

# Kampung Development Strategy through Sustainable Home Based Enterprise (HBE) Approach Study Case: Kampung Tempe Tenggilis Kauman, Surabaya City

Akhmad Raditya M. Fajrin<sup>1</sup>, Rika Kisnarini<sup>2</sup>, Happy R. Santosa<sup>3</sup>

<sup>1,2,3</sup>Institut Teknologi Sepuluh Nopember, Department of Architecture, Surabaya, Indonesia

**Abstract:** Home Based Enterprise (HBE) is a residential use combining the functions of a private residence and also a function of economic activity on it. Home Based Enterprise (HBE) is important at a time when formal wages diminish or cease and enterprise are started at the only place available-the house. The advantages of HBE include the ability to maintain an enterprise at little overhead cost, to make use of home based resources, especially space and utility concessions. Home Based Enterprise (HBE) is not a new phenomenon in Indonesia, nor any other developing country. Surabaya has a home-based Kampung, one of which is Kampung Tempe which is located in Tenggilis Kauman street. It is one of the Kampung with the biggest Soybean Cake Industry in the city of Surabaya. Soybean Cake Industry has been existed since the Dutch era in 1938 and carried on from generation to generation. Kampung Tempe does not only make soybean cake industry, but there is also processing of soybean cake made by mothers. Soybean Cake Industry's products have been able to supply out of Surabaya and for this case usually it is not sold in units. This business is done at home by dividing the proportion of houses to live and also as a workplace. One of the concepts that can be offered is the development of HBE-based settlements that are sophisticated. In this study the paradigm of post-positivism research is naturalistic, and the method is qualitative descriptive with a technique of collecting data in the form of interview, observation and literature study as supporting data. The analysis technique used is Transect-map to identify the characteristics of Settlements (Kampung Tempe), Triangulation and SWOT is applied to formulate the development strategy of Kampung Tempe settlement through the sustainable HBE approach. The result of this research is the development strategy for settlement of Kampung Tempe through the continuous HBE approach with improving the quality of settlements: (non decent houses improvement, street quality improvement, improvement of drainage quality and procurement of WWTP for home based activities, institutional : (coaching by the government and educational institutions), social culture: (development of the next generation of kampung tempe and empowerment of communities around kampung tempe to realize social sustainability), supporting facilities and infrastructure: (procurement of WWTP for home based enterprises (HBE) and relocate and find new wells for home based enterprise (HBE)) and sustainable development principles : (procurement regulation regarding development of sustainable based facilities and infrastructure, procurement of environmentally friendly home based enterprise (HBE) and utilizing land to be used for urban farming).

**Keywords:** HBE, Soybean Cake, Tenggilis Kauman, Kampung Tempe Surabaya

## 1. Introduction

Dwelling is the smallest part of a settlement which has the function as interaction space among the people. A house is a building which has function as an adequate shelter, place for family raising and property as well. In other words housing not only has the function of shelter but also the beginning place for living development. Affordable housing is a productive asset to a house that has important contributions to the national welfare and economic development. Moreover, decent affordable housing and related infrastructure are among the key factors that also make the local place more attractive, inclusive and competitive [1].

Home-based enterprise (HBE) is a residential use combining the functions of a private residence and also a function of economic activity on it. HBE is part of the informal economy [2]. HBE is one of the emerging economic activities within or adjacent to the house itself rather than commercial areas or in industrial areas [3]. Home Based Enterprise (HBE) is important in time when formal wages diminish or cease and enterprise are started at the only place available-the house. The advantage of HBE includes the ability to maintain an enterprise at little overhead cost to make use household resources, especially space and utility concessions [4].

Home based enterprises (HBE) is not a new phenomenon in Indonesia, neither developing countries. This is revealed from research in India, that there is a very large number of HBE activities such as; rental of retail products and specialty services

The city of Surabaya has a prominent home based Kampung. One of these Kampung is Kampung Tempe which is located in Tenggilis Kauman street. It is one of the Kampung with the Soybean Cake Industry the biggest in the city of Surabaya. Soybean Cake Industry has existed since the Dutch era in 1938 and is carried on from generation to generation. Kampung Tempe not only makes soybean cake industry, but there is processing of soybean made by mothers. Soybean Cake Industry's products have been able to supply out of Surabaya and for this case usually it's not sold in units. This business is conducted at home by dividing the proportion of houses to live and also as a workplace.

