Sustainable kampong model in Kelurahan Keputih, Kejawan Putih Tambak and Gebang Putih of Surabaya City

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Abstract. Kelurahan Keputih, Kelurahan Kejawan Putih Tambak, and Kelurahan Gebang Putih are located in the area around Institut Teknologi Sepuluh Nopember (ITS). The existence of ITS is recognized by the vicinity communities to give positive impacts, especially on aspects of economic development. The development of the city has certainly impacts on the overall urban aspect, including in the aspect of settlement. One of the real effects of urban development is the emergence of urban villages. All villages must be prepared not to be left behind by the dynamic development of the city. The form of village preparedness is by formulating sustainable kampong development which attempt to create a model of local society in the face of the modern world. In creating models and definitions of specific sustainability villages it certainly can not be merely generalized from the general results. This paper aims to discuss the theme of appropriate sustainable kampongs to be developed in each kelurahan according to the characteristics. Need to be done more in-depth identification of existing field conditions so as to facilitate the development applications in the three urban villages. Data is analyzed using content analysis and comparison method with the results of availability of secondary data available.

Keywords: Kampong, Kelurahan Keputih, Kelurahan Kejawan Putih Tambak, Kelurahan Gebang Putih, Sustainable, Sustainable Kampong Model.

1. Introduction

Settlement is housing with all the contents and activities in it. Settlements have a broader meaning than housing that is only a container of the physical course, but the settlement as a combination of container (nature, protection, and network) and its contents (people who lives in society and culture in it) [1]. There is also explained that settlement was a form of life order which contains physical elements in the sense that the settlement was a place of community meeting place for social interaction with the community [2].

Kelurahan Keputih, Kelurahan Kejawan Putih Tambak (Kejawan), and Kelurahan Gebang Putih (Gebang) are kelurahan located in the area around Institut Teknologi Sepuluh Nopember (ITS) campus. No wonder if the three urban villages are also homes of ITS students. Based on its own localities and aspects, each kelurahan has different characteristics.
In demographic view, the composition of the people of Kelurahan Kejawan and Kelurahan Gebang have similarities which the majority of the society composition are 0-5 years old, while the majority of Kelurahan Keputih is the productive age population. In addition, the community of Kelurahan Gebang and Kelurahan Keputih is dominated by high school graduates while the majority of Kelurahan Keputih is university graduates.

In the economic sector, the existence of ITS campus is recognized by society as a positive thing because it can drive economic activity in the area. The majority of economic activities in these three urban villages are local economic activities such as dwelling homes, food stalls, laundry, and photocopy. Although located in a densely populated area but some people of Kelurahan Gebang and Keputih are still work as tambak farmers. The level of welfare of Kelurahan Kejawan and Kelurahan Gebang is at KS-III1 level while Kelurahan Keputih Urban Village is one level better that is in KS-III1. The highest number of unemployed heads of households was in Kelurahan Kejawan (36%) and was followed by Kelurahan Keputih of 6%.

The environmental conditions of the settlements in these three urban villages can be categorized as dense residential neighborhoods. If summed, the total area of three urban villages is 4,986 Ha with a population of 30,191 inhabitants. This figure does not include the number of students who rent boarding rooms in three urban villages. In addition to the population density, the impression of slums is also shown from the customs of the local community. The three villages are not declared yet as open defecation free (ODF). The largest number of people who still practice OD is in Kelurahan Keputih. Based on the survey results it is known that there are still more than 100 homes that do not have latrines let alone septic tanks. Contrary to the poor practice of defecation, the three urban villages have their own potentials that can be developed. The three urban villages have similar education facilities like schools, although with different quantities and qualities. Kelurahan Gebang and Kelurahan Keputih has its own community health centre (puskesmas) with affordable services for the community. Kelurahan Gebang has excellent IT network access where there is a central wifi connection in each RT provided by Surabaya City Government. There is also potential in the form of fishery products in Kelurahan Keputih and Kelurahan Kejawan. Fishery in Kelurahan Keputih is just in the form of direct marketing from the ships to buyers, hence the sale price is small.

