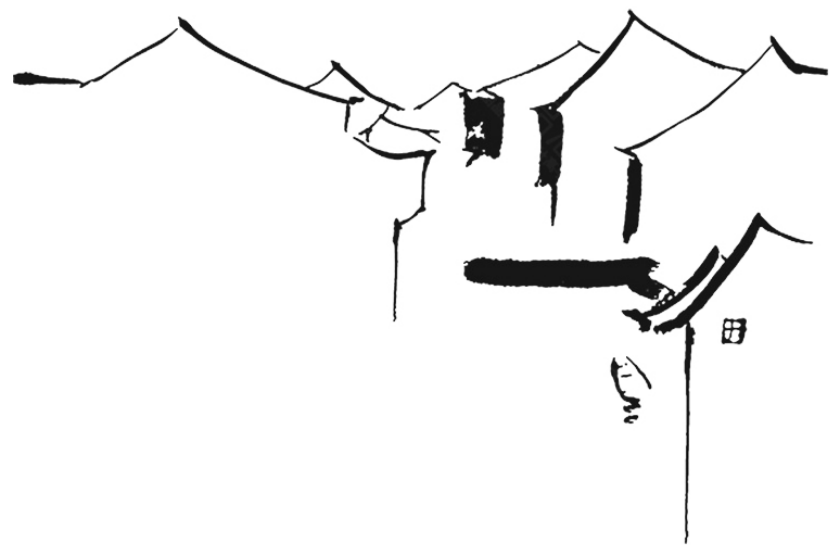




A New Watery Balance

Redefine The Scenic and Circular Waterscape of The Villages in Wuyuan

Jiawei Zhao, 4838432

First mentor: Inge Bobbink

Second mentor: MaartenJan Hoekstra



Chongqing



Guangzhou



Shanghai



Shenzhen

Urbanity



Wuyuan



Zhouzhuang



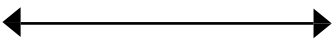
Pingyao



Fenghuang

Rurality

Cities in China



Villages in China

Similarity
Density
Busy and intense Life

Poverty
Lack of development
Isolation

Quality and Identity of the
living environment



The villages in China has potential
to become a liveable place for both
young and old people

Wuyuan, Where People Live with Water

Scenic Value of Rural Landscape



Jujing Village



Xiaoqi Village



Wangkou Village



The Mist In Wuyuan

Cultural Value of Water Tradition



The Water wheel in Qinghua



The Canal in Likeng Village



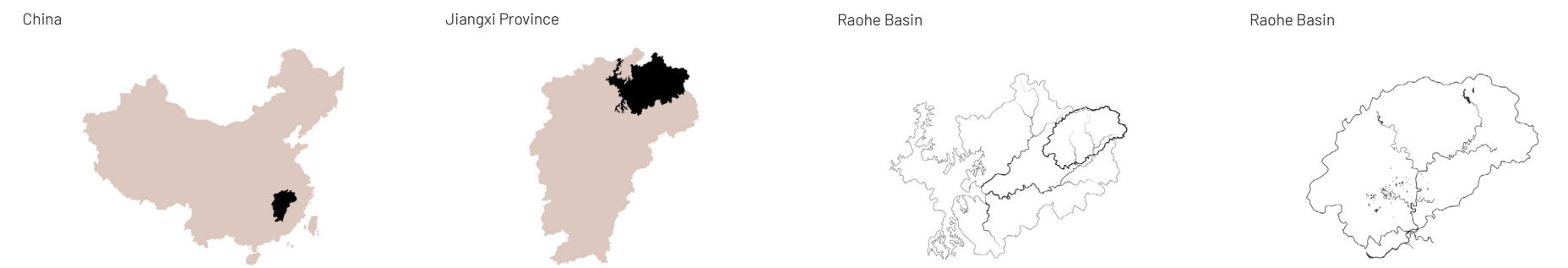
The Canal in Likeng Village

Image Source: <https://saveig.org/tags/chinasights/>

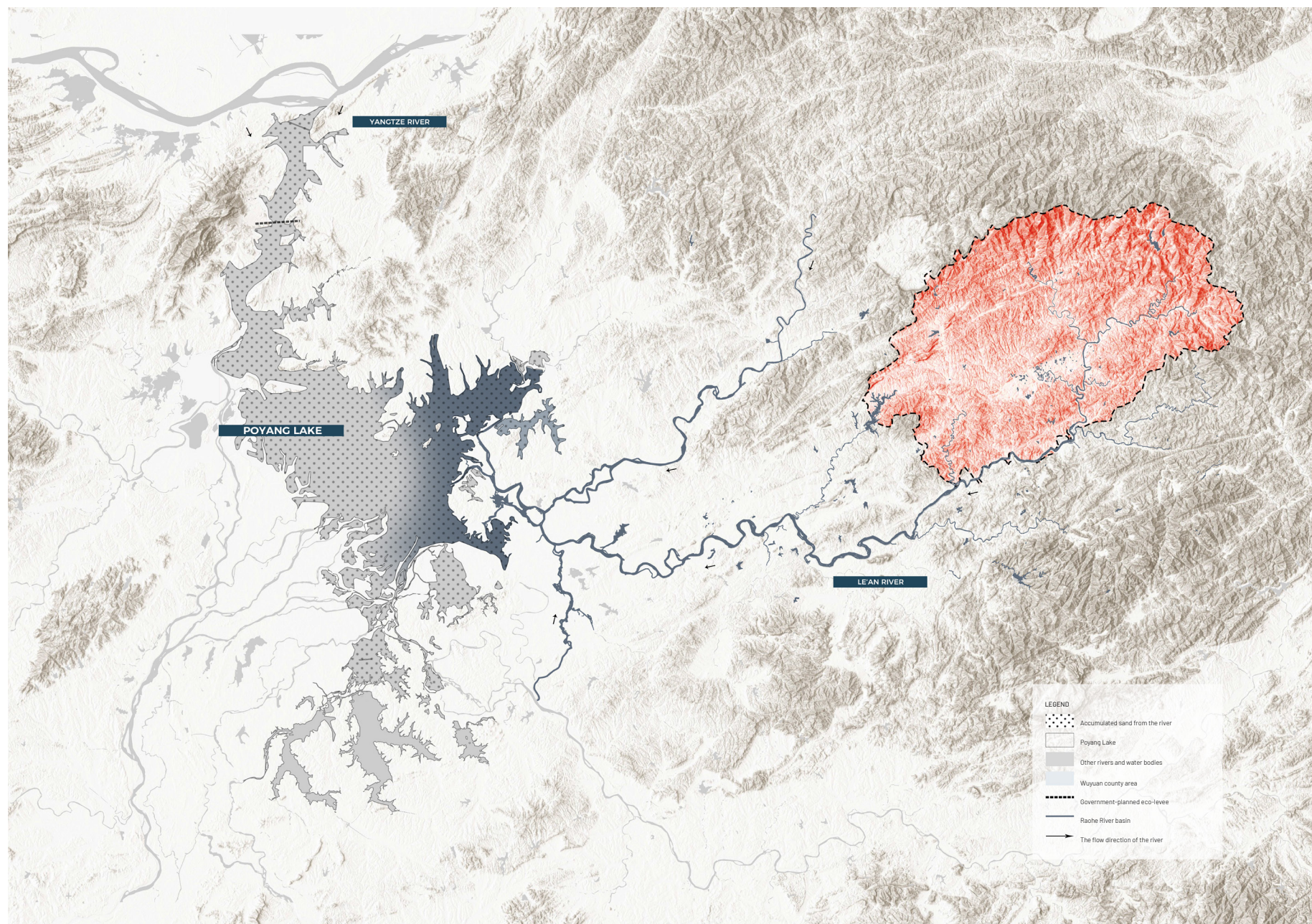
Image Source: <https://saveig.org/tags/chinasights/>
<https://www.theglobeisbeautiful.com/travel-stories/2019/4/wuyuan>

Context of the Wuyuan County and Water System

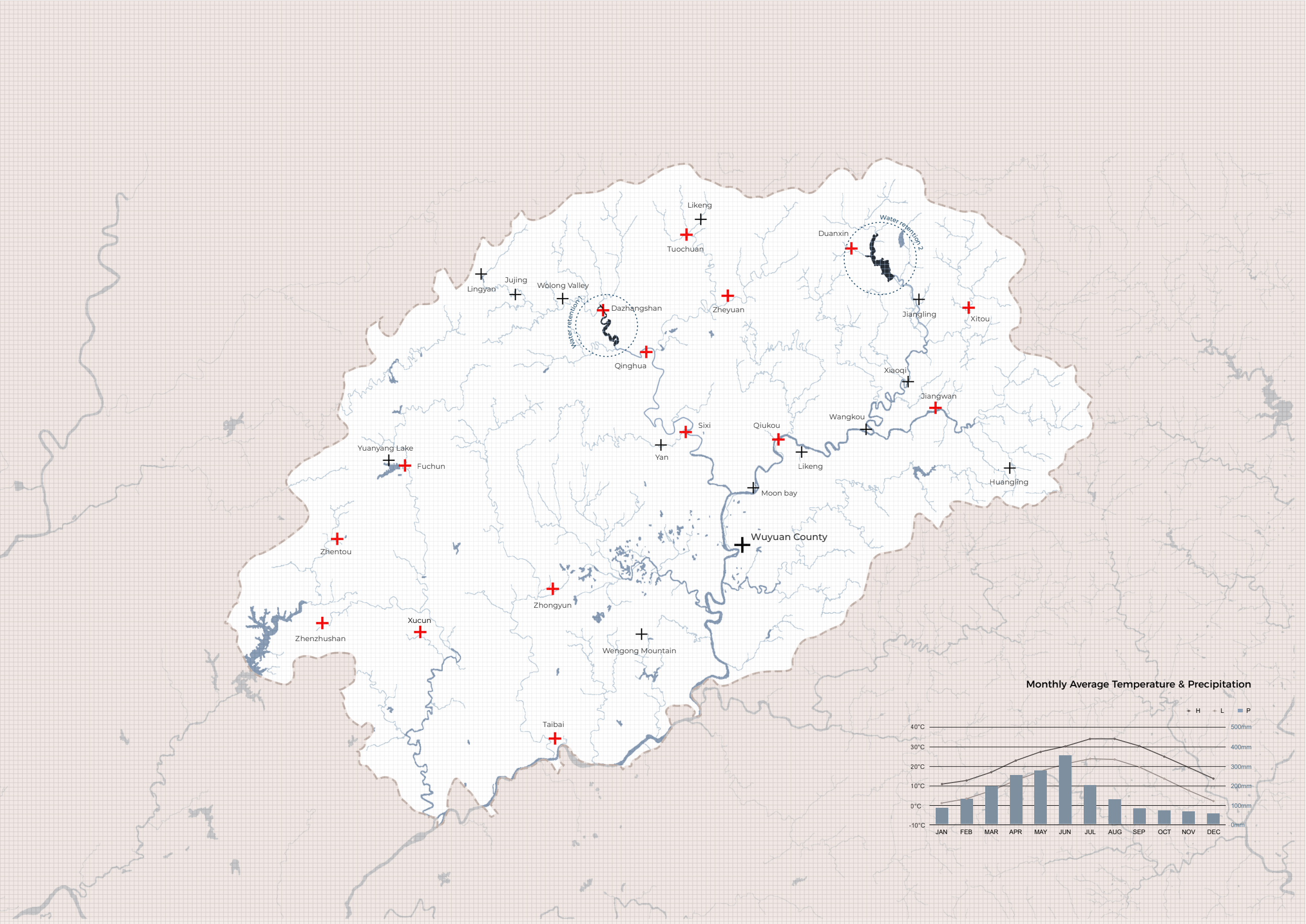
Site Location



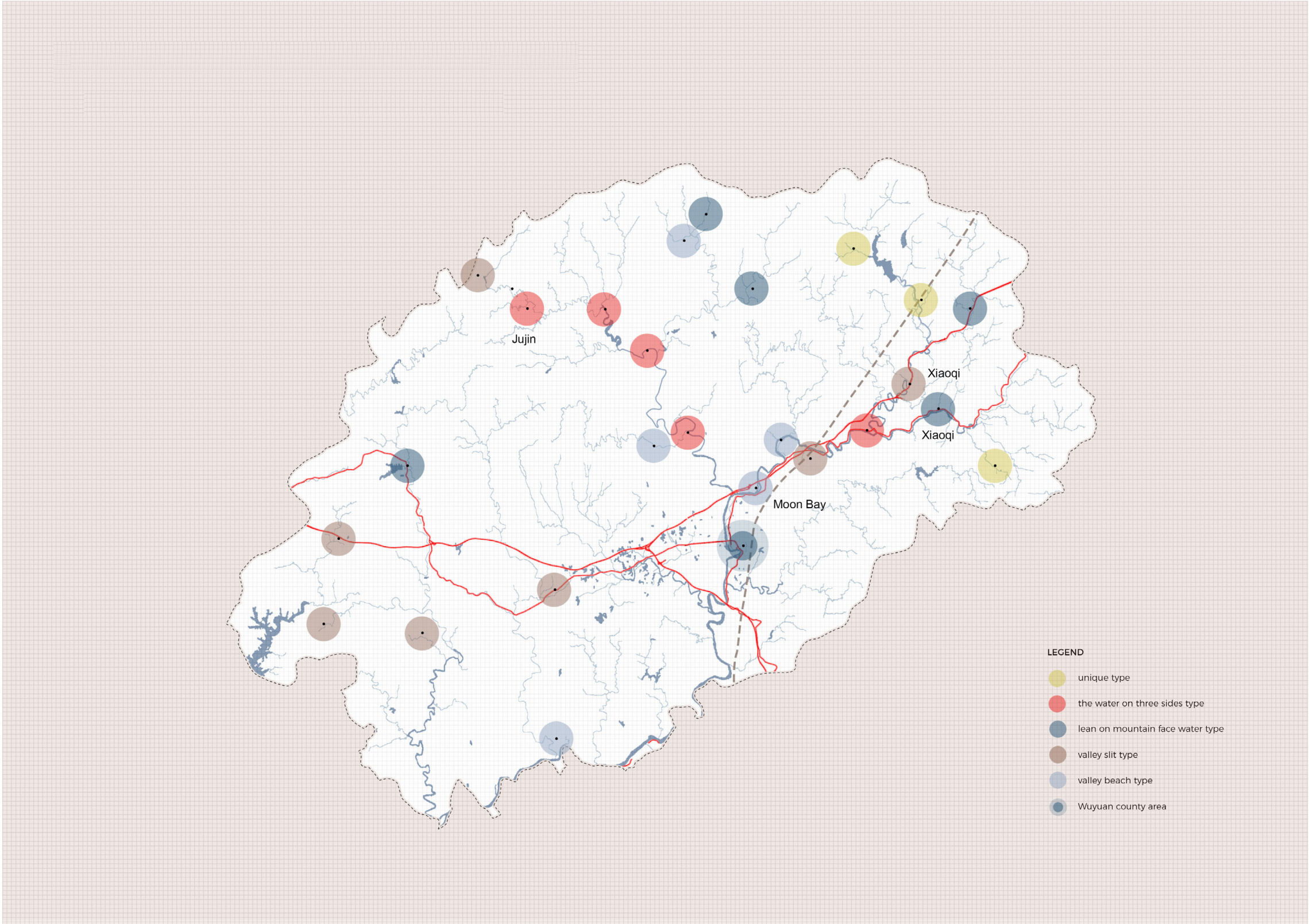
Regional Water System - Raohe Basin



Catchment Area

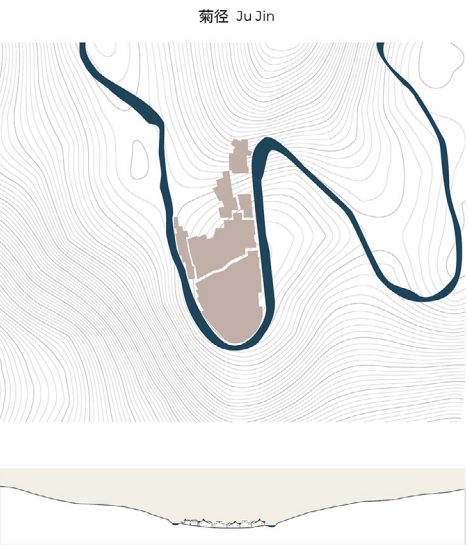


Four Type of Relation Between The Village and The Environment



The Valley Beach Type

This type of village is mostly located on the valley beach along the downstream of the river. The flat vally beach area provides fertilized soil for growing crops and other economical plants. The village mostly stays in distance to the river due to the seasonal flooding crisis.



