

**Agri-industrial park:  
Strategies for transformation of Linpan countryside of  
Chengdu plain, China**

by  
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Submitted to the Department of Architecture in partial fulfillment of the requirements for the degree of  
Master of Science in Architecture Studies at the  
Massachusetts Institute of Technology

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#### ABSTRACT

After 30 years' fast economic growth and urbanization, the gap between city and village has become one of the biggest challenges of today's China. Large countryside area with distinctive landscape is dying because of poor living conditions and fewer job opportunities. At the same time, the frenzy of Industry Park and Office Park developments, which started in the 1990s, is taking vast farmland from countryside, especially in peri-urban area. The process of land acquisition removes all the farmers and existing agriculture elements. Millions of farmers lose their land for life support every year in China.

Linpan is a typical agriculture landscape in Sichuan Plain, China. It is characterized by scattered residential settlements enclosed by trees and bamboos distributed in large farmland area with dense irrigation system, which has a history of two thousand years. When Chengdu quickly becomes one of the largest industry cities of West China after 1980s, more than 100km<sup>2</sup> of Linpan area has been transferred to various of industry parks and office parks and the number is still growing.

By taking a typical linpan land as a testing site, the thesis proposes a mutual-beneficial cooperation mode of agriculture and selected industry development. New programs are plugged in within minimum effect on agriculture system. Certain degree of agriculture is maintained till the end of development process. When factories and offices enjoy the benefits from the in-site agriculture production and beauty of landscape, new possibilities of Chinese New Countryside is appearing.

Thesis Advisor: Miho Mazereeuw

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## CONTENTS



## **1. Introduction**

This chapter will introduce general background about the gap between city and countryside in China, the fever of industry park development and the intention of this thesis.

## **2. Linpan landscape and Dujiangyan irrigation system**

This chapter will analyze the current Linpan landscape system in relationship to dense irrigation network.

## **3. Industry development and countryside decline**

This chapter discusses two big challenges this Linpan area is facing: the pressure for industry development and the decline of countryside from inside while “New Countryside” movement in China create new opportunity.

## **4. Thesis proposition and design proposal**

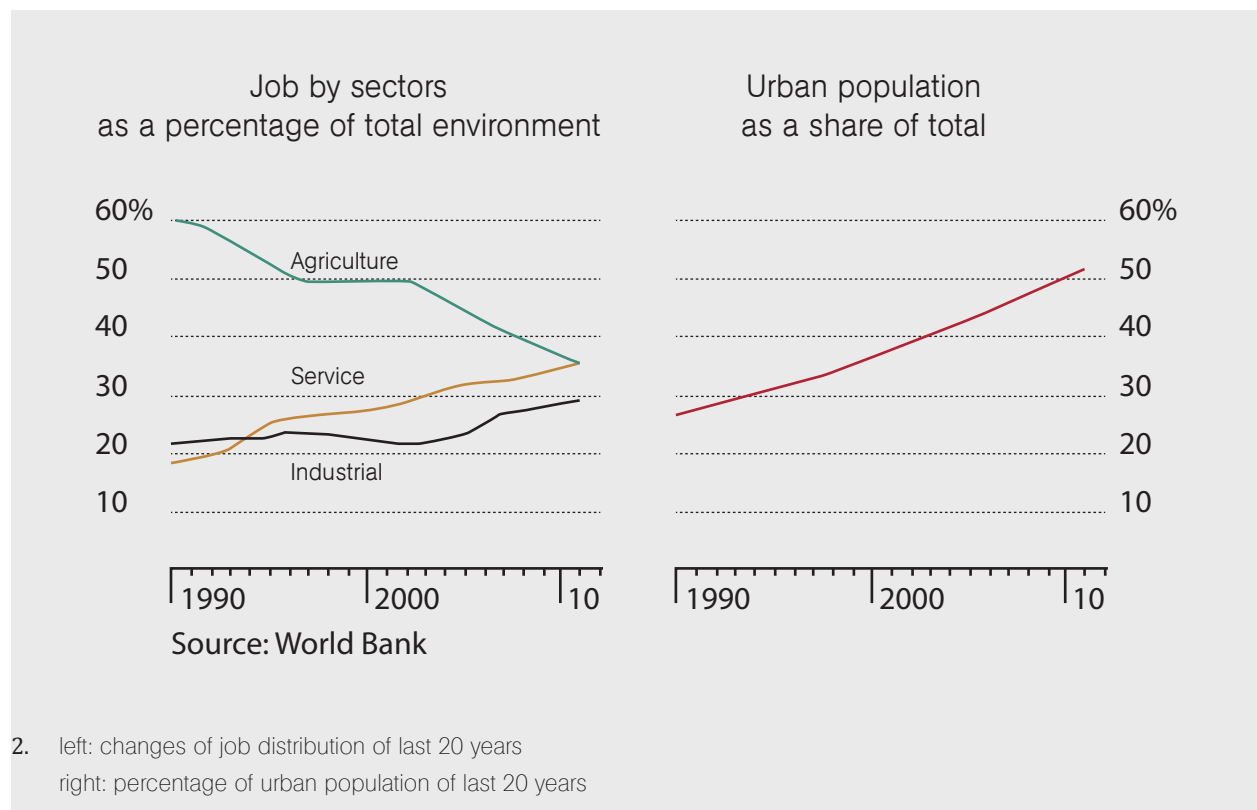
Industry park development as countryside upgrade:

Coexistent models of agriculture and industry development

## 1 INTRODUCTION



1. photo of Linpan countryside



2. left: changes of job distribution of last 20 years  
right: percentage of urban population of last 20 years

## INTRODUCTION

In 2005, the Chinese government-sponsored campaign “Constructing a Socialist New Countryside”, or “New Countryside”, was published in China’s Eleventh Five Year Plan. This means that after mainly focusing on urban development, economically or socially, for more than 30 years, the central government is gradually putting attentions to Chinese countryside.

At the same time, the challenges the countryside are facing include: firstly the gap between city and village after 30 years’ fast economic growth and urbanization leads to the huge loss of younger generation. Large countryside area with distinctive landscape is dying from inside because of poor living conditions and fewer job opportunities.

Secondly, the pressure of new development is taking large farmland especially in peri-urban area, especial during the fever of Industrial park development after 1990s. As the main mode of industrial development today, typical industrial park development process remove all the agriculture elements and farmers in site.

Chengdu plain is the most productive agricultural place in China, the “Heavenly Kingdom and currently one of the biggest industry cities of West China, which makes it the best place to rethink the new possibilities of rural region. Linpan is a unique agriculture landscape in Chengdu Plain and it is charactered by scattered residential settlements enclosed by trees and bamboos distributed in large farmland area with dense irrigation system, which is a masterpiece of ancient Chinese, a perfect combination of nature and human life.

By taking a typical linpan landscape area, which is planned to become an industrial park in the near future, as a testing site, the thesis proposes a possibility that the process of Industry park development could be a way of countryside upgrade. While a mutual-beneficial cooperation is built between agriculture and industry, this landscape is sustained in new ways.

In the following chapters, this thesis will first offer an analysis of Lianpan landscape system, then through the investigation of typical development process of industrial parks and relationship between actors, a design proposal will be given in the last sector.

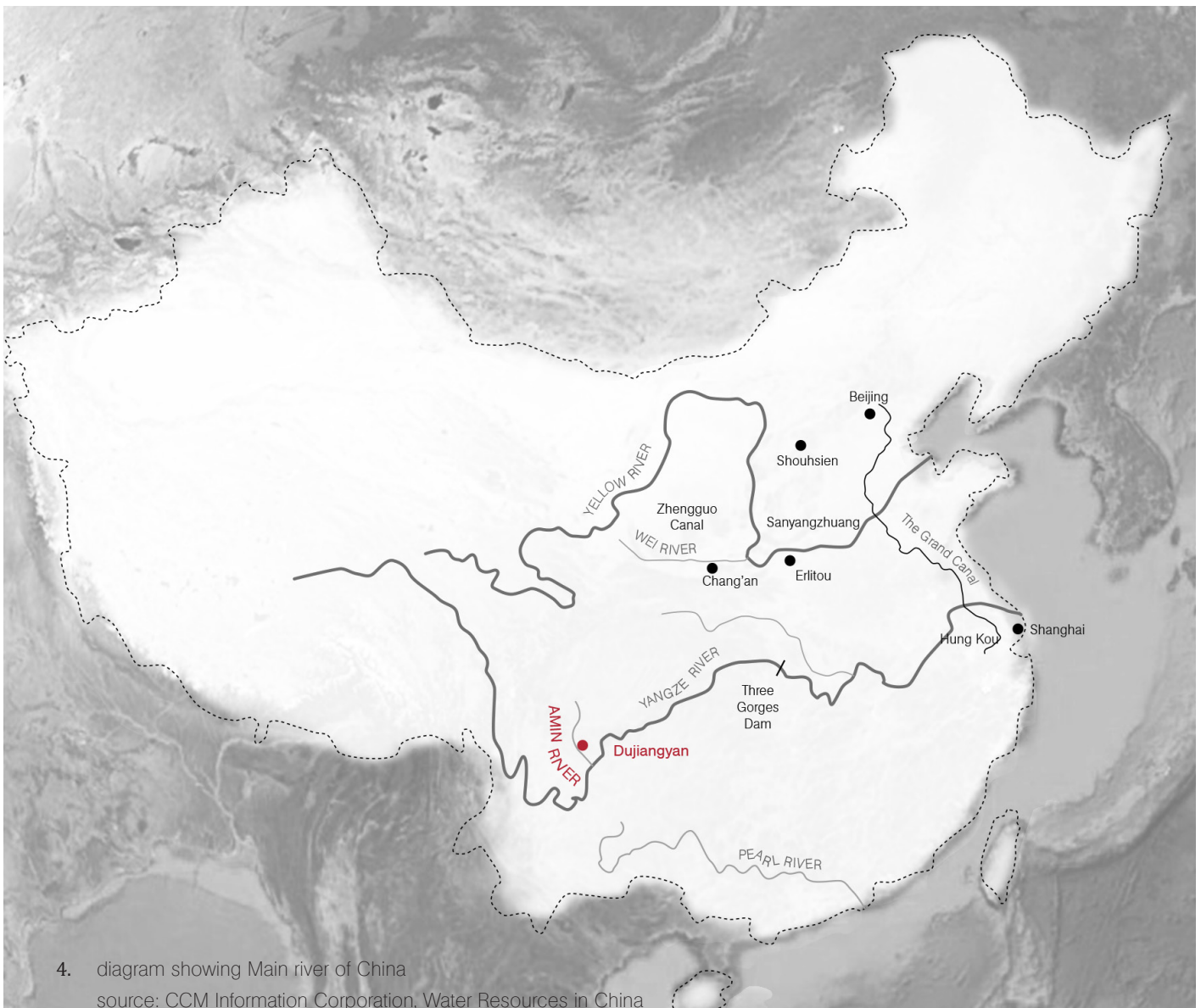
## INTRODUCTION

## 2 DUJIANGYAN IRRIGATION SYSTEM AND LINPAN LANDSCAPE





3. up: photo of Dujiangyan Dam  
down: aerial photo of Linpan Landscape



4. diagram showing Main river of China  
source: CCM Information Corporation, Water Resources in China

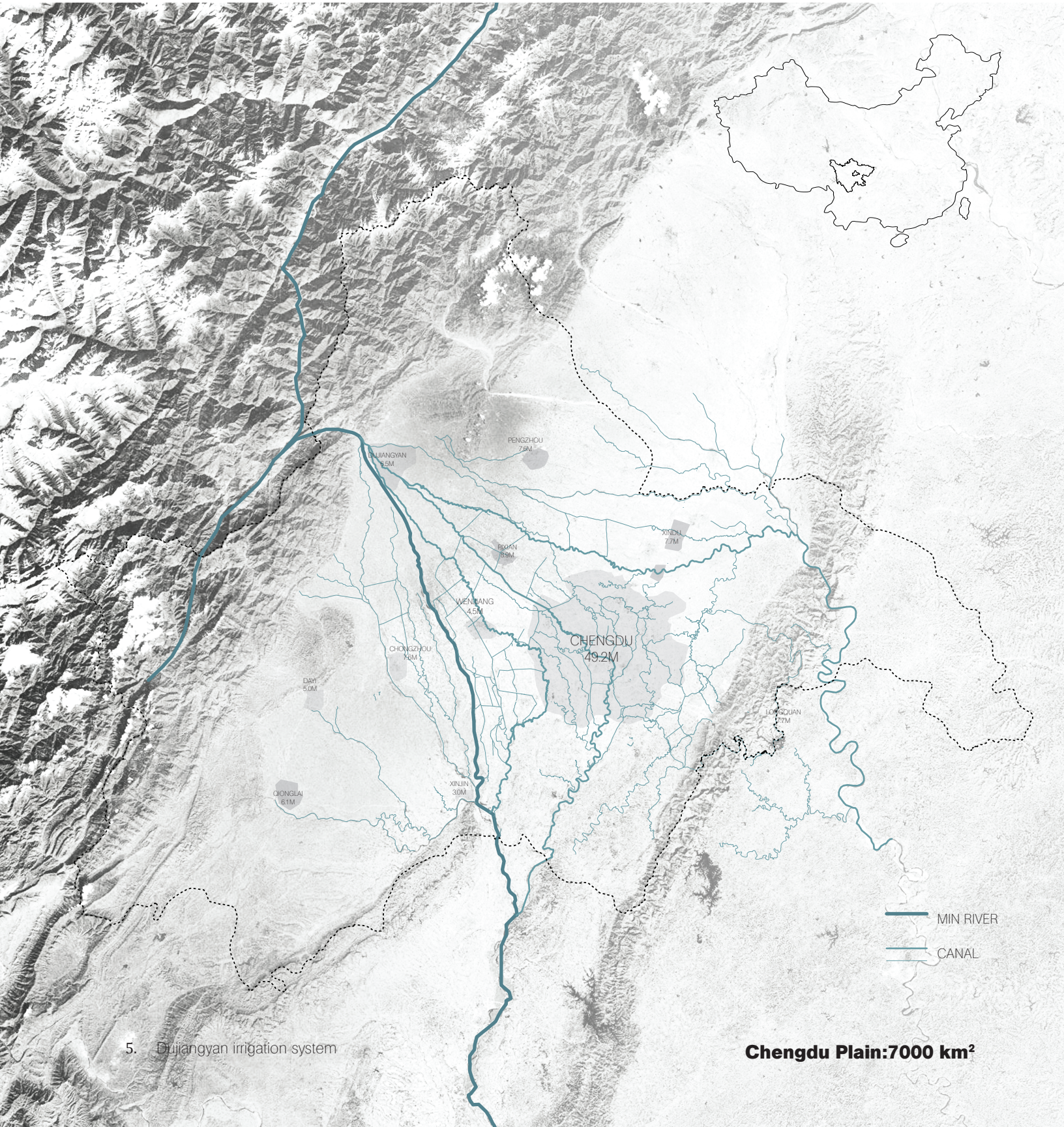
## 2.1 Dujiangyan Irrigation System

Dujiangyan is an irrigation infrastructure built in 256 BC. It is located in the Min River in Sichuan province, China, near the capital Chengdu. As a tributary of Yangtze River, Min River joins Yangtze River at Yibing. The irrigation system includes the Dujiangyan Dam and canals divided from Min River through the Dujiangyan Dam.