The development of the city certainly has impact on the overall urban aspect, including in the aspect of settlement. One of the real effects of urban development is the emergence of the urban villages. Sany explains that kampong is a settlement formed in urban areas due to the agglomeration process [3]. Therefore all villages must be prepared and not to be left behind by the dynamic development of the city.

One form of village preparedness is to formulate sustainable kampong development. It is not surprising that today many emerging concepts of sustainable villages in Indonesia such as Kampung Wisata Jambangan Kota Surabaya, Pare English Village, Heritage Braga Village, and many more. Kampung Wisata Jambangan uses the concept of educational tour of self-help waste processing by the community to attract tourists. The English village of Pare uses educational concepts to appeal to students, and Kampung Braga features historical aspects to attract tourists. The concepts of sustainable kampong development are based on the characteristics and potentials of each village. Therefore it is necessary to identify the characteristics of the villages around ITS to be able to formulate the concept of sustainable development of the village accordingly.

2. Methods
The discussion in this article uses a method using empirical facts sourced from observations and supported by the theoretical basis. Theories collected are the theories used as the basis for determining appropriate development models. In addition, qualitative approaches are used to conduct field exploration and development model formulation in accordance with the characteristics found.
3. Result and Discussions

3.1. Kampungs
Based on Big Indonesian Dictionary, kampung has four definitions are House groups that are part of the city (usually inhabited by low-income people); villages, hamlets; The smallest administrative unit occupying a particular area, located below the kecamatan; and Backward (not modern); With regard to custom in the village; Old-fashioned.

Kampung, in Malay means a closed compound (enclosed compound). In Minangkabau language, the village is concerned with a lively and consistent life of the application of traditional values. In Aceh, gampong is the whole community in a village [4]. The village as an enclosed compound within a city has its own characteristics, where the life of a village is still in it, which is still visible in binding social and cultural systems.

Sullivan explained that the village has links to "neighbourship" and emphasizes the villagers to be good neighbors. The rules in neighboring life are also governed by village life where severe sanctions that serve to make community members behave in conformity with the prevailing conventions. In essence, villages appreciate the main purpose of harmony, togetherness, a situation where people live in peace and compact, usually described by the word rukun.

Referring to these two views, Sany argues that the process of development and expansion of a city impact on the process of integration of a region [3]. The area, which was originally a suburb, is now part of the city center due to the agglomeration process. The area affected by the agglomeration was eventually known as the village where the process gradually made the existence of the village more integrated into the structure of the city center.

As a result, the existence of this village inevitably should be a concern and part of urban life, including in the process of planning and structuring the city. This, of course, encourages the village as a part of the formation of a city in Indonesia, as a relevant part or an alternative problem solving urban. This opinion states that kampung is actually an original form of cities in Indonesia. Regardless of formality and development rules, it seems that the village more depicts the humanity and urban aspects of urban life that are now being sought by developed countries.

Furthermore, Sany also explains that the large number of immigrants who live in a village due to proximity to their workplace [3]. This has a positive impact on the "native" population of the village, especially in the economic sector. This is because the "original" villagers can open up business opportunities, in the form of leasing, selling land or houses and selling various services such as food stalls, grocery stores and goods for daily consumption. In accordance with the existing dynamics, the villages became denser, more heterogeneous and socially structurally developed.

3.2. Urban Kampungs
Setiawan explains that in its development the term kampung is used to explain the phenomenon of urban housing carried out independently or independently by rural migrants [5]. This housing is called a 'village town' or housing that is like a village in the countryside, but is in urban areas. The term kampung town known as the kampung was used by the Dutch colonial government in the early 20th century, through a program called verbrechting village. Silas also emphasized the oblique view of the village, explaining the Dutch government separately between villagers and ordinary citizens (Indlandsche Gemeente) with prijajis, cadets/gedongan (Stads Gemeente) [6].

Later also for our government, the term kampung was used in a kampung improvement program in the 1960s known as Kampung Improvement Program (KIP). Although the term kampung has been used formally, but the view is oblique to him is still often appear until now. Always compared to a 'gedongan' house identical to 'real estate'. Real estate as a symbol of wealth and establishment, while the village as a symbol of poverty and ordinary citizens or wong cilik.