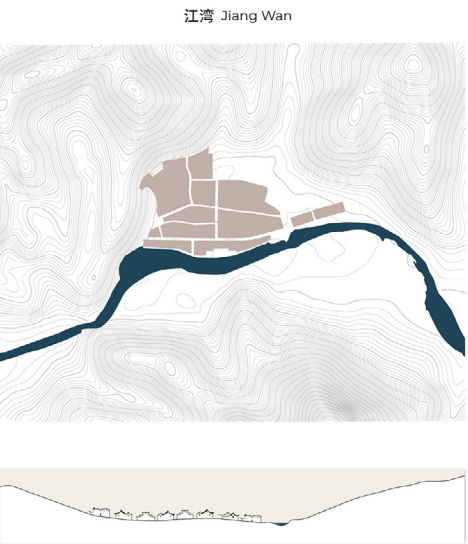
The Water on Three Sides type

This type of natural space appears in river crossings or a large angle turn. this type of village mostly lean on the mountain and surrounded by the water in 3 sides,which is of great defence to the outside of the village. It is Strongly closed, so the only access to the village in the bridge.



Valley Slit Type

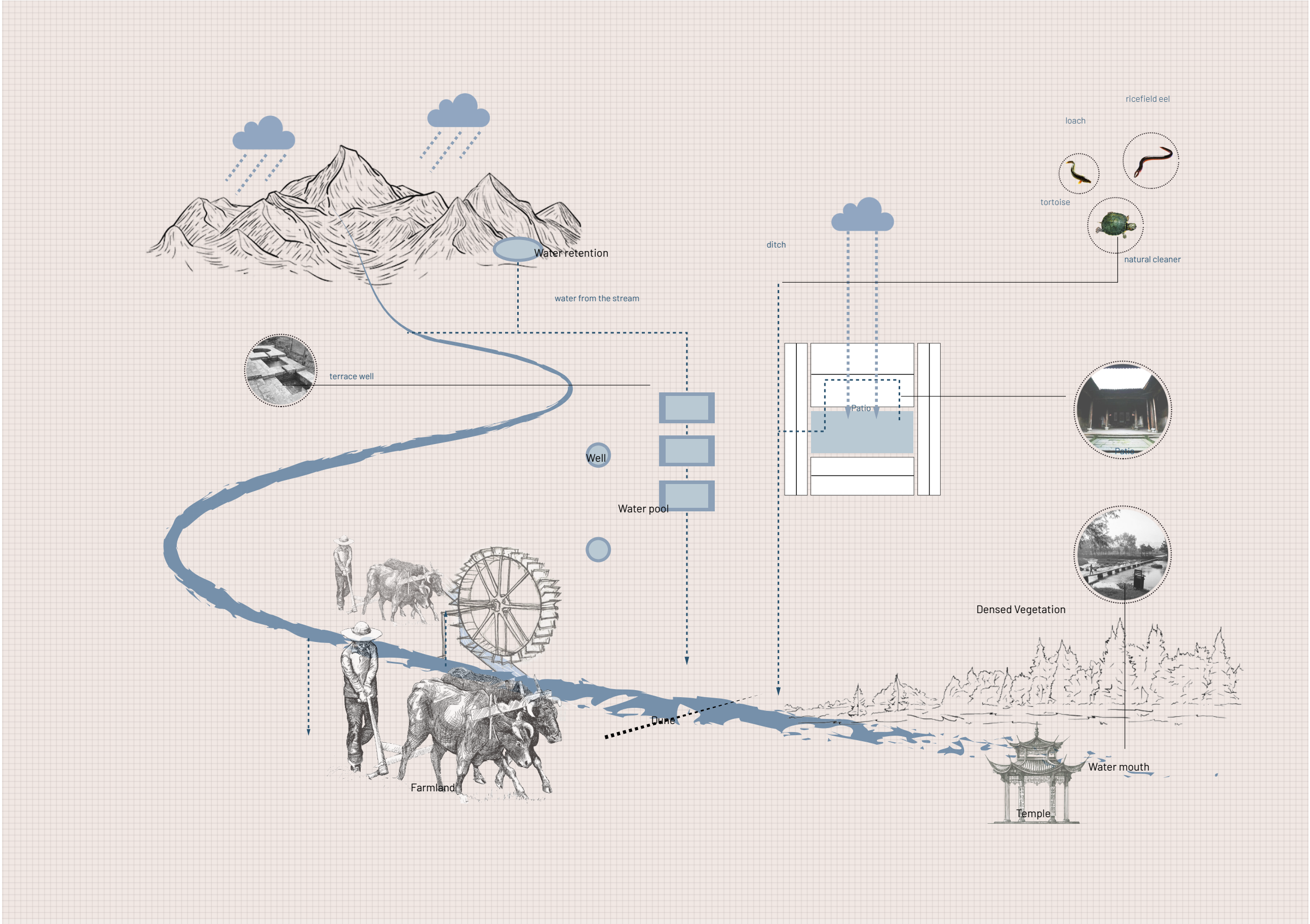
Based on the rich and varied hills in the Wuyuan area, this type of village is mostly located in the vally area between two mountains, which formed a linear or narrow shape.



Lean on Mountain Face Water type

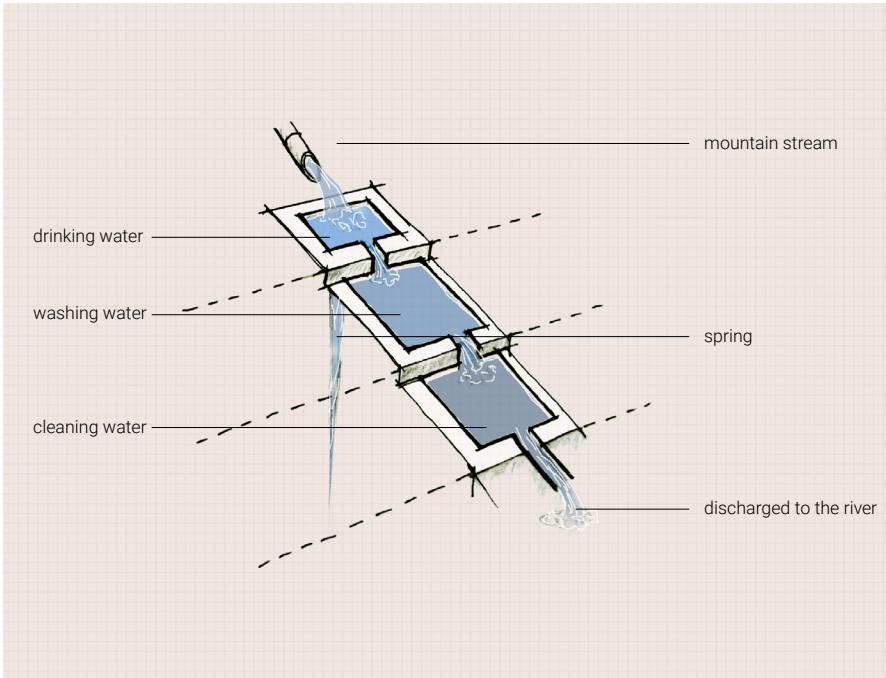
This is the most typical and common ancient Village natural layout. It is situated on the theory of feng shui. Backed by the mountain, the village can resist the cold wind and get the view of the Open field.

Circular Water System in The Village in General



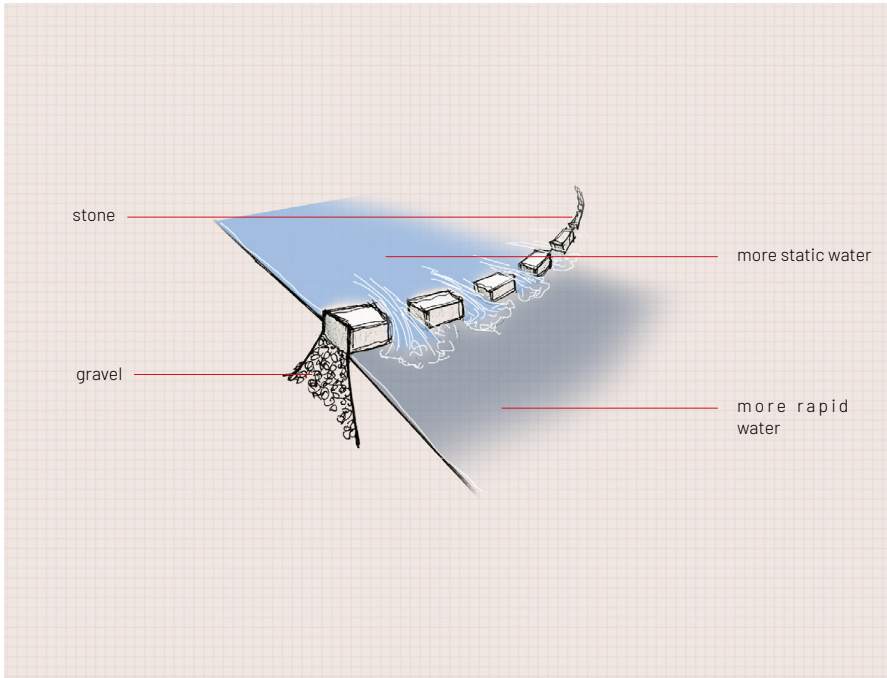
Traditional Water Knowledges

三叠井 Triple Terraced Wells



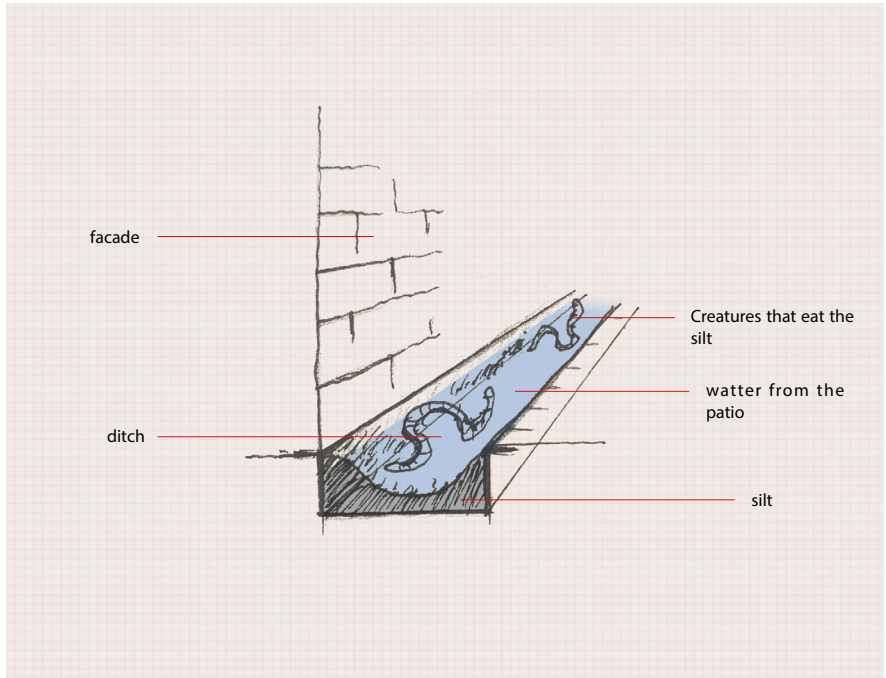
The terraced water pools or wells that recycle the water

石埭 Catch dune



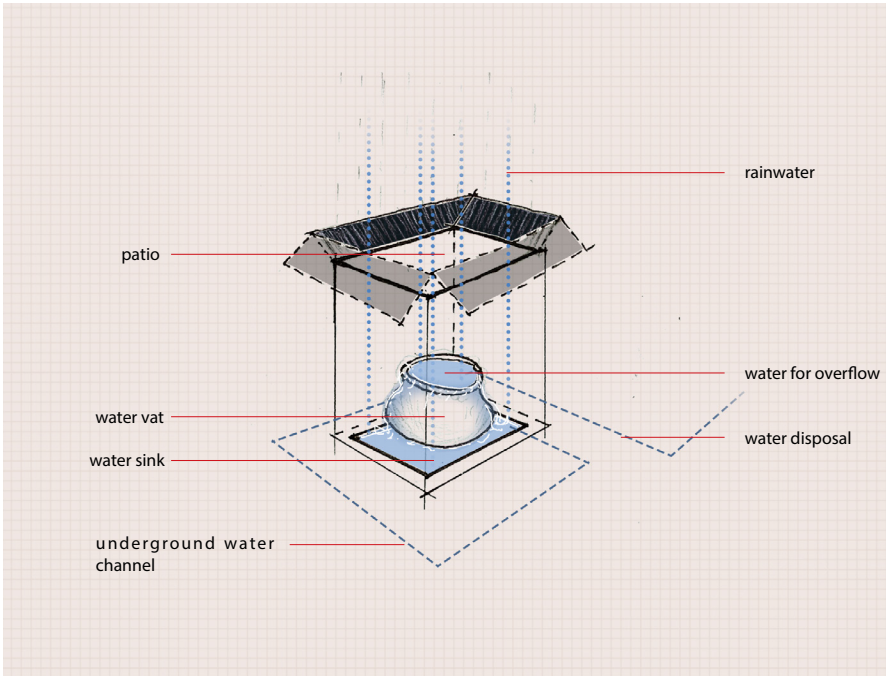
A Stone Structure that Catches the water to rise its level

排水明沟 Ditch



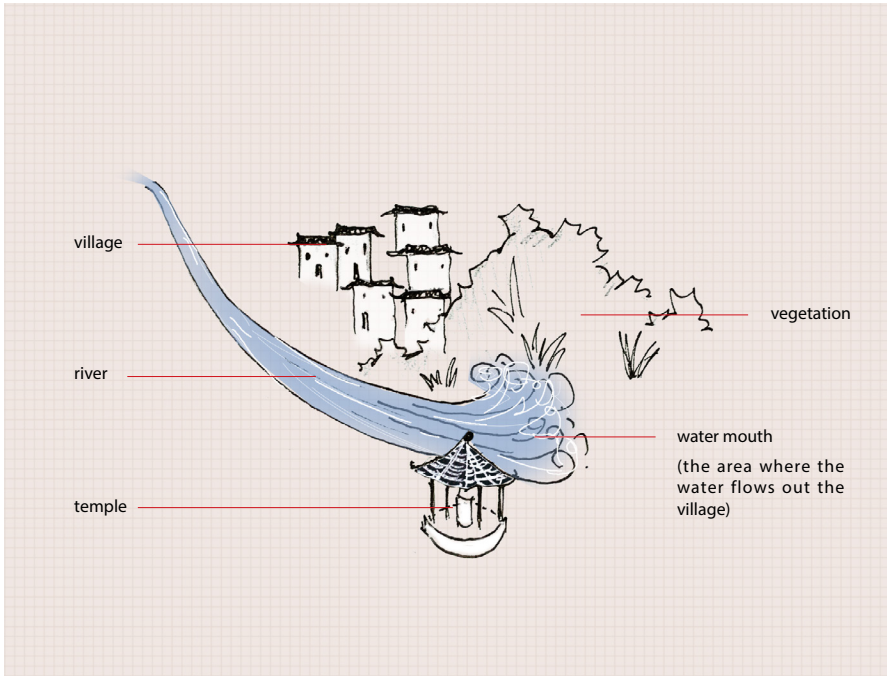
The ditch attached to the facade to discharge the water

天井 Patio



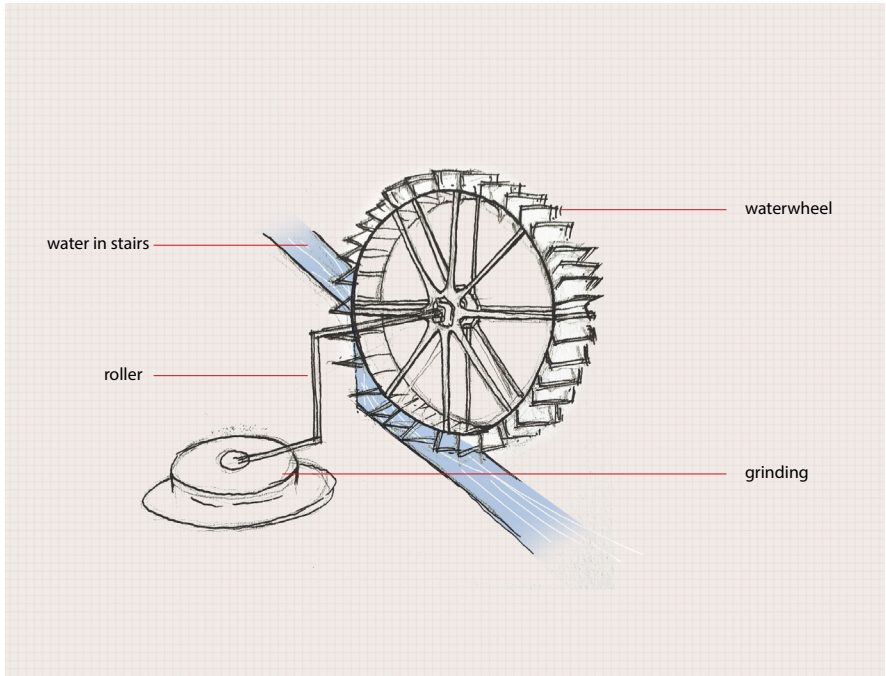
The Architectural structure used to catch the rainwater and light