Dujiangyan Dam is regarded as “the originator of the world’s water culture” as the world’s oldest and only dam whose levee works without a dam. It is the most successfully solved the natural diversion and erosion problems with the river. Before the Dujiangyan was built, people who lived along the banks of the Min River were plagued by annual flooding, The governor at that time, Li Bing, discovered that the river was swelled by fast flowing spring melt-water from the local mountains that burst the banks when it reached the slow moving and heavily silted stretch below, so instead of building a dam, Li Bing, proposed to construct an artificial levee to redirect a portion of the river’s flow and then to cut a channel through Mount Yulei to discharge the excess water upon the dry Chengdu Plain beyond. This part of water will recombine with Min River at Xinjing.

The dense irrigation canal network makes make the best of natural slope of Chengdu Plain from west to east and still irrigates the whole plain of 5300 km<sup>2</sup> today, making Chengdu Plain the most productive agricultural place in China, the “Heavenly Kingdom.”

AGRI-INDUSTRIAL PARK



5. Duijiangyan irrigation system

**Chengdu Plain: 7000 km<sup>2</sup>**

## 2.2 Linpan Landscape

After flowing from Dujiangyan Dam, a portion of Min River is redirected for irrigation, which is Neijiang. Neijiang then divided to a dense fan-shaped water network. Canal, sub canal, head ditch, field ditch, pond and paddy fields all together constitute a complicated ecology system.

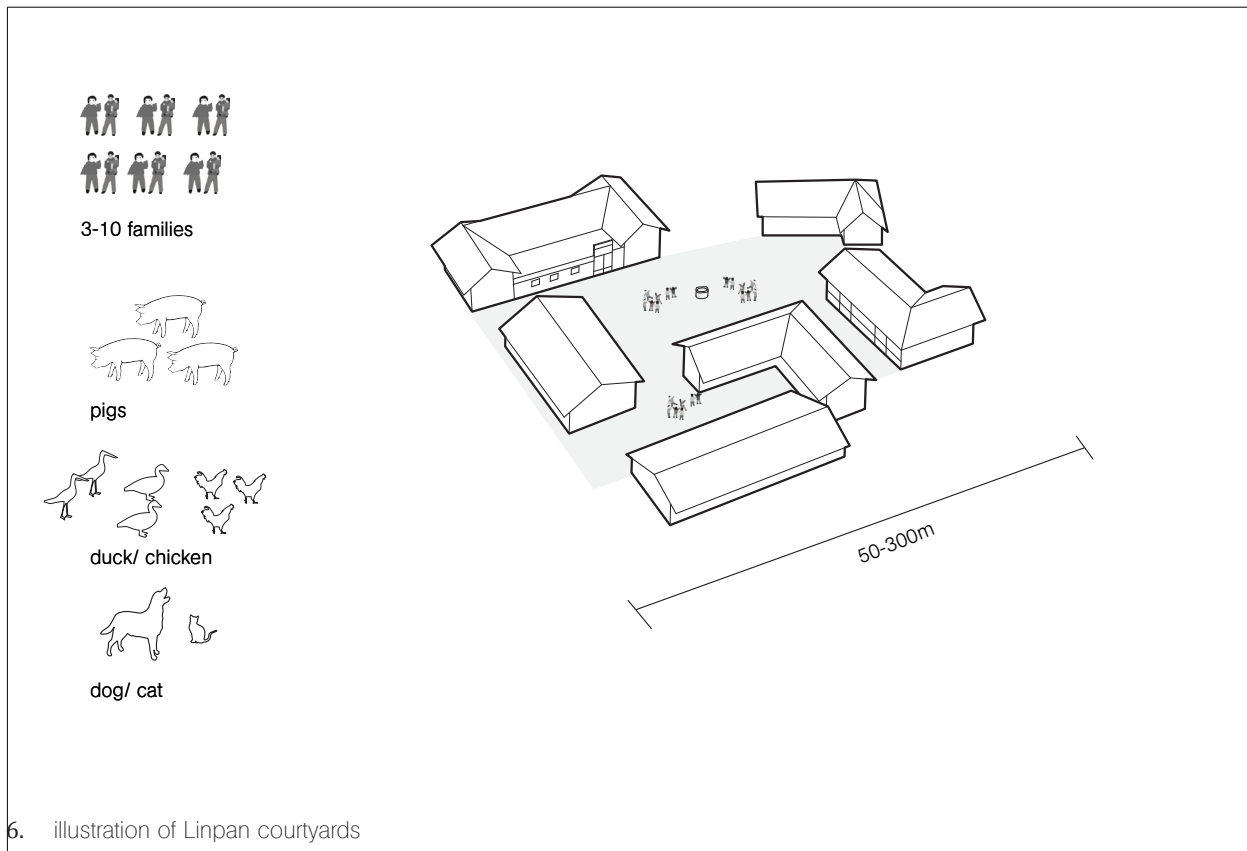
Water government and distribution becomes a social activity and relies more on social organization and moral constraints. It is impossible for any family to monopolize water resource, which creates the condition for the distributed small-family living mode instead of the centralized big-family mode in most places of China. The rich underground water recourse offers rich domestic water, making living with fields possible. All of these give rise to Linpan, a unique agriculture landscape of China, a combination of production and living.

Linpan is characterized by scattered residential settlements enclosed by trees and bamboos distributed in large farmland area with dense irrigation system. According to incomplete statistics, there were about 150 thousand Linpan Units, living 4 million people till 2008. However, as I will mention later, the number dropped down dramatically after 2008.

Linpan Landscape is a multi-layer system, including four main elements: Courtyards, Trees, Water and Fields.

### Courtyards

One residential unit has a diameter of 50~300 m. Up to ten families live in one unit with pleasant courtyards. The enclosed or half-enclosed space is the social and entertainment space within a unit, where people drying clothes and grains, chatting and playing, and raising animals like pigs, dogs and cats.



## Trees

Trees are the sole of Linpan Landscape. Every residential unit is enclosed by dense trees and bamboos, which not only build the silent natural environment for the residents living inside, but also create pleasant microclimate during the whole year. There are hundreds of trees, main types of which include *Cinnamomum camphora*, Ginkgo and *Machilus*, while bamboo is the most popular plant.



## Water

Canal, sub canal, head ditch, field ditch around settlements not only irrigate large field, but also serve as the water supply for domestic use and house drainage. Trees planting along the canals form the green lines in the vast fields.

While canals are the main resource for irrigation water and domestic use, wells in courtyards are the main supply for drinking water.



8. illustration of canal around courtyards



LINPAN LANDSCAPE



9. photo of bamboos and canals around linpan housing



10. photo of canal

### Field

Every residential settlement with the field surrounded it forms a walkable production and living unit. The

The main grain crops include rice, which takes 71%, wheat and corn.

Two or three crops are common, given the rich soil and steady water supply. Main cash crops include rape, flowers and herbs. In recent years, the planting of cash crops takes more and more land from grain crops.

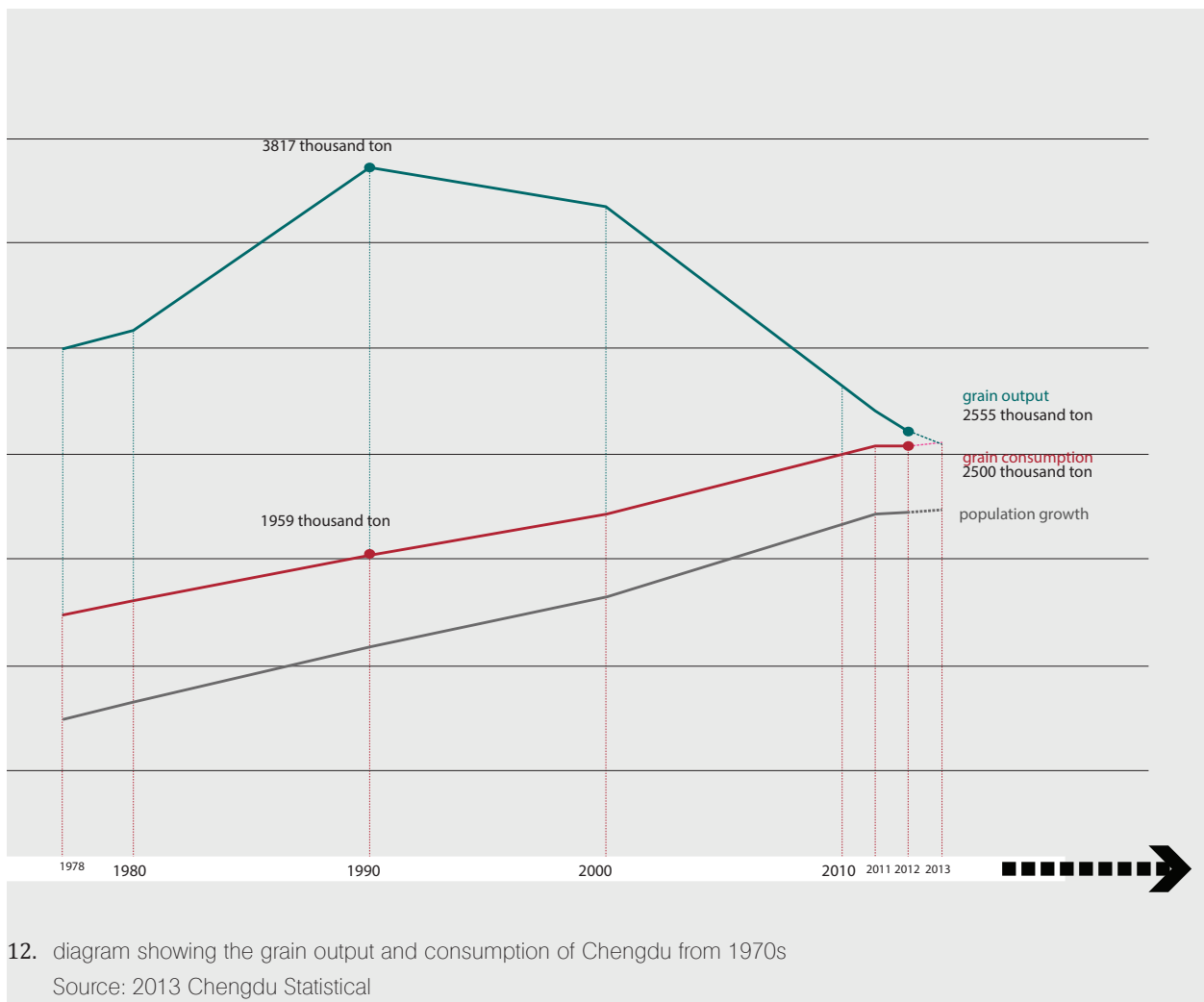


11. production and living unit

## Decline of Agriculture

Linpan is a masterpiece of ancient Chinese, a perfect combination of nature and human life. However, just the same as many unique landscapes based on agriculture in China, Linpan is facing fast decline

The diagram below shows the decrease of grain output of Chengdu plain. Even as the “Heavenly Kingdom” for last thousands of years,



Chengdu Plain is hard to be self sufficient today. Two of the main reasons include: decrease of farmland due to urbanization and the increasing land taken for cash crops. Actually it reflects the awkwardness China is facing: as a country with a population of 1,3 billion, the pressure of national food security has become increasingly concerned. In 2006, the government calculated that it was necessary to cultivate 1.8 billion mu of land in order to produce enough food for the whole nation, which give rise to the land quota as threat for development including industrial parks, which would be talked about in details later.

The next chapter will talk in detail about the two challenges of Linpan Landscape : pressure from industry growth and the decline of countryside from inside.

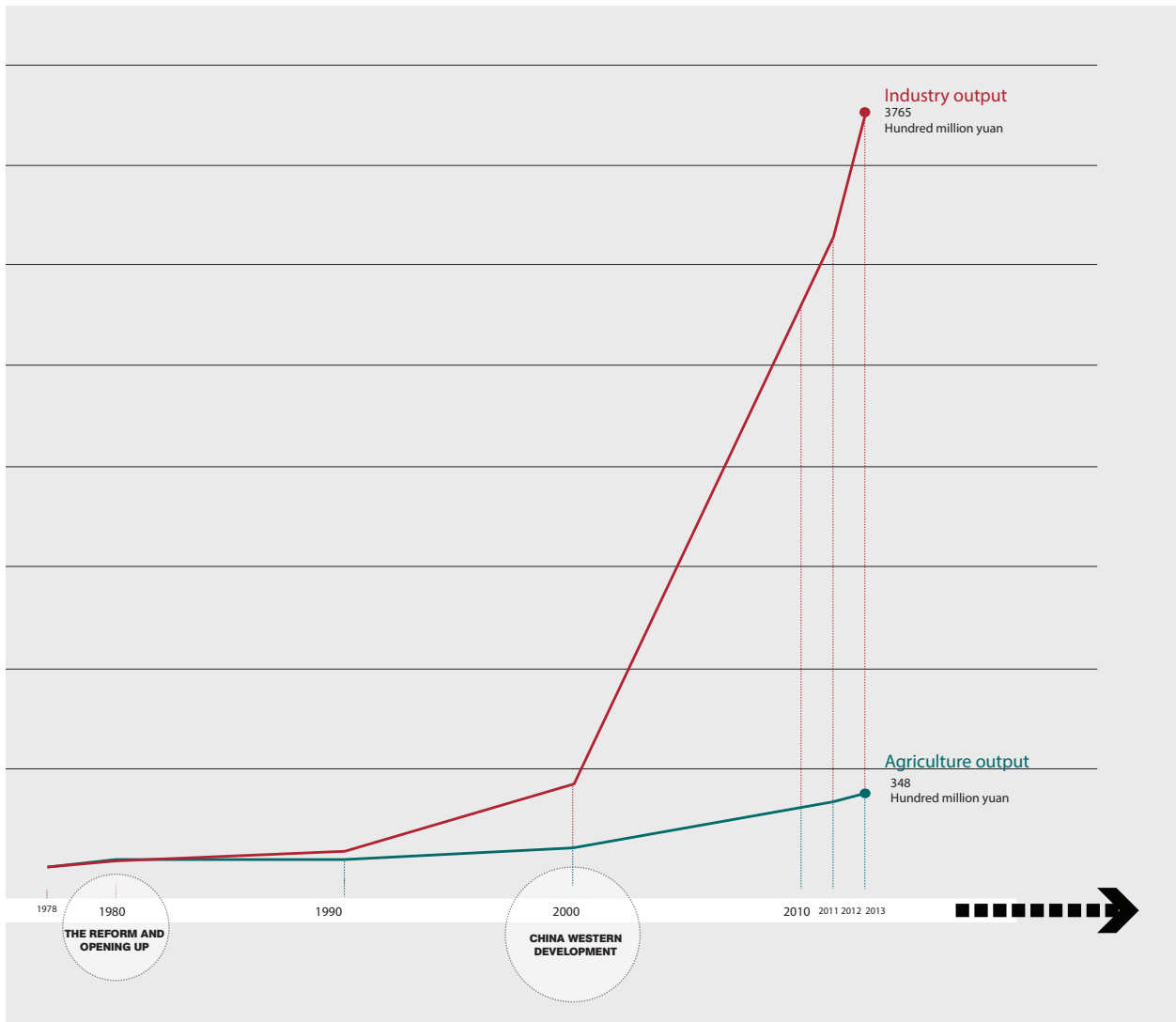


13. photo of fields

### 3 INDUSTRY DEVELOPMENT AND COUNTRYSIDE DECLINE



14. up: photo of vacant land in a industrial park  
down: photo of Linpan countryside



15. diagram showing the growth of industry after 1978

Source: 2013 Chengdu Statistical



### 3.1 Review of Industry growth of Chengdu and related policy

As one of biggest cities of West China, the industry development of Chengdu has a close relationship with Central policy.