Physically, the village is characterized by irregularity, uniformity, inability, even insecurity and unhealthy. In many ways, the peculiarity of the kampung lies precisely in an astonishingly organic,
even diverse physical pattern. Each village is unique because it represents the peculiarities of history, the ability of business and the struggle of even the free soul of its citizens. In the context of urban housing, kampong represents the concept of housing autonomy which means that villagers have the freedom and authority to determine their own living environment. Kampong also represents a concept that describes housing as a process, as a verb as presented by Turner. This concept means that housing development, especially for low income people, can not be seen from a single policy, but as a continuous and dynamic process in line with the social and economic development of the community [7].

As a physical system, kampong has been able to represent the concept of urban development as a compact city, both in terms of population density, land efficiency and infrastructure facilities [5]. The mixed land use pattern has provided an efficient land use pattern. In addition to the mixing of land for residential and non-residential land, including commercial activities in the village, it ensures the sustainability of the kampung and creates live city living conditions.

Not only the physical system, the village is also viewed as a complex and dynamic social system. The village is inhabited by various citizens with various religious, educational, occupational, ethnic, and even political backgrounds. Kampong became a kind of collage that encouraged the community in it to continue to develop diversity, tolerance and solidarity [5]. Haryadi also pointed out that the villagers have a special strategy in addressing the various urban pressures to avoid the pressure and discomfort [5].

3.3. Sustainable Development

The basic concept of sustainable development is development that is able to meet the needs of today's society without neglecting the ability of future generations to meet their needs [8]. Seragedin and Steer argue that there are four types of capital stock in sustainable development, namely: natural capital stock, everything that nature provides; human-made capital stock, tangible investment and technology; human capital stock, human resources with skills and behavior; social capital stock, an organization [9].

Based on these descriptions it can be seen that the basic concept of sustainable development is development that meets the needs of today's society without compromising the interests of future generations to meet their needs. Where the pillars of development used to implement sustainable development are always experiencing growth. Three main pillars to be considered in sustainable development are social, economic and environmental [10]. In more detail Budimanta explains that development not only emphasizes the increase in per capita income as a welfare index alone, but also considers environmental conditions [11].

A healthy and clean environment can also affect human productivity. In addition, cultural diversity is also needed to keep the tradition in order to be enjoyed by future generations as well. The second phase of development of sustainable development is the inclusion of aspects of social justice. Gondokusumo explains that the goal of sustainable development is to achieve a prosperous society in a sustainable environment [12]. Therefore, poverty and environmental degradation pose a major threat to sustainable development. In addition He also outlines the sustainable development criteria known as 3PRO namely [12]:

1. Pro social justice, equity and equitable access to natural resources and public services, valuing cultural diversity and gender equality.
2. Pro welfare economics, economic growth aimed at the welfare of society.
3. Pro environmental sustainability, striving for environmental sustainability and balance, and conservation of natural resources.

Nowadays awareness about sustainable development has begun to grow with more greening, tree planting, and open spaces. But this is not enough, sustainable cities should have a strong economy, a harmonious environment, a relatively equal social level, and controlled energy conservation [9]. Therefore, stocks of productive capital in urban development are needed: (1) environment or natural
resources, (2) people or human resources, (3) financial resources, (4) infrastructure and productive facilities, (5) institutions.

Based on the above description can be seen that sustainable development is always experiencing substance development. The growing breadth of thinking about sustainable development raises the notion that the concept of sustainable development is becoming increasingly difficult to implement. This is because the problems to be faced become more complex. But this is becoming increasingly in line with the problems that must be faced, especially for developing countries.