水口 Water mouth



The area where the water flows out the village

水春作坊 Waterwheel Grinding



The Structure that utilize the height different dynamic of the water

Catch Dune in Qinghua Village



Catch Dune in Qinghua Village

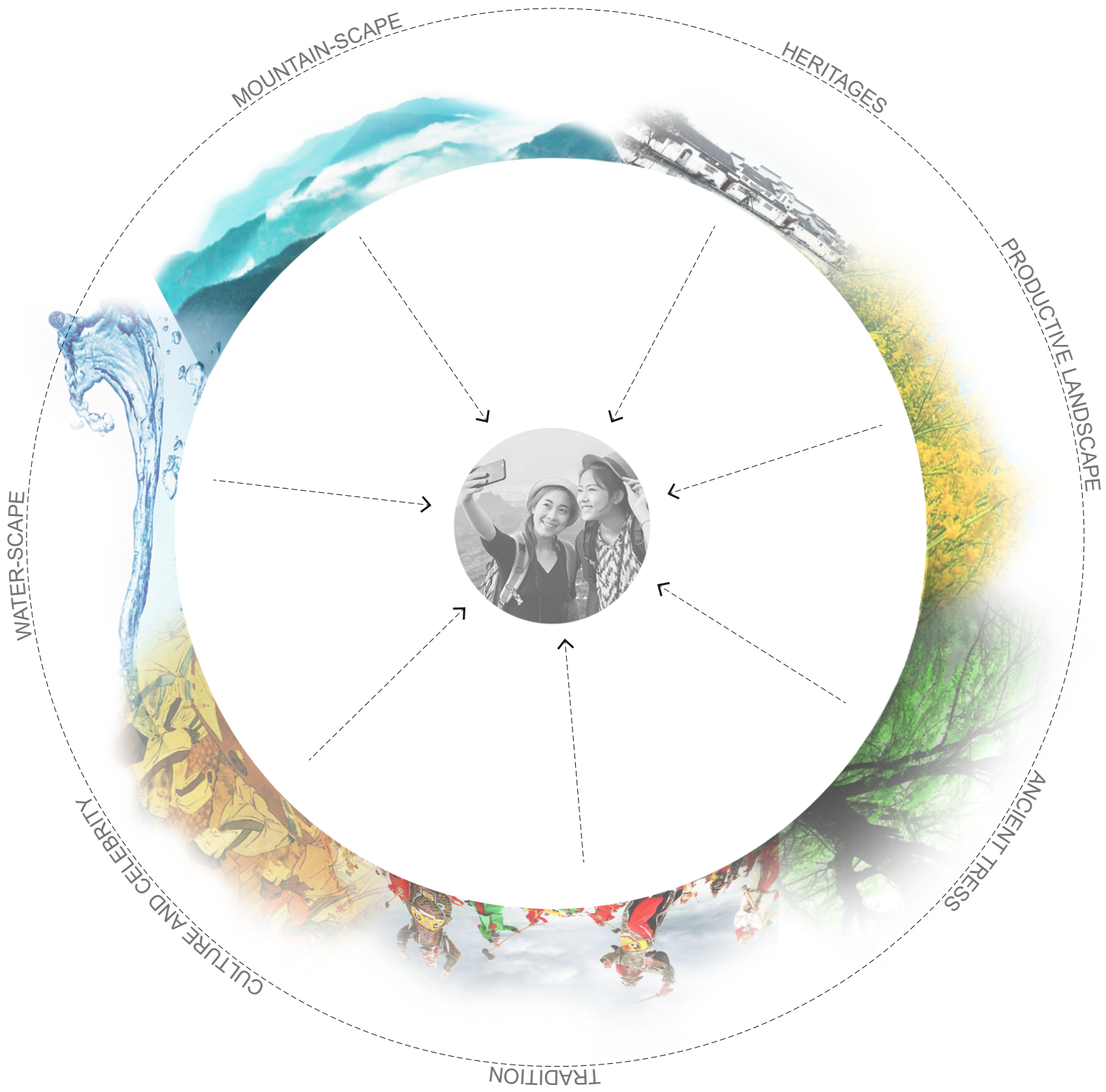


Courtyard

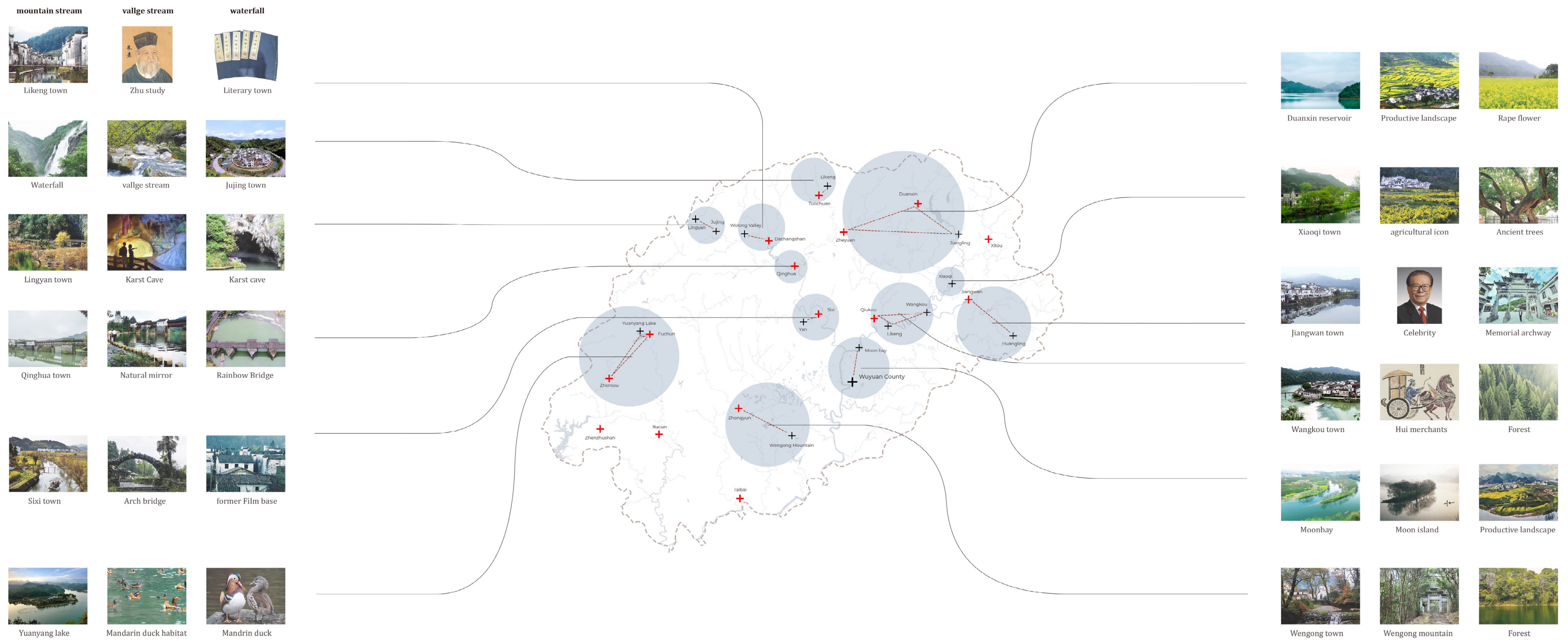


Problem Field - Tourism and Water

Attractions in Wuyuan



Identity Map of The villages In Wuyuan



Over Tourists Population

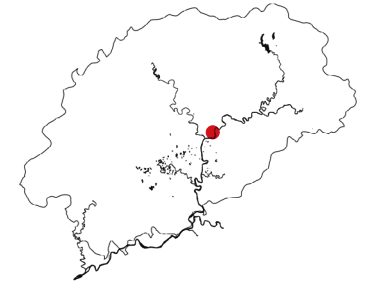




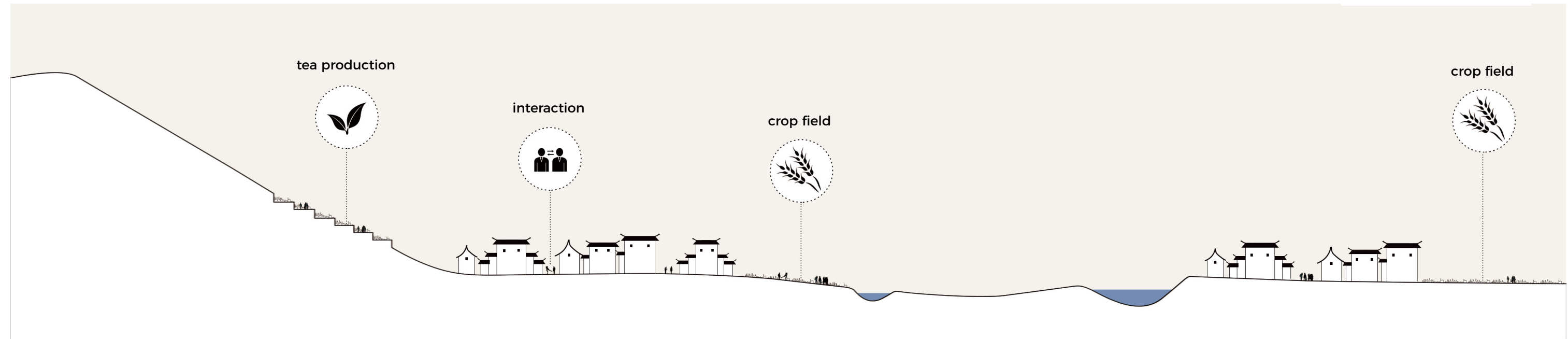
Improper Influence to The Original Heritage and Landscape



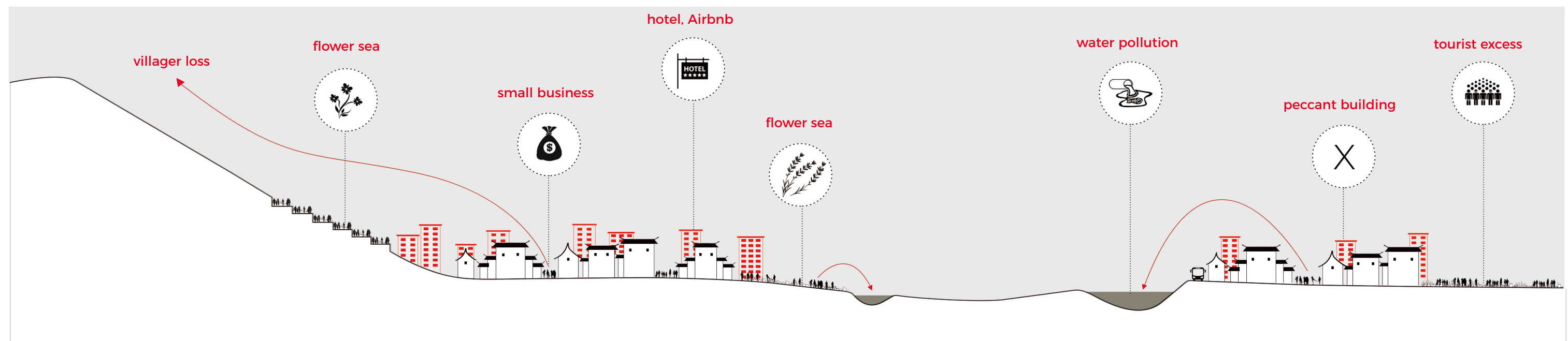
Influence of Tourism to Moon Bay Village



Before the over tourism (-2001)



After the over tourism (2001-)



Torrential Flood



On June 24th, 2017, A flash flood Attacked Wuyuan. Suddenly, the roads were broken, Bridges fell, the crop fields and houses were flooded. The most beautiful countryside in China is in ruins.

Example: Flood In Moon Bay, Wuyuan

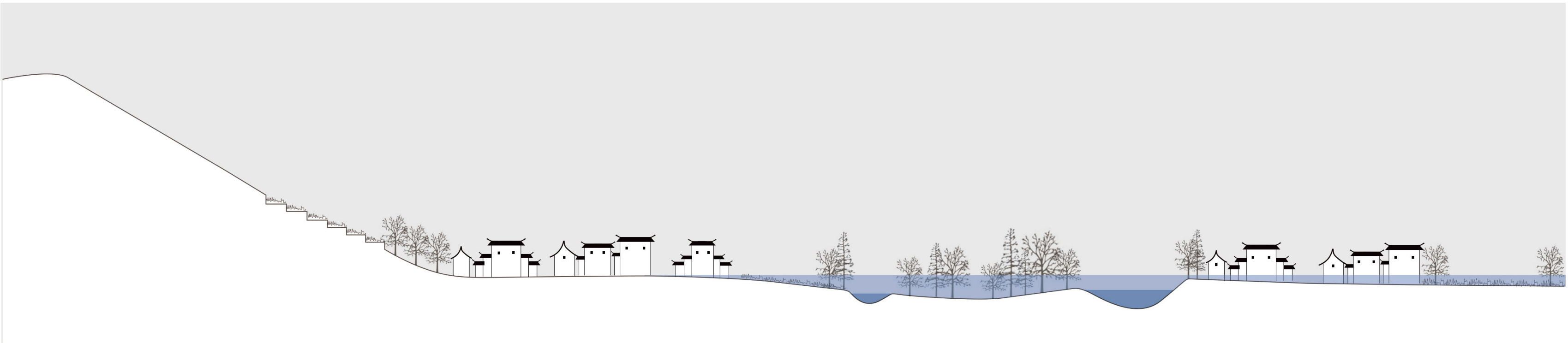




Before (- 2015)

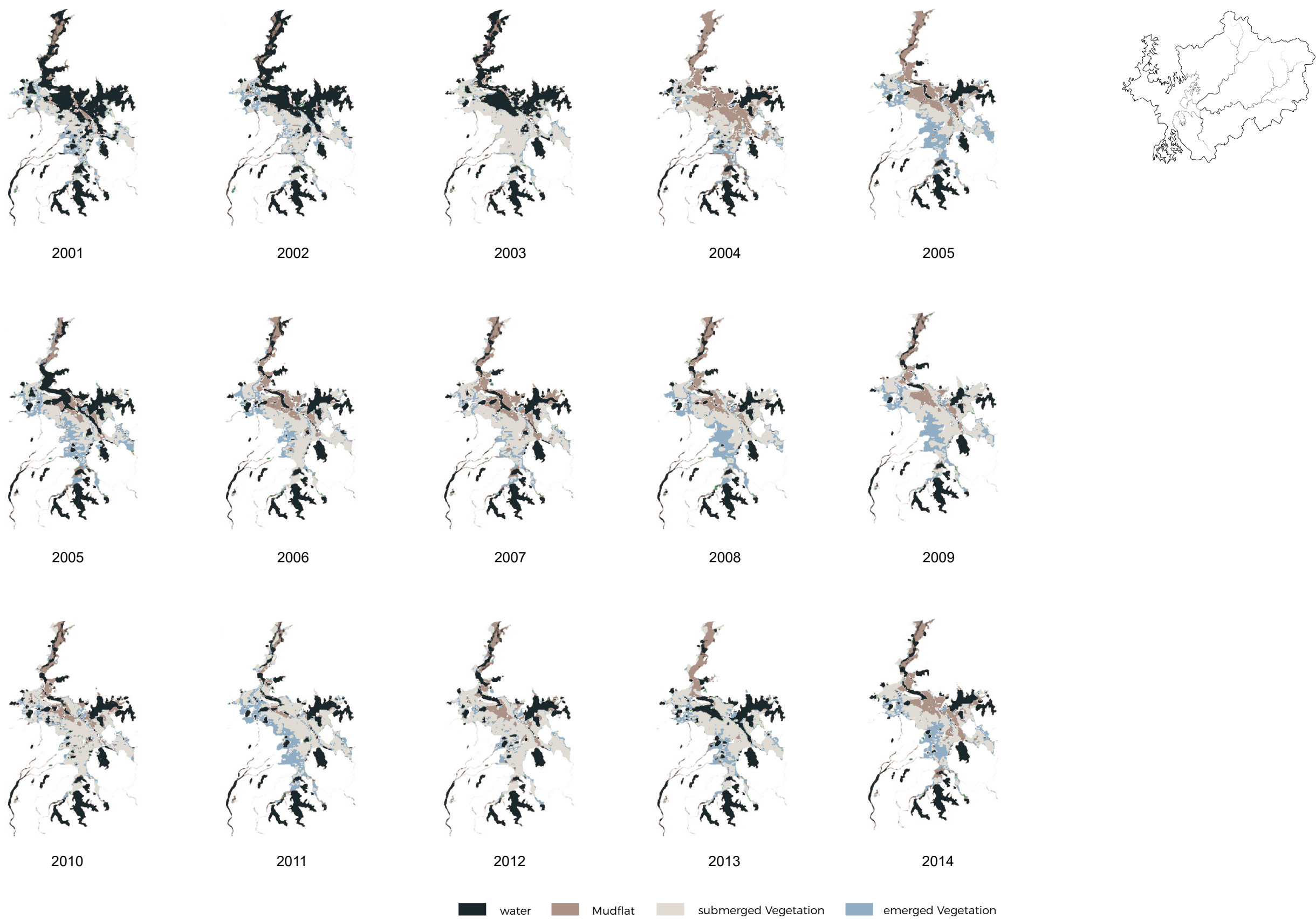


After (2015 -)



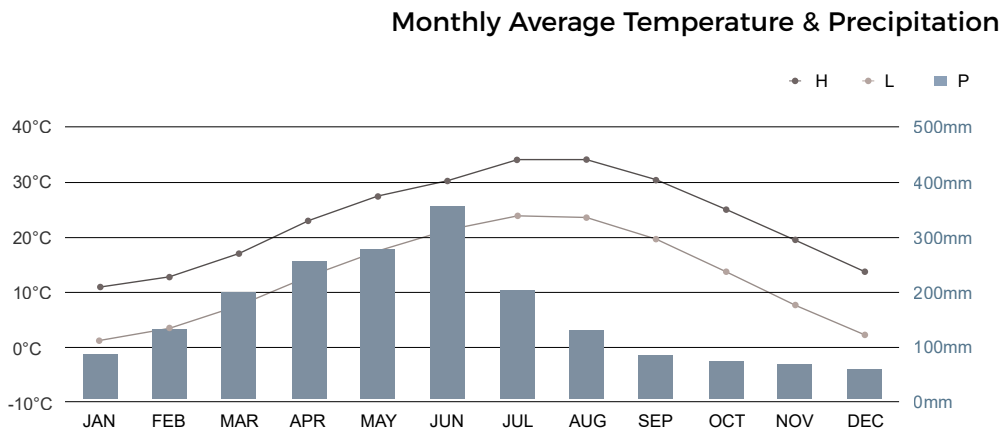
Regional Influence

Shrinkage of Poyang Lake from 2001-2014



Historical Reclamation

The climate in Wuyuan is a humid subtropical monsoon climate, and the imbalance precipitation causes the rainstorm between April and June. Therefore, the Wuyuan region is a typical area of the rainstorm that caused flood, that is, the cause of Wuyuan flood is the rainstorm.