1950: The earliest industry development of Chengdu started in the 1950s. A group of national military enterprises were the first industry of Chengdu.

1964: The movement of “Third Line” laid the foundation of the second industry of Chengdu.

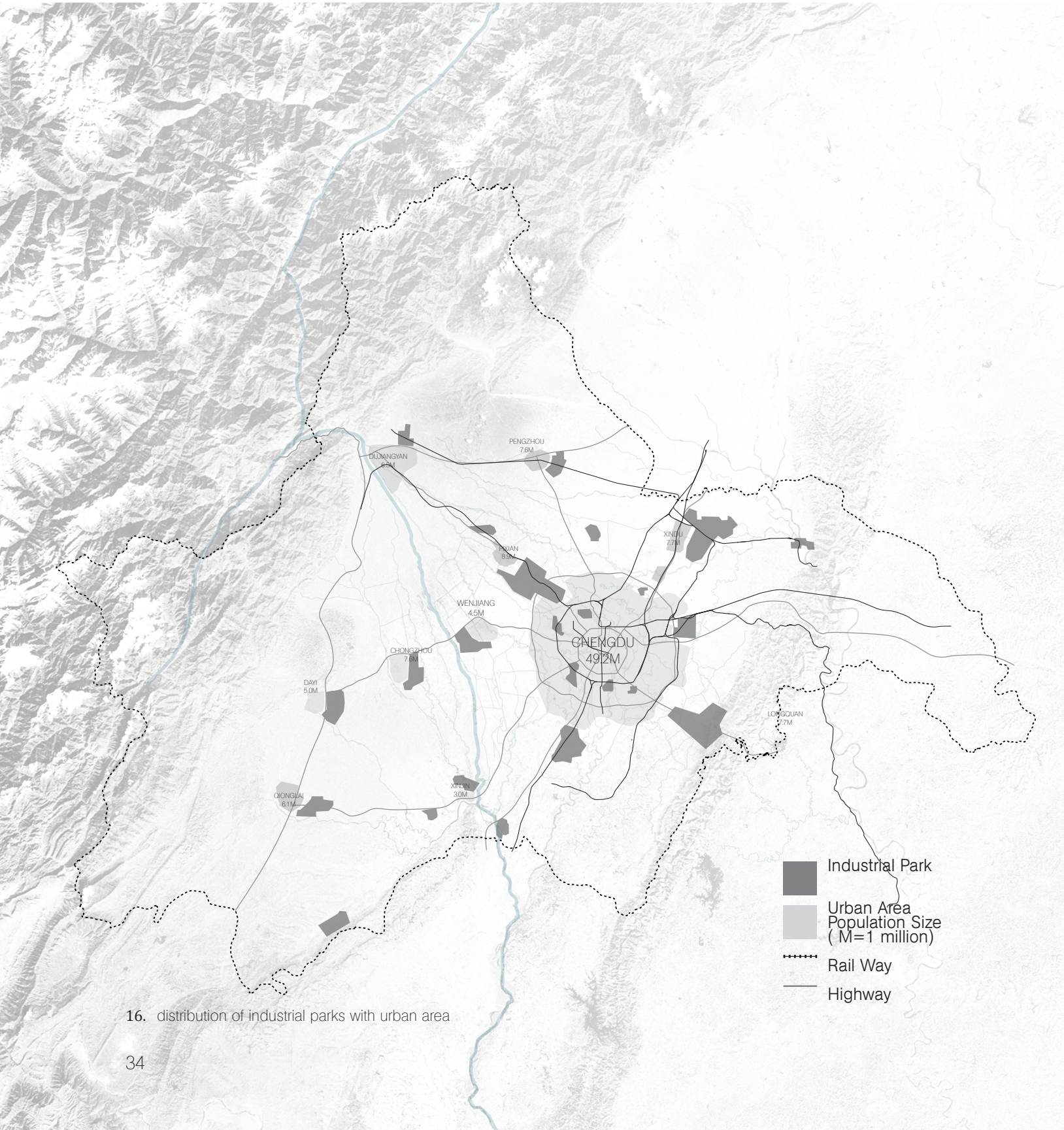
1978: The Reform and Opening up

2000: China Western Development: Manufacture and other industry started to move from coastal regions of eastern China to Middle West due to improvement of infrastructure, cheap labor and land.

2007: Chengdu was named as one of the ‘Pilot Area for the Comprehensive Reform for Balanced Urban–Rural Development’ in China. “Three concentrations” policy was published after that: the concentration of industries in development zones, the concentration of rural population in township, and the concentration of land for scale operation.

“Third Line”: The “Third Line”, or ‘Third Front’, refers to a large-scale programme the country started in 1964 -- in response to the then volatile international situation -- to build a range of industrial bases in its remote yet strategically secured hinterland.

China Western Development: A policy adopted for the development of Western regions of China, including construction of infrastructure, ecological protection and promotion of education.



16. distribution of industrial parks with urban area

### 3.2 Industrial park typologies

An industrial park (also known as industrial estate, trading estate) is an area zoned and planned for the purpose of industrial development. In this thesis, this term also refers to “economic and Technological zone”, “High-tech Development Zone” .

The industrial park development of China first started in Shekou in 1978. Now Industrial parks have become the main mode of Industry development. Compared with Western countries, large portion of governmental involvement is one of the main characters of industrial parks in China.

The dark grey area shows hundreds of industrial parks in Chengdu Plain, which took up to 100km<sup>2</sup> farmland.

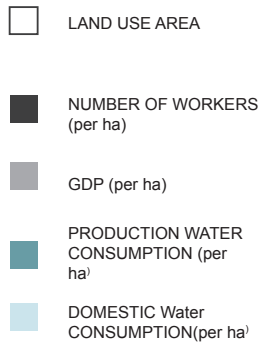


17. photos of gates of industrial parks

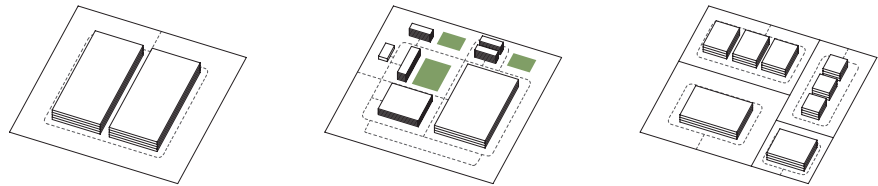
## Manufacture

Machinery, electronics, pharmacies, foodstuffs, construction, commerce and trade have contributed significantly to Chengdu's economic development. Biotechnology, new medicine manufacturing technology, new materials are growing fast in recent years.

Manufacture requires accessibility to infrastructures, bigger production area and large water consumption.



18. analysis on manufacture typologies and typical block



ELECTRONIC PRODUCT



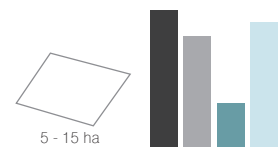
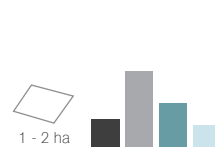
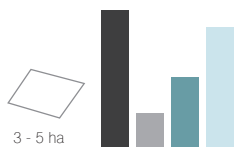
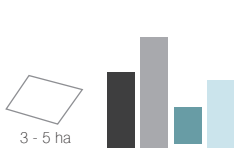
FOOD



MEDICINE



MACHINERY



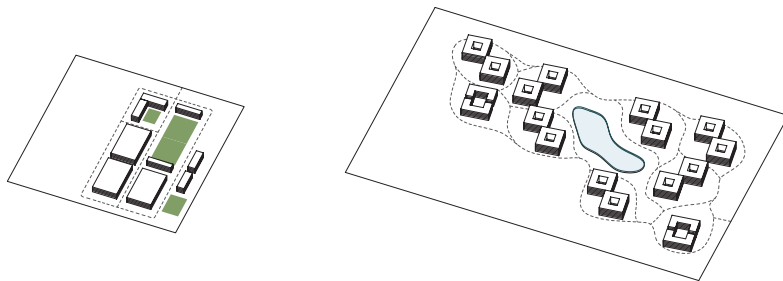
INDUSTRIAL DEVELOPMENT

Intelligence Industry/ Creative Industry

Software development, finance, insurance, tourism and real estate are projected to expand rapidly, especially Software development.

These types of industry have high value of output and little pollution but also require relatively high quality of environment.

19. analysis on typologies of intelligence industry and typical block



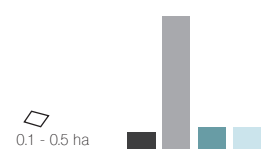
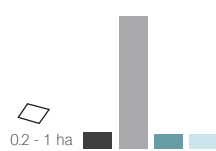
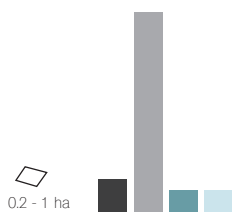
SOFTWARE

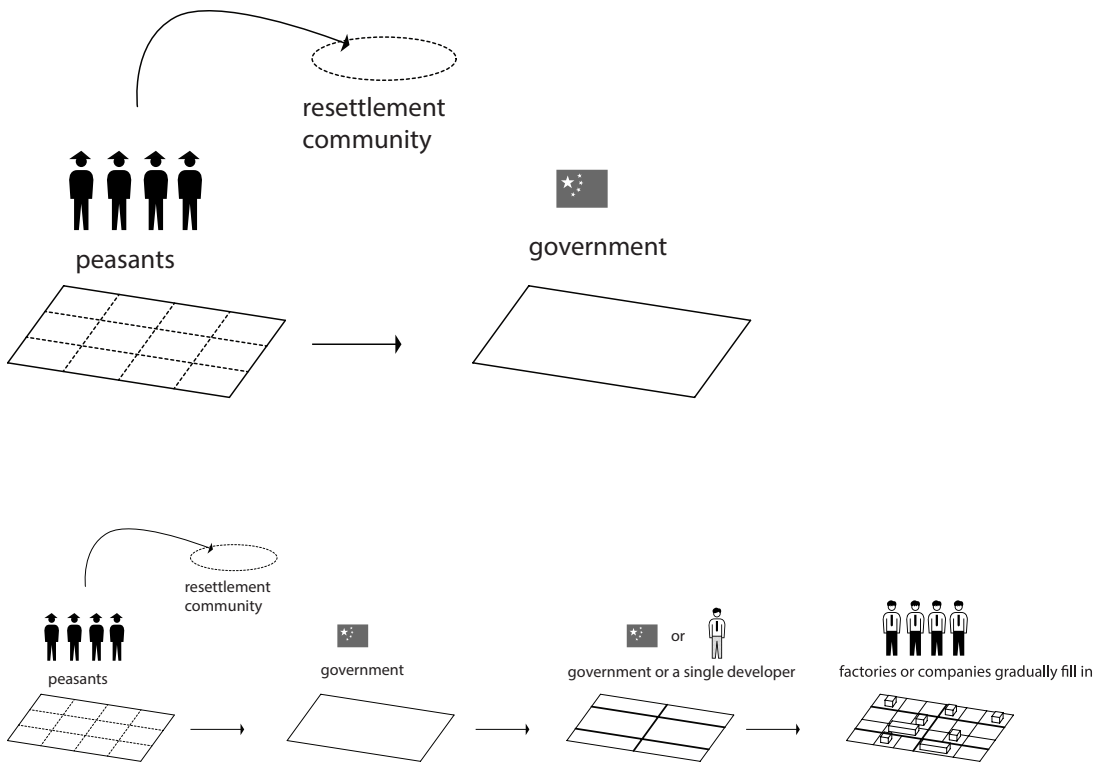
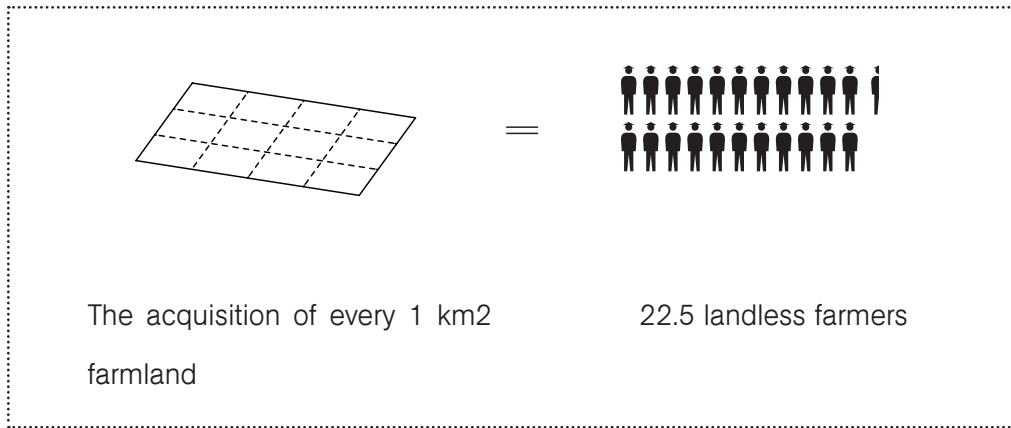


SCIENTIFIC RESEARCH



DESIGN





20. diagram showing the first step of industrial park development: land acquisition

### 3.3 Industrial Park Development Process

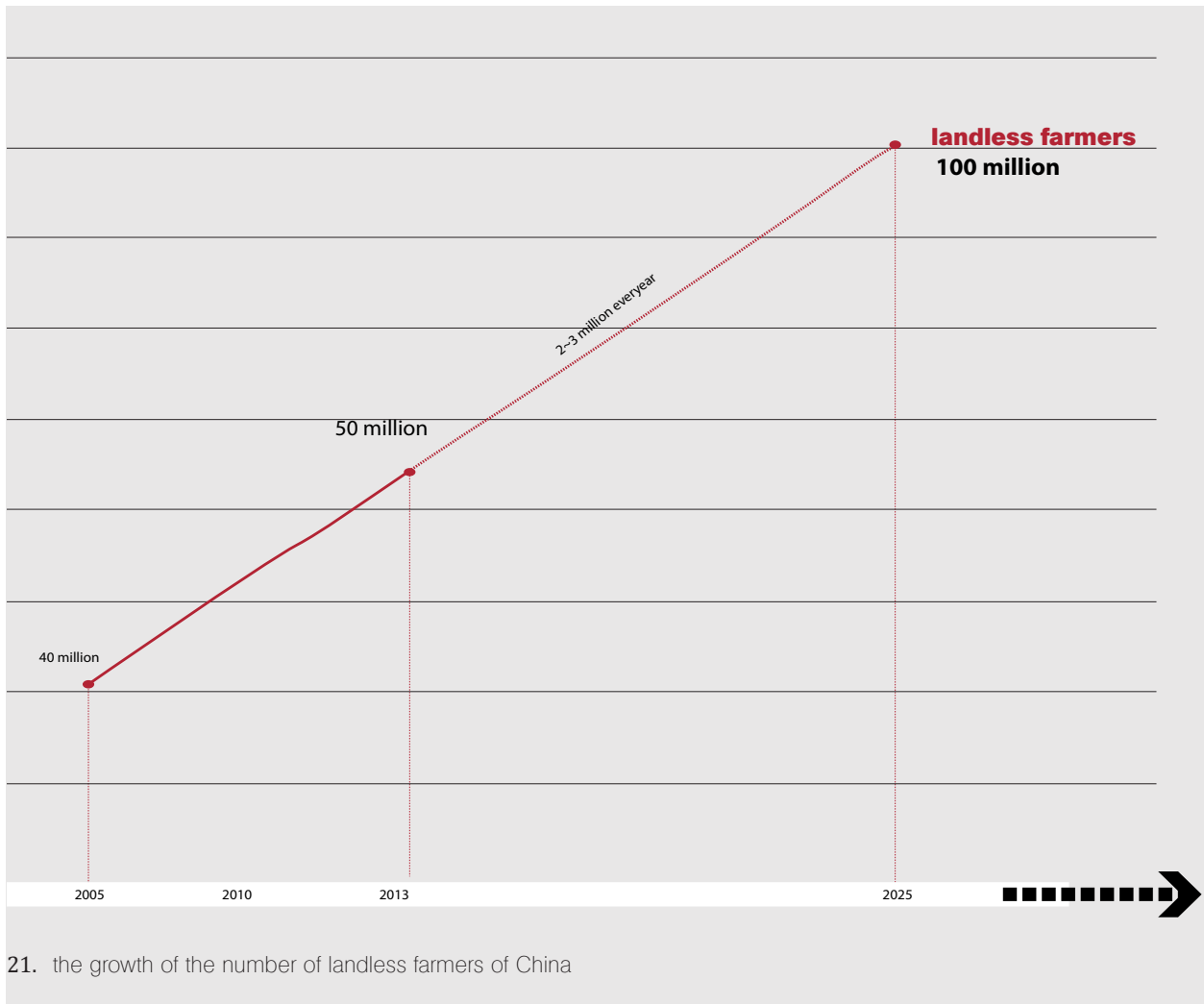
The analysis of the development process of industrial park aims to indicate the problems and scarifications behind every step of the typical scenario.

