

State : Indonesia
University : Parahyangan Catholic University
Team : **1. Timothy Vittorio** **2013420061**
 2. Dennis Cahya Indra **2014420028**

Project Name :

GREEN METAMORPH

P R O J E C T

“TRANSFORMING URBAN SLUMS IN JAKARTA INTO GREEN SETTLEMENTS”

I. background

The twenty-first century is marked by unprecedented urbanization. More than half of the world's population now lives in cities and towns, while the current urbanization trend is expected to continue at a particularly rapid pace across less developed regions. Based on UN-Habitat estimates, 95% of the urban growth during the next two decades will occur in the developing world. Indeed, many of the largest urban agglomerations, which are also major consumers of energy and generators of pollution, are already located in less developed countries. Rural-urban migrants, many of them considered poor, move to urban areas voluntarily in order to tap into real or perceived economic opportunities. These opportunities are often realized through informal sector activities that are especially thriving in urban slums.

II. MAIN ISSUES

A large number of slum residents especially in Jakarta live under appalling conditions in overcrowded settlements and face a widening divide between the poor and the rich. Genuine initiatives are needed to provide them with formal housing and urban services at an adequate scale or in a sustainable manner. However, slums often continue to proliferate as a result of the failure of housing policies, constraining regulatory environments, and non-responsive service delivery systems as well as misguided national and urban policies. At the local level, lack of capacity to cope with or manage the situation has left many slum residents trapped in an environment of illegality insecurity.

III. DESIGN CONCEPT

We believe slums represent a survival strategy in the face of insufficient and affordable housing and lack of security. Despite all inherent problems, slum provide some basic lessons such as :

- The houses in slums are some of the smallest possible. Most of the spaces in these shelters are used as **multi – functional spaces**, with common spaces of living and **family interaction**. Thus, these dwellings are probably the best examples of optimum utilization of living space.
- Slum dwellings are **people’s own solutions** for their housing needs. They are the **cheapest** and most **affordable possible** in a given area.
- Slums are vibrant communities of people. They have integrated a **whole range of social** and **community spaces**.
- Slum- dwellers use **minimum building materials** to create their houses. They use easily available local building materials.

So responding to those characters we create a strategies based on analytical process to the characters of the slum that will not only **recover** the negative condition towards the slum, but there are some characters and condition inside the slum that possible to be **preserve** and **enchance**.



IV. DESIGN VISION

Our goals to create a green living situation is to find a right solution through analytical process, our strategies to recover, preserve, and enhancing every aspect that matters in Slum will gradually transform the image of the slum itself from abandoned informal sectors into one of the most influential aspect in realizing the **Future of a Green Tropical Living** of the City.

V. ACTUALIZATION

To realize our vision we try to perform our strategies into one of the site in Jakarta,

Luar Batang village is one the oldest Village in Jakarta located in the area of Pasar Ikan (Fish Market) in North Jakarta on the west side of the Sunda Kelapa Harbor. This area is one of many village in Jakarta that has an over populated situation and leads to unhealthy living space, affecting the surround environment.



VI. STRATEGIES

1. RECOVERY STRATEGIES

a) Water Treatment System

Due to the increased demand and local weather changes we need to seek ways to supplement water sources. Using the Artificial recharge (AR) and aquifier. Storage and recovery (ASR) are processes that convey water underground. These processes replenish ground water stored in aquifers for beneficial purposes. Although the terms are often used interchangeably, they are separate processes with distinct objectives.

b) Sustainable Housing System

Analyzing the typical of the existing houses in the site we tried to create a compatible solution to answer the demand of increasing population by creating a Smart Share House, using a sustainable materials such as Bio Concrete, Recycled Woods, and Bamboo.

c) Biogas Electricity System

Managing the waste of the site, we perform a biogas electricity system. Biogas is the gas resulting from an anaerobic digestion process. A biogas plant can convert animal manure, green plants, waste from agro industry and slaughterhouses into combustible gas.

d) River Purification

The River existence is main core of life support to the local community. By creating a smart bridge filtration, the flow of the river water that pass through the bridge is filtralized in sequences.

e) Reforestation

Expanding the riverbanks and creating a forest near the river is one simple solution to prevent the floodings and improve the environment quality.

2. PRESERVATION STRATEGIES

a) Collaborative Communal Space

The main character of the community are very closely to togetherness and to preserve this situation every Share House Module are organized to create a core that can be used as a collaborative communal space.

b) Participatory Development Method

In realizing a Sustainable Green Living we believe that the sustainability can be achieved by infusing the greenery into the communities, a participatory development process is one way to bring the community understanding the transformation of their environment, how and why they should maintain the greenery to the environment.

c) Heterogeneous Culture

There are uniqueness inside the community that colorize their society, bringing their living spaces more alive in such different ways, and this diversities need to be maintain in

d) Expansion Capabilities

As the communities grow ,we prepare an expansion capability to the structure of the housing, so every household could expand their living space

3. ENHANCEMENT STRATEGIES

a) Vertical Farming & Urban Harvesting

Providing daily needs and creating an independent society each houses are able to be planted by vertical vegetables and fruit, and each garden created by the house cluster are also able to be planted.

b) Redefining Circulation

Enhancing the mobility inside the site, every main road are expanded and bordered by greenline giving more spaces between the houses and the road.

c) Water Harvesting Oriented

Rain water harvesting were maximalized through rainwater collecting on every share house. Rainwater underground tank is separated with reservoir from city water supply and groundwater to make the rainwater as the main supply.

d) Community Bath

A communal bath is created due to preservation of clean water and managing the water supply.

VII. CONCLUSION

So our proposal in achieving a sustainable green living especially towards slum in Jakarta is by transforming the slum into a sustainable green community through an integrated system that could strengthen the capacity of local people and their Institutions, scaling-up the delivery of basic infrastructure services for water , sanitation, better and affordable housing , waste removal and access to the land tenure rights through collaborative efforts with local people and municipal authorities.

And to secured the future for posterity ,by bequeath a green living habits and organized environments, cause in the end a sustainable green living can't be simply created by "providing" but only by how we hand on the green living habits through the generations.