Around AD 700- 1300
plough of the hills



Reclamation of terrace field



water loss and soil erosion and
sedimentation



Around AD 1300- 1900
Plough of the polders



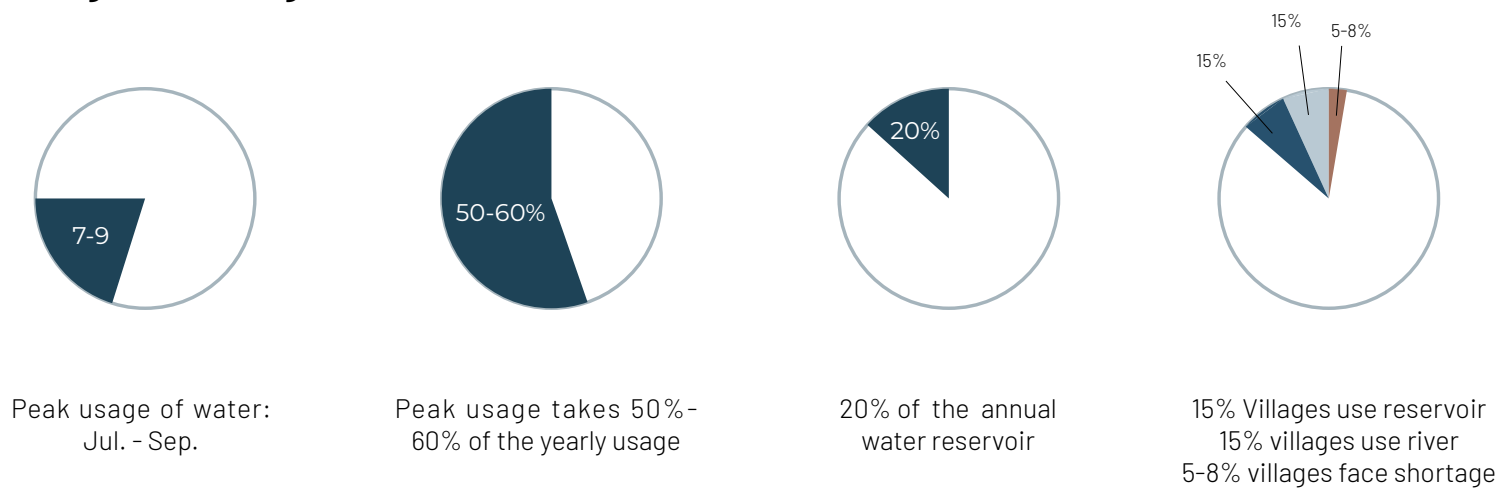
Rising of the riverbed

Water Supply Shortage

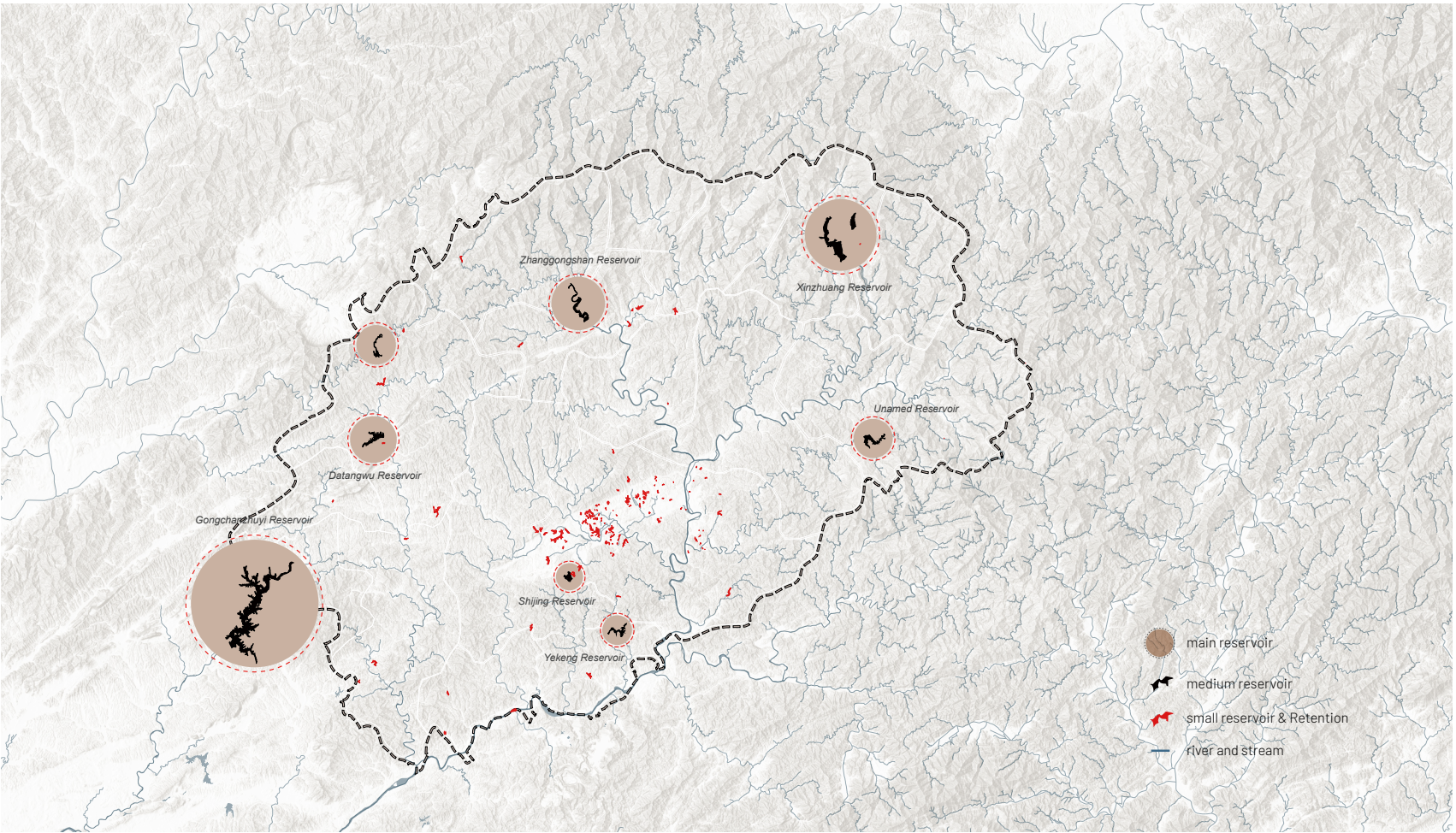
Existing reservoir condition



Existing water usage condition

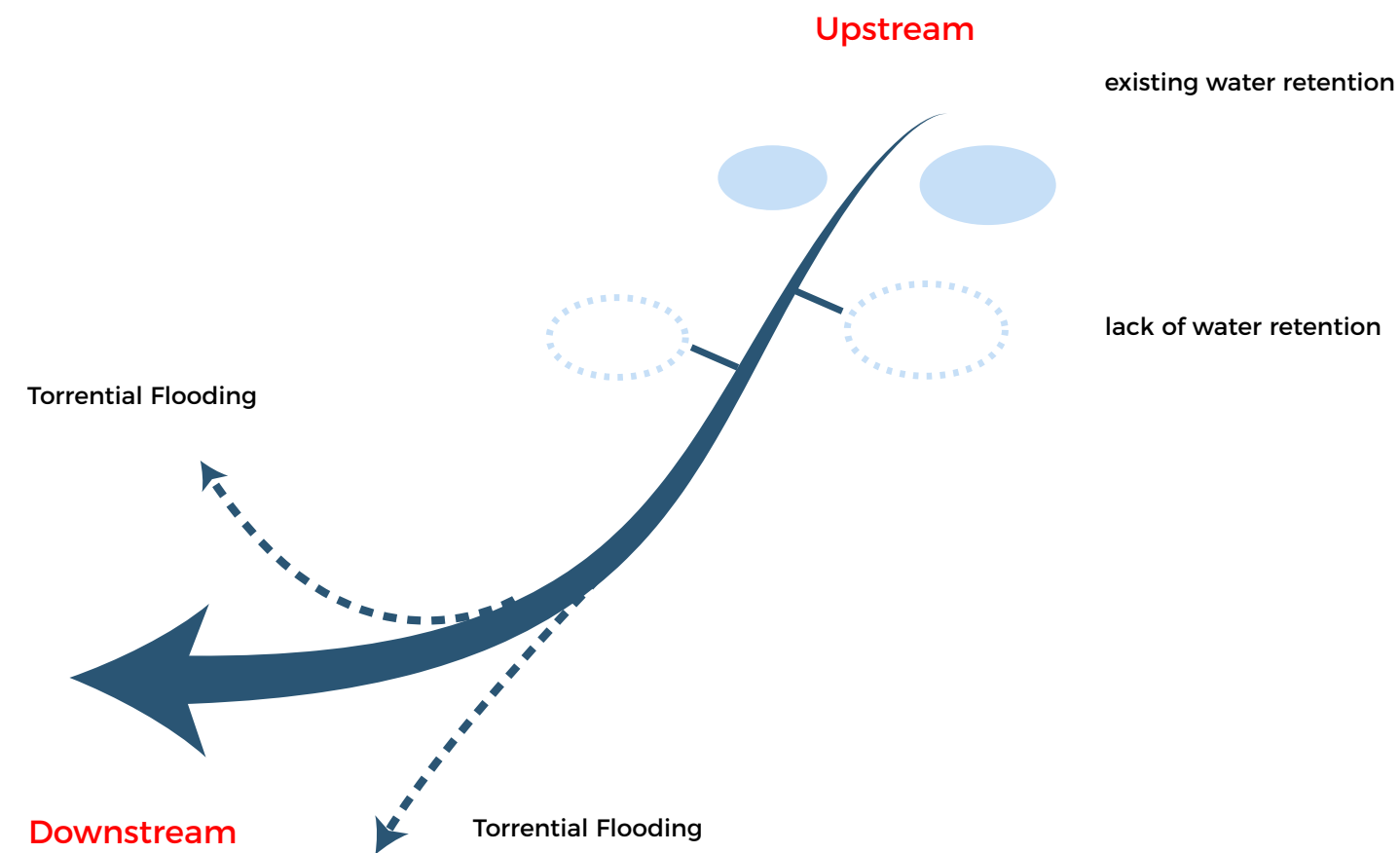


Water Retention Distribution in Wuyuan

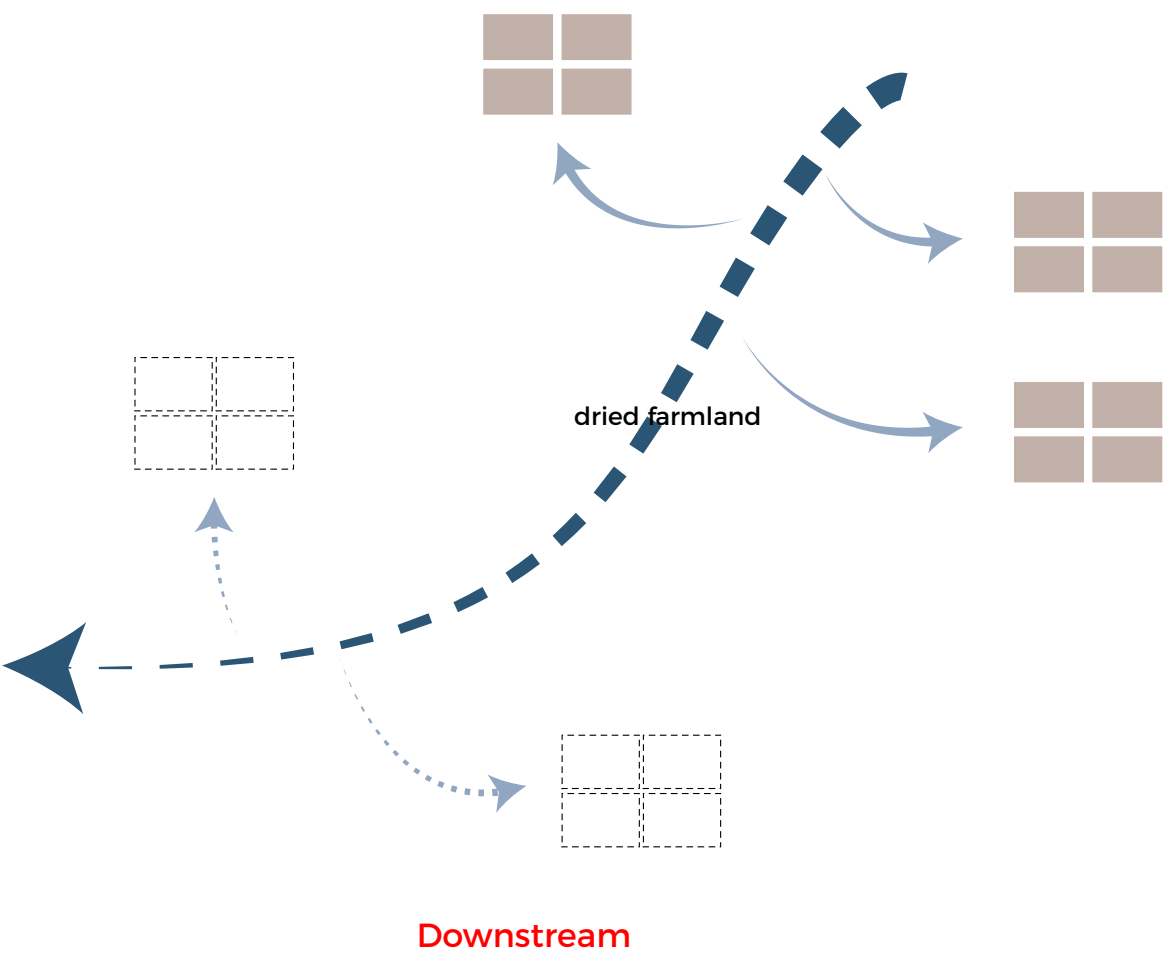


Conclusion of Water Resource Crisis

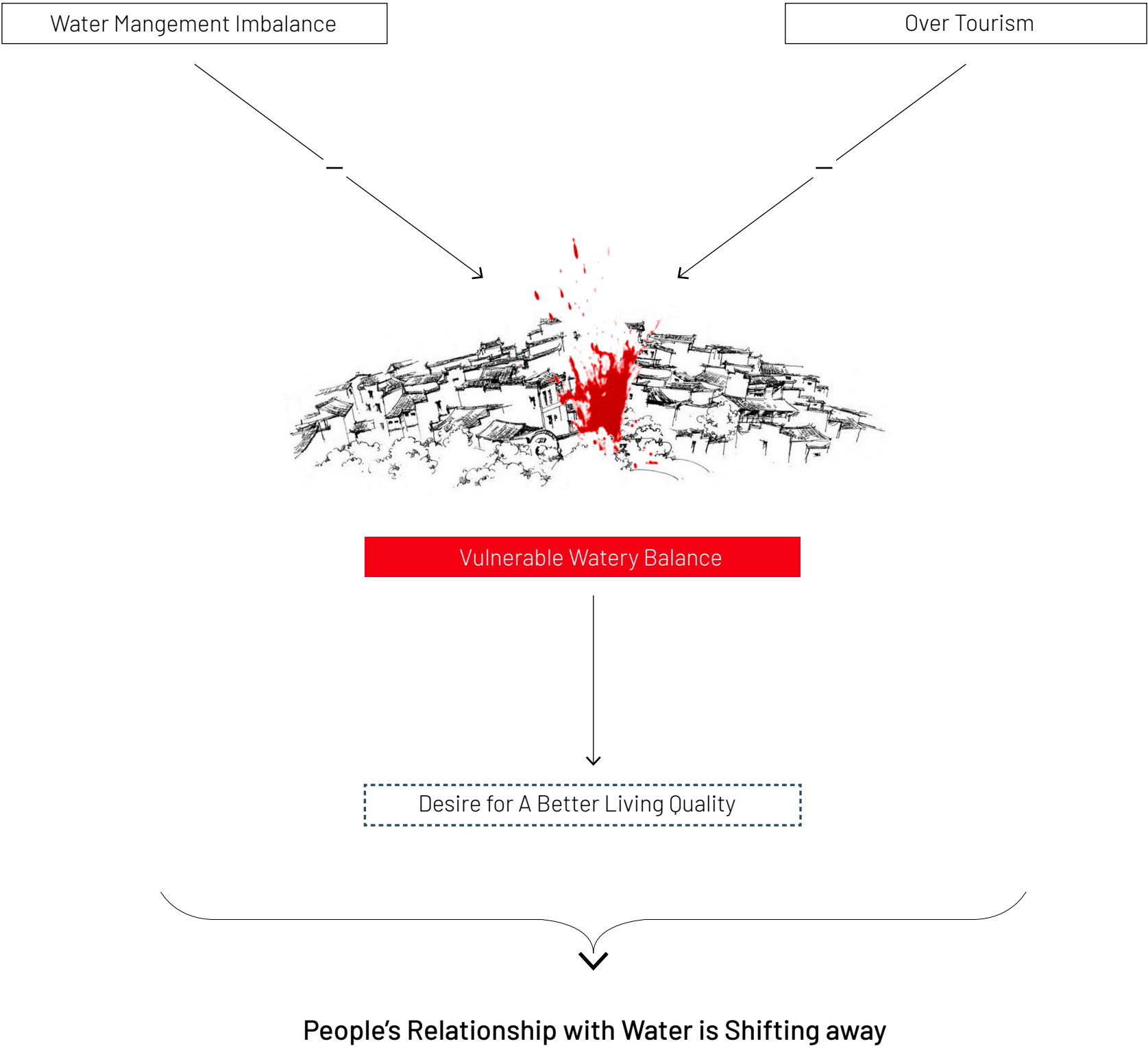
Rainy Season



Dry Season



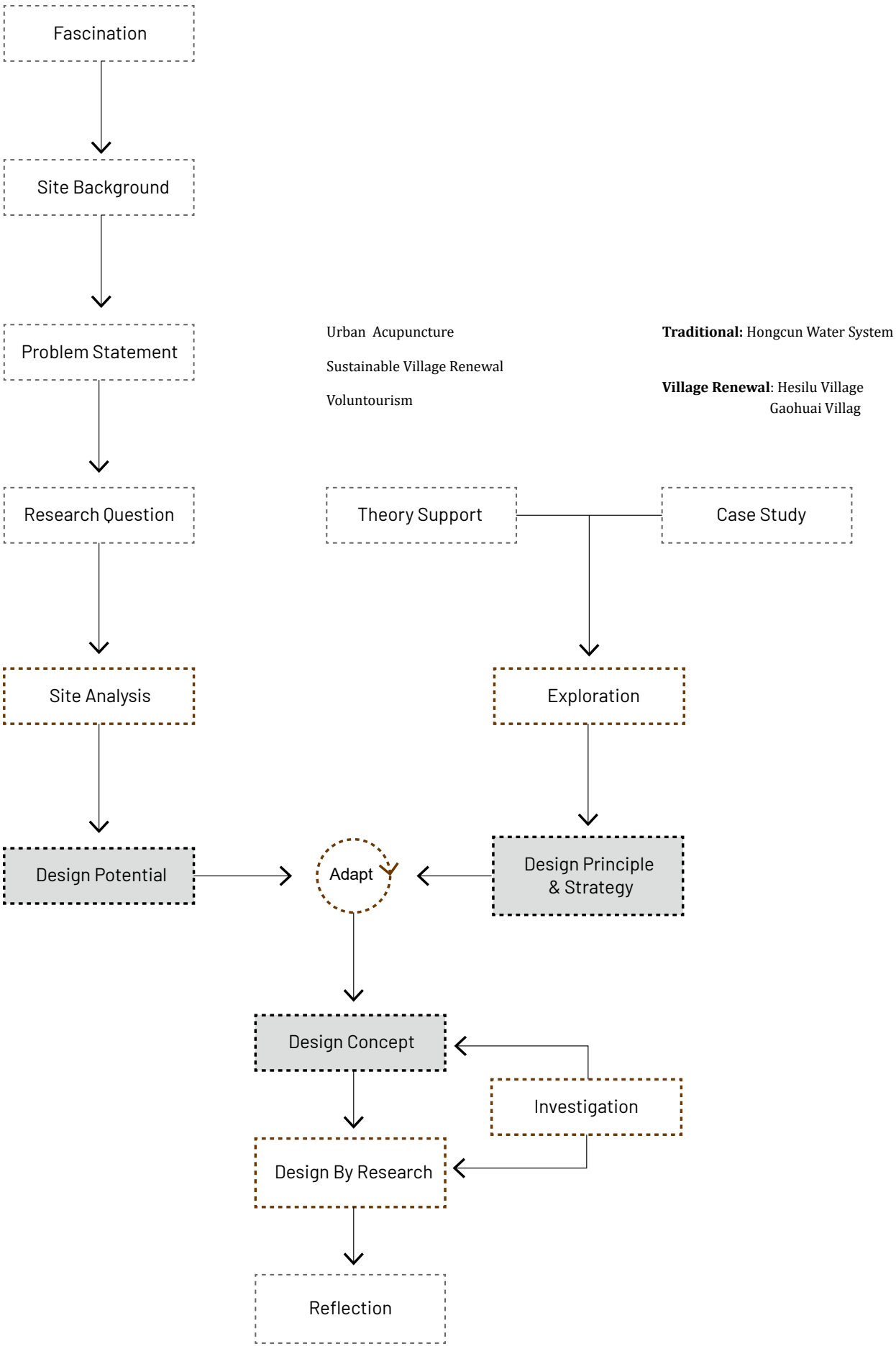
Research Question and Objective



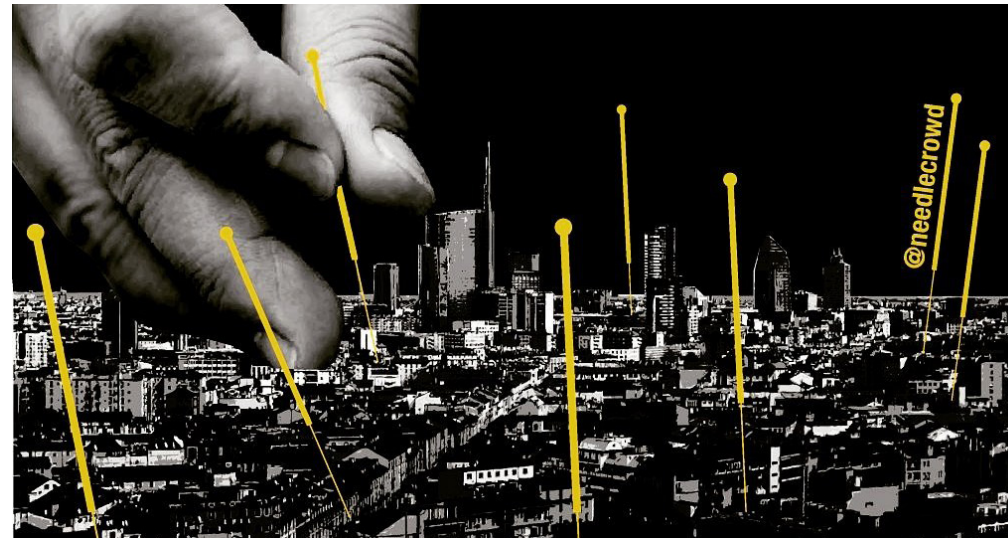
How to balance the **scenic and circular qualities of the waterscape** of Wuyuan district for inhabitants and tourists in the future?

Methodology

Research and Design Approach



Theory Exploration



Urban Acupuncture



Rural Regeneration



Voluntourism

Case Study



Moon Water Square In Hongcun Village, China

Water Retention Area as The Social Space



Hesilu Village Landscape Master Plan by Sasaki

Promotes the unique landscape features, rediscover the village culture as a spiritual legacy