#### 3.3.1 Step1: Land acquisition.

The land acquisition by government transfers the farmland (owned by the village collective) to urban construction land (owned by the state). Farmers get certain compensation and are moved to multi-layer apartment buildings from their detached dwellings in the fields. The farmers who loss their land during this process are called Landless Farmers.

Landless farmers, together with rural migrant workers have become serious social problems. The acquisition of every 1 km<sup>2</sup> farmland equals 22.5 landless farmers. From 1990 to 2008, while the built area of Chinese cities expanded from 12.9 thousand km<sup>2</sup> to 36.3 km<sup>2</sup>, 50 million farmers lost their land. At least 2 to 3 millions of farmers lose their land for life support every year. According to the estimate by Wen Tiejun, the number of landless people will reach 100 million in 2025. (Shen Guanbao, Wang Huibo, 2008).

Such huge group of people, if not settled properly, would definitely become trigger of complicated social contradictions( Xiong Jinwu, 2013) On one hand, land is the only source of life support and security





## INDUSTRIAL DEVELOPMENT

for farmers under current social security and medical insurance policy of China. Landless farmers usually have lower education level, which makes it hard for them to find jobs in cities. Some of them stayed jobless after land acquisition. The simple limited cash compensation is definitely not enough for long-term life support.

On the other hand, the “forced” change of lifestyle brought hidden challenge. Farmers are forced to leave land and move to multi-layer concrete apartment. Instead of picking vegetables in the courtyard, they need to buy every food from market. According to a survey, a considerable percentage of landless farmers, especially elder farmers, complain about the decrease of life standard (Han Jun, 2005). In some extreme cases, this change may lead to mental problems, even depression. Actually, the consideration of changes of life style also applies to the New Countryside Movement, which will be mentioned later.

Landless farmer is a unique topic under the specific context of today's China. Most of the related research concentrates on changes of land policy during land acquisition, social security of landless farmers and relations to urbanization. This project aim to build new possibility from a design perspective and rethink the changes in landscape form in whole process.

AGRI-INDUSTRIAL PARK



22. photo of cleaners who are landless farmers

source: the NY Times, <http://www.nytimes.com/2013/11/10/world/asia/new-china-cities-shoddy-homes-broken-hope.html?pagewanted=4&r=3&>



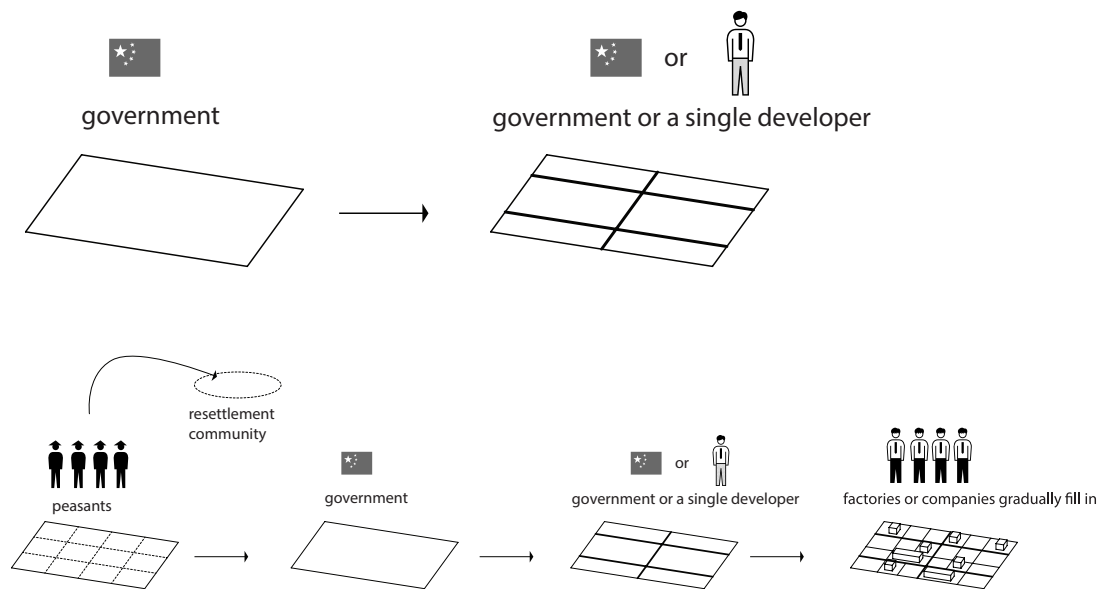
23. photo an elderly farmers living in an apartment building

source: the NY Times, <http://www.nytimes.com/2013/11/10/world/asia/new-china-cities-shoddy-homes-broken-hope.html?pagewanted=4&r=3&>

### 3.3.2 Step2: Zoning/ Construction of infrastructure

After the land has been transferred to construction use, usually government or certain developer is responsible for the construction of basic infrastructure. For most industrial parks, maximum persuasion of efficiency directly leads to the damage of agriculture system. Similar gridding is covering everything behind.

For this specific Linpan landscape, the damage of water system in site may affect the irrigation of surrounding area because of the connected canal system. More importantly, it is a loss of precious heritage of thousands of years.



24. diagram showing the second step of industrial park development: construction of infrastructure

AGRI-INDUSTRIAL PARK

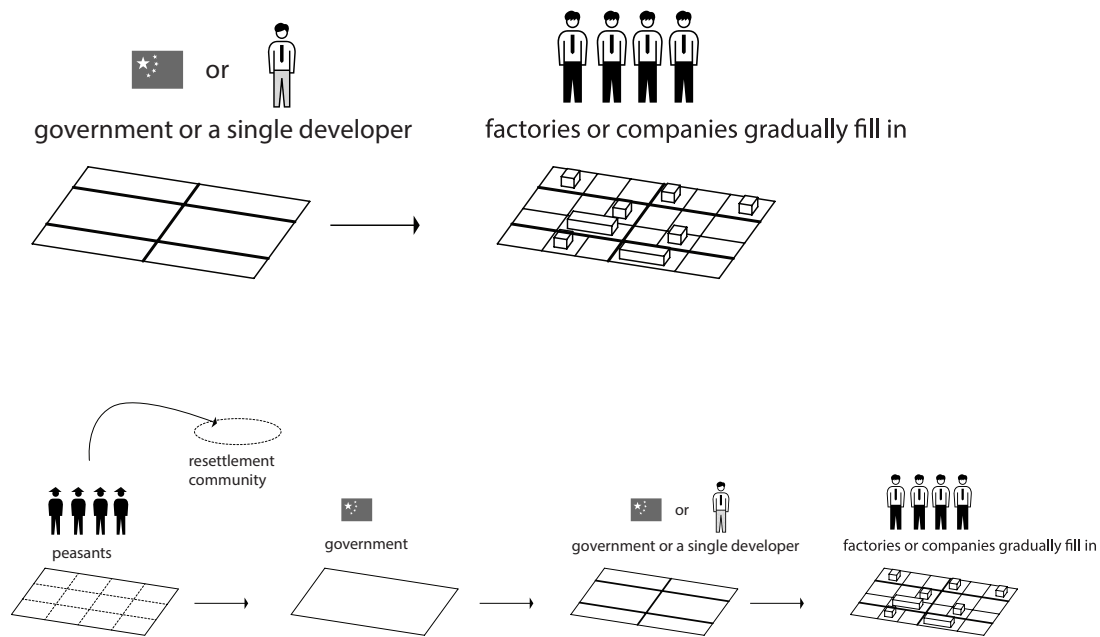


25. comparison of Google earth map of the same area in Pixian, Chendu in 2008 and 2012, showing agriculture trace under urban gridding

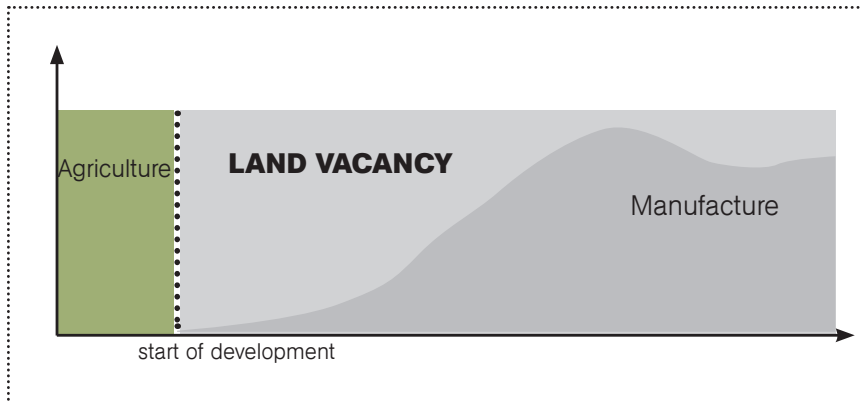
### 3.3.3 Step 3: Inefficient use of industrial land during the development process

Most industrial parks need a few years to be filled in gradually, which means the land stays vacant to wait for factories. Vacant land grown with weeds is a common view of industrial parks. The land idle ratio of Chengdu reaches 30%, even it is one of the most successful industry cities of West China.

Other than the vacancy during development, large area of “greenness” of industrial parks is not used a lot and actually expensive to maintain.



26. diagram showing the third step of industrial park development: vacancy during development



27. diagram showing the vacancy period during development



28. photo of vacant land grown with weeds



29. the greenness of a industrial park

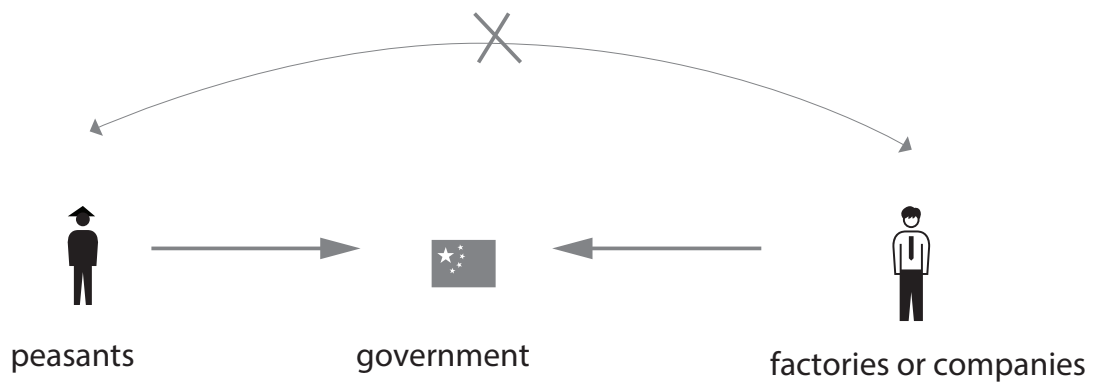
## LAND USE RIGHT TRANSFER POLICY

Although controversial, it is taken granted by law that the only legal way to transfer agriculture land to urban construction land. It is illegal to trade or transfer land directly between farmers and factories (except in some experimental area, like Guangdong Province, where farmers have the right to transfer land use rights to industrialists for a definite period. It enables an industrialization of the countryside at village level, gives rise to prosperity of Township and Village Enterprises).

New revised "Land Management Law" in 1998:

Article 2: the government can confiscate land that owned by village collectives for public interest.

Article 43 any unit or individual have to apply for state-owned land to make any construction.



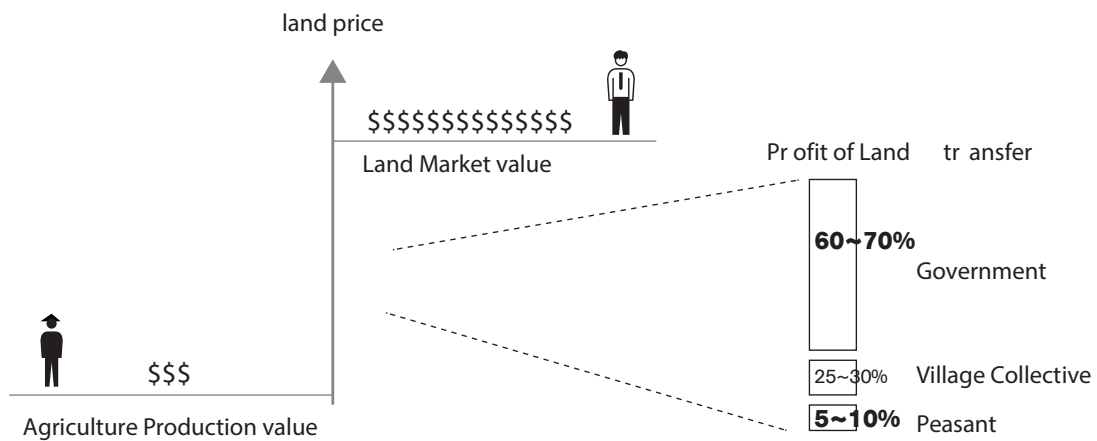
## LAND FINANCE

Based on WEN Tiejun' study, during the process of land acquisition and land transfer, peasants only get 5% to 10% of the profit while local government get at least 60%.

However, due to the growing social pressure, Chengdu is one of city that started the policy "Exchanging Land for Social Security" in 2004.

New revised "Land Management Law" in 1998:

Article 47 the compensation fee is six to ten times of the average production value of the land last three years. The resettlement fee for every peasant is four to six times of average production value of the land last three years.





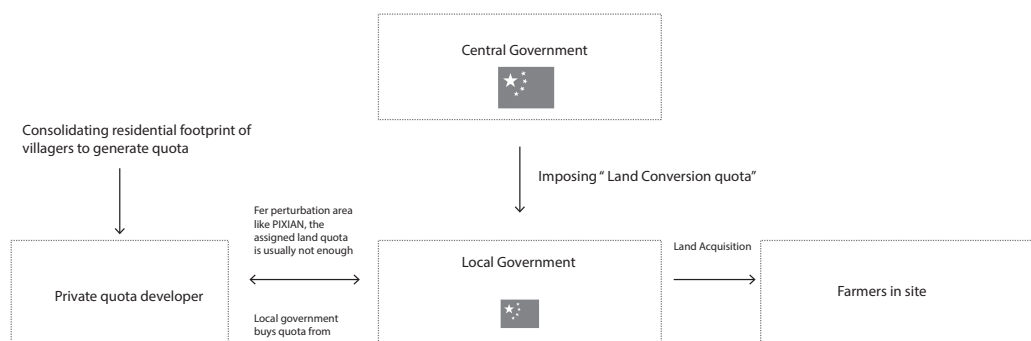
## LAND QUOTA

Land conversion quota refers to the limits on the amount of agricultural land that Chinese municipalities can convert to urban use. The land use quotas that apply to agricultural land create a binding constraint on urban growth in China.

