasongan Village, a well-known pottery craft village in Special Region of Yogyakarta, donated by the local government of Bengkulu Province, Indonesia. This activity was conducted as one of the in-situ housing reconstruction programs earlier right after the earthquake. Within this context, it is interesting to study the role of core house to its beneficiaries' post disaster life. The aim of this study is to explore the role and advantages of core houses as an in-situ housing reconstruction program for the beneficiaries in Kasongan Village, Yogyakarta. Qualitative method was used in the analysis, based on field observation and interview.



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This paper is divided into several sections. The first section is introduction that describes background, aim, and method of the study. The second section describes the Kasongan Village and the provided core houses from the Bengkulu Province. The third section contains findings and discussion. And this paper ends with conclusions in the fourth section.

2. Kasongan Village and the Core House

Kasongan Village is located at the South side of Yogyakarta City (Figure 1). Administratively the village is part of Bantul Region. One of the well-known activities in this area is economic activities of its inhabitant in creating pottery handcraft. On the main street of the village there are the shops and showrooms of the pottery handcraft, while in the inner part behind the main street there are craftsman who makes the pottery in their own houses. When the Central Java-Yogyakarta Earthquake 2006 struck, Kasongan Village was damaged and many houses were affected with minor as well as major damage.

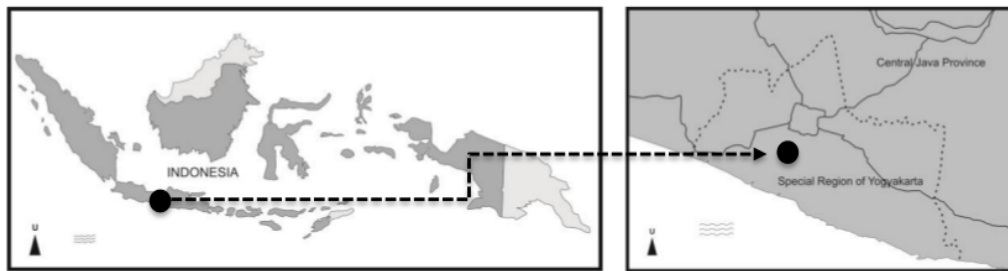


Figure 1. Location of Kasongan Village

Various post-disaster housing reconstruction programs were delivered in Kasongan Village. One of the housing reconstruction programs was in the form of donation of core houses from the Bengkulu Province. This program was one type of housing reconstruction implemented right after the disaster with the form of in-situ reconstruction (Figure 2). Core house was starter house that could be occupied immediately and then developed incrementally along with the occupants' need and capability. The core house was developed in the former lot of the beneficiary. It had 18-m²-floor area with a gable roof style. Stone foundation and concrete steel column were used in the construction with bricks wall and roof tile from clay.



Figure 2. In-situ core house as one type of post disaster housing reconstruction program

3. Findings and Discussion

Based on field observation, the built core houses as the part of ² post disaster housing reconstruction program after the Central Java-Yogyakarta earthquake 2006 in Kasongan Village have been developed in various forms (Figure 3). The transformations conducted in building quantity as well as quality aspects. The quantity aspect means the floor space area of the house. The occupants have extended the current core houses with various width of floor space area. With these floor space area extensions, room structure or room completeness in the houses has become better, complete and adjusted according to the occupants' need. This condition can be seen in the function of the rooms that become clearer and separated each other, such as guest room, bedroom, kitchen, production space for the craftsman, and other rooms. It seems that the occupants still emphasize the quantity aspect in developing their core houses although several core houses already did not function as the main houses of the occupants. On the quality aspect, it is found that the occupants have conducted enhancement on the building quality through improvement of the finishing materials. These quality enhancements were mostly conducted not in the whole part of the house but only toward several parts of the house, such as material of floor tile, wall surface, and finishing of the ceiling. The enhancement was also usually conducted in the certain parts of the house that had the nature of public area, such as terrace, guest room, and the front elevation of the house. According to Pandelaki [2] this kind of core house transformation can be categorized as moderate. This transformation is development emphasizing the quantity aspect of floor space extension with room structure that becomes clearer, altogether with development in quality⁴ aspect that is still implemented in several or certain parts of the house. These conditions show that the occupants have the capability to develop their houses incrementally. Although based on observation on the condition of space and its utilization in several houses, it seems that sometimes assistance needs to be given in order to improve the house to be a more comfortable place to live.