I Am Looking for ...

1. **A more resilient and ecological green and blue framework** is proposed to make the villages more sustainable and resistant to the climate change.
2. **A new tourism model** is promoted to enhance visitor's relation to this waterscape in the villages in Wuyuan
3. To enhance **the living quality and environment** for the inhabitants in the villages.

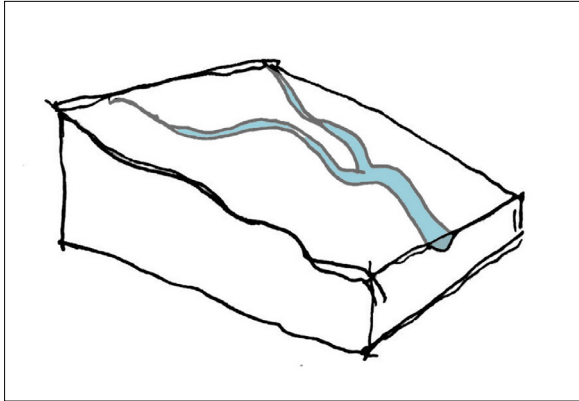
Principles in Regional Scale

Existing Condition

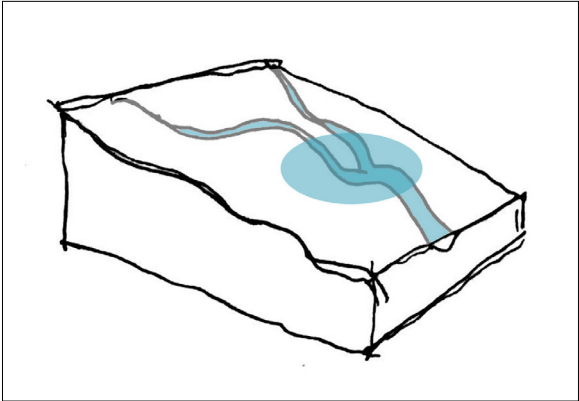
Strategy

Existing Condition

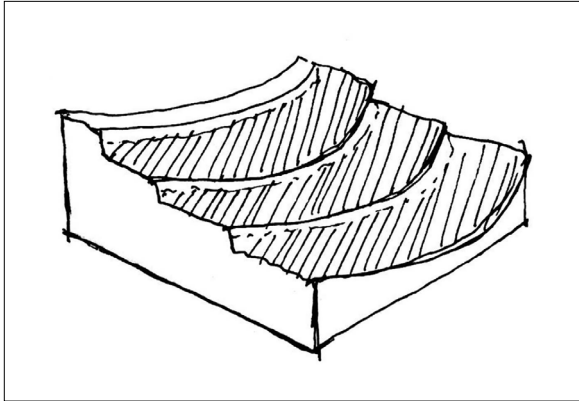
Strategy



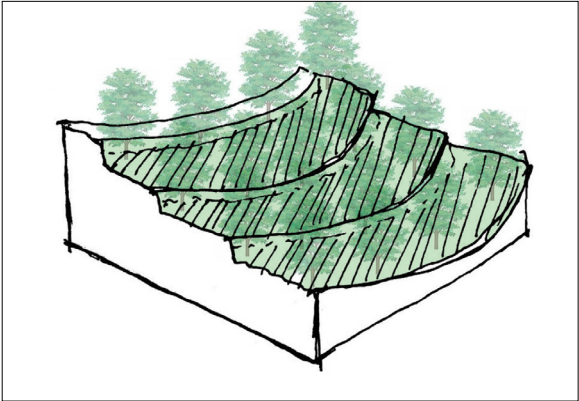
1. Limited space for Water retention in the upstream in the rainy season



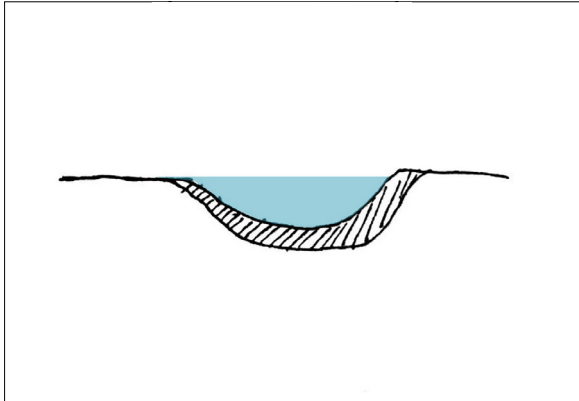
1. Introduce more reservoir in the upstream



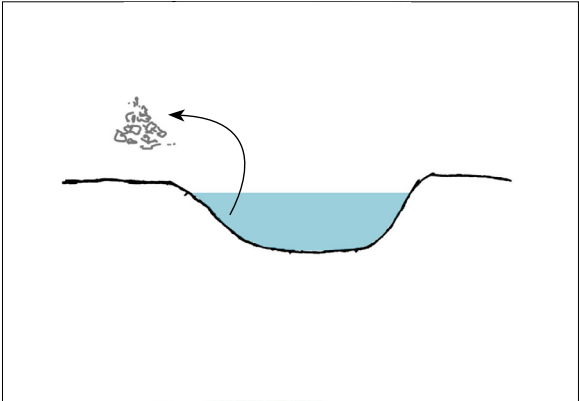
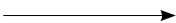
4. Over excavation of the mountain



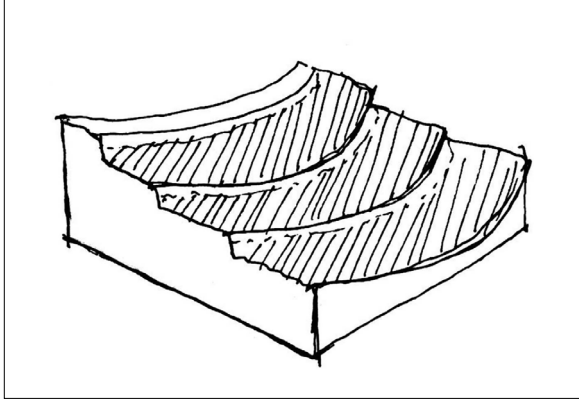
4. Revegetation to conserve the water and soil



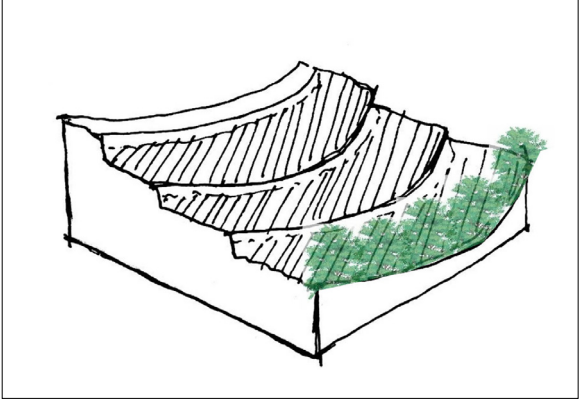
2. The rising of river bed by sedimentation



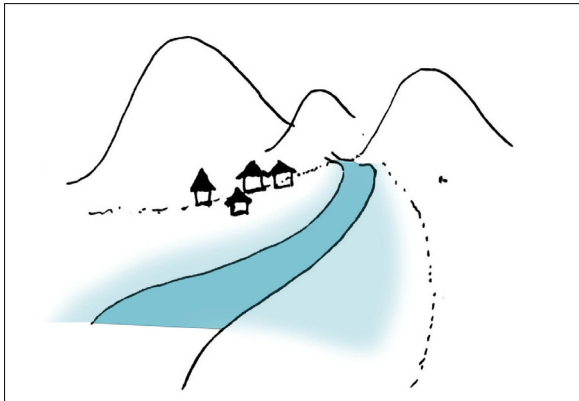
2. Dredge the riverbed by visitors and villages