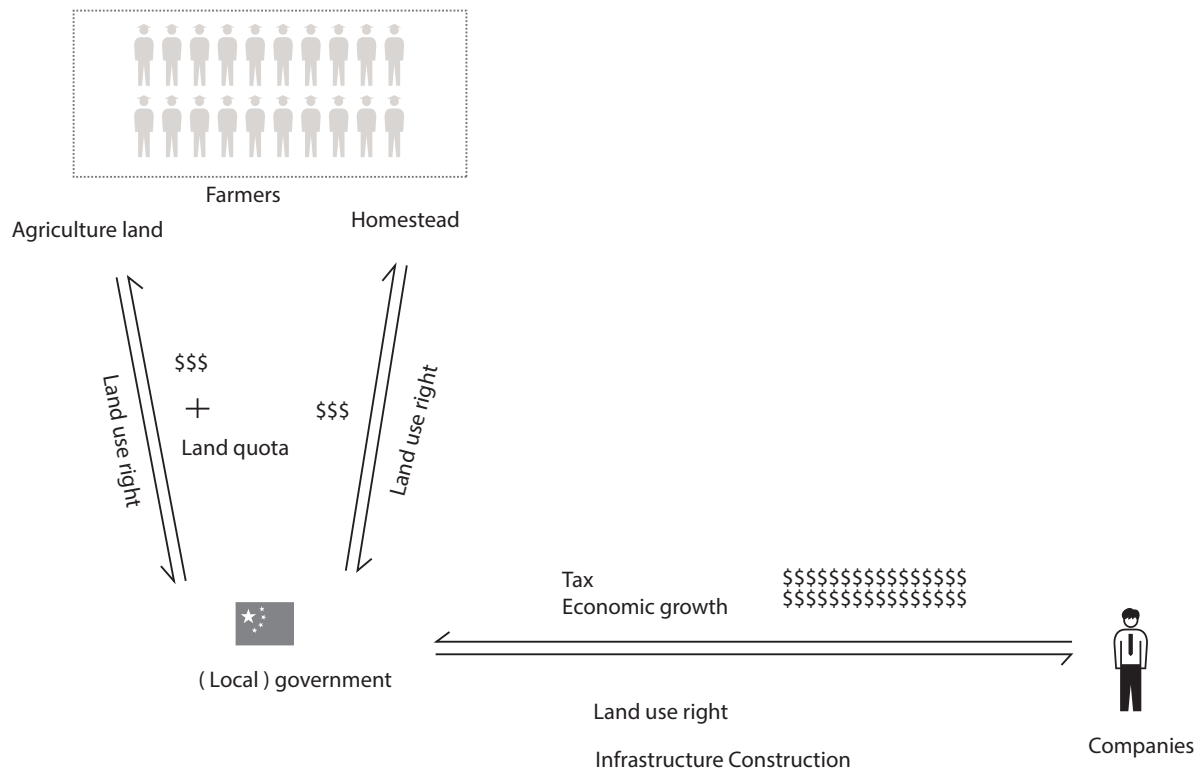
The municipalities of Chongqing and Chengdu are now piloting a new way to work around the central government's agricultural land quota. The municipalities allow private developers to enter into agreements with village collectives in their jurisdiction. The agreements consolidate the residential footprint of the villages while expanding their agricultural footprint.

In order to develop new urban land in Chongqing or Chengdu, real estate developers are required to purchase land quotas on an open market. In other words, the land freed up for agricultural use in the villages effectively increases the amount of agricultural land (over and above the central government's limit) that the municipality can convert into urban land.

(Xiao Yuan, 2014)



AGRI-INDUSTRIAL PARK

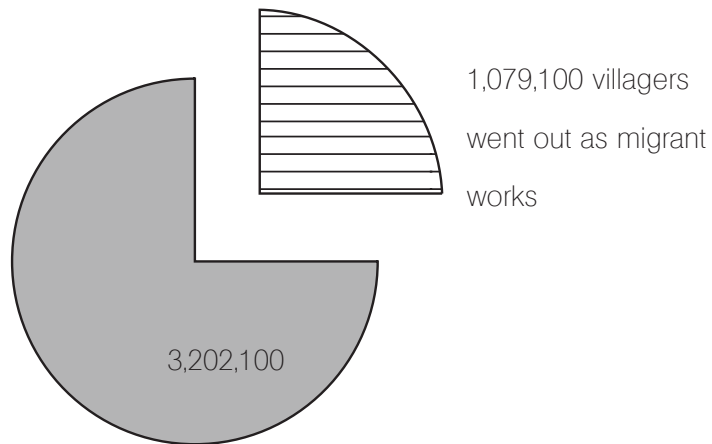


30. diagram showing relationship between main actors

### 3.3.4 Actors

The process of industrial park development mainly involves three actors. The relationship could be simply put like the diagram beside. It is clear to see the key role local government is playing. Two things to pay attention on are: firstly, the municipality gets the pressure for the protection of agricultural land from central government; secondly, compared with real estate development project, the municipality benefits from the tax and job opportunities companies brought in, instead of the direct land lease. In fact, the price of industrial land lease is even lower than the cost for infrastructure construction.

Even farmers tend to be in the relatively passive position; the situation is gradually improving with the maturity of related rules and policies. A certain design opportunity manifest itself to rethink how future development could happen while putting much more concerns to agriculture.



31. diagram showing the number of migrant workers of Chengdu in 2006  
source: China.com.cn



32. photo of a yong migrant worker

### 3.4 Decline of Linpan countryside and Chinese New Countryside

#### Migration of the young

The gap between cities and villages leads to the decline of countryside from inside. Thousands of young people are leaving villages and become part of the flowing population in cities due to of the poor living conditions, few job opportunities. For example, in 2006, almost one-fourth villagers of Chengdu area went to cities for jobs. What comes after this in the village side is the lack of labor, the separation of children and parents and the increasing gap. Even after so-called “new countryside” movement in 2005, it is not hard to find that mainly children and the olds stay when walking in the one of the new countryside residential community.

#### New Countryside Movement

In 2004, in one of the “No. 1 Documents” called “The Decision on Major Issues Concerning Rural Reform and Development”, it was stated that “China has generally entered into the development stage in which industry props up agriculture and urban areas support rural areas, a critical moment of accelerating traditional agriculture restructuring and pursuing a path of agricultural modernization with Chinese characteristics and a key period of breaking down the urban-rural dual structure and building a new pattern of integration of rural and urban economic and social development.” This means that after



33. photo of new countryside residential community in Chengdu Plain with the characteristic local building style



34. photo taken in the new built residential community

## INDUSTRIAL DEVELOPMENT

mainly focusing on urban development, economically or socially, for more than 30 years, the central government is gradually putting attentions to Chinese countryside.

In 2005, the Chinese government-sponsored campaign “Constructing a Socialist New Countryside”, or “New Countryside”, was published in China’s Eleventh Five Year Plan. This movement or complain aims to modernize China’s “backward” rural society by integrating urban-rural development. Construction of infrastructure, water and electricity supply is the first focus of “modernization”. The so called “ New farmers’ housing” projects are appearing everywhere as models of countryside modernization, which is these new dense, housing units constructed with modern facilities, where farmers are moved in from their detached rural homes. However, as mentioned before, the fast change of farmers’ life style and agriculture landscape remains controversial from many aspects.

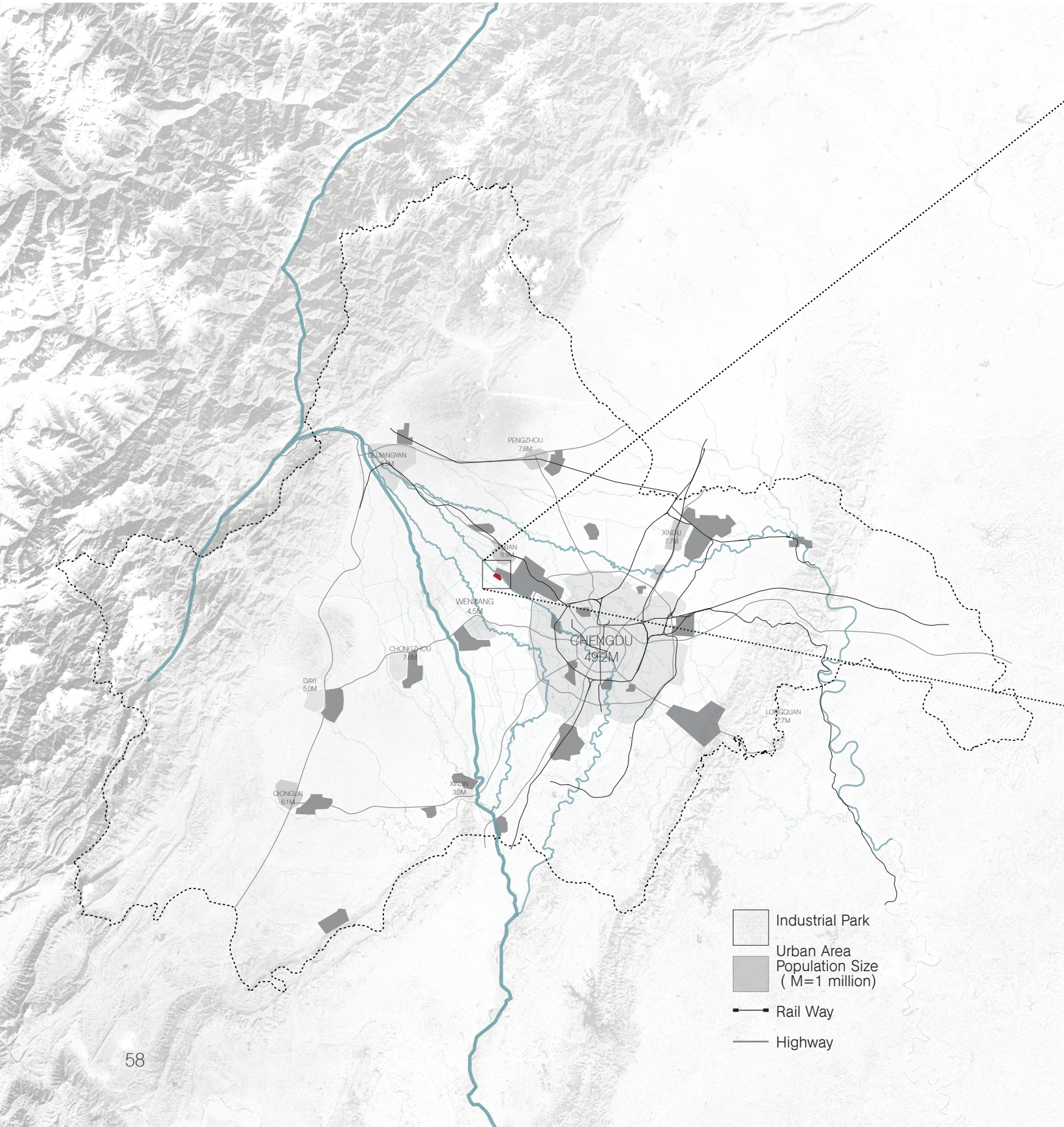
In conclusion, pressure from industry development from outside and the social-economic decline from inside are the two challenges Linpan landscape is facing while the new policy opportunity brings the best time to rethink the opportunities and possibilities of rural regions.

## 4 THESIS PROPOSITION AND DESIGN PRINCIPLE



By taking a typical linpan landscape area as a testing site, the thesis proposes a possibility that the process of Industry park development could be a way of countryside upgrade. While a mutual-beneficial cooperation is built between agriculture and industry, this landscape is sustained in new ways.

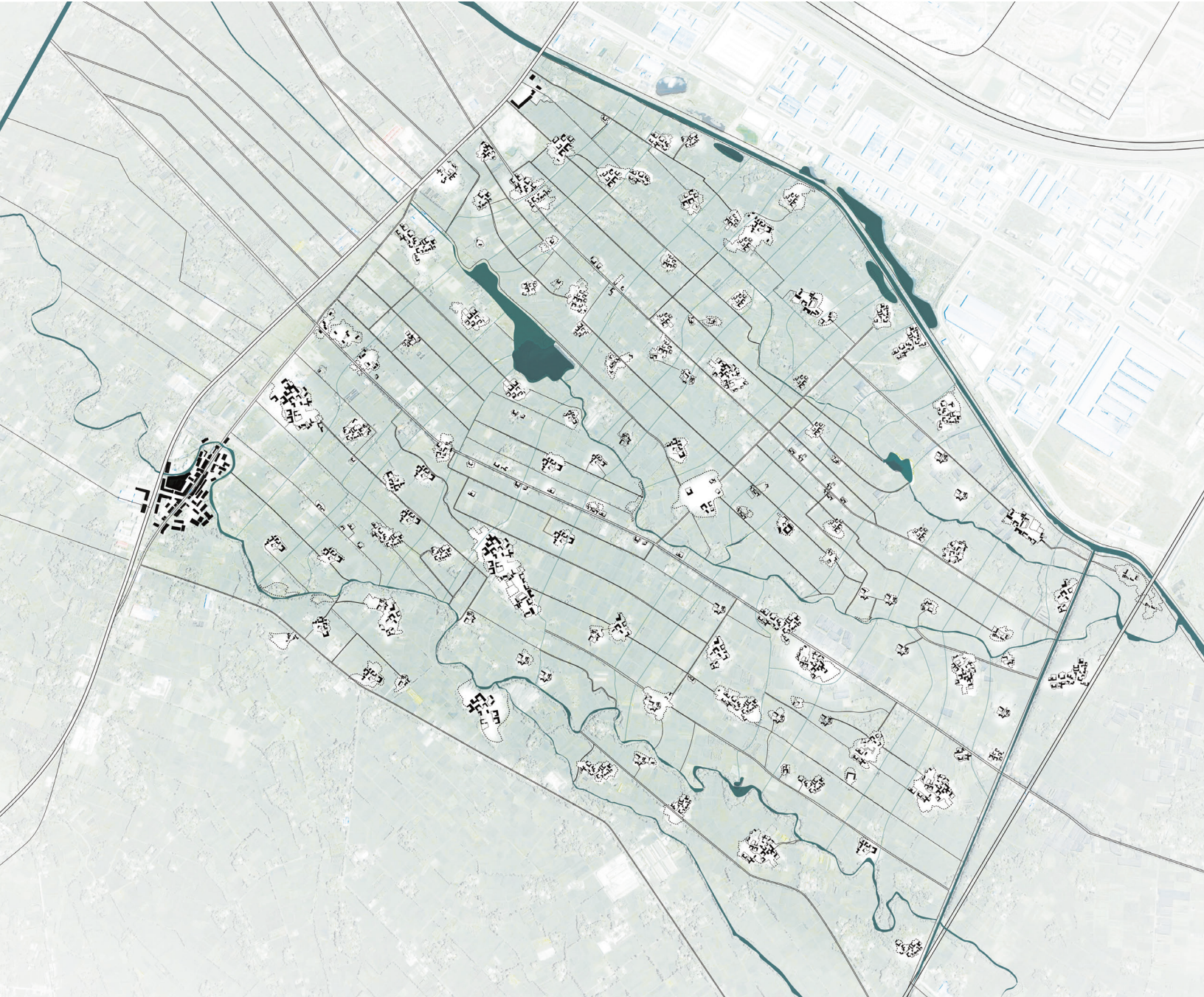
AGRI-INDUSTRIAL PARK

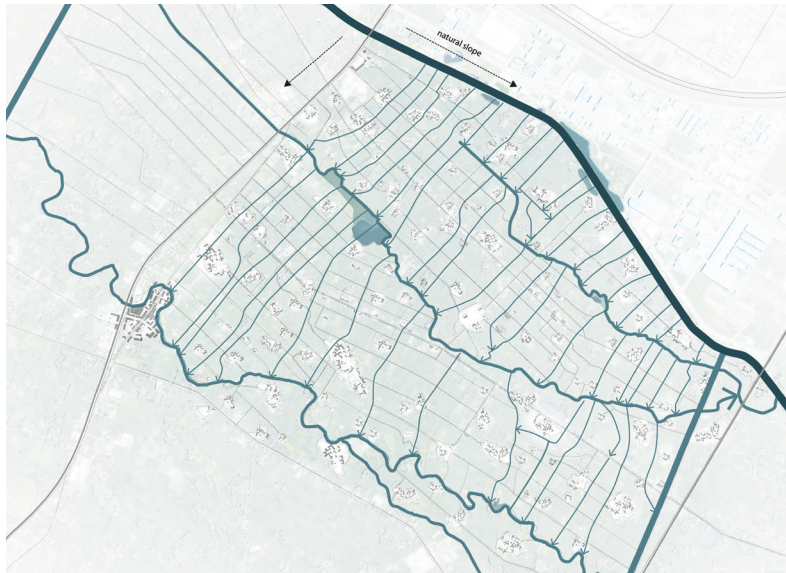




### Testing Site

The testing site is at the boarder of existing industrial area. It is planned to be an industry park in the near future by the government just as what is currently surrounded it. Fast ways in two ends connect the site to provincial highway and railway.





### Site Analysis

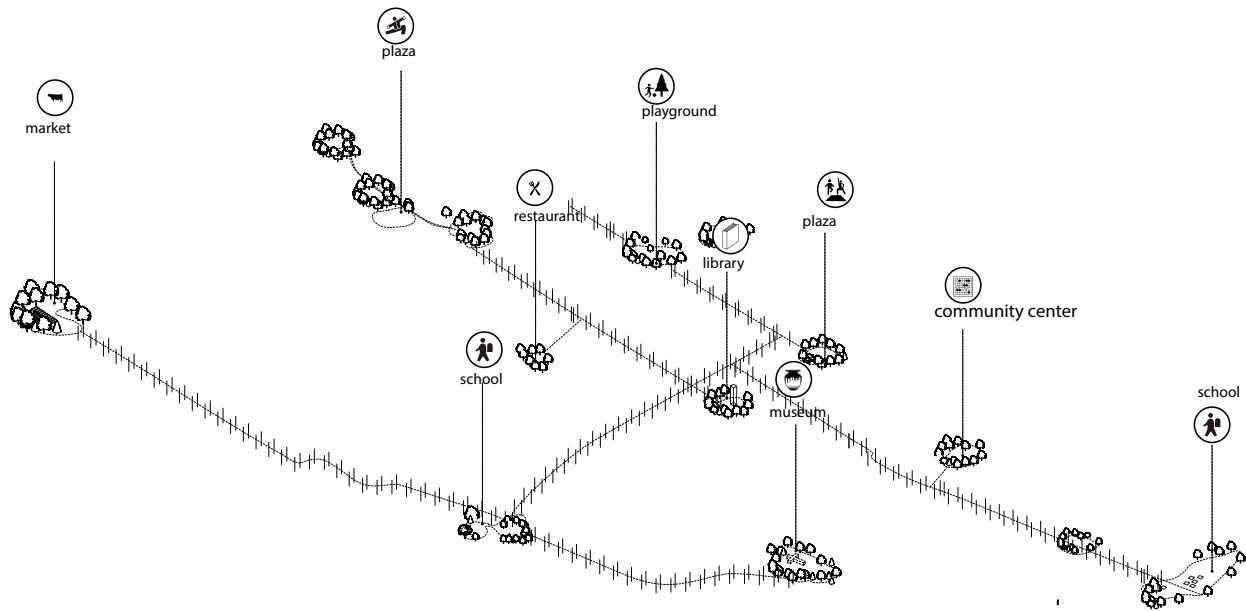
Currently the site still remains all the features of Linpan Landscape. Three parallel main canals pass the site and are connected by sub canals, forming separate irrigation zones.

250 Linpan villages in site, 6400 farmers live in the distributed settlements, which are connected by the road network.



### Site Strategy

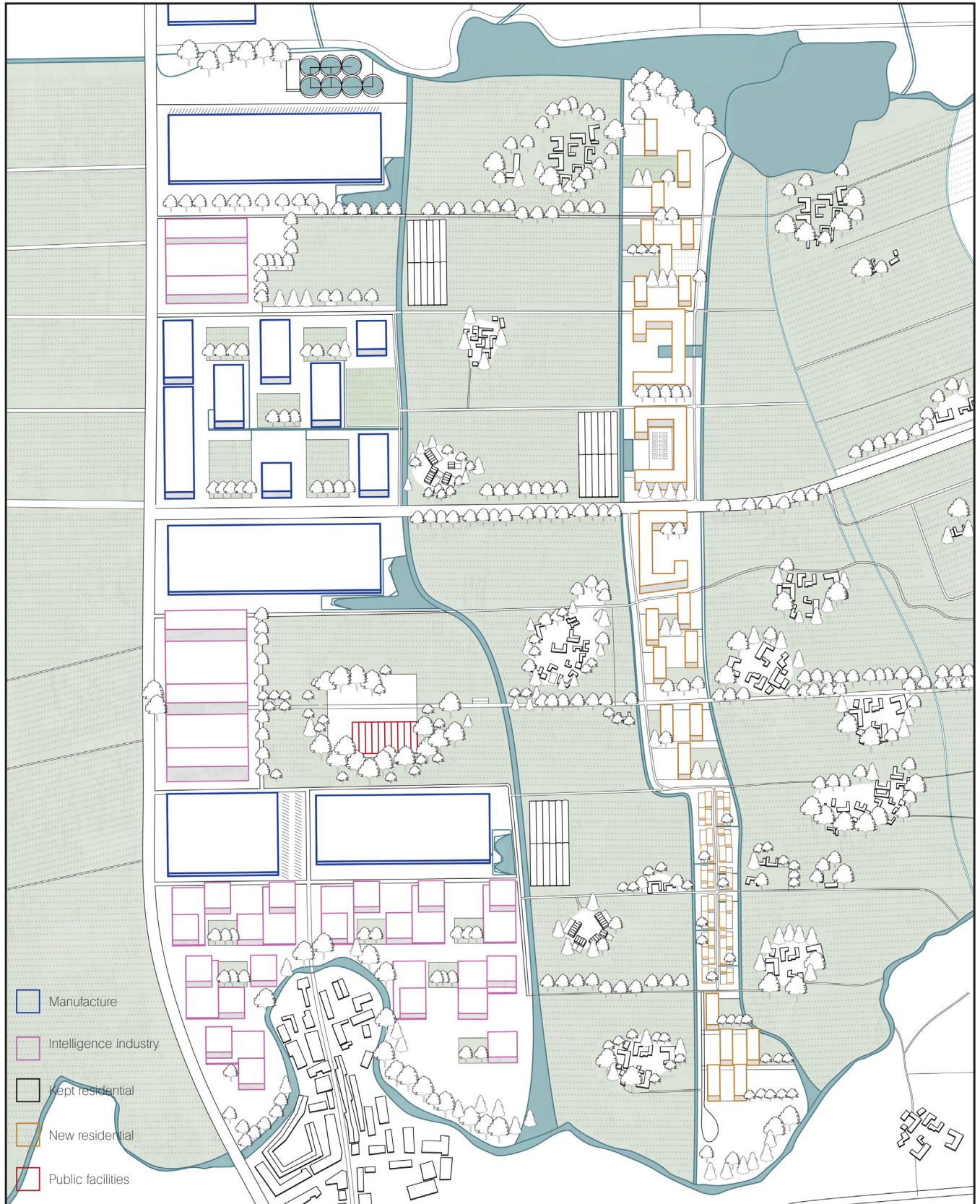
One of the main aims is to insert new development with minimum damage of current agriculture system and minimum resettlements of farmers. The principle is every step of development happens within an irrigation zone. The potential development area is selected including whether it is close to infrastructure or it has fewer existing settlement. But in reality it also relates to farmers' willing.



### Public space Network

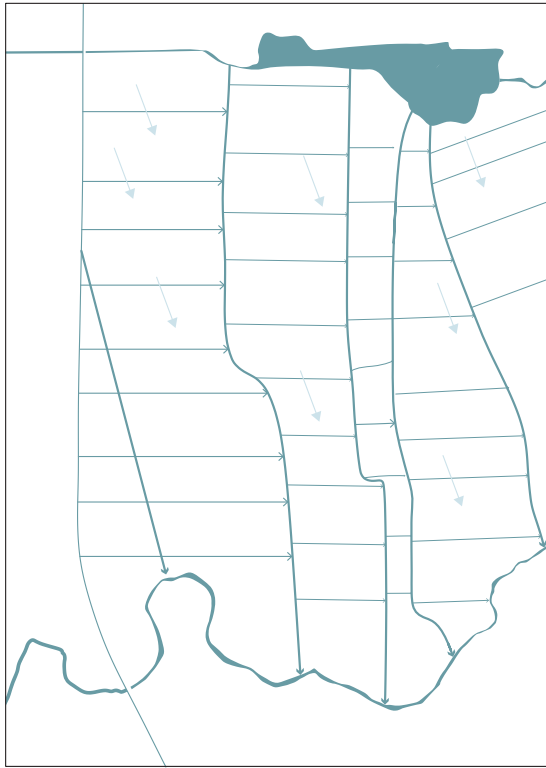
Some of current residential settlements within development zones are transferred to public amenities together with its road network. All the public spaces enclosed by trees will eventually become the meeting place for farmers, workers and new residents.

AGRI-INDUSTRIAL PARK

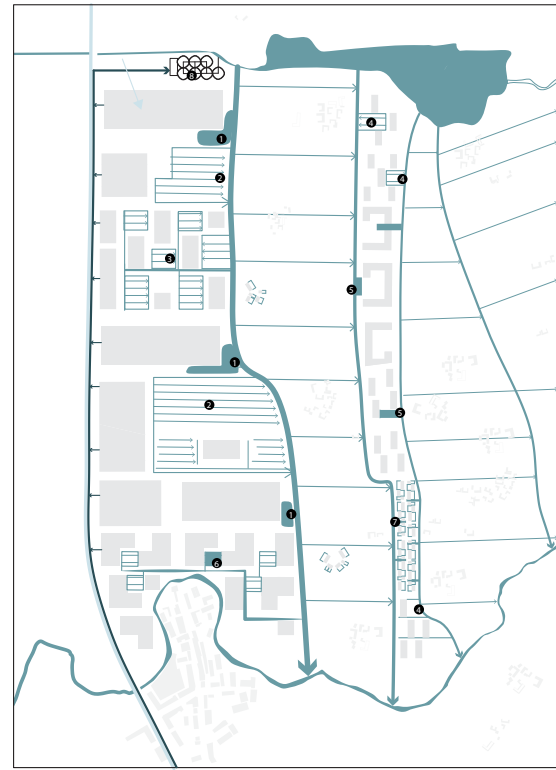




## DESIGN PROPOSAL



EXISTING IRRIGATION WATER SYSTEM  
Rain water get infiltrated to earth



ADAPTED WATER BOARDER

- Wetland park
- Agriculture
- Research Garden
- Community farming
- Swimming pool
- Fountain
- Private farming
- Water treatment Plant

The close relationship between live and work, production and consumption is rebuilt. The wide bands close to infrastructure are mix of manufacture and intelligence industry while the narrow ones are new residential area. Development also happen within these Linpan clusters, some become public, some become commercial or as part of new residential development.

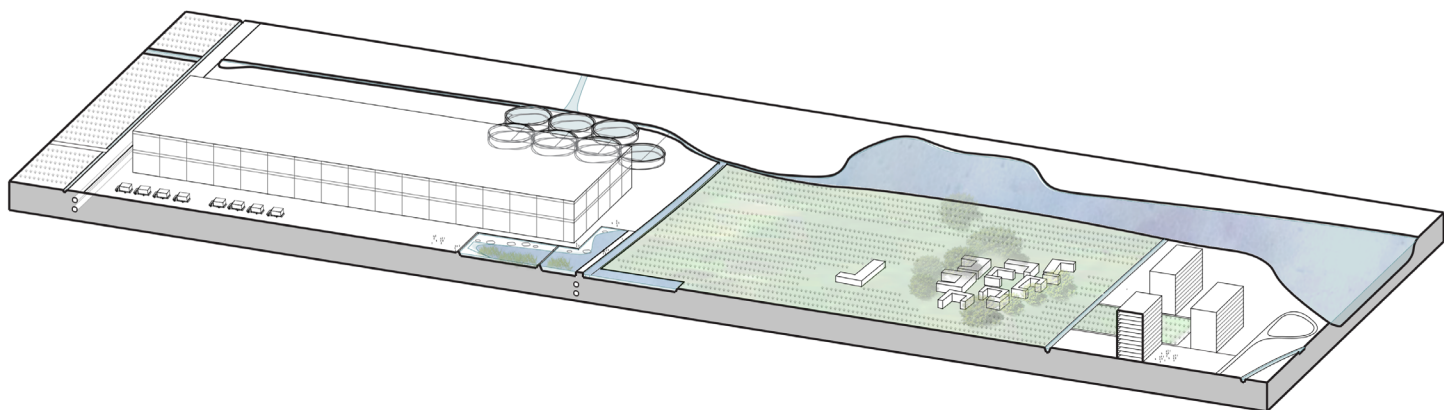
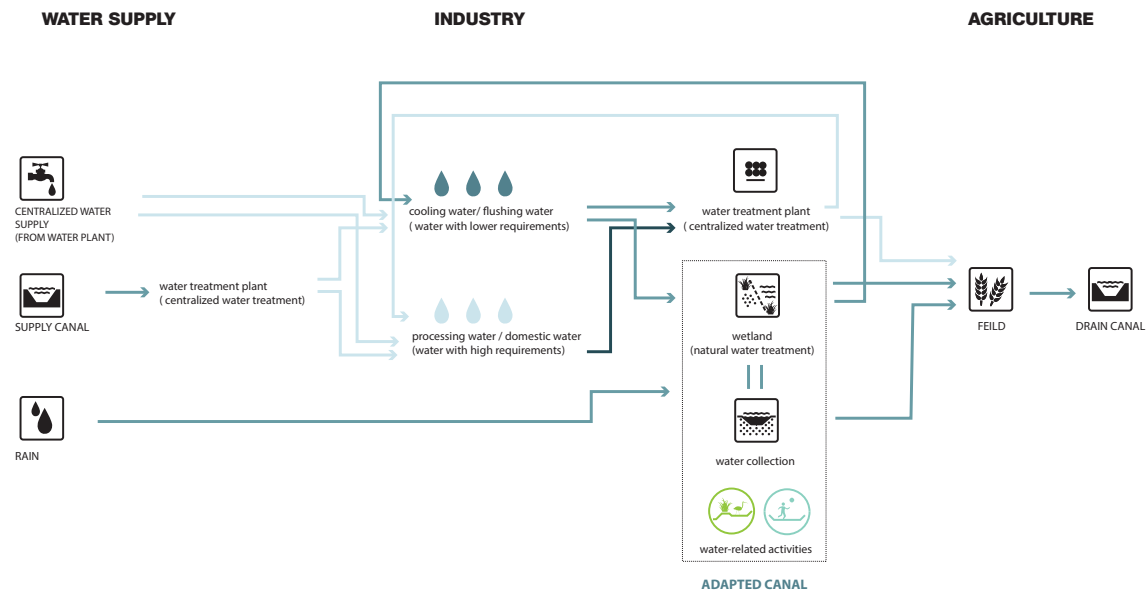
### Interface

The existing irrigation canal becomes the flexible boarder between different programs. So it is transferred from simply irrigation function on the left to a multi-functional water body, which will intervene with production, office, residential and entertainment in different ways.

### Typology1

The first typology of interface is the potential water cycle happens between the big box manufacture and agriculture.

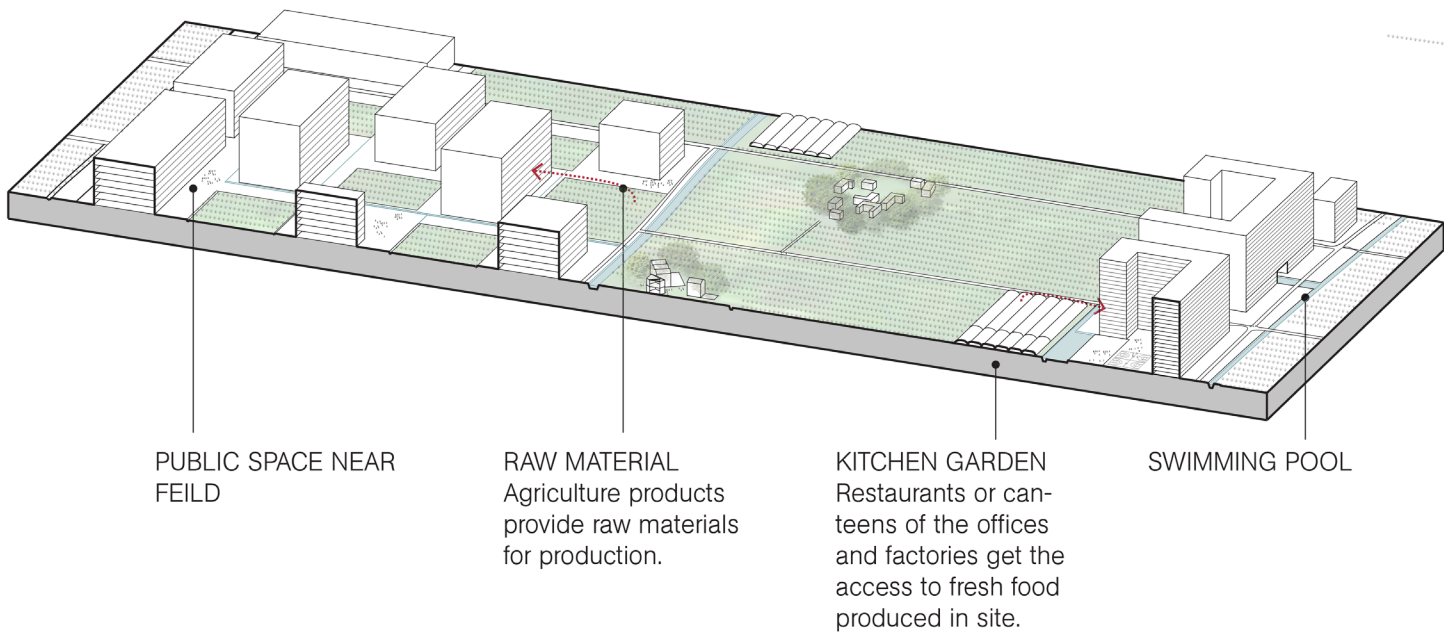
Large water consumption of manufacture contains water with different quality requirements. Some of the water, like cooling water can be reused for irrigation in site if treated properly, much of them can be reused for irrigation in site. Also factories can get benefits from the small water cycle. Large roof of manufacture is another potential for storm water collection.





## Typology2

Canals keep irrigating the research field of production, community gardens, and courtyards within new development. What's more, the field offers direct raw material supply for production and also the freshest food for residents.

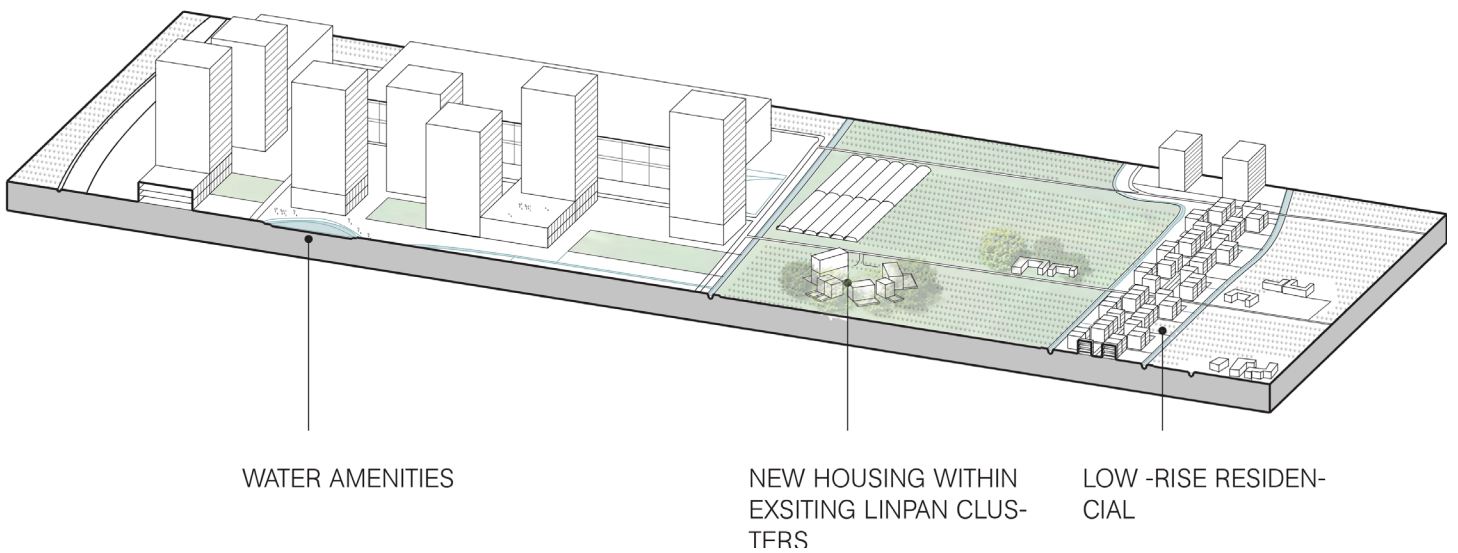




Typology3

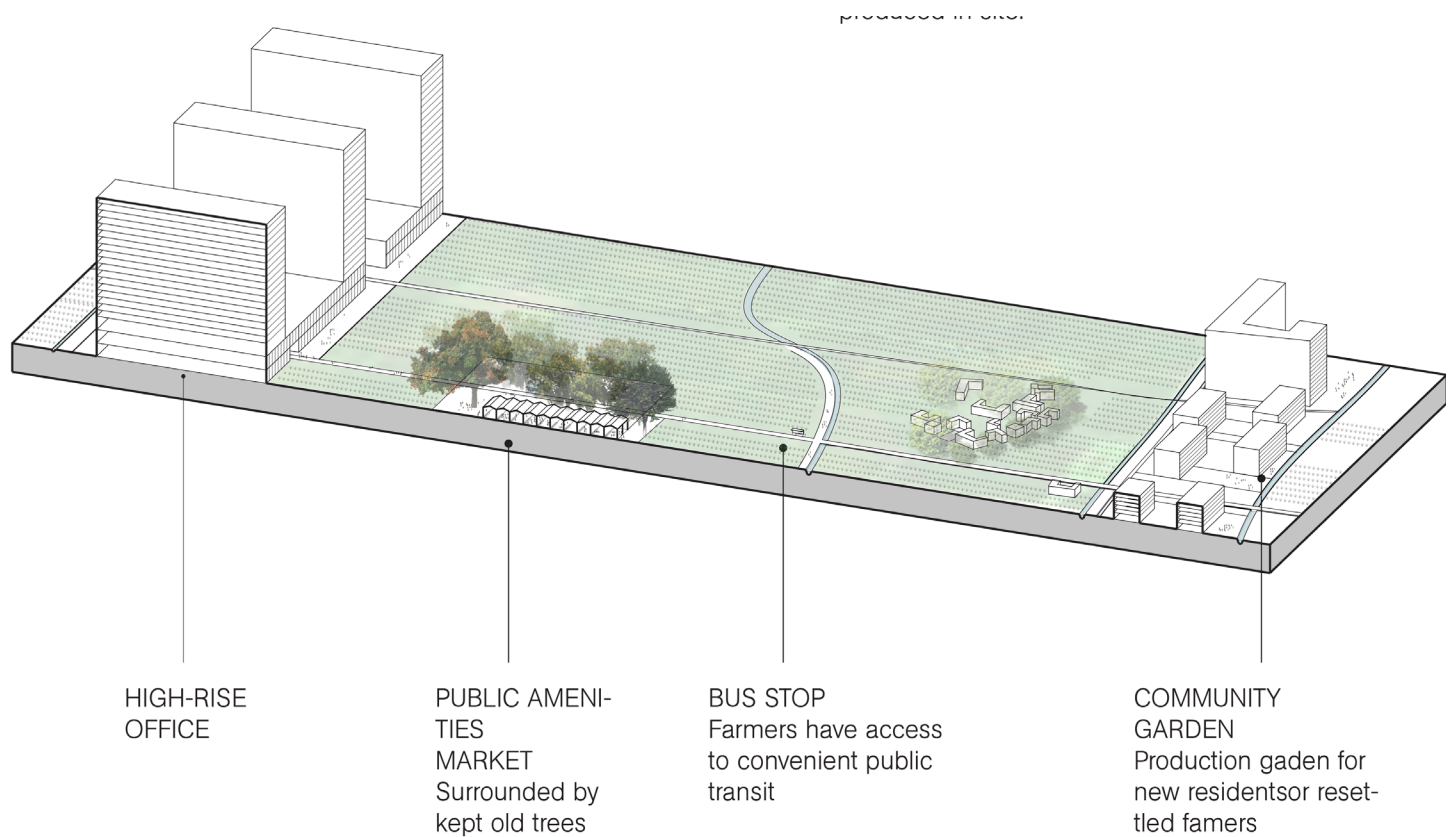
Natural water features come in and become the feature of this place.

The road through field could be the link connects work and live.

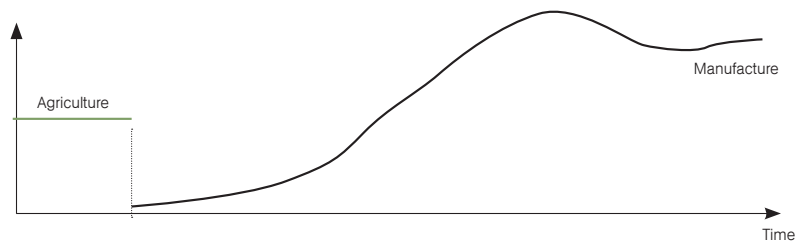


### Typology4

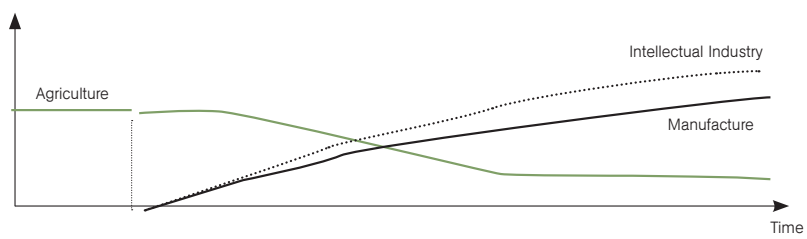
Public space, for example the market in the diagram, become where farmers, workers , new residents all meet together doing different kind of exchanges.



## AGRI-INDUSTRIAL PARK



Typical industry park development



Proposed development

### Development process

Compared with typical industry park development process, agriculture sustains during the whole process and even in the end certain degree of agriculture still remains, but the district would become a mix-use with multiple economic sources.

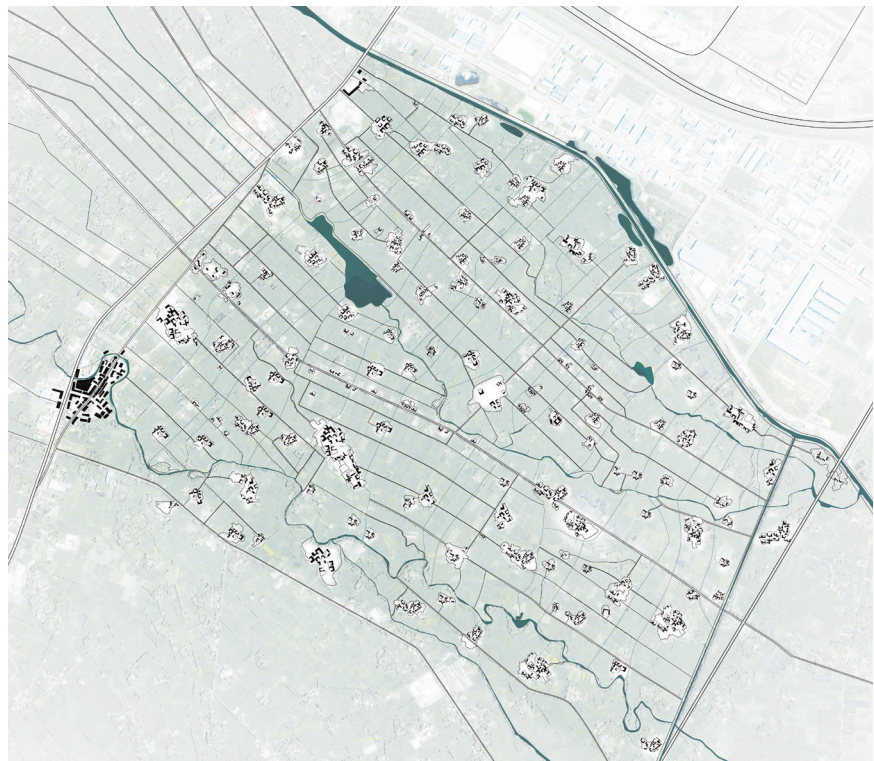


DESIGN PROPOSAL

POPULATION COMPOSITION



LAND USE

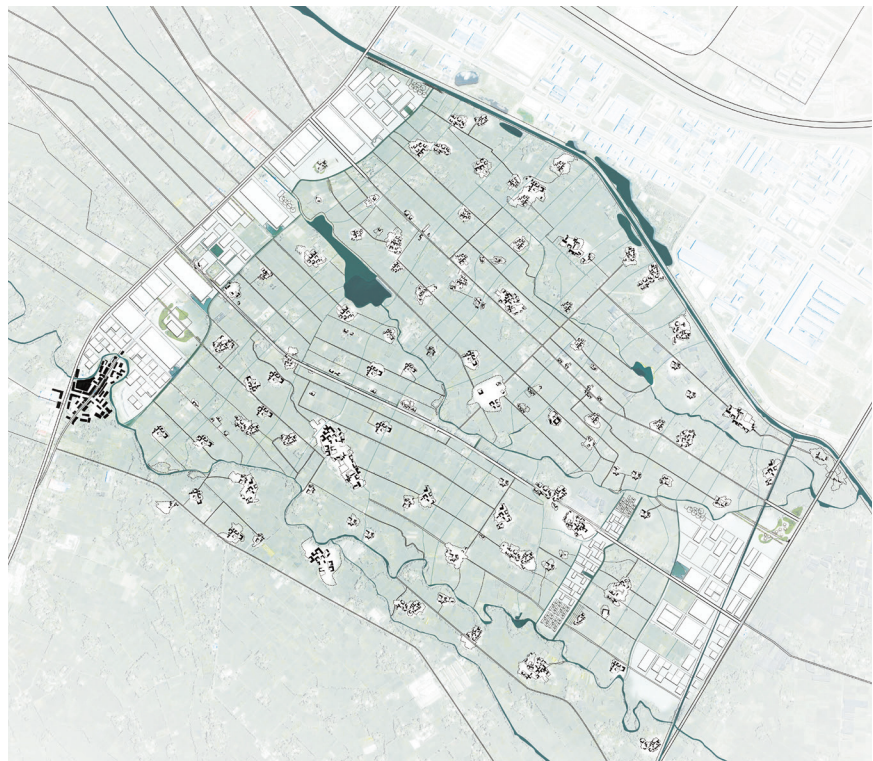
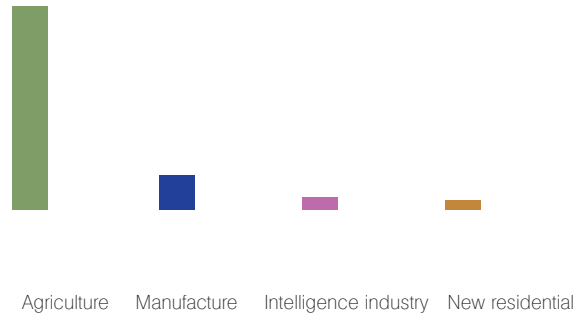


AGRI-INDUSTRIAL PARK

POPULATION COMPOSITION



LAND USE

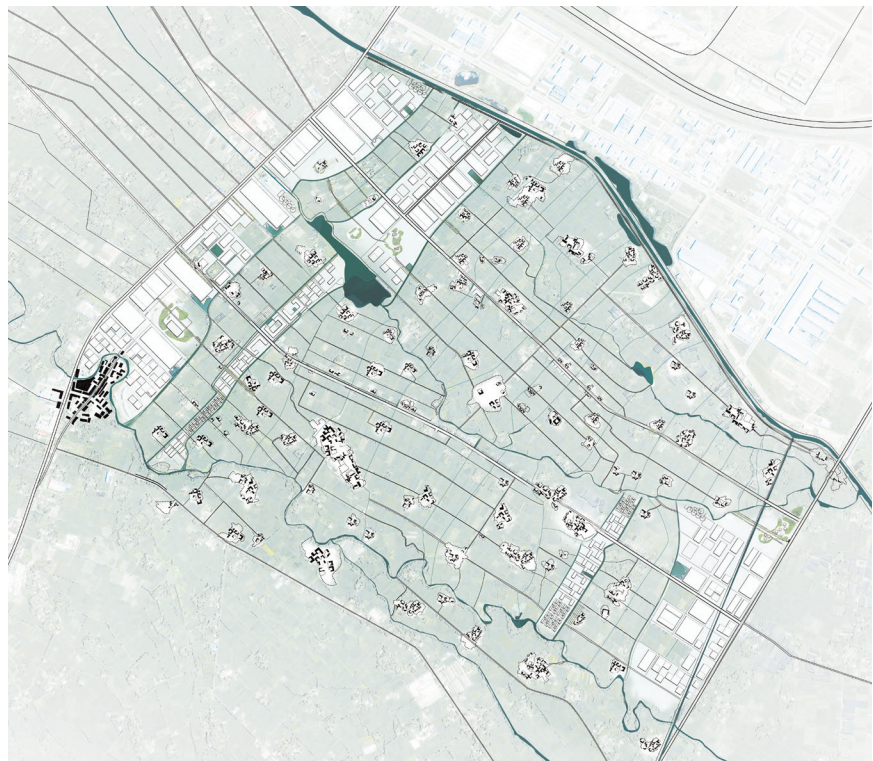
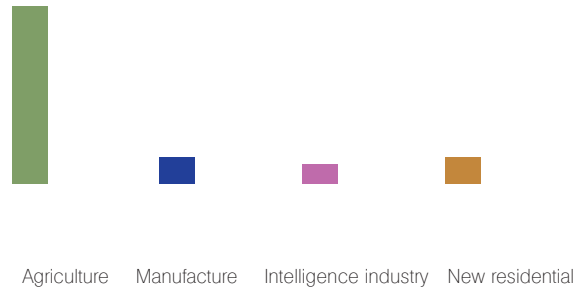


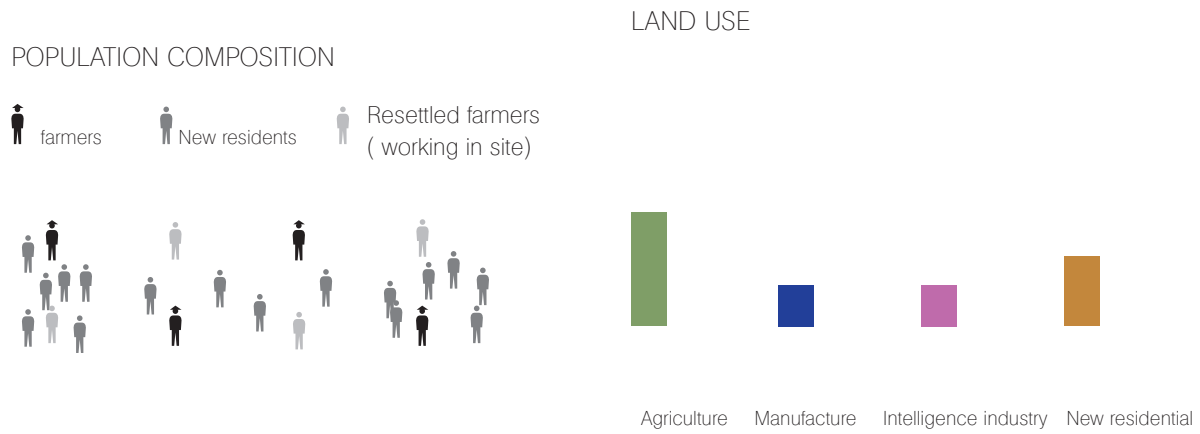
DESIGN PROPOSAL

POPULATION COMPOSITION



LAND USE

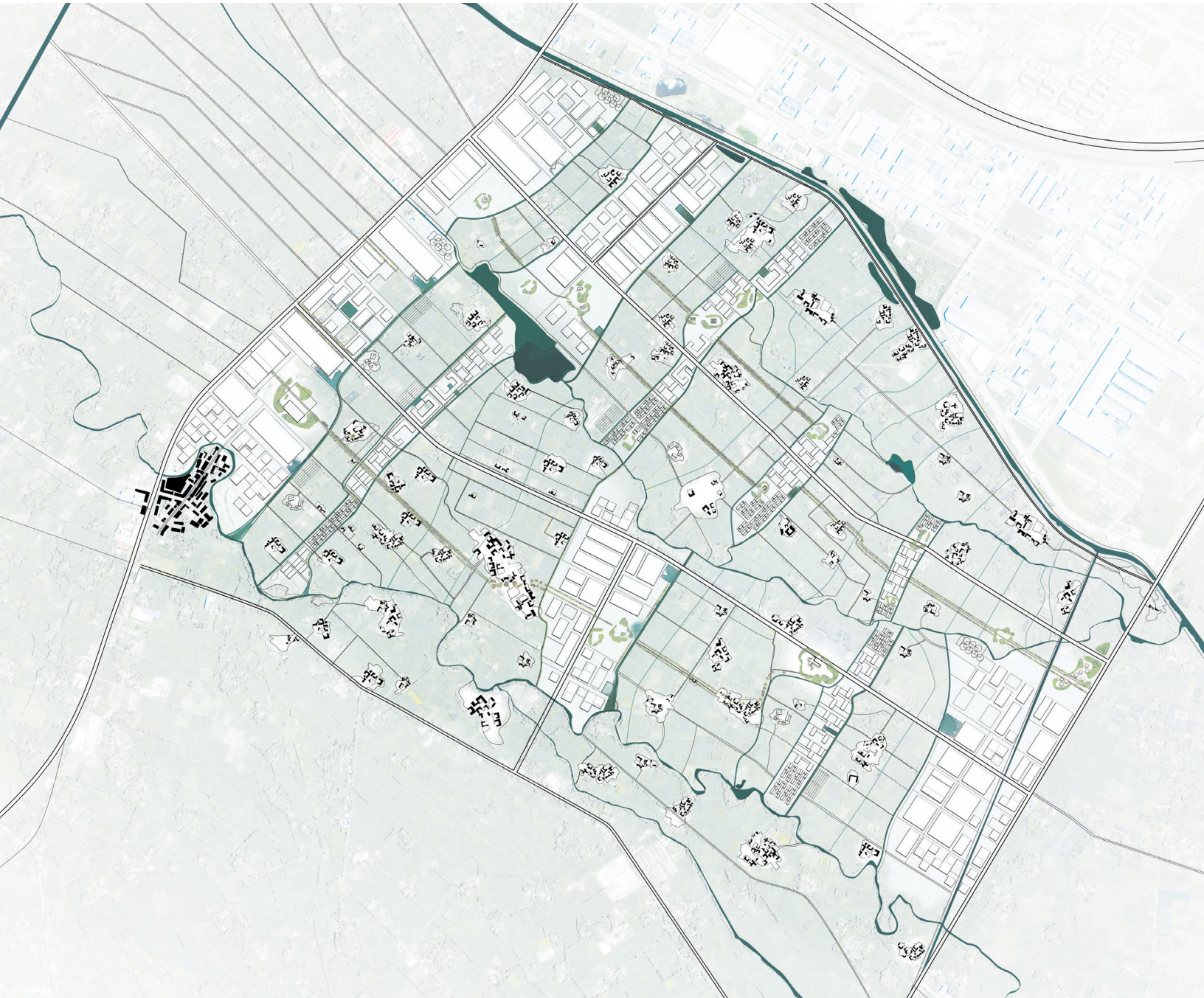




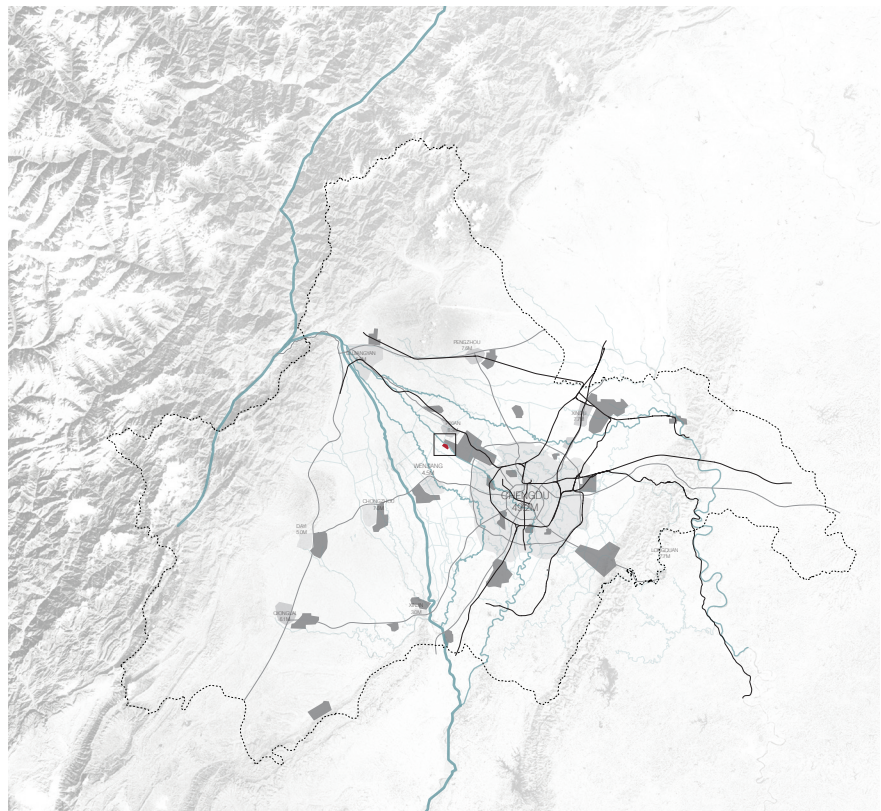
### Possible scenario of development process

Land acquisition is taken by steps and each step happens within irrigation zone with minimum affect on surrounding areas. Even when waiting for factories to come in, temporary farming can happen instead of just staying vacant.

Gradually this area will become a much more densely populated area than before, when farmer can keep farming but also get the opportunity to take in other jobs just in site.



While the irrigation system fed the land for two thousands of years, the thesis aims to offer a new development mode in order to sustain and active the extraordinary Landscape, together with the precious rural culture. It is also a start to look at Chinese New Countryside. What are the other possibilities beside those brand new apartment buildings?



DESIGN PROPOSAL

TABLE OF FIGURES OF CHAPTER 1-3

1. photo of Linpan countryside
2. left: changes of job distribution of last 20 years  
right: percentage of urban population of last 20 years
3. up: photo of Dujiangyan Dam  
down: aerial photo of Linpan Landscape
4. diagram showing Main river of China  
source: CCM Information Corporation, Water Resources in China
5. Dujiangyan irrigation system
6. illustration of Linpan courtyards
7. illustration of trees around Linpan unit
8. illustration of canal around courtyards
9. photo of bamboos and canals around linpan housing
10. photo of canal
11. production and living unit
12. diagram showing the grain output and consumption of Chengdu from 1970s  
Source: 2013 Chengdu Statistical
13. photo of fields
14. up: photo of vacant land in a industrial park  
down: photo of Linpan countryside
15. diagram showing the growth of industry after 1978  
Source: 2013 Chengdu Statistical
16. distribution of industrial parks with urban area
17. photos of gates of industrial parks
18. typical manufacture block
19. typical intelligence industry block
20. diagram showing the first step of industrial park development: land acquisition
21. the growth of the number of landless farmers of China
22. photo of cleaners who are landless farmers  
source: the NY Times, <http://www.nytimes.com/2013/11/10/world/asia/new-china-cities-shoddy-homes-broken-hope.html?pagewanted=4&r=3&>
23. photo an elderly farmers living in an apartment building  
source: the NY Times, <http://www.nytimes.com/2013/11/10/world/asia/new-china-cities-shoddy-homes-broken-hope.html?pagewanted=4&r=3&>
24. diagram showing the second step of industrial park development: construction of infrastructure
25. comparison of Google earth map of the same area in Pixian, Chendu in 2008 and 2012,  
showing agriculture trace under urban gridding
26. diagram showing the third step of industrial park development: vacancy during



## NOTES

development

27. diagram showing the vacancy period during development
28. photo of vacant land grown with weeds
29. the greenness of a industrial park
30. diagram showing relationship between main actors
31. diagram showing the number of migrant workers of Chengdu in 22006  
source: China.com.cn
32. photo of a yong migrant worker
33. photo of new countryside residential community in Chengdu Plain with the characteristic local building style
34. photo taken in the new built residential community

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