In doing this Soybean Cake Industry activity there are several problems related to the environment. One form is still found the craftsman who disposes wastewater into the river without any filtering effort first. This study focuses on the development of HBE-based settlements.

Volume 7 Issue 1, January 2018

[www.ijsr.net](http://www.ijsr.net)

Licensed Under Creative Commons Attribution CC BY

## 2. Literature Frameworks

### 2.1 Settlement

The settlements from the physical side can be shown as the collection of houses that dominate spatially. Settlement is a part of a residential environment consisting of more than one unit of housing that has infrastructure, facilities, public utilities, and other supporting functional activities in urban and rural areas [5]. In this case, settlement is closely linked with the environment and spatial arrangement

### 2.2 Settlement Issues

Urban settlement issues concerning matters relating to water supply, sewerage systems, wastewater, building structures, rainwater drainage, fire prevention, and water, air, and water pollution soil [6]. The high number of residents is not only causing problems that create the emergence of settlements unsuitable for habitation, but also the emergence of slum settlements. The problems faced in the construction of housing in urban areas is the narrowing land area, the price of land, the increasingly expensive building materials from time to time, and the increasing needs of the community. Such conditions affect the quantity and quality of housing, and often grow slums [7].

### 2.3 Home Based Enterprise (HBE)

HBE is a combining of home and work concepts including social and dimensions culture. Some details of the home function can be described as follows [8]:

- House: used as a place to live without any significant activity;
- House of business / productive house: on this type part of the house is used for business (productive) or economic activity.

The existence of a business house reinforce the function of the house for humans, that is as a product of human technology, is a means (tool) as well as purpose in human life, also become commodities / business capital that support the daily life associated with the economy. Formulates (HBE) type based on the type of business [9]:

- Producing manufacture, such as handicrafts, garments and convection and so on;
- Services, eg salon, workshop, and so on;
- Distribution, such as shops selling handicrafts;
- Other, is a combination or cannot be grouped on one of the above types.

### 2.4 Sustainable Development

In relation to sustainable development, there are two rules to be considered in the management of natural resources and the environment [10] namely: for renewable natural resources: harvesting rates should be less than or equal to regeneration rate (sustainable product) and for environmental problems: growth rate The concept of sustainability can be broken down into three aspects of understanding [11].

- a) Economic sustainability, defined as development that can produce goods and services continuously to maintain the sustainability of government and avoid the occurrence the imbalance sector that can damage agricultural production and industry.
- b) Environmental sustainability, an environmentally sustainable system must be able to maintain stable resources, avoid exploitation of natural resources and environmental absorption functions. This concept also infiltrates the maintenance of biodiversity, airspace stability and other ecosystem functions not included in the categories of economic resources.
- c) Social sustainability, is defined as a system capable of equality, providing social services including health, education, gender and political accountability.

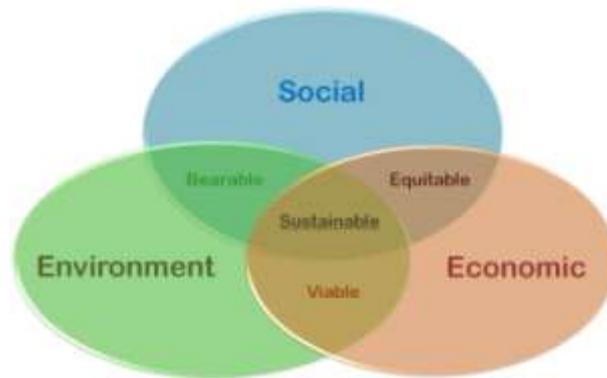


Figure 1: Sustainable development concept  
Source: bangazul.com

### 2.5 Sustainable Housing Concept

Sustainable housing concept is the part of sustainable development concept which emphasis is on the sustainable for the next generation. Related to sustainable development, housing is also part of the relationship between society and environment [1].

#### 2.5.1 Building Performance Related to Sustainable Housing

The important issues in the design of sustainable are about environmental performance, impact on health, occupant comfort and also related to the care and maintenance of housing [1].

#### 2.5.2 Sustainable Building Construction and Materials

The building construction can lead to massive environmental problems, including noise, air pollution and dust, as well as hazardous contamination due to the presence of toxic water [1].