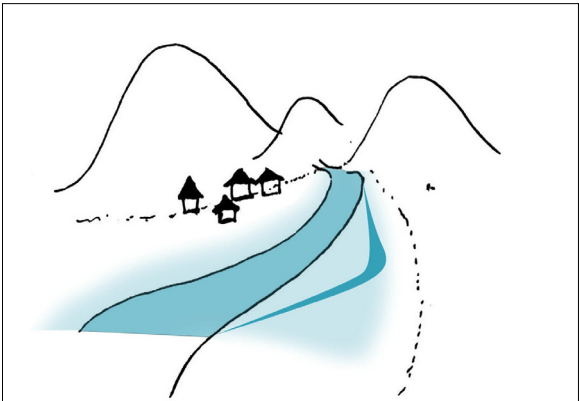
5. Existing terraced Crop field cannot maintain the water and soil



5. Plant the bottom of terraced crop field to catch the water and soil

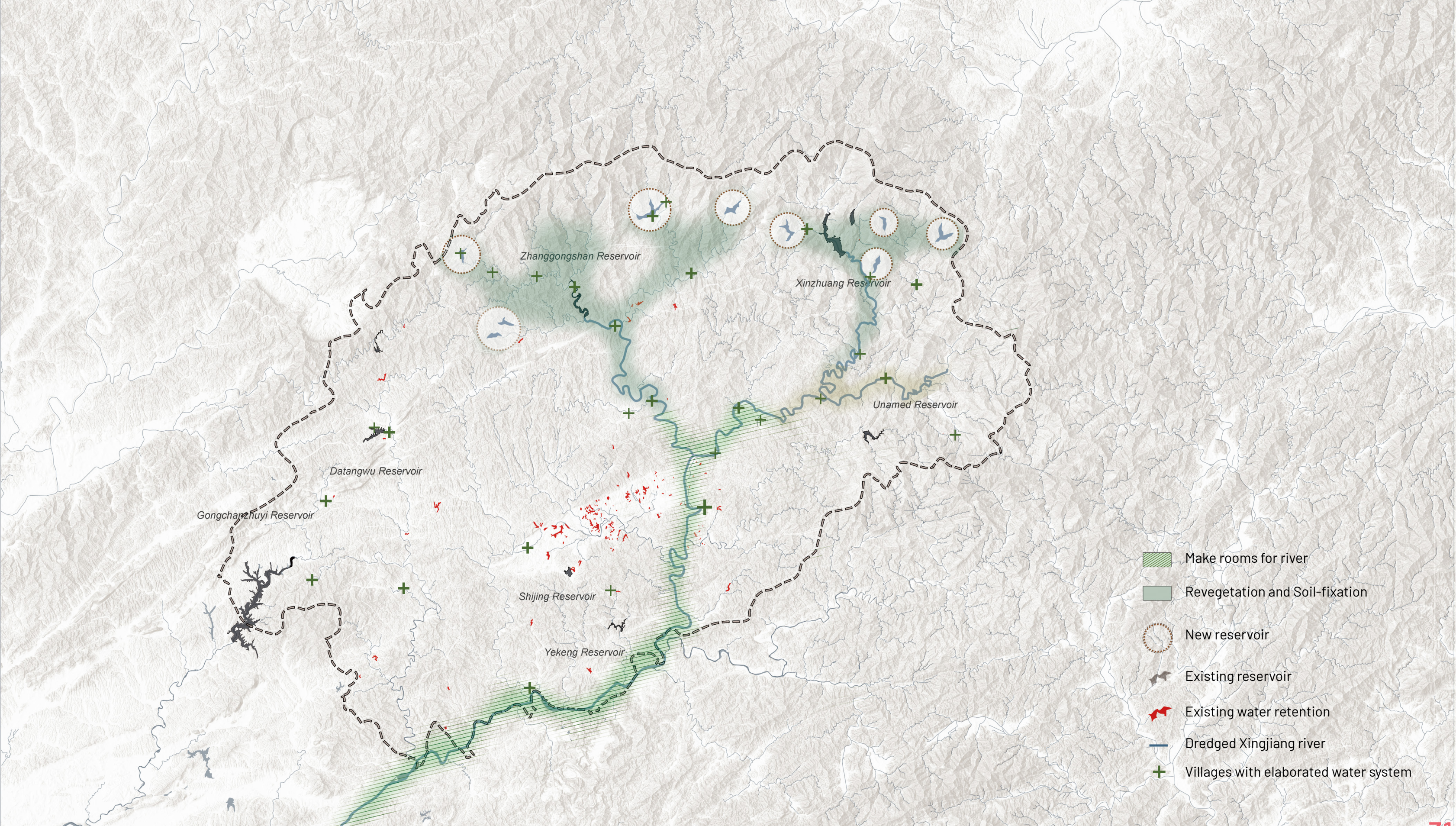


3. Limited room for river in the valley beach area in the downstream

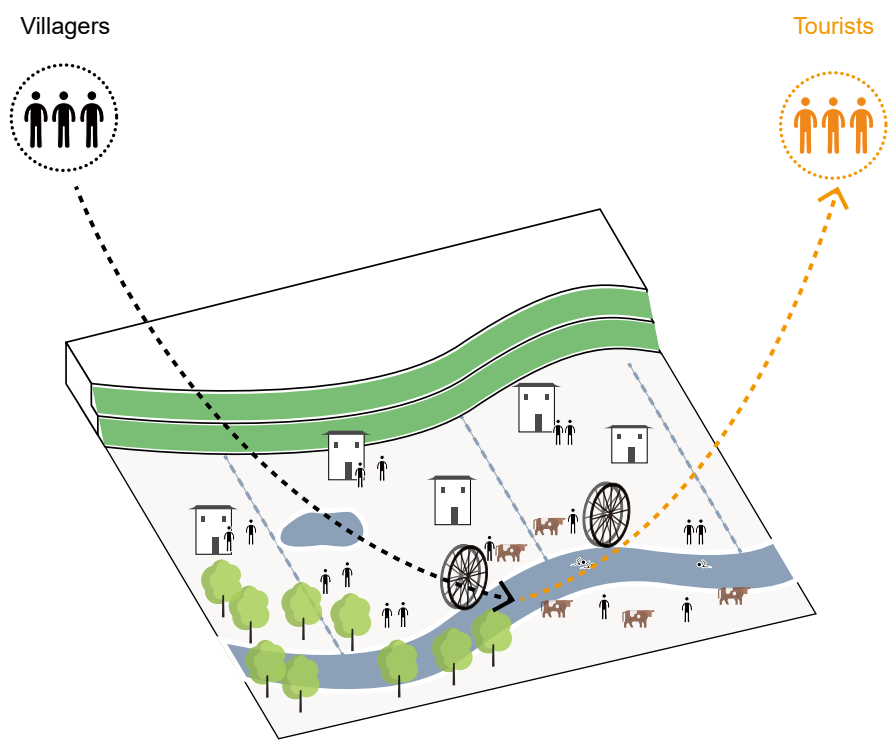


3. Introduce bypass to make room for the river

Regional Vision Map



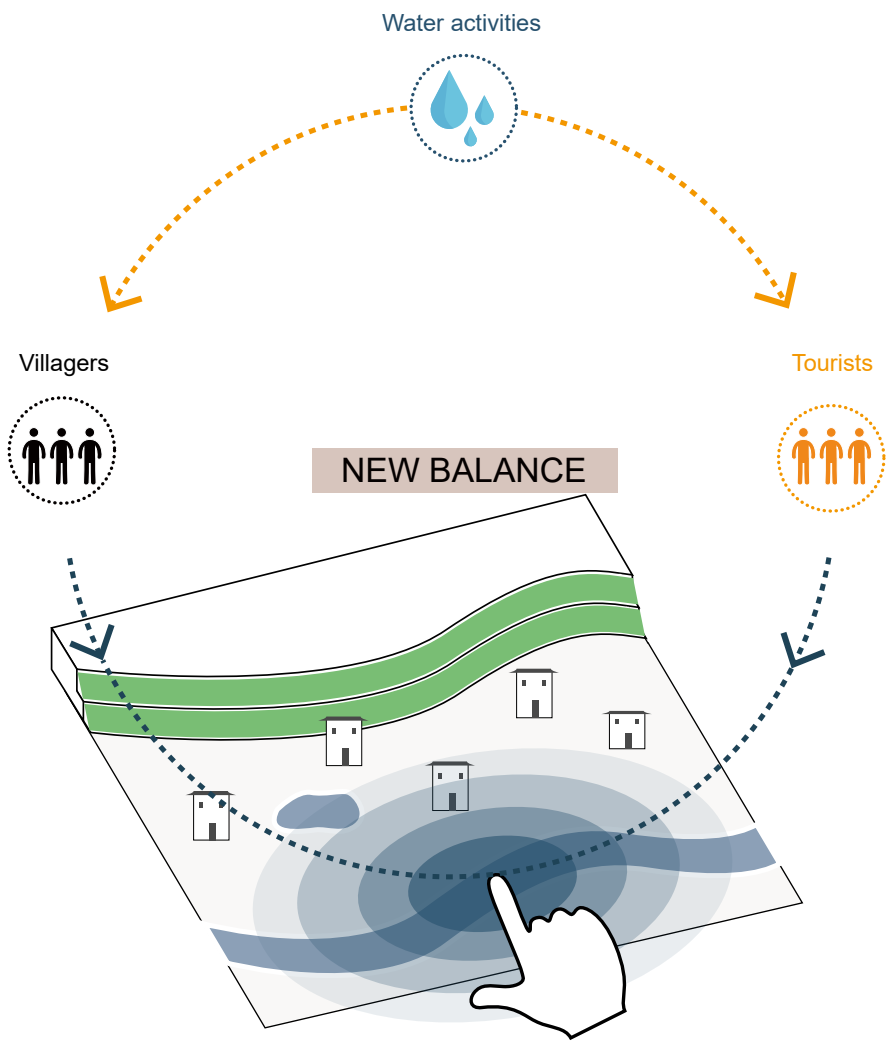
Principles in Village Scale



The villagers' close relation to water was the identity of Wuyuan, which attracts tourists



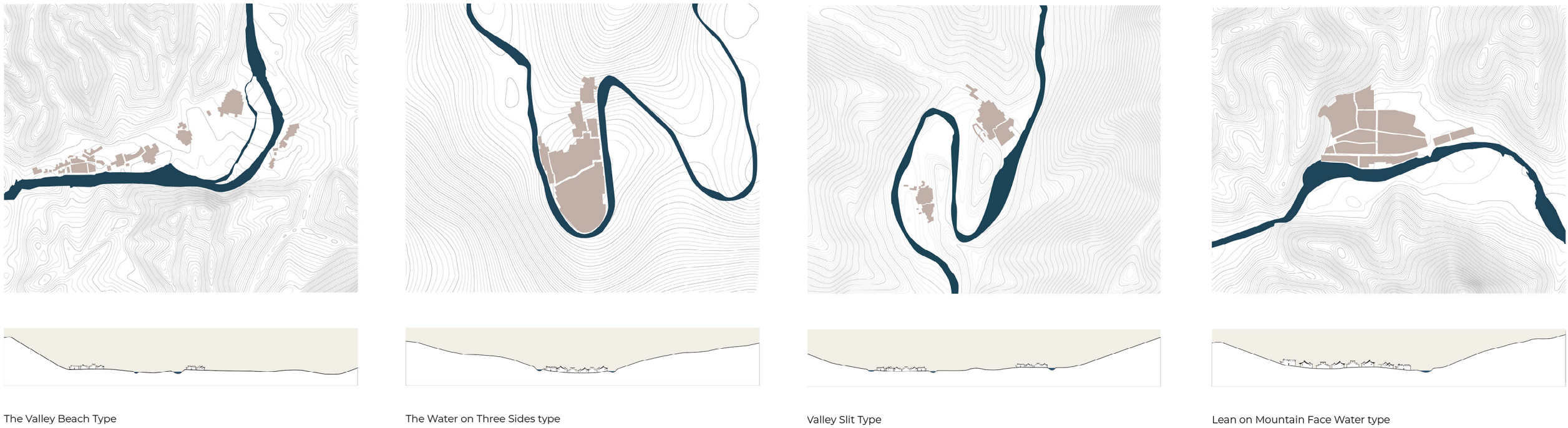
The people's relationship to the water has shifts away.



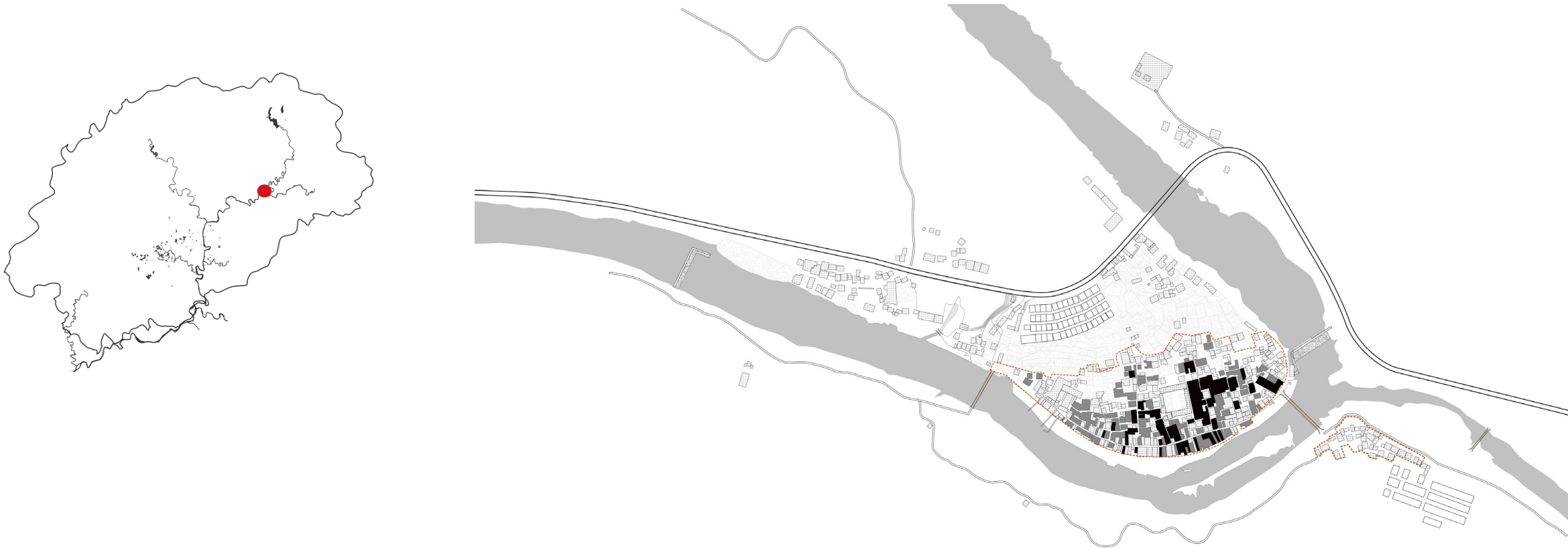
Re-activate the scenic and circular water landscape, raise the water identity, reconnect villagers and tourists to the water.