Figure 3. Core houses that have been transformed by the occupants

The core houses receive positive response from the beneficiaries. The occupants satisfy with the core houses because they can receive support after the disaster struck. However, the point of strength and fast

implementation of the core houses also becomes positive factors put forward by the occupants. Its simple form makes the core house has the flexibility in space utilization and easier establishment and development. This condition is in accordance with the core house concept as a starter house that can be occupied immediately and then developed according to the need and capability of the occupants. The core houses use simple construction technology that can be conducted by the local community and local building labours. As mentioned above, the core houses from Bengkulu Province became one of early supports given to the beneficiaries in the form of in-situ reconstruction. Social bond owned by the community and kept within the community with the in-situ housing reconstruction supported the achievement of the objective. This condition is needed for post-disaster situation. Social bond becomes one capital that could support the implementation of post disaster housing reconstruction.

The development or transformation of core houses was conducted in phases. Several houses were transformed right after the occupants started to live in. Almost all of the core house had been extended or transformed after one year of development [3]. The core house transformation was related to the source of funding, which might come from several sources, such as government support, family savings, and other sources. The utilization of lot and materials from former houses as remaining assets gave advantages in the development of the core houses afterward. These assets could be utilized in the housing reconstruction process. The occupants' response related to the obstacles in the core house transformation process is more toward financing the transformation.

The current development or transformation of core houses receives a positive response from the occupants. Various forms of transformed core houses reflect their various needs, capabilities, and priorities. Therefore, the transformed core houses have various roles and capabilities in fulfilling the occupants' needs. Within the framework of Maslow's hierarchy of needs, basically the occupants gave positive response toward fulfilment of the needs by the current house form. An important point in post-disaster housing reconstruction program is concern with the development of core houses that could also support the recovery in family's economic condition. There were people who worked as pottery craftsman in their houses before the earthquake in Kasongan village. Through the implementation of core houses as an in-situ housing reconstruction, the craftsman could immediately return to conduct their economic activities of creating pottery to support their livelihood (Figure 4). Therefore, their economic aspect as craftsman can also immediately be restored.



Figure 4. Inhabitant create pottery handcraft in their own houses

The findings revealed that the core houses with their current various transformation forms had enough flexibility in accommodating the spectrum of occupants' needs in the bionomic process. It also appears in the responses to the obstacle in the development of the core houses, which was more toward financing instead of physical aspects. Several advantages also could be seen from the core houses as an in-situ

housing reconstruction program, such as maintaining togetherness of the inhabitants, and supporting recovery in economic aspect through the existing assets. Therefore, the post-disaster housing reconstruction program needs to give concern on not only physical aspect of providing immediate shelter for the disaster's victims, but also long term condition. In this regard, non-physical aspect needs to be given in order to comprehensively recover the life of the beneficiaries.

4. Conclusion

The beneficiaries provided positive responses on the original core houses and the current developed or transformed core houses. Various forms of transformation reflected the occupants' needs, capabilities, and priorities. This condition also reflects the role and capability of the core houses, which is flexible enough in accommodating the spectrum of various needs, capabilities, and priorities of the occupants. Furthermore, this study revealed that as an in-situ housing reconstruction program after the earthquake, the core houses in Kasongan Village had several advantages for its occupants, such as: support in maintaining the family's and neighbourhood's togetherness and support in economic recovery by maintaining and utilizing the existing assets. Post-disaster housing reconstruction program will have a better role when given long term and balanced attention between physical and nonphysical aspects. The house should provide not only an immediate shelter but also recovery for the occupant's life comprehensively.

5. Acknowledgments

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