#### 2.5.3 Social and Cultural Sustainability of Housing

Social sustainability in housing is creating affordable housing, have good quality with inclusive or diverse ownership system (mixed-income and mixed tenure), which is supported by a healthy and safe environment, residential areas and community environment of mutual support and integrated with one another [11].

#### 2.5.4 Economic Sustainability of Housing

The Existence of the economic dimensions in sustainable housing arises from the existence of a wide variety of

economic function owned by homes, and the impact of this aspect in the surrounding environment. The existence of traditional materials/local nature provides the better impact on the environment than the use of brick, concrete and steel. The combination of traditional and modern materials can be an option in achieving sustainable homes, especially in the environment. Environmental friendly-building materials assessment is begun with determining the criteria to evaluate the building materials [1].

## 2.6 Society Participation

Participation can be interpreted as a conscious involvement of a person into social interaction in certain situations. With that understanding, participation can be bias when he finds himself with or in a group, through various processes with others in terms of traditional values, feelings, loyalty, obedience and shared responsibility. Three main reasons for the importance of community participation in development are: (1) public participation is a tool for obtaining information on conditions, disadvantages and local communities, without which development programs and projects will fail, (2) communities will trust development programs when they are involved in the process of preparation and planning, because people know more about the project and feel the project, (3) participation is the democracy right of community in its involvement in development.

## 3. Research Methodology

### 3.1 Research Paradigm

This study uses post-positivism that is naturalistic because the research is done by natural conditions (natural setting). Data analysis is inductive based on facts that found in the field and then constructed into hypotheses or theories [12].

### 3.2 Research

This research applies descriptive qualitative research which method is used to find the knowledge of the subject of research at a certain moment. Descriptive research is a study intended to collect information about the research subjects at a certain period. The descriptive qualitative research attempts to describe all the circumstances that exist, namely the state of the symptoms according to when the research is conducted. Descriptive research is merely exposing the situation or event of this research. It does not seek or explain the relationship, not test the hypothesis or make predictions [13].

### 3.3 Method

#### 3.3.1 Transect Map Analysis

In identifying the characteristics of Kampung Tempe' settlements, this research used transect map analysis technique that is the technique of extracting information and the media of understanding through tracing by walking along the longitudinal line from one corner to another corner at a certain location. This technique can be used for the present, historical transect, or future scenarios. The objective is to understand the characteristics and circumstances of what will

be observed (community and place) such as Drainage Network, Sanitation Network and Road Network etc

#### 3.3.2 Triangulation Analysis

The purpose of this triangulation is to strengthen the researchers' understanding of what has been found [14]. Triangulation aims more to the researcher's understanding of the world around holistically, both academically and legitimately[15]. Triangulation is interpreted as checking data from various sources in various ways and different types [16]. Triangulation is a method of cross-checking data from a variety of sources [17]. The type of triangulation used in this research is data triangulation involving the time, space and respondents/resource persons in other words if the data is still dubious, then researchers can do a re-check that involves the time, space and respondents concerns.

#### 3.3.3 SWOT Analysis

SWOT matrix analysis is the systematic identification of various factors for formulating the development strategies. This analysis is based on the logic that can maximize the strength and opportunity, and minimize the weaknesses and threats.

## 4. Overview of Kampung Tempe

Kampung Tempe is the leading Kampung of Surabaya City which is located in Tenggilis Kauman Tenggilis Surabaya City (Figure 2).



Figure 2: Location kampung tempe  
Source: Google Maps

The small-scale industry of soybean cake in Tenggilis urban Kampung has existed since Dutch time ( $\pm$  1938) and done from generation to generation. The difference is, at ancient time, the raw material for making soybean cake using local soybean (Javanese soybean) and stripping process is still done conventionally and traditionally by stepping on the river. Packaging soybean cake still uses banana leaves or teak leaves tied with rope straw (rice stalk). Over time, in 1970, as local soybeans were no longer sufficient in the manufacture of soybean cake, gradually the craftsmen used soybean raw materials of choice with a more modern process. It is not easy to take care of heritage business amid the increasingly tough economic competition from year to year [18].