Exemplary Villages Design as Paradigm

Four Type of Relation Between The Village and The Environment



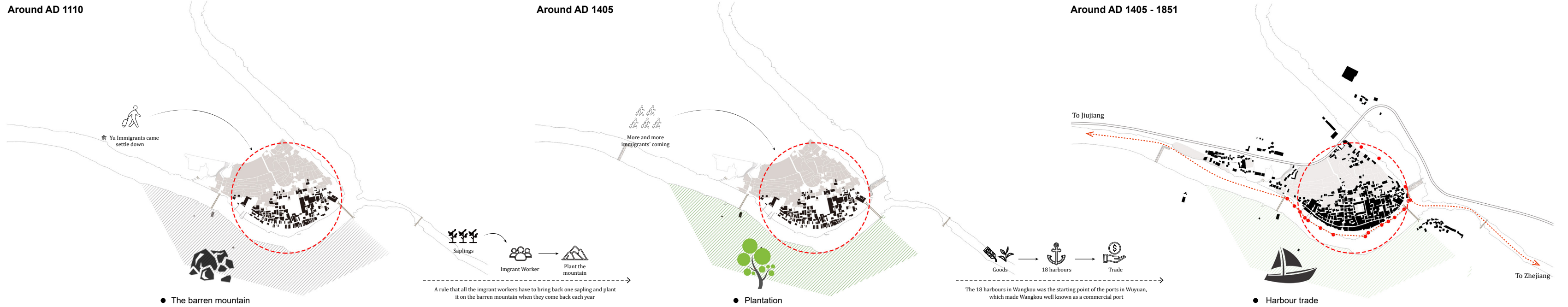
Exemplary Design Village : Wangkou



Exemplary Village Design



Historical Storyline of Wangkou



Landscape Typology of Wangkou





Old harbours



Sediments



Weir



Shore

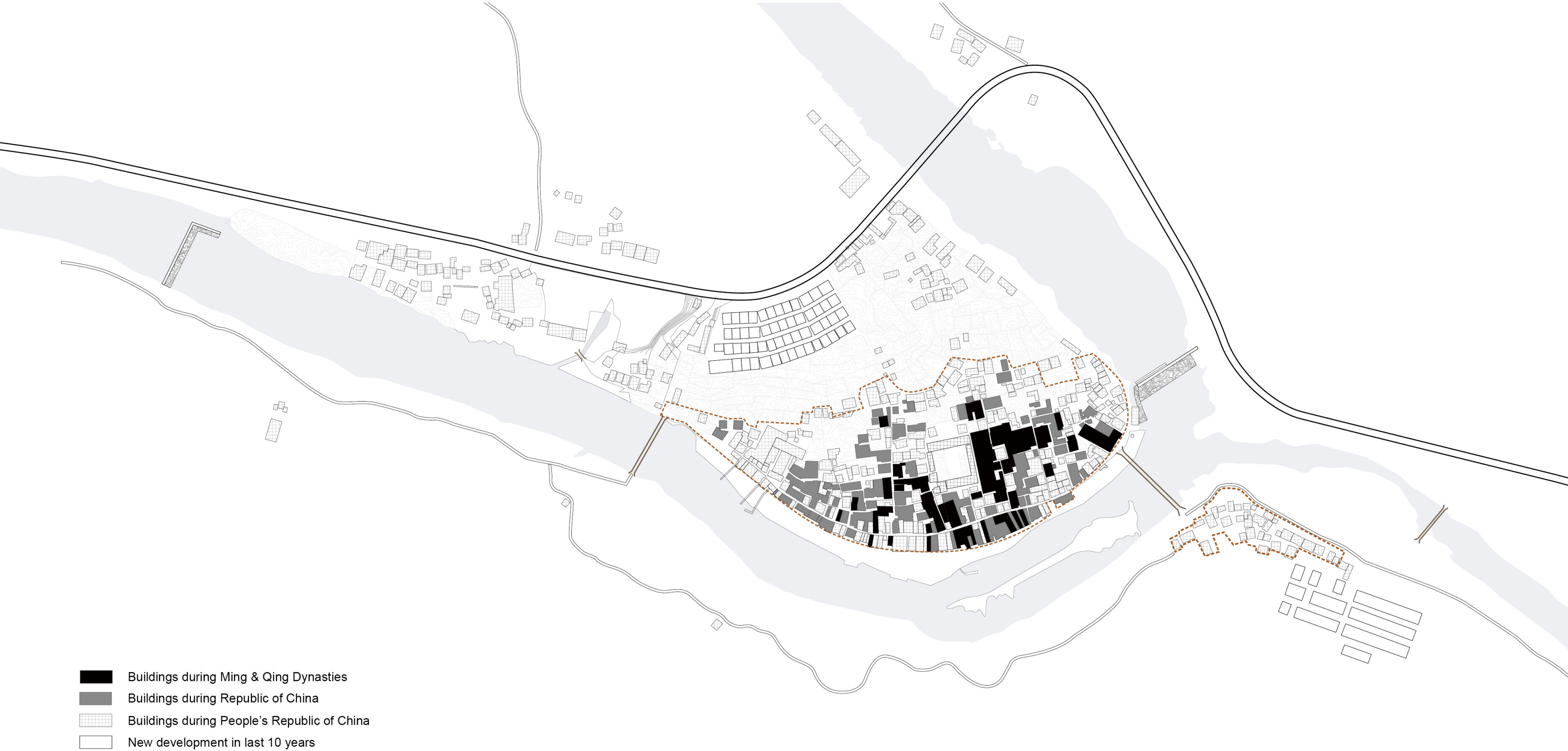


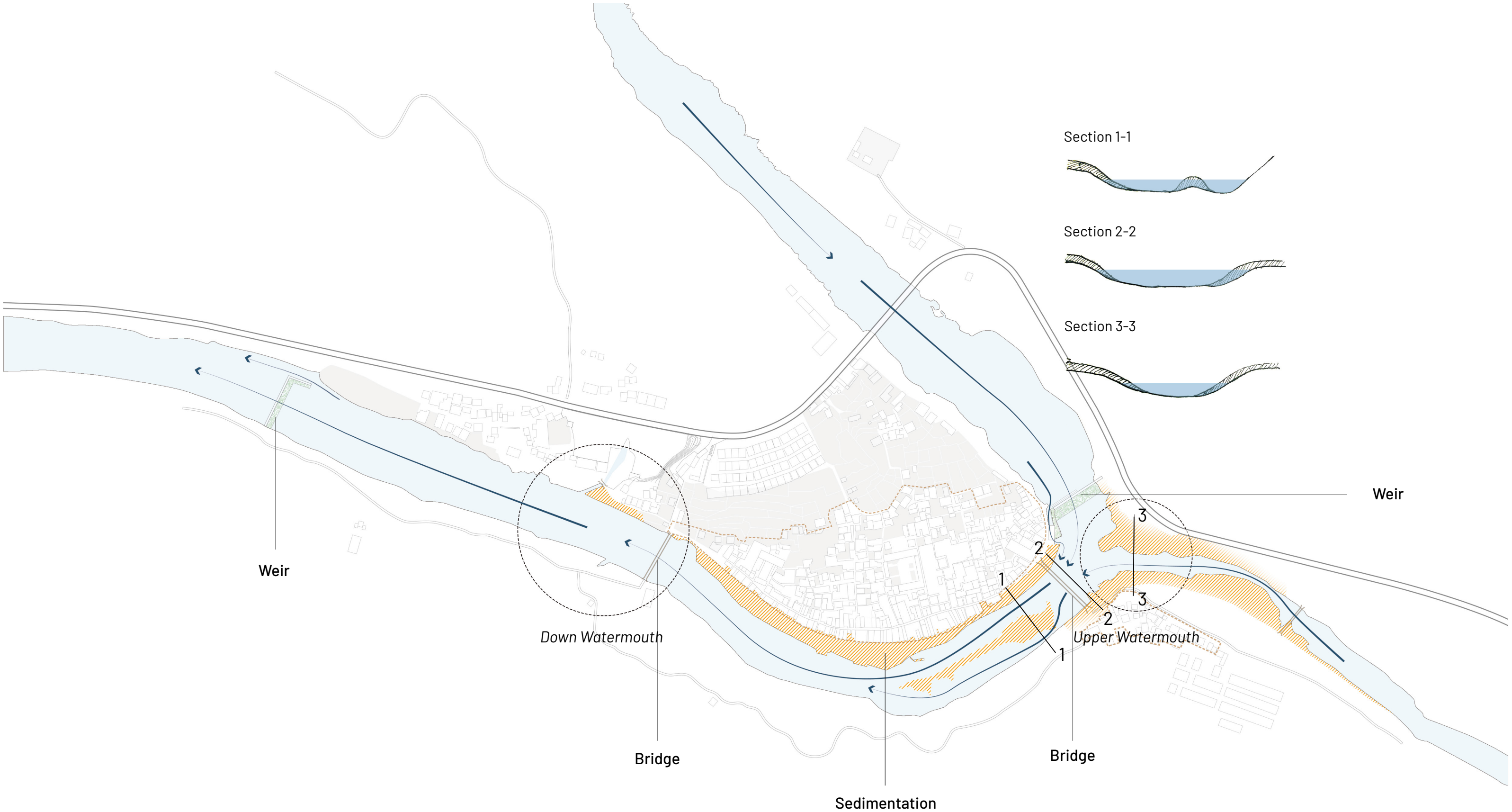
Accessible Riverside



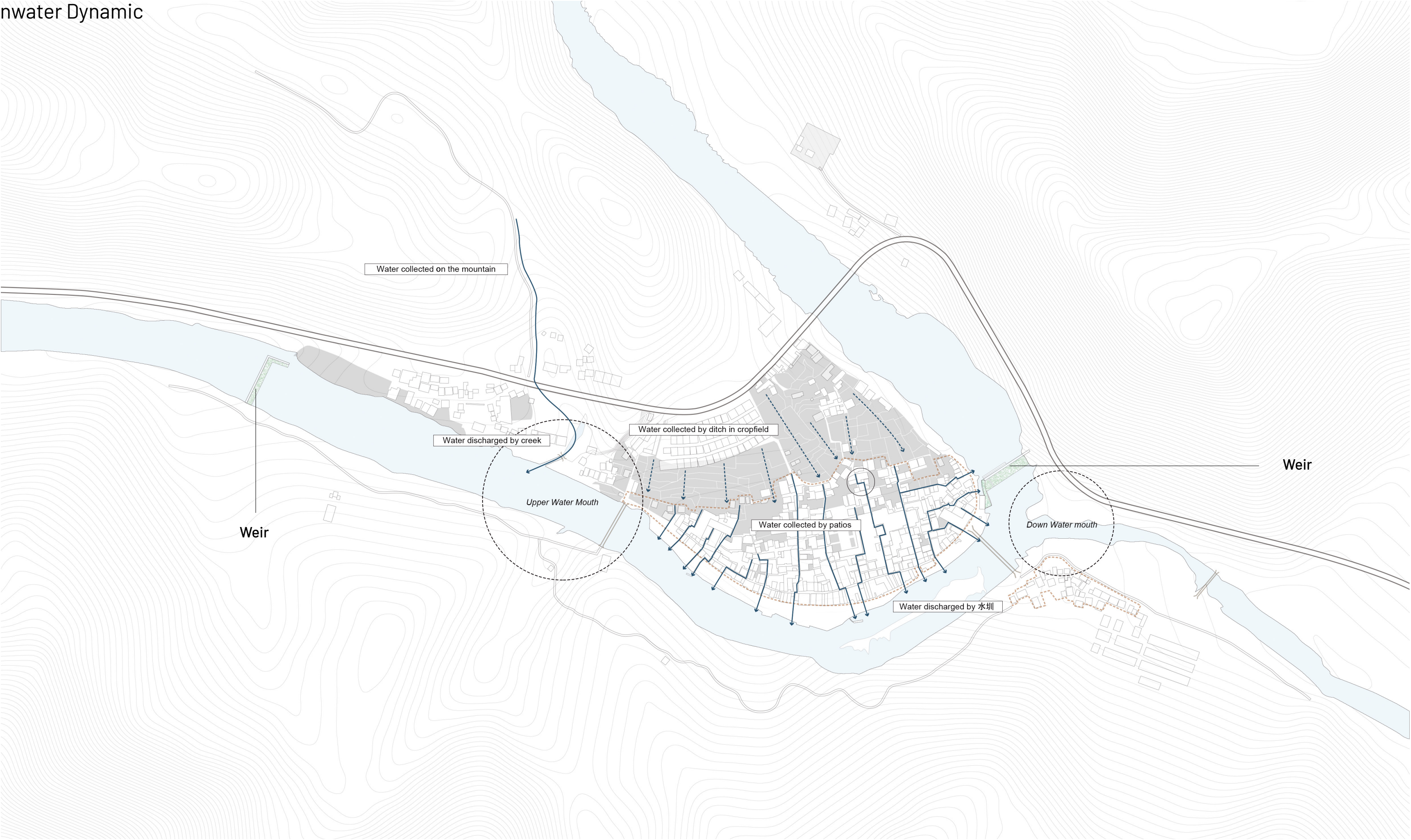
Cultivated Terraces

Year of Building Construction in Wangkou





Rainwater Dynamic

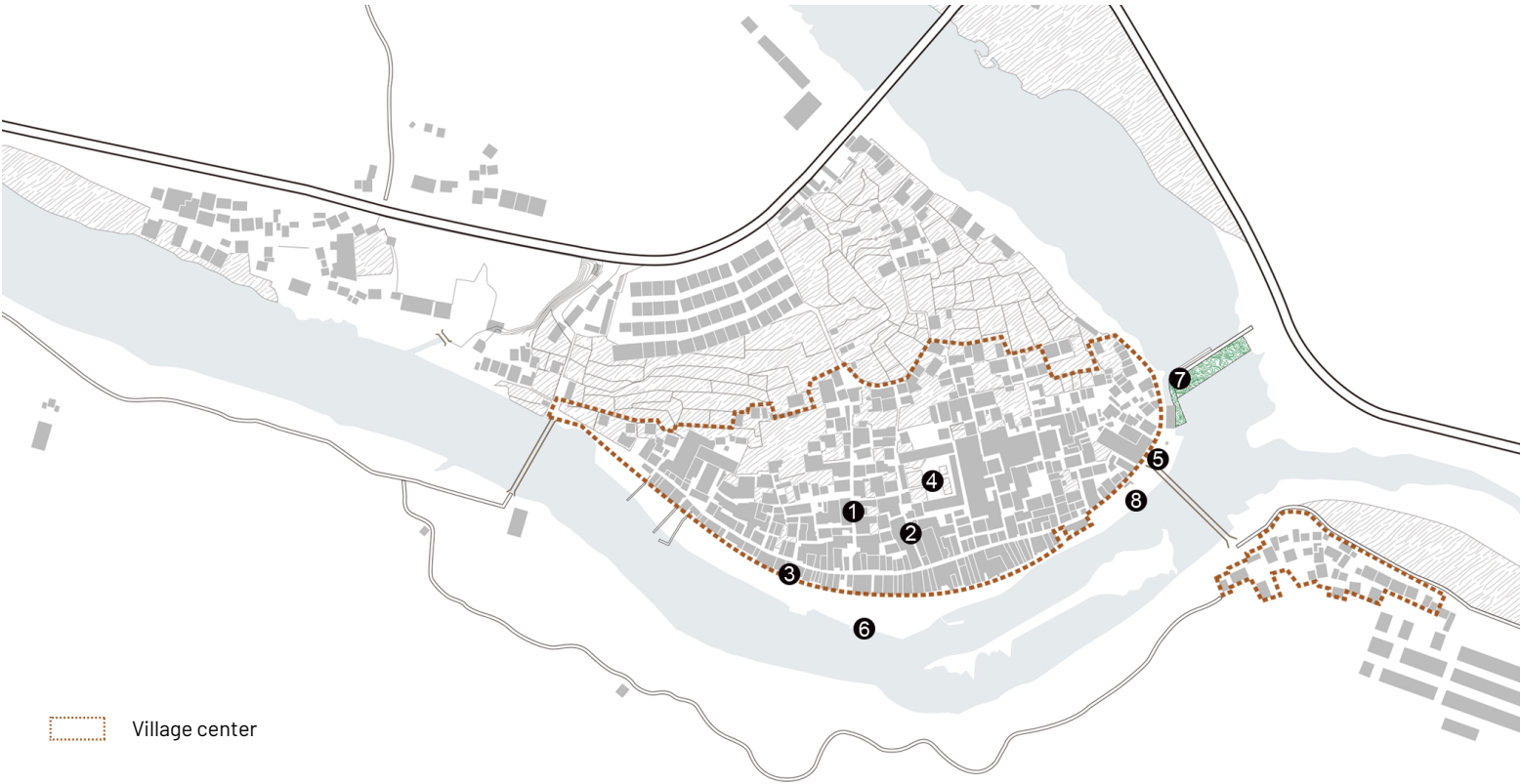


Public Space in Wangkou



Public Spaces In Wangkou

Existing Use of The Public Space



Public Space Inside The Village



Main User : All the villagers and the tourists

Interior Public Space in The Village



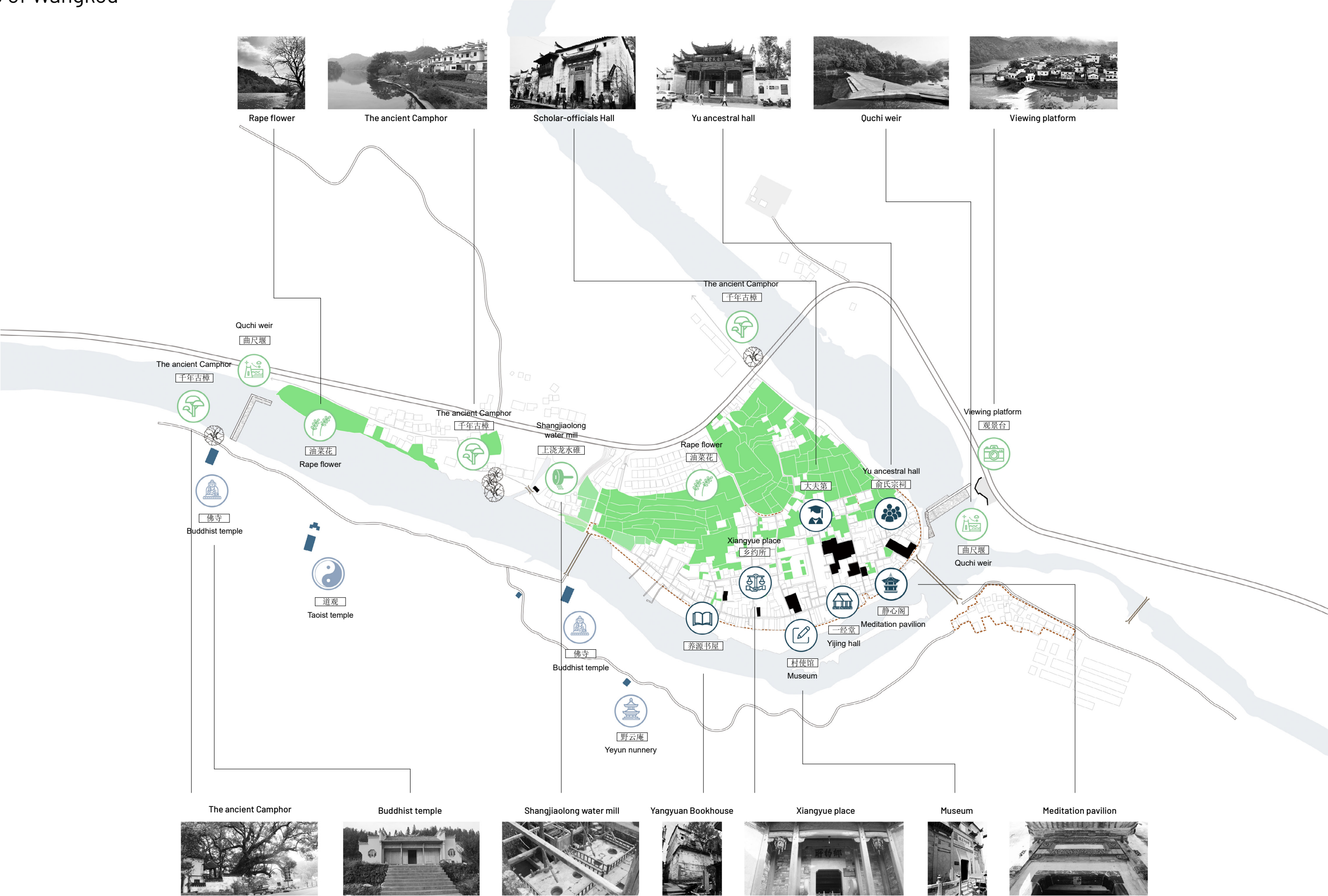
Main User : some villagers and the tourists

Public Space Outside The Village



Main User : Female Villagers and few tourists sketching

Identity Map of Wangkou





Rape flowers



The ancient camphor



Scholar-officials hall



Yangyuan bookhouse



Yu ancestral hall



Yu ancestral hall



Museum



Buddhist temple



Meditation pavilion



Museum



Viewing platform

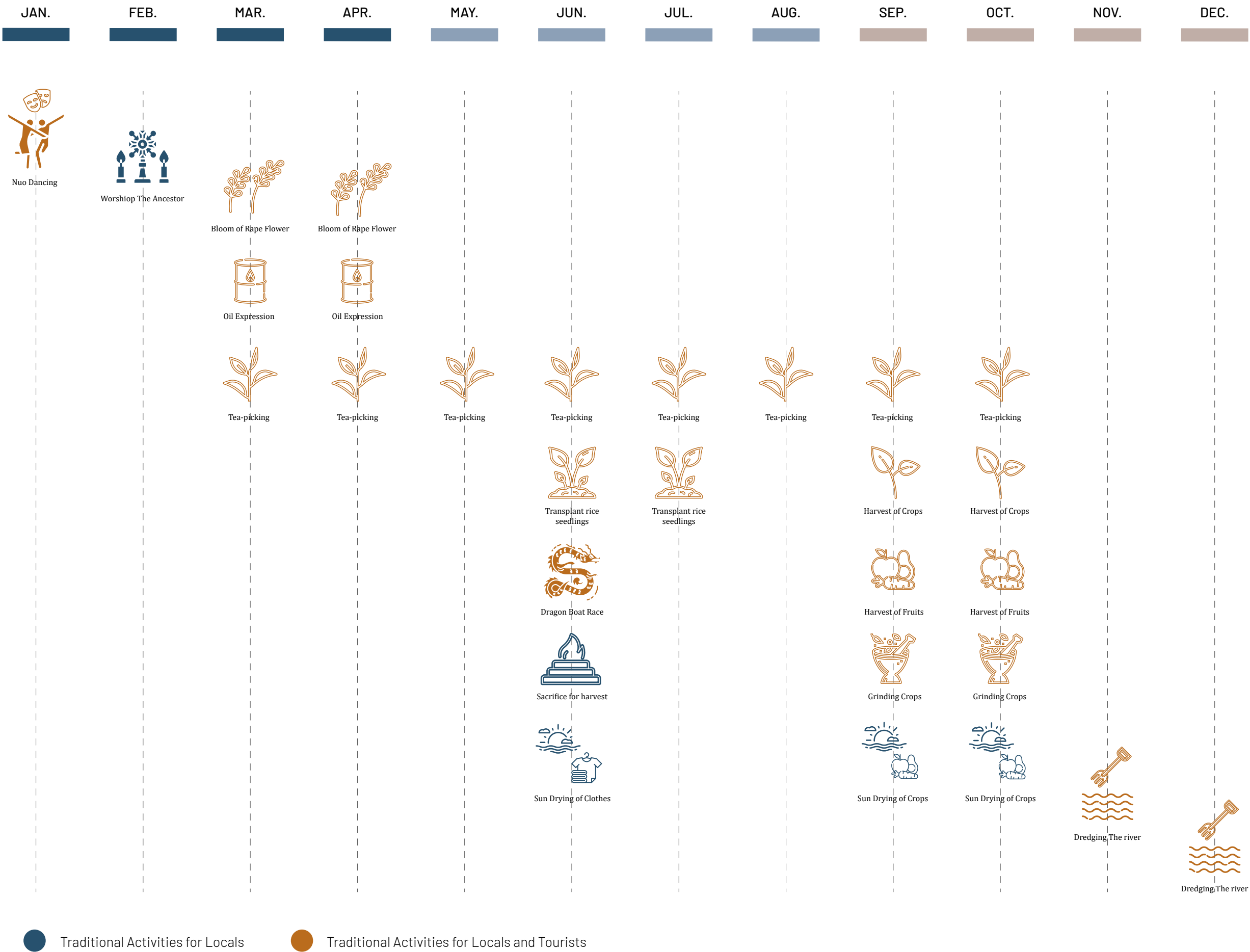


Shangjiaolong water mill



weir

Annual Water Activity and Events in Wangkou





傩舞 Nuo Dancing

Ritual Dancing for the sake of a good weather for the crops in the coming year as well as the wish for driving away evil spirits



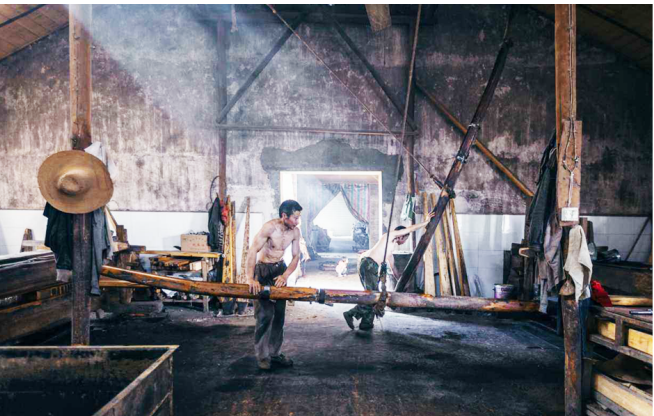
祭祖 Ancestor Worship

Annual worship to the ancestors for the best wishes for the villagers



油菜花开 Bloom of Rape Flowers

In Mar. - Apr. each year, the bloom of the rape flowers attract millions of visitors coming here for sightseeing



榨菜籽油 Oil Expression of Rape Flowers

The Rape flowers can be expressed to oil, which is one of the main industry of Wangkou



采茶 Tea-picking

APR. - OCT. each year is the time for green tea-picking up, the experience of picking up the tea attrarcts many tourists



插秧 Transplant Rice Seedlings

Due to the mountain climate, the seedlings of the rice started at june till july, each year, there is a competition of seedlings between the farmers and the visitors



祭五谷神 Sacrifice for Harvest

To invoke a good harvest of the coming fall, the villagers sacrifice to the God of Crops in order to make the best wishes



赛龙舟 Dragon Boat Race

In Dragon Boat Festival every year, there will be a dragon boat race



夏晒 Summer Sun Drying

When the summer is coming, villagers will expose the humid clothes under the sun to avoid the clothes of getting mildewed



作物丰收 Harvest of The Crops

SEP. - OCT. each year is the harvest of crops



水果丰收 Harvest of The Fruits

SEP. - OCT. each year is the harvest of fruits



水碓作坊 Grinding Crops

Afer collecting the crops from the field, some crops need to be grinded by the waterwheel driven by the water



秋晒 Fall Sun drying of The Crops

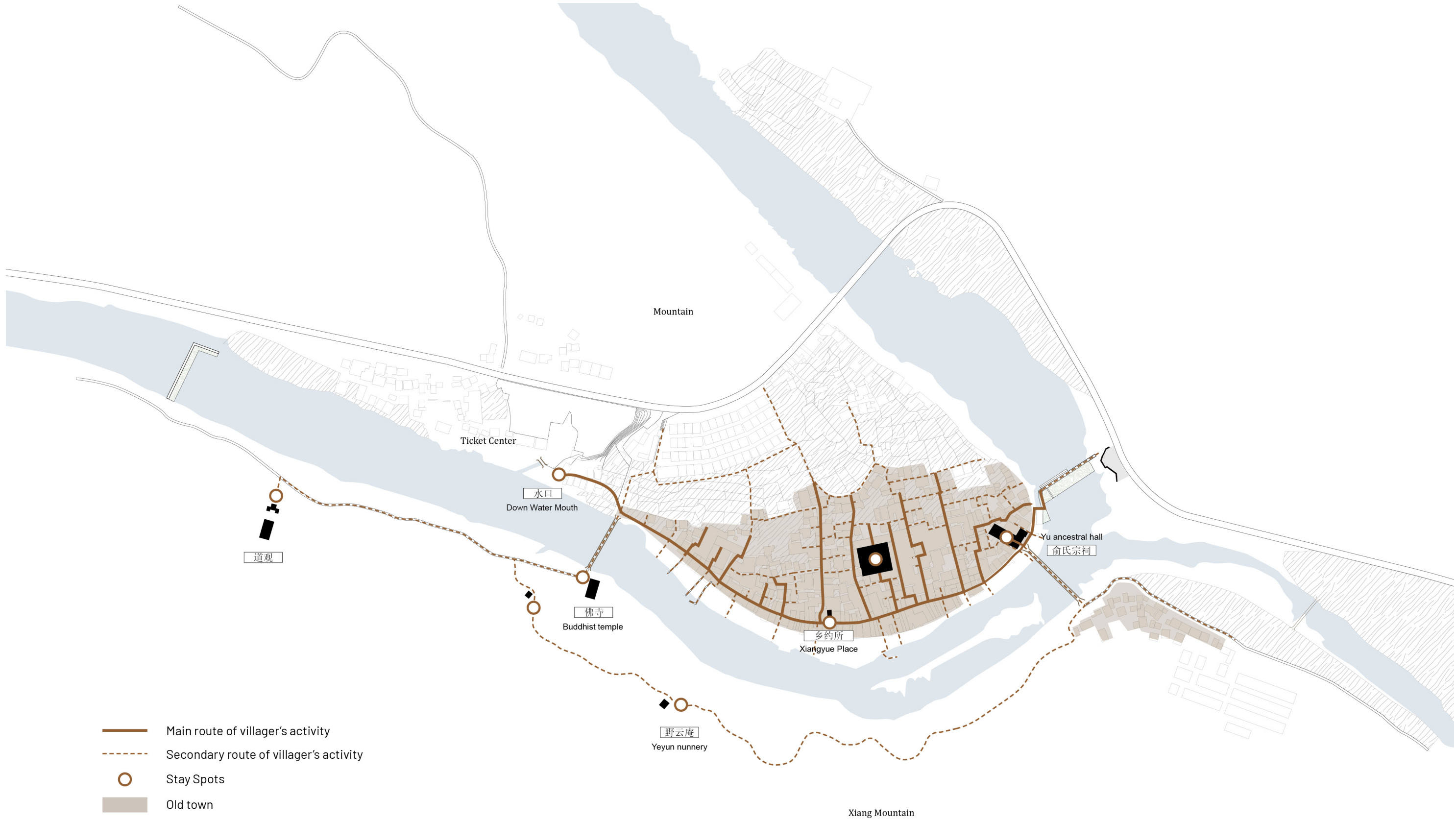
In the fall, the villagers will start the sun drying of the crops to retain the freshness of food for winter storage



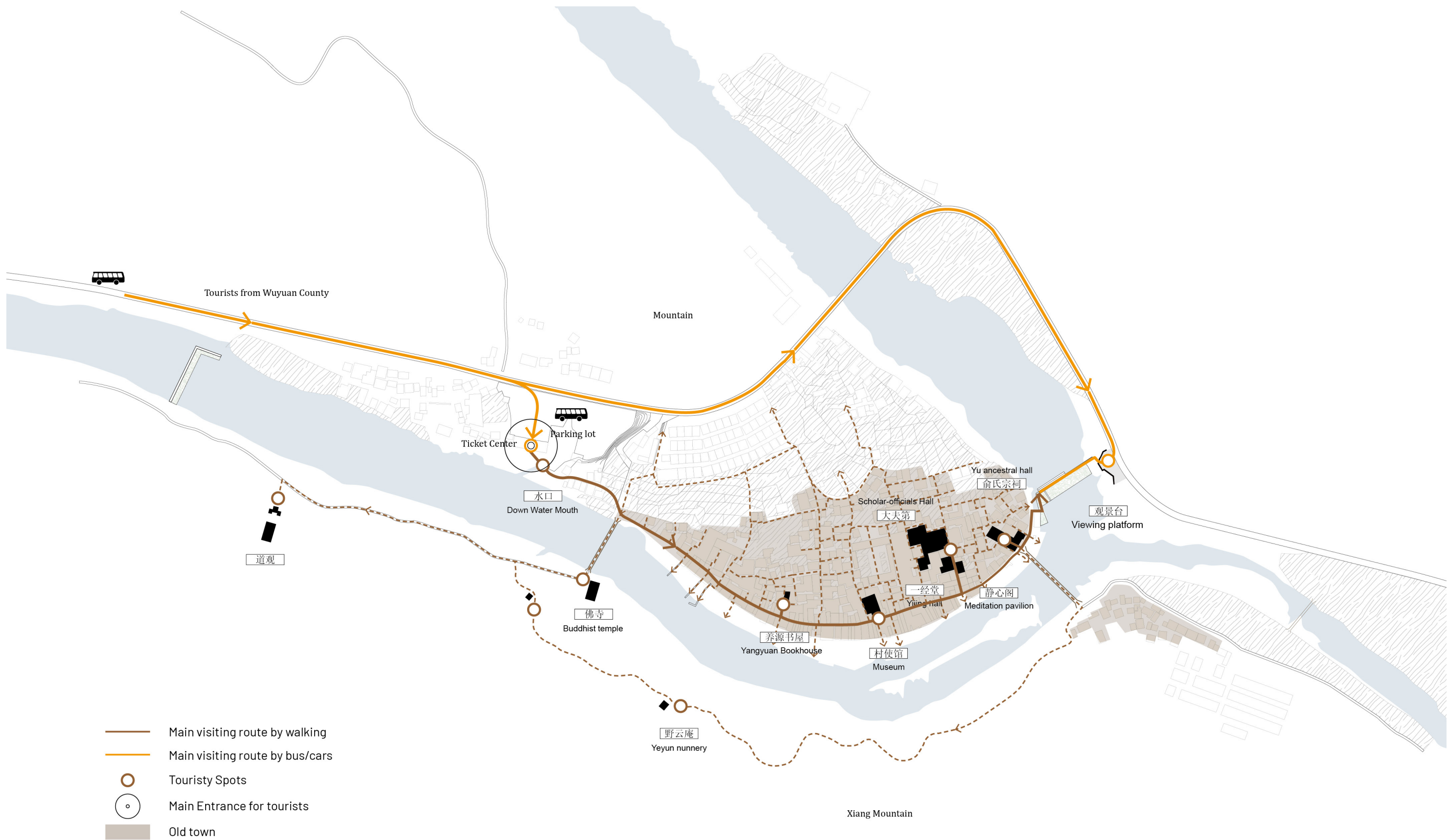
洗河 Dredging The River

Traditionally, the leder of the village will organize the villagers to dredge the riverbed to avoