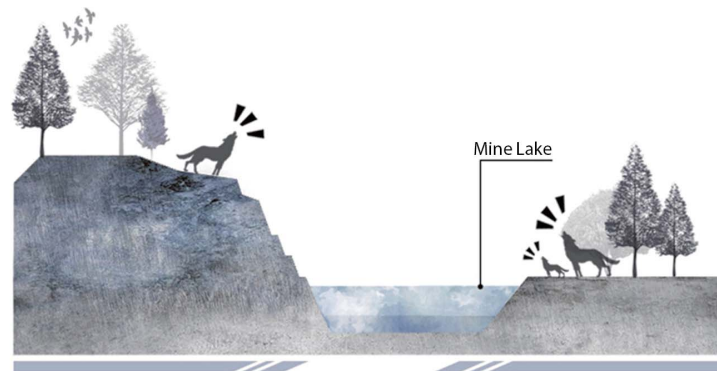
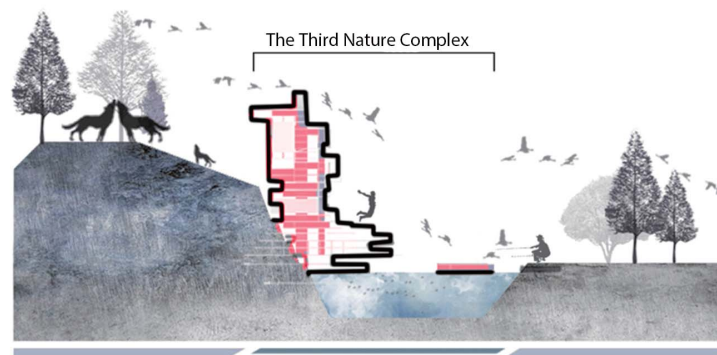




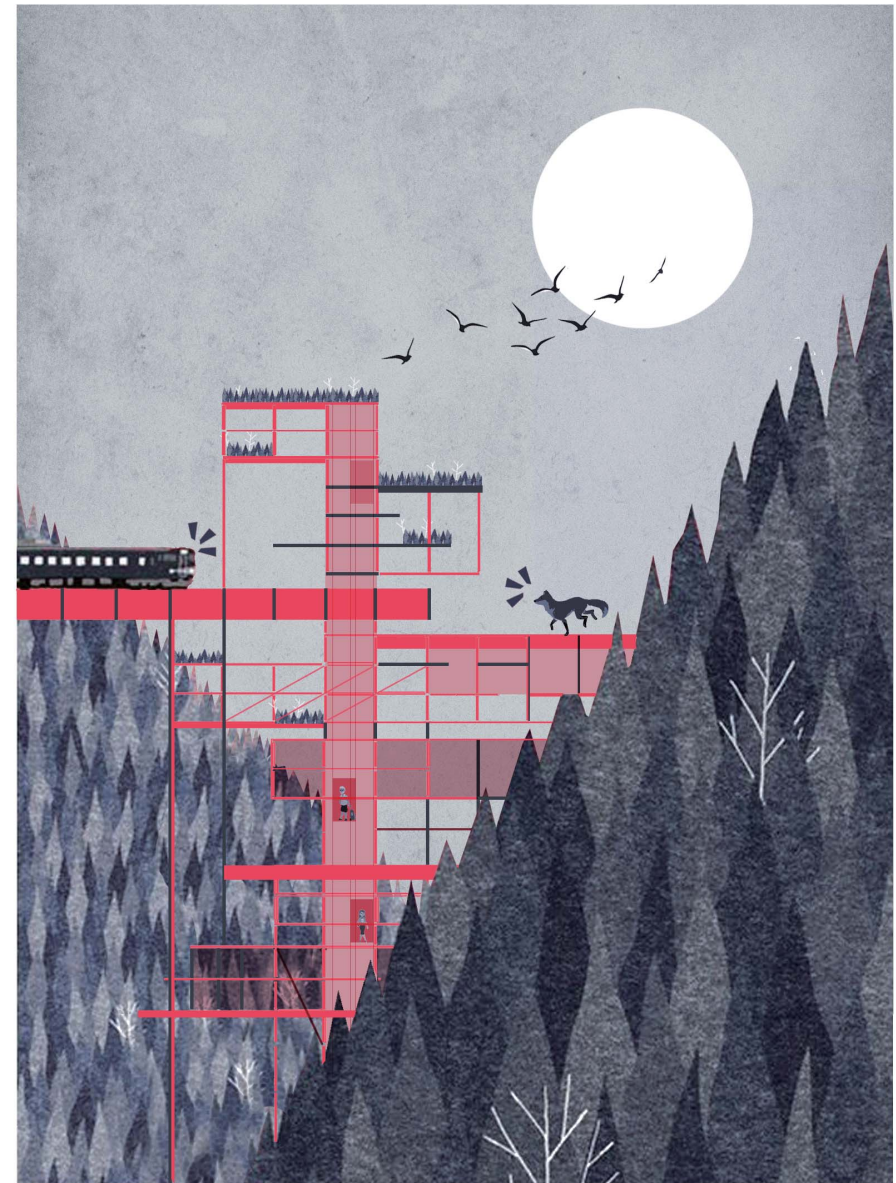
The First Nature



The Second Nature



The Third Nature



Country / City	Guangzhou, China
University / School	South China University of Technology
Academic year	2017-2018
Title of the project	TO THE THIRD NATURE - Ecology Strategy and Landscape Design for abandoned mines in Urban Fringe Area -
Authors	Pu Luan



# PERFORMATIVE NATURE

Barcelona International Landscape Architecture Biennial

September 2018 **Barcelona**

SCHOOL PRIZE

X International Landscape Architecture Biennial

Máster d'Arquitectura del Paisatge -DUOT - UPC

ETSAB- Escola Tècnica Superior

d'Arquitectura de Barcelona

Avenida Diagonal, 649 piso 5

08028 Barcelona-Spain

## TECHNICAL DOSSIER

Title of the project	<b>TO THE THIRD NATURE</b> - Ecology Strategy and Landscape Design for abandoned mines in Urban Fringe Area		
Authors	Pu Luan		
Title of the course	Landscape Planning and Design III		
Academic year	2017-2018		
Teaching Staff	Guangsi Lin		
Department/Section/Program of belonging	Department of Landscape Architecture		
University/School	South China University of Technology		

Written statement, short description of the project in English, no more than 250 words

Under the context of urbanization, Human's early exploitation of the mountain forms a large area of abandoned mines. Meanwhile, agricultural land is encroached by the development of city. Nature has been damaged and villagers have lost their farmland. So how to make a sustainable development in this urban fringe area is the burning issue. The site is located in Tanwei, an urban fringe area of Nansha District, including natural mountain, abandoned mines, Traditional villages and new urban districts. So I try to tap the potential linkages between nature and manmade environments and come up with new solutions to turn contradictions like environment disruption and rural renewal into coexistence elements for organizing an efficient, sustainable and liveable complex by using the idea of "urban agriculture" and "third nature". The village will be renewed, the agriculture will be transformed, and the city will be reconstructed with the ecological restoration. The aim is to establish a spatial order in which biological species are shared under the condition of human interaction and creat a world in a hybrid form in which organisms, social groups and technological products are interrelated, which is the core of repairing the site and supporting future development.

For further information

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Consult the web page <http://landscape.coac.net/>



## TO THE THIRD NATURE

Ecology Strategy and Landscape Design for abandoned mines in Urban Fringe Area

### BACKGROUND :

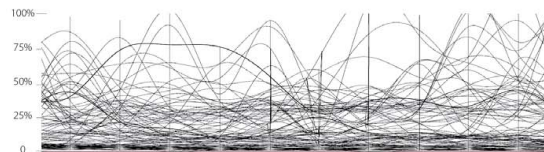
Under the context of urbanization, Human's early exploitation of the mountain forms a large area of abandoned mines. Meanwhile, agricultural land is encroached by the development of city. **Nature has been damaged and villagers have lost their farmland.** So how to make a sustainable development in this urban fringe area is our aim.

### MAIN PROBLEM :

- recycling of open-air abandoned mines
- ecological restoration of natural mountains
- renovation of Tanwei village
- development of a new urban agriculture
- transformation of agricultural industrial high stratification

### VISION :

The idea of "urban agriculture" and "third nature" will be designed and put into practice. The village will be renewed, the agriculture will be transformed, and the city will be reconstructed with the ecological restoration. The aim is to establish a spatial order in which biological species are shared under the condition of human interaction. And also create a world in a hybrid form in which organisms, social groups and technological products are interrelated, which is the core of repairing the site and supporting future development.



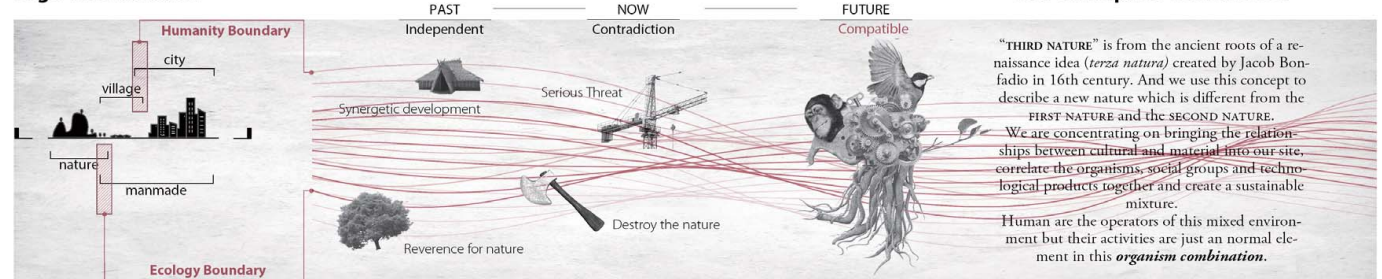
The ratio of different elements - A disorderly site



The site is located in Tanwei, an urban fringe area of Nansha District, including **natural mountain, abandoned mines, Traditional villages and new urban districts.** The key planning area is about 1.43km².

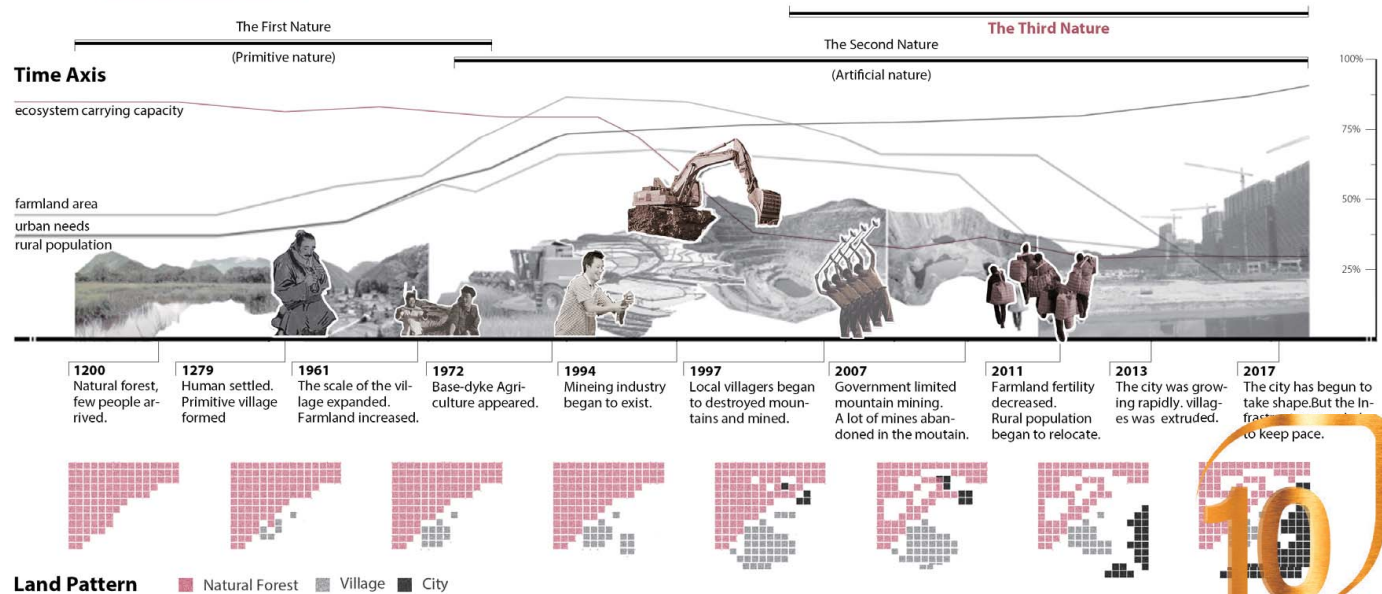


### Edge-contradiction



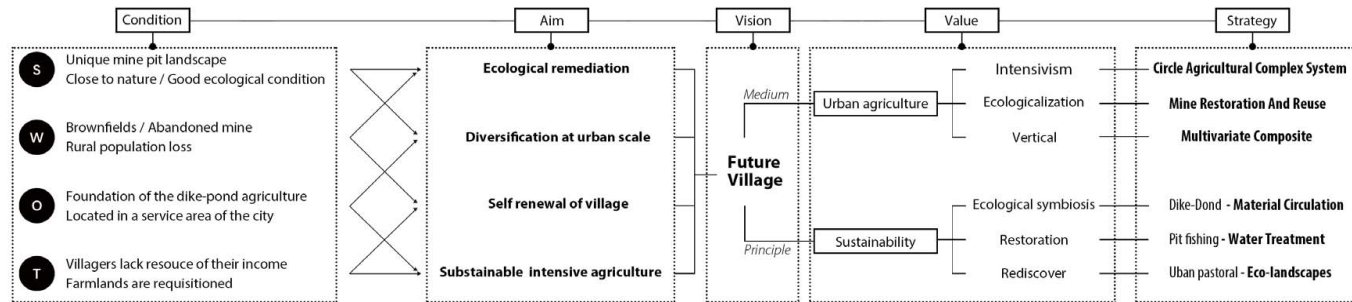
### The Concept Of Third Nature

"THIRD NATURE" is from the ancient roots of a renaissance idea (*terza natura*) created by Jacob Bonfadio in 16th century. And we use this concept to describe a new nature which is different from the FIRST NATURE and the SECOND NATURE. We are concentrating on bringing the relationships between cultural and material into our site, correlate the organisms, social groups and technological products together and create a sustainable mixture. Human are the operators of this mixed environment but their activities are just an normal element in this **organism combination**.



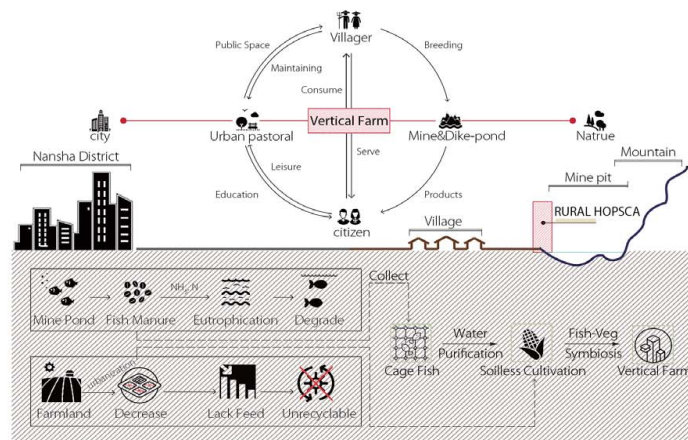


## Strategy Analysis

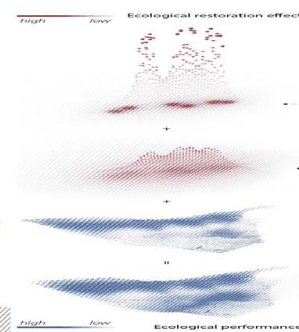


## Operational Model

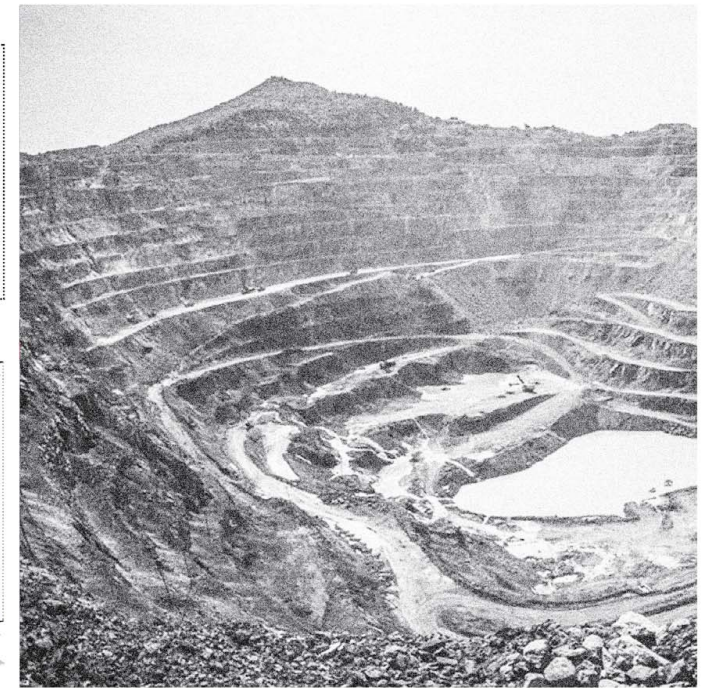
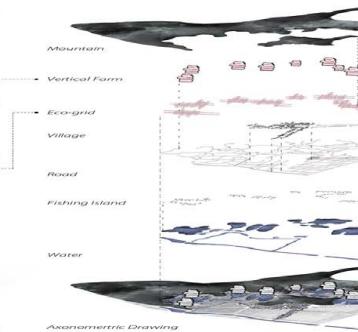
Planning with all kinds of resources and activities of elements, make the model operate ecologically, economically and socially. Meanwhile, find the **ECOLOGICAL BALANCE** and **SOCIAL EQUITY**.



## Ecological Indexing

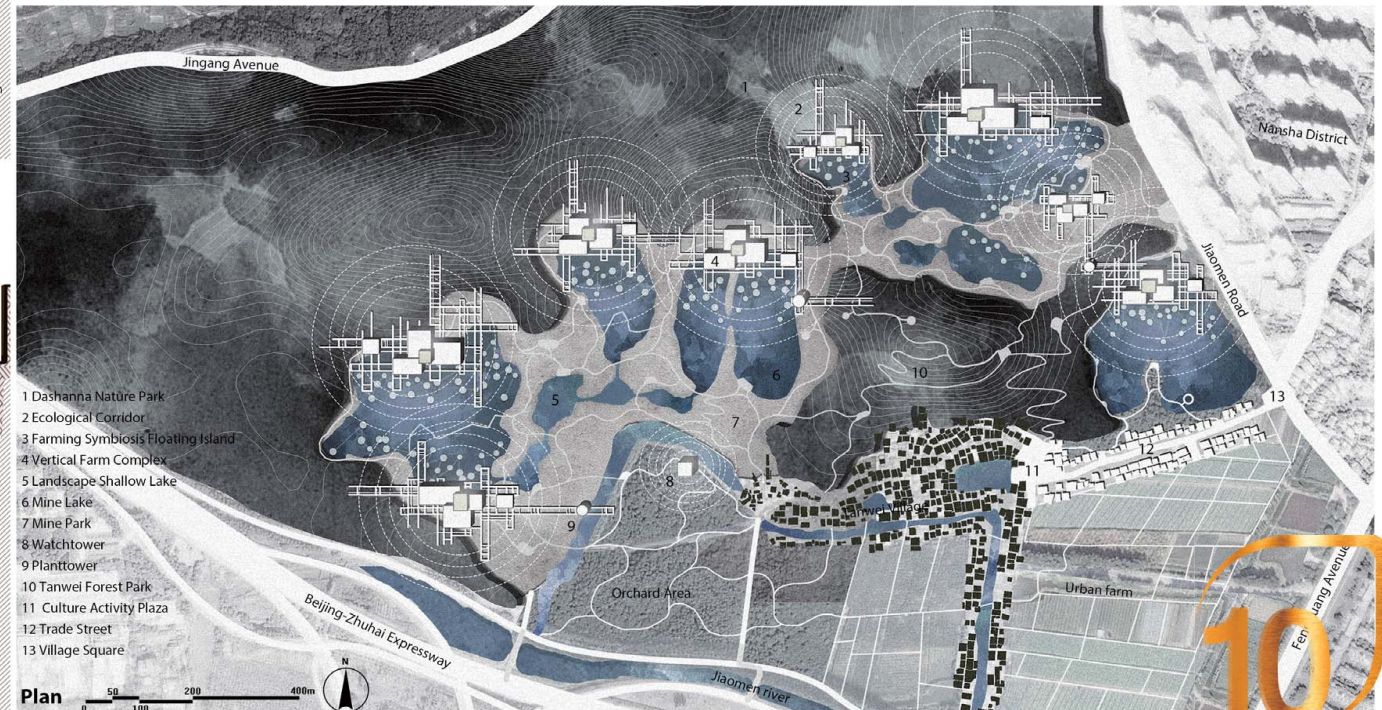
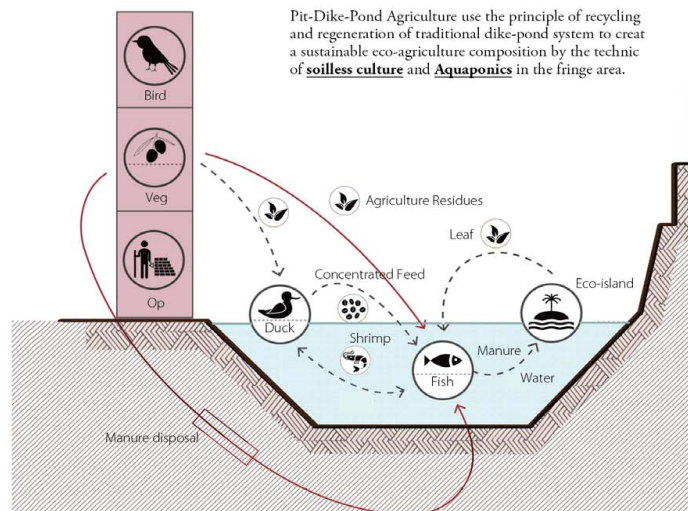


## Site Analysis



## Circulation Model

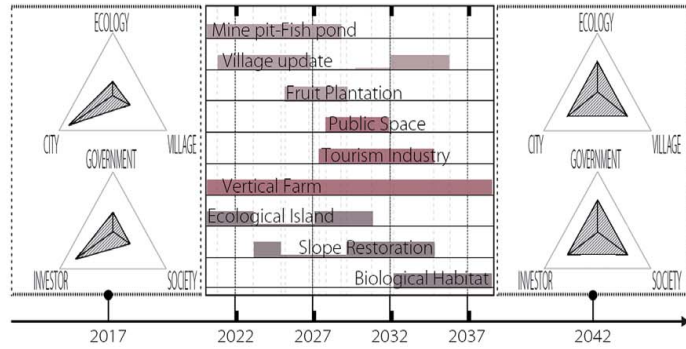
Pit-Dike-Pond Agriculture use the principle of recycling and regeneration of traditional dike-pond system to create a sustainable eco-agriculture composition by the technic of **soilless culture** and **Aquaponics** in the fringe area.



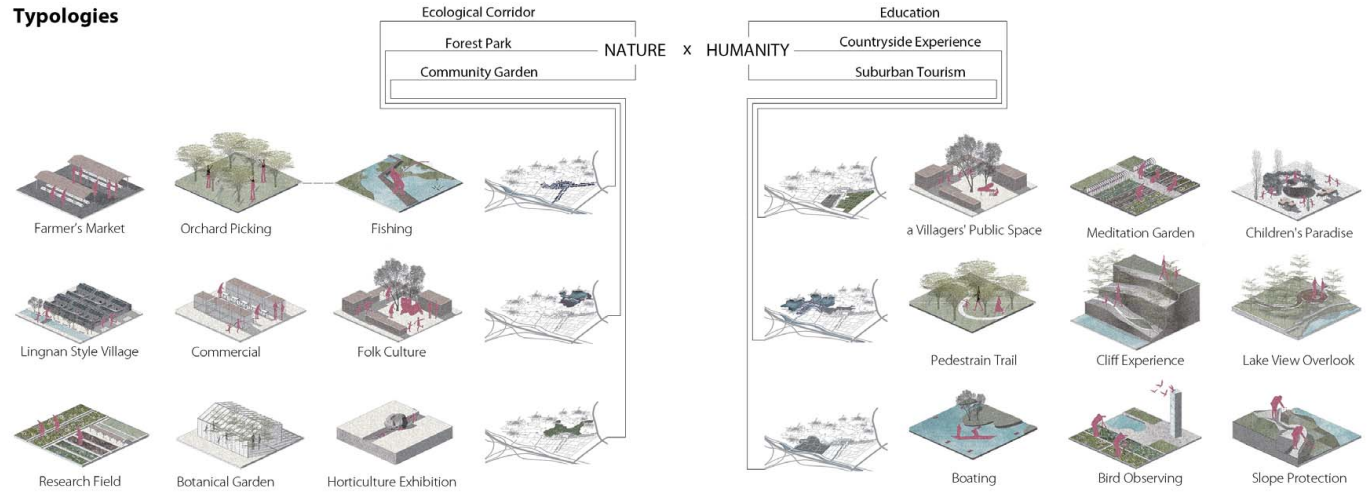


## Developing Sequence

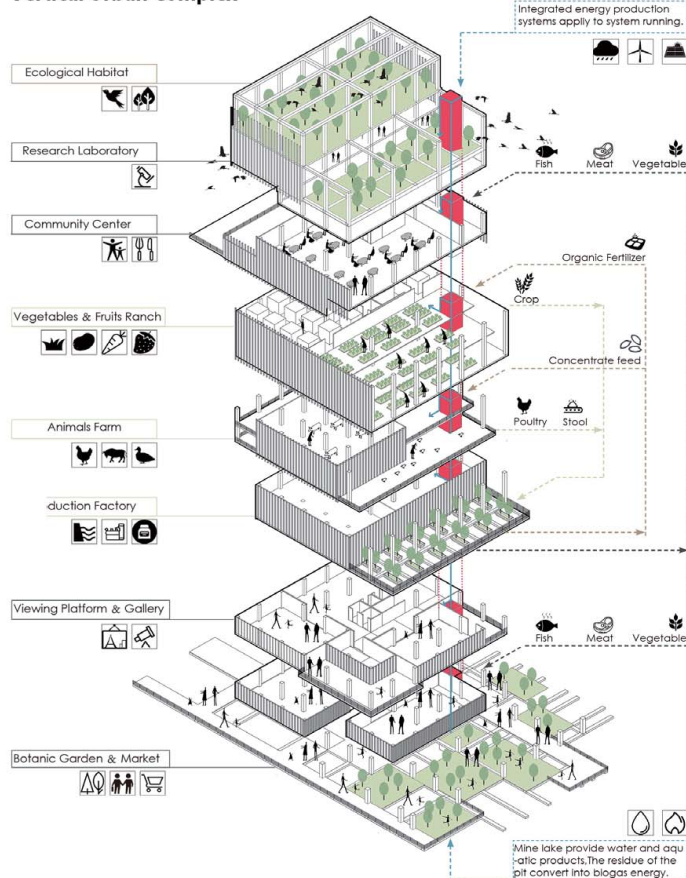
Planning in variety of ways and developing step by step, which are aiming at balancing the elements in our site to create a sustainable nature orderly and feasibly. And the following plan is the future vision in the next 30 years.



## Typologies

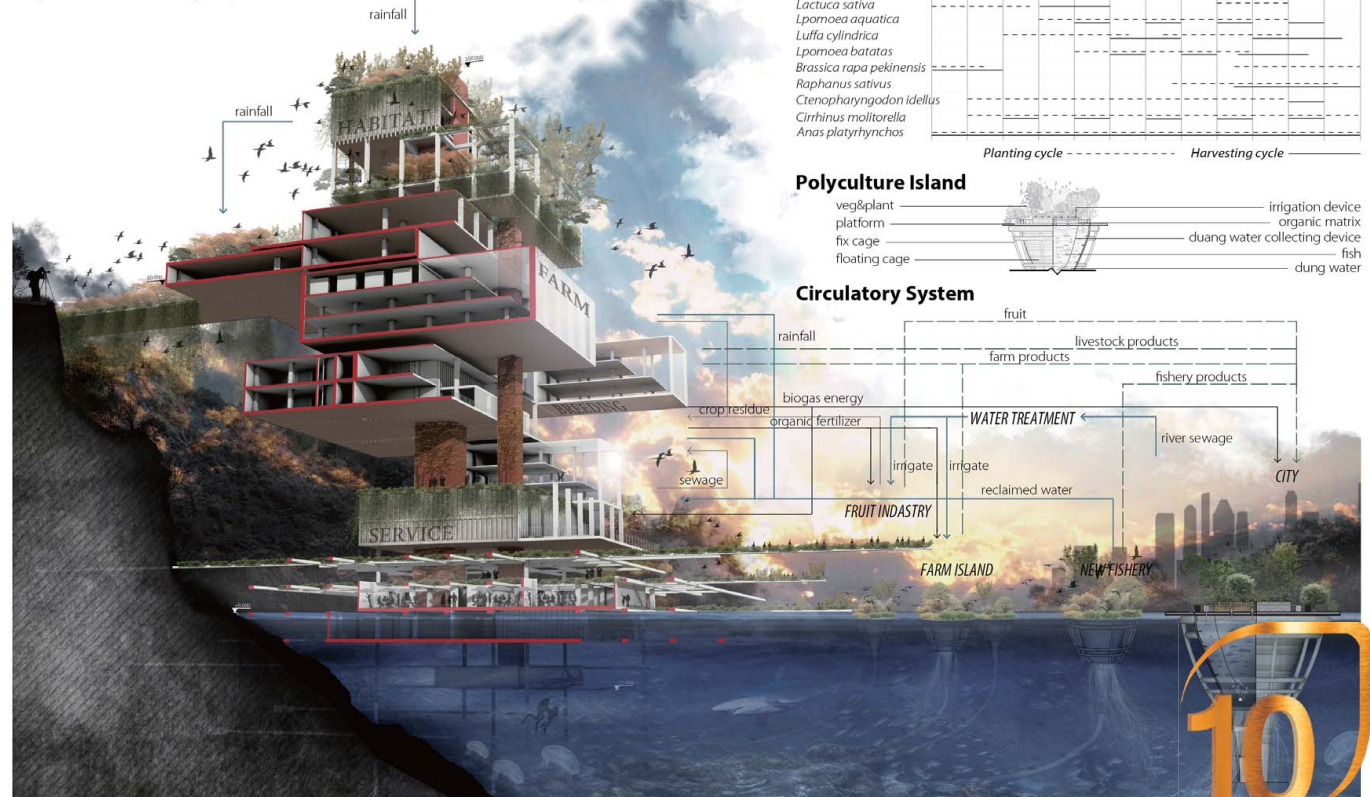


## Vertical Urban Complex



## New Order Of The Mountains

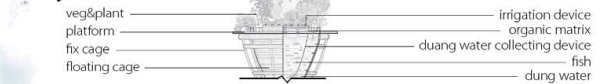
The use of new deep fish cages with an overall structure depth of 30M can make full use of the vertical space of the pits. And the vertical farms up to 100M can effectively compensate for the ecological benefits of mountains damaged by the mining. These facilities finally develop a mechanical and biological symbiotic third nature.



## Crop Rotation Model

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
<i>Morus alba</i>												
<i>Musa nana</i>												
<i>Phaseolus vulgaris</i>												
<i>Lactuca sativa</i>												
<i>Ipomoea aquatica</i>												
<i>Luffa cylindrica</i>												
<i>Ipomoea batatas</i>												
<i>Brassica rapa pekinensis</i>												
<i>Raphanus sativus</i>												
<i>Ctenopharyngodon idellus</i>												
<i>Cirrhinus molitorella</i>												
<i>Anas platyrhynchos</i>												

## Polyculture Island



## Circulatory System