However, the soybean cake makers in Tenggilis Kampung Tempe Surabaya have proven that they can still exist to take care of heritage amidst the competition. The secret lies in the consistency of soybean cake makers in maintaining the quality of soybean cake production. Tempe produced by soybean cake makers in Kampung Tenggilis Mejoyo is made from a pure soybean. Tempe production process is also very hygienic because it uses soybean peeler machine and experiences the process of stewing twice. In addition, the process of soy washing done in a special sink to be more securely hygiene. The combination of quality soybeans and hygienic production process produces a taste and quality of Tempe is undoubted [18].

Social culture conditions contained in the Kampung Tempe Tenggilis is quite good. This is because there is a community group that has been established, although this community can be classified into non-formal institution. The community is used to accommodate craftsman of soybean cake if there is a problem, innovation, assistance from the government or just as a meeting for soybean cake Industry activity are done.

## 5. Enterprise Activity

In the Kampung of Tempe not the whole community works as Tempe craftsman. A part of the community act as a supporter of Tempe activities. Among others they act as supplier of raw material (soybean), or some others act in the distribution and marketing of the Tempe.

### 5.1 Suppliers of Raw Materials

Soybean is the main raw material in the process of making soybean cake. The soybean that will be made for soybean cake must be imported from outside the city of Surabaya even from abroad. This is because in the city of Surabaya cannot find land for soy farm. After the soybeans are imported by the supplier, the next task is to sort the soybean if that are not in accordance with the standard. After that the next process is washing the soya using clean water coming from the well (Figure 3).



**Figure 3:** Sorting and washing the soybeans  
*Source: Survey by author, 2017*

### 5.2 Boiling and Cooking

Soaking and boiling soybeans are mostly done by men. This is because it takes a lot of energy in boiling soybeans. This activity is done inside the house or soybean cake factory (Figure 4).



**Figure 4:** Soya Immersion and boiling  
*Source: Survey by author, 2017*

### 5.3 Fermented Parts

Fermenting is the main part of making soybean cake. If the ferment is not done properly, then the quality of soybean cake that is not perfect even failed (Figure 5).



**Figure 5:** Fermentation process  
*Source: Survey by author, 2017*

### 5.4 Packaging

This packing section is done by the mothers/womans. This packaging uses plastic, because banana leaf is now in Surabaya hard to find. This packaging can be classified into three sizes i.e. small, medium and large depending on consumer demand (Figure 6).



**Figure 6:** Packaging of soybean cake  
*Sources: Survey by author, 2017*

### 5.5 Distribution

Soybean cake distribution is done by men. This distribution activity is carried out every day on a fixed consumer with a large amount because this soybean cake does not sell it retail. These distributed activities typically use bikes for consumers on a small scale, motorcycles for medium-scale and cars/pickups for large-scale consumers (Figure 7).



**Figure 7:** Transportation for soybean cake distribution  
 Sources: Survey by author, 2017



**Figure 9:** Clean water from PDAM and ground water  
 Source : Survey by author, 2017

## 5.6 Processing Based Soybean Cake

In this Kampung, there are also other household industry activities which are managed by mothers. This industrial activity serves to support the economic activities of the family by making home industries such as soybean milk, soybean cake nugget, soybean cake chips et (Figure 8).



**Figure 8:** Making soybean cake, nugget and chips  
 Source: Survey by author, 2017

## 6. Analysis

### 6.1 Identification and Analysis of Kampung Tempe Settlements

Improving the Quality of slum housing and slum areas by defining slums as settlements that are not habitable due to irregularity of buildings, height of building density levels, and quality of buildings and facilities as well as infrastructure that is not eligible [19]. Conditions of slums are reviewed from a number of criteria, namely:

- a. water supply
- b. electricity
- c. accessibility
- d. sanitation
- e. drainage
- f. waste management
- g. fire protection
- h. non decent houses

#### 6.1.1 Water Supply

The clean water supply in Kampung Tempe that is dominated by the use of city water board (PDAM) and ground water in which the whole community has been served by clean water network. In the future, the additional clean water supply and network maintenance are needed (Figure 9).

#### 6.1.2 Electricity

Kampung Tempe Tenggilis Kauman has been empowered by electricity from PLN. For the future improvement of quality and maintenance of electricity network is required. This is because it is not impossible that the electricity network can sometimes experience damage due to industrial activities and street-lighting.

#### 6.1.3 Accessibility

Accessibilty of Kampung Tempe Tenggilis Kauman is still in unsuitable conditions. Therefore, it needs the road quality improvement on several road segments and improvement of road quality with concrete and re-feeling system (Figure 10).



**Figure 10:** Accessibility within the kampung  
 Source: Survey by author, 2017

#### 6.1.4 Sanitation

There are still some houses in Kampung Tempe Tenggilis Kauman that do not have waste water treatment plant (WWTP), so residents still throws waste directly into the river. In the future, it needs to make communal WWTP at 3 points in Kampung Tempe Tenggilis Kauman is needed (Figure 11).



**Figure 11:** Direct sanitation in stream of the river  
 Source: Survey by author, 2017

**6.1.5 Drainage**

The Drainage in Kampung Tempe Tenggilis Kauman can be classified into two types namely open and closed. The conditions found are almost all the drainage network contains with trash and the depth is relatively shallow. So in the future it needs effort to improve the quality of the drainage by covering the entire drainage (Figure 12).



**Figure 12:** Open and closed drained  
 Source: Survey by author, 2017

**6.1.6 Waste Management**

Waste management in Kampung Tempe Tenggilis Kauman already provided with a network of private trash, but still a lot of trash that scattered around. It takes effort to socialize the society related to this problem (Figure 13).



**Figure 13:** Stacking waste  
 Source: Survey by author, 2017

**6.1.7 Fire Protection**

Facilities and fire infrastructure for fire protection in Kampung Tempe cannot be found. As Home Based Enterprise (HBE) Kampung should have provided fire protection equipment, this is because the vulnerability to the emergence of fire danger is very large. Fire protection is not only done in industrial homes but must also must be-in every home. Fire protection system is the most simplest form of fire extinguishers.

**6.1.8 Non Decent Houses**

In the settlement of Kampung Tempe Tenggilis Kauman still found some houses that can be categorized as unfit for habitation. In the future, revitalize the house to be appropriated with the standard of decent houses is needed (Figure 14).



**Figure 14:** Dirty house and small house for one family  
 Source: Survey by author, 2017

For more information, the SWOT shown in table 1.

**6.2 Settlement Development Strategy**

In determining the strategy what will be used in the development of the settlement that previously performed the analysis using SWOT. The goal is to know some strengths and weaknesses from inside and outside the village that later can be generated strategy. For more details can be seen in the (Table 1).

**Table 1:** SWOT Analysis

SWOT	Strength	Weakness
	1. Soybean cake production already using the machine 2. All raw material requirements are provided by fixed suppliers 3. Already have a fixed market with service scale out of town 4. Have other soybean cake processing activities 5. kampung that has the identity as soybean cake production kampung. 6. There is clean water coming from wells for soybean cake industry activities 7. Have excellent product that is soybean cake Tenggilis 8. There is a mural of soybean cake as an amplifier identities of Kampung Tempe	1. The presence of houses unfit for habitation 2. Do not have WWTP for soybean cake industry 3. Do not have WWTP for daily activities 4. There is an inappropriate street 5. Drainage channels that need to be repaired 6. The need for green open space which is still lacking 7. The level of community awareness on environmental management is still low
Opportunity	Strategy SO	Strategy WO
1. Have community craftsmen soybean cake	<ul style="list-style-type: none"> <li>Empowerment of communities around Kampung</li> </ul>	<ul style="list-style-type: none"> <li>Non decentt houses improvement</li> </ul>

<p>2. Directives from the city government on environmentally friendly industrial activities</p> <p>3. There is a unused land</p> <p>4. Have an environmental cadre</p> <p>5. There is assistance from industry and trade office related to soybean cake industry</p> <p>6. There is a direction from the Surabaya city government as the leading the Kampung in the field of soybean cake industry</p> <p>7. There is an improvement on the house unfit for habitation by Surabaya city government</p> <p>8. There is a government policy for environmental management</p>	<p>Tempe to realize social sustainability</p> <ul style="list-style-type: none"> <li>• Procurement regulation regarding development of sustainable based facilities and infrastructure</li> <li>• Procurement of environmentally friendly Home Based Enterprise (HBE)</li> </ul>	<ul style="list-style-type: none"> <li>• Street quality improvement</li> <li>• Improvement of drainage quality</li> <li>• Procurement of WWTP for home based activities</li> <li>• Procurement of WWTP for Home Based Enterprise (HBE)</li> <li>• Utilizing land to be used for urban farming</li> </ul>
<p>Threats</p> <p>1. The price of soybean is fluctuating</p> <p>2. The young generation left soybean cake industry activities</p> <p>3. Limitations of time owned by the community in terms of environmental and social activities.</p> <p>4. Enthusiasm and quality of human resources owned by Kampung Tempe</p> <p>5. Inadequate distance from well to sanitation</p>	<p>Strategy ST</p> <ul style="list-style-type: none"> <li>• Development of the next generation of Kampung Tempe</li> <li>• Relocate and find new wells for Home Based Enterprise (HBE)</li> </ul>	<p>Strategy WT</p> <ul style="list-style-type: none"> <li>• Coaching by the government and educational institutions</li> </ul>

Sumber : Analysis by author, 2017

### 6.2.1 Improving the Quality of Settlements

#### Strategy 1. Non Decent Houses Improvement

The purpose of the house improvement program is to eradicate slums in Indonesia. In addition to improving the quality of life/public health degree. This home improvement will have implications on the environmental conditions of Kampung Tempe, thus creating a healthy Kampung, clean and safe (Figure 15).



**Figure 15:** Concept of home improvement  
 Source : beritalima.co.id

#### Strategy 2. Street Quality Improvement

The street is one of the most vital infrastructures in the homebased industry and daily activities. The streets that exist in the Kampung Tempe Tenggilis Kauman are still bad conditions. It is necessary to repair them immediately considering the street is part of the soybean cake production system if street is left damaged it will inhibit the flow of soybean cake production activities. The streets repair can use paving block that can absorb water (Figure 16).



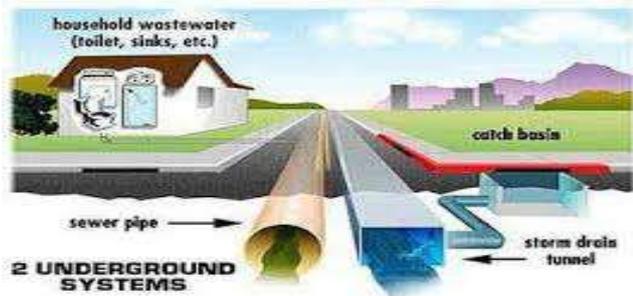
**Figure 16:** Structuring and improving environmental street  
 Source : Slideshare.net

#### Strategy 3. Improvement of Drainage Quality

Drainage in the Kampung Tempe Tenggilis Kauman can be classified into two types, namely open and closed. Drainage condition with the open system is require improvement in the form of dredging and deepening. This is because there are several points of the drainage covered with soil. In the rainy season this drainage can overflows. Otherwise it is necessary to create a new drainage network at some points due to the network is disconnected.

#### Strategy 4. Procurement of WWTP for Home Based Activities

Procurement of WWTP for Home based activities is very necessary for the Kampung Tempe this is because the waste water produced by Home Based Enterprise (HBE) directly streamed into the river that is behind Kampung Tempe. This can lead to water pollution as moreover 70% of the wastewater is produced from detergent which is very difficult to decompose. The existence of the river itself is still widely used by the community even there are fishing communities in the river to be a side dish to eat. Thus WWTP is required to filter wastewater before it flows into the river (Figure 17).



**Figure 17:** Concept of new wells for industrial activities  
 Source: Pinterest.com

### 6.2.2 Institutional

*Strategy. Coaching by the Government and Educational Institutions*

In conducting its activities the community of Kampung Tempe Tenggara Kauman cannot be separated from the relevant stakeholder's role. The role of stakeholders can help in terms of economic empowerment, social community empowerment and knowledge about the impact of the Home Based Enterprise (HBE) on Kampung Tempe. This stakeholder role can be in the form of counselling and guidance that is from the side of the government and educational institution. For the government, side it can be represented by the Department of Trade and Industry and the Office of the Environment where the service can provide guidance on how to process Soybean Cake Industry with attention to environmental conditions. While the guidance is done by educational institutions by providing coaching and counselling to the community about marketing strategy, environmentally friendly industry concept and waste disposal management so as not to pollute the surrounding environment.

### 6.2.3 Social Culture

*Strategy 1. Development of the Next Generation of Kampung Tempe*

One character of Home Based Enterprise (HBE) is the involvement of all family members in doing soybean cake processing industry activities. The problem faced is the number of young people who do not continue the industrial activities. Therefore, counselling and guidance from relevant stakeholders on the benefits of economic sustainability of soybean cake HBE activities for the family can be inherited. The intention is that the sustainability of the Soybean Cake HBE in the future is still can be expected.

*Strategy 2. Empowerment of Communities Around Kampung Tempe to Realize Social Sustainability*

Kampung Tempe community should have a positive impact on the surrounding environment not only in the Kampung Tempe environment only. Positive impacts can be either employment in the form of processing, distribution and marketing, so agglomeration prosperity can be equitable and can improve the economy of the people around the Kampung Tempe. With such a social sustainability in the Kampung Tempe can create affordable settlements, with good quality of economic and social conditions that are increasing and exclusive.

### 6.2.4 Supporting Facilities and Infrastructure

*Strategy 1. Procurement of WWTP for Home Based Enterprises (HBE)*

Procurement of WWTP is very necessary for society, this is because for the activities of Home Based Enterprise (HBE) both the process of managing soybean cake and the resulting water produced directly discharged into the river. Surely this is a serious concern that where the wastewater released will pollute the environment (Figure 18).



**Figure 18:** Concept WWTP for Home Based Enterprise (HBE)

Source: Biotech-bg.com

*Strategy 2. Relocate and Find New Wells for Home Based Enterprise (HBE)*

In carrying out soybean cake Home Based Enterprise (HBE) activities cannot be separated from the use of water. Water is one of the important components besides soybean which is the main raw material. The water used by the community in soybean cake Home Based Enterprise (HBE) activity mostly uses well. Problems that occur is the existence of a well located adjacent to the septic tank that the distance is not up to 8 meters. Frightened is when the water is contaminated with bacteria produced by septic tank, thus causing contamination of the soybean cake products. Although so far not been concerned about the existence of these wells, but this problem must be addressed early before causing serious problems in the future and sustainable Kampung Tempe can be achieved (Figure 19).



**Figure 19:** Concept new wells for industrial activities

Source : Pinterest.com

### 6.2.5 Sustainable Development Principles

*Strategy 1: Procurement Regulation Regarding Development of Sustainable Based Facilities and Infrastructure*

The development of these facilities and infrastructures should be formulated together between the community and the government regarding the future regulation that will be implemented in Kampung Tempe. This regulation is very

important considering the construction of facilities and infrastructure built, so it should not damage the ecosystem of the environment itself.

### Strategy 2. Procurement of Environmentally Friendly Home Based Enterprise (HBE)

Procurement of this Home Based Enterprise (HBE) is by revitalizing the existing home based industry by providing training and counselling about the concept of environmentally friendly by using renewable energy and does not cause environmental problems such as wastewater etc (Figure 20).



**Figure 20:** Concept of environmentally friendly Home Based Enterprise (HBE)

Source: *Housing-estate.com*

### Strategy 3: Utilizing Land To Be Used For Urban Farming

The concept of urban farming itself is to make use of unoccupied land or land around homes and Kampung to be used as green farming by communities, for the benefit of the community itself (Figure 21).



**Figure 21:** Concept of vertical urban farming and concept of horizontal urban farming

Source: *Vinadigou-wordpress.com and m.monitor.co.id*

## 7. Conclusion

Based on the SWOT analysis and explanation it can be concluded that Kampung Tempe has the potential to be developed. This is because this Kampung has a Home Based Enterprises (HBE) in the form of Soybean Cake and processed Soybean Cake such as Soybean Cake Nugget, Soybean Cakechips, Soy Milk. However there are some problems still found: sub standarad houses along with Kampung infrastructure. Soybean Cake-based Home Based Enterprise (HBE) that are not friendly to the environment with existing wastewater directly to the river. Therefore the activities and infrastructure of this industry require improvement of quality and quantity by giving priority to

environmentally friendly and sustainable Home Based Enterprise (HBE).

The result of this research is development strategy of Soybean Cake settlement through continuous HBE approach with improving the quality of settlements: (non decent houses improvement, street quality improvement, improvement of drainage quality and procurement of WWTP for home based activities, institutional : (coaching by the government and educational institutions), social culture: (development of the next generation of kampung tempe and empowerment of communities around kampung tempe to realize social sustainability), supporting facilities and infrastructure: (procurement of WWTP for home based enterprises (HBE) and relocate and find new wells for home based enterprise (HBE)) and sustainable development principles : (procurement regulation regarding development of sustainable based facilities and infrastructure, procurement of environmentally friendly home based enterprise (HBE) and utilizing land to be used for urban farming)

## References

- [1] Habitat, U. N. 2012. *Sustainable Housing for Sustainable Cities: A Policy Framework for Developing Countries*. United Nations Human Settlement Program. Nairobi
- [2] Strassmann, P.W. 1987. Home-Based Enterprises in Cities of Developing Countries. "Economic Development and Cultural Change, Vol. 36, No 1, pp. 121-144
- [3] ILO. 1972. "Income and Equality: A Strategy For Increasing Productive Employment in Kenya". International Labor Office. Geneva
- [4] Lawson, T and Olenrewaju, D. 2012. "The Home As Workplace: Investigating Home Based Enterprises In Low Income Settlement Of The Lagos Metropolis", *Ethiopian Journal of Environmental Studies and Management EJESM Vol. 5 No.4*.
- [5] Undang-undang No.1 Tahun 2011. *Perumahan dan Kawasan Permukiman*. Pemerintah Replublik Indonesia, Jakarta
- [6] Yunus, H.S. 1987. *Geografi Permukiman dan Permasalahan Permukiman di Indonesia.*: Fakultas Geografi UGM, Yogyakarta
- [7] Soedjadi, K. 2005. *Kesehatan Perumahan dan Lingkungan Pemukiman. Bagian Kesehatan Lingkungan Masyarakat*, UNAIR. Surabaya.
- [8] Silas, J. 1993. *Housing Beyond Home*. Pidato Pengukuhan Guru Besar ITS Tahun 1993. Surabaya
- [9] Silas, J. 2000. *Rumah Produktif: Dalam Dimensi Tradisional dan Pemberdayaan*. UPT Penerbitan ITS. Surabaya.
- [10] Pearce, D.W dan Turner, R.K. 1990. *Economics Of Natural Resources and The Environment*. Harvester Wheatsheaf, London
- [11] Fauzi, A. 2004. *Ekonomi Sumber Daya Alam dan Lingkungan*, PT. Gramedia. Pustaka Utama, Jakarta.
- [12] Groat,L and Wang, D. 2002 *Architectural Research Method*. John Willey&Sons.Inc, USA
- [13] Sugiyono. 2007. *Metodologi Penelitian Pendidikan..* Alfabeta, Bandung.

- [14] Stainback, S and William, S. 1988. *Understanding and Conducting Qualitative Research*. Kendall Publishing Company, Iowa.
- [15] Bogdan, R.C dan Biklen, S.K. 1982. *Qualitative Research for Education: An Introduction to Theory and Methods*. Allyn and Bacon, Inc, Boston.
- [16] Wiersma, W. 1986. *Research Methods in Education: an Intoduction*. Allyn and Bacon, Inc, Massachusetts:
- [17] O'Donoghue, T & Keith P. 2003. *Qualitative Educational Research in Action: Doing and Reflecting*. Routledge, London.
- [18] Dianingrum, A. 2017. *Perkembangan Program Perbaikan Kampung dan Pemberdayaan Masyarakat Di Surabaya..* Unpublished Tesis, ITS, Surabaya.
- [19] Peraturan Menteri Pekerjaan Umum dan Perumahan Rakyat. No.02/PRT/M/2016. *Peningkatan Kualitas Perumahan dan Permukiman Kumuh..*Kementrian Pekerjaan Umum dan Perumahan Rakyat, Jakarta.

### Author Profile



The author was born in Jember on June 16, 1993 and is the second child of the couple Drs. Turasman and Warjiyah. The author has taken formal education namely Kebonsari 1 of Jember State Elementary School, State Junior High School 12 of Jember, State Senior High School 1 of Jember, Bachelor of Regional and City Planning Department FTSP-ITS through invitation in 2011 and currently master students, of architecture department FADP-ITS. In 2015-2017 the author works in Indonesia's largest private consultant in Development and Architect located in Bandung City, with the final position as an assistant expert in the field of urban and regional planning.