Improvement of Cibaduyut Housing District to Facing City Growth Phenomena, based on “System Approach to Architecture” Concept

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Abstract. The city development is should give positive contribution to social development, on ideal situation. However, this situation is not always similar with the expectation as well as theory. Several factors are being as the push factor to the movement, and the movement can be contradictive to negative conditions, for example due to: (1). The high-level land invasion by private sector to community on location. (2). The lack of development as well as training program in location, by the government and others. (3). The condition of high pressure of import handicraft from another country including: shoes and other handicraft from leather. The similar things happen in Cibaduyut as housing settlement based on leather industry-activity. Therefore, this is become the focus of analysis of this research (2017). Actually, there are several potentials in research location as bellow (SWOT analysis 2017): (1). Potential of small industry in the large numbers of handyman, (2) Recreation Potential, (3). Potential of development of new transportation LRT, (4). Potential of historical legend on Cibaduyut area and (5). Potential of development in economy of community. An important thing that should be highlighted is this analysis based on the strength and the opportunity of application concept of “system approach to architecture”, which being completed with many supporting theories. The key factor of the strength of this research is based on Memorandum of Understanding (MoU) between university (UPI) and the Bandung’s Government to find the best design solution and grand theory about The Handicraft Housing Settlement to finding the way sustainable settlement as well as sustainable development in research location.

1. Introduction
Cibaduyut has been introduced since 1920 as a district of producing and selling of shoes and the other handicrafts from leather. The origin of word Cibaduyut is come from “baduyut” as one of a tree which has fruit which call as baduyut fruit. On the old time, this area was still as a village which was very cool, a lot of handyman lived with a group of farmers and breeders. The condition of village was still as traditional kampung. After, Indonesia got the independence, in 1950, there were 250 unit of production of leather handicraft in Cibaduyut District. There was change from central of producing and marketing of shoes, etc. to one of central of recreation area in Bandung which has several recreational areas, there. This process can be seen from a large of tourist have been came to location, 4.9 million people in 2013.

Based on data about capacity of production of leather handicraft in Cibaduyut Bandung, there is about 3.114.022 pairs of shoes with the value of investment Rp. 19 billion and it was absorbing 3.008 people of
worker to fulfilling the needs of market in the city as well as from out of the city. But, the condition nowadays there is degradation of data of handyman in location, it was noted that there were only 850 handymen of shoes in Cibaduyut District, from the data on the last time about 3000 of handyman. That tourism area which is get city development (neoliberalism), is need working together among several subjects, strategy of community development, strategy of management etc. Finally, the transformation of cultural environment is need change from political aspect for the sustainability [1]. Meanwhile, several strategies to improving the central of handicraft settlement, by: (1) By developing completion facilities: Infrastructure, Machine of Industry and Equipment’s, (2). By giving training to handyman, (3). By using good materials of industry, (4) By improving management of information, new ideas, innovation, etc., (5). By marketing strategy of product and (6). By completing public service and capital of industry [2].

**Figure 1a.** Location of Cibaduyut District which can be accessed from Soekarno Hatta Street, has distance no more than 500 m from Leuwi Panjang Bus Station  

**Figure 1b.** The sculpture of Cibaduyut Shoes, as the landmark in around of Cibaduyut District.

**Figure 2a.** The condition of environment degradation and density of traffic jam in around of Cibaduyut District.  

**Figure 2b.** The plan of M-Square apartment and commercial area (CBD) which has been growing in Cibaduyut District, besides of the others real estate development.

From this figure can be seen that there is challenge toward the existence of local settlement, the challenge toward the existence of open space and the challenge toward the art of this district as recreational area. But there is will be developing MRT Station and LRT Station, on the other hand this is can be as opportunity to the development of Cibaduyut District on long term planning, if this is thinking on context of sustainable city and sustainable development.
2. Methods
This research is using qualitative method, by using data from the field and literature study. All of data is using to find the conclusion therefore can-do modelling about Cibaduyut in the future. Meanwhile aim of study of this research is as the descriptions below:

- To know factors which have influence to the degradation of housing of handicraft maker in Cibaduyut District.
- To know and mapping potential of the location of this research in context reach Cibaduyut to be the sustainable of recreational district in the future harmony with the development of around of area.
- To do comparison study by literature as well as field survey the successful recreational district to understanding factors which influence to integration of system of this area and around in the future.
- To design and modelling design of lanscape of Cibaduyut which is relevant with the development of this area in the future

3. Results and discussion
If Cibaduyut is analysis from level of the company of shoes in location which exist in location, can be known that there are 3 parts of cluster in Cibaduyut District [3], as follow:

| Cluster          | Total of Company | No Responden | Name of Company                                           |
|------------------|------------------|--------------|-----------------------------------------------------------|
| 1 High Cluster   | 9 (30%)          | 10, 14, 3, 16, 24, 18, 5, 30, 1 | Pormil, Tiara House, Diana, Oval, Mitako, Mega Cibaduyut, Trio, D Class, Aneka |
| 2 Medium Cluster | 10 (33 %)        | 2, 28, 6, 25, 26, 29, 15, 9, 12, 20 | Basama, Basoga, Dian Sari Pratama, Royal, Repalts, Gontina, Ocssa, Parunten, Ega Shoes, Ogan Jaya, Chaira House |
| 3 Low Cluster    | 11 (37,5%)       | 4, 11, 7, 22, 8, 21, 17, 28, 13, 27, 19 | Silvi Shoes, Gian Ghie, Aldymore Shoes, CBU, Ellyza, Almond, Asra, Picanto, Annisa Jaya, Inntany, Koyoko |

On general, the development of infrastructure development in Bandung has been developing for example: the development of MRT Jakarta-Bandung, the development of LRT, and development of infrastructure of streets in around of Bandung City. Until now the development of the way of MRT Jakarta-Bandung is still 5 KM. This analysis will be done on 5 zones:

1. Zone A, northernmost
2. Zone intersection 3 (B)
3. Zone middle C
4. Zone intersection 3 (D)
5. Zone around of M-Square CBD and Apartment (E).
Figure 3. Analysis Zone of Location
Table 2. Analysis of Condition

| Zone            | Analysis of Condition                                                                                                                                 |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Zone A          | The northernmost zone in where the shoes sculpture as the landmark of Cibaduyut is exist. This area is having potential as the landmark of this area. Beside of that this area has potential as the path of primary circulation. This location is intersection between Soekarno Hatta Street and Leuw Panjang Street which continue to Cibaduyut Street. On the future, this area will also be change from Bus Terminal to Train MRT Station, CBD, Apartment and Central Bussines District (CBD). |
| Zone B          | Zone area of adverse 3 between Cibaduyut Raya Street and Cibaduyut Lama. There is exist sidewalk and open space which wider but the condition is look unplanned, arid and no more have aesthetic value.                                                                                       |
| Zone C          | Middle Zone of The Cibaduyut District. There is exist some Store of Shoes, which have the wider of yards, besides of that some public facilities for example: The Mosque, School, ATM Center, Cafe, and the other public facilities. On this area is look more crowded with many vehicles which are parking, and also many street vendors there. On this area is also exist many public facilities which are have various function. For example: store of daily needs, restaurant, cafe, etc. On this area is also the highest level of traffic jam because this area is intersection to Mohammad Toha Street. |
| Zone D          | Zone around of intersection of Cibaduyut Lama Street and Mekarwangi-REAL Estate. On this area is also exist many public facilities which are have various function. For example: store of daily needs, restaurant, cafe, etc. On this area is also the highest level of traffic jam because this area is intersection to Mohammad Toha Street. |
| Zone E          | Zone around of M Square CBD-Apartment. This area is predicted that will be developing so fast due to the development of M –Square CBD-Apartment with a large number of unit of housing, there are 750-unit apartment and many public facilities as the completion. The development of this area will be change this environment and the pattern of circulation in Cibaduyut area. If analysis more, this location actually will give the more earnings from tax sector, mainly from The Stores which have category as High Cluster |

An area can be developing become one of destination which fulfilling as available recreational area which is available to can be visiting if has minimal 3 requirements which should be developing, there are the existence of: (1). Something to see. (2). Something to buy. (3). Something to do. This theory therefore was implemented on recommendation of the design for the location to accommodate the future need in this area. To reach sustainable tourism district is also should accommodate all aspect of human resources as well as natural resources. Based on SWOT analysis can be know that this area has opportunity from the market of high cluster, this is having tax potential, this potential can support another side condition in location for
example invasion of land, unplanned public facilities [4], etc. as the wealth and the threat of location [5]. From comparison studies of Yogyakarta and Singapore about handicraft tourism area, several attractive lessons can be noted to enrich the simulation of model of “system approach of architecture” concept for Cibaduyut area in the future.

Figure 4. Concept for Cibaduyut area in the future
Result of simulation model of “system approach to architecture concept”, variable of this basic theory is:
(1). Objective, (2). Constraints and (3). Criteria. From the simulation process can be find that the best planning of recreational area for urban tourism for handicraft selling and living, is influence of this factor:
(1). Political factor, (2). Functional Factor, (3). Aesthetic Factor, (4). Concept of Participatory Planning, (5). Concept of best Management of Tax. (6). Sustainable knowledge.

4. Conclusion
In general, the planning of area for recreational area basically should analysis very many comprehensive factors [6]. The best planning of recreational area for urban tourism for handicraft selling and living, is influence of this factor: (1). Political factor, (2). Functional Factor, (3). Aesthetic Factor, (4). Concept of Participatory Planning, (5). Concept of best Management of Tax. (6). Sustainable knowledge.

Application of concept about “System Approach to Architecture” [7] is very useful basically to understanding and analysis system in a place more comprehensive, therefore after than can get best design in which deliberate all aspects which relate to the new needs of an area, contextual with the concept sustainable city as well as sustainable settlement. This research will be continuing in next year on the other aspect is human settlement after about landscape and urban design study as describe in this paper at all.

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