The Research Triangle Institute also develops the concept of sustainable development where there are five basic principles necessary to create a sustainable city known as Panca E: environment (ecology), economy (employment), equity, engagement, and Energy [9]. In more detail the approach used by the Research Triangle Institute is as follows:

| Principle               | Component           | Approach                          |
|-------------------------|---------------------|-----------------------------------|
| Economy (welfare)       | Approach            | • Strategic cooperation            |
|                         |                     | • Increased workers skill          |
|                         |                     | • Infrastructure and information   |
| Ecology (environment)   | Resource use        | • Resource conservation            |
|                         |                     | • Pollution prevention and mitigation|
| Equity                  | Dsparities          | • Less disparitied                 |
|                         |                     | • Equal opportunity                |
|                         |                     | • Vary available opporunity        |
| Engagement (participation)| People’s participation| Optimized                        |
| Energy                  | Energy source       | Energy saving                      |

*Source: Research Triangle Institute, 1996*

3.4. Participatory Planning

Planning is the whole process of thinking and careful determination of things to be done in the future in order to achieve the goals that have been predetermined [13]. Another definition is expressed Kunarjo which states that in general planning is the process of preparing a set of decisions to be implemented in the future which is directed to the achievement of certain targets [14]. As for the term participation, taken from the English language that is participation, which means include people or other parties. Mubiyarto defines participation as a willingness to help the success of each program according to the capabilities of everyone without sacrificing self-interest [15]. Arimbi defines participation as feed-forward information and feedback information [16]. From the definition can be interpreted that the participation of society as a continuous two-way communication process is a communication between the government as the policy holder and the community as the parties involved and feel directly the impact of the policy.

Conyer argued that community participation is voluntary community participation based on the determinants and self-awareness of the community itself in the development planning program [17]. Various forms of community participation in the planning of development programs can be established or created. This depends on the condition of the local community, whether social, cultural, economic, or educational. The community can participate well if there are three conditions, namely: (1) the opportunity to participate in development; (2) the willingness of the community to take advantage of opportunities; and (3) the willingness of the members to participate. There are several forms of participation that can be provided by the community in a development program, namely participation of money, participation of property, participation of personnel, participation of skills, participation of ideas, social participation, participation in decision-making process, and representative participation. In some areas the form of community participation in development has taken place, where the containers and mechanisms of participation have been well established.
With development planning that involves community participation, it is already considering the needs and environmental situation of the community and can avoid deviations in order to achieve development success in accordance with the planned goals.

3.5. Sustainable Kamponds

The basic concept of sustainable development is development that meets the needs of the community, where the pillars of development used always experience the development. Sustainable cities should have a strong economy, a harmonious environment, a relatively equal social level, and controlled energy conservation. Massive urban developments create a village. Kampong is essentially a local wisdom or identity of a city, but today the development of a more dynamic city deadly characteristic of the city itself. Kampong increasingly marginalized and the gap increasingly shows its existence in urban areas, especially cities that have known and put forward the technology.

Surabaya city is one of metropolitan city in Indonesia which also has its original culture. The development of the city of Surabaya is increasingly dynamic and, however, causing the settlement in the city of Surabaya experiencing setbacks. Kelurahan Keputih, Kelurahan Kejawan Putih Tambak, and Kelurahan Keputih are examples of villages located in strategic locations of Surabaya. The three urban villages are located in the vicinity of ITS area where the existence of ITS causes many opportunities exploited by developers and individuals to develop housing sector to trade and services. The emergence of these new sectors sooner or later can remove the identity of the village located in the village Keputih, Kejawan, and Gebang.

ITS campus itself is located in the village Keputih. The location of ITS campus in Keputih urban village has resulted in the proliferation of trade and services managed by the community both from within and outside the village itself. In addition, the existence of ITS campus itself also raises the number of homes that functioned for residents homes. Similarly, in Kelurahan Gebang Putih, the economy of the community also increases with the presence of ITS students who use the area as a temporary residence location and utilize trade and services in it. While in the area of Kejawan Putih Tambak, emerging a trade and recreation center which became known as Pakuwon City Mall/East Coast Center. The location is used by students of ITS and Surabaya society in the provision of trade and services.

Each urban village also has a village within it with the characteristics it has. Each kampong also has the potential to be maintained so as not to turn off its identity. In the village of Keputih for example, kampons there have the potential to become independent village. Because people can process unnecessary items into something useful. One of them is the processing of compost fertilizer initiated by Dewi's mother in Keputih village. Mother Goddess and mothers who are in the village Keputih managed to use the waste items, such as plastic, paper, and so forth, to make fertilizer. The fertilizer has also been sold in the city of Surabaya. The existence of compost making activities also make Keputih kelurahan become the destination of Surabaya City Government when receiving visit both from inside and outside the country. Then, Kelurahan Kejawan Putih Tambak is known as a fishing village. This is caused in the area many people who livelihood as fishermen ponds and fishermen who go to sea. The result is then sold by the wife of the fishermen directly or in the market. With the campus of ITS, where the food is also increasingly mushrooming, so as to increase the purchasing power of fish fishermen. While in the area Gebang Putih is a location that becomes the location of trade and services and housing. Even so, in the area of Gebang Putih is a location that is included in social vulnerable locations. This is because the village in the village Gebang Putih directly adjacent to housing developers, apartments, and buildings that have conditions in contrast to the conditions of the settlement.

Table 2. Condition of localities

| No | Aspect            | Location          |
|----|-------------------|-------------------|
|    |                   | Gebang | Keputih | Kejawan |
| 1  | Social - economic | 27.06% population| 12.05% population| 13.45% population |
| No | Aspect          | Gebang                                                                 | Keputih                                                                 | Kejawan                                                                 |
|----|----------------|------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|
| 1  | Aspect         | categorised on poor families;                                         | categorised on poor families;                                         | categorised on poor families;                                         |
|    |                | 30% of people work as manual laborers;                                 | 83% of people work as manual laborers;                                 | 57% of people work as manual laborers;                                 |
|    |                | Local economic activities are mostly boarding services, laundry, and   | Local economic activities are mostly boarding services, laundry, and   | Local economic activities are mostly boarding services, laundry, and   |
|    |                | food stalls.                                                           | food stalls.                                                           | food stalls.                                                           |
| 2  | settlement     | GSB 0 meters; Drainage is clogged, it caused flooding when it rains   | GSB 0 meters; Drainage is clogged, it caused flooding when it rains;   | GSB 0 meters; Drainage is clogged, it caused flooding when it rains;   |
|    |                |                                                                       | There is an area whose citizens have not been served by clean water.   | Damaged roads at some locations.                                       |
| 3  | Hazard         | Floods and wildfires due to drainage are clogged with garbage and     | Floods due to clogged drainage; Wildfire due to densely populated      | Floods and wildfires due to drainage are clogged with garbage and     |
|    |                | densely populated settlement.                                          | settlement; drought in areas that have not been served clean water.    | densely populated settlement.                                          |
| 4  | Sociology of   | Relations between neighbors is good enough. The community has a habit  | Relations between neighbors is very good. Making communication all the  | Relations between neighbors is not good. Some people rarely            |
|    | settlements    | of gathering with neighbors in the afternoons at certain gathering     | time without any sense of awkwardness.                                 | communicate with neighbors because of their busyness.                 |
|    |                | points.                                                                |                                                                       |                                                                       |
| 5  | Participatory  | There are active community cadres to help with village development    | The community is willing to follow or assist activities in the         | The community is less interested if there are activities in the        |
|    |                | activities. The majority of people are excited if there is activity in the neighborhood. | neighborhoods, since the local head of RT is eager to carry out        | neighborhood. They will follow the activity as long as they have free | neighborhood. They will follow the activity as long as they have free |
|    |                |                                                                       | improvement activities in the settlement. Communities are also aware   | time and other neighbors are also doing similar activities.            |

The characteristics of the village can be a potential when the Government cares and the community is aware of the need for action that needs to be taken to preserve its culture. So that sustainable development is very important to be done in the three kelurahans.

4. Conclusion
Urban villages are areas that posses the characteristics and identity of a city like Surabaya. The village preservation is indispensable for maintaining the identity of the city of Surabaya. Keputih and Kejawan Putih tambak are overcrowded. It is necessary to improve the infrastructure of settlements to improve the quality of settlements. Gebang Putih is need sustainable development programs that also involve participation from the community so Surabaya will not lose identity. If you look at the potential of these three regions, it would be great if the utilization is maximized so that it can have a positive impact on the community and the development of the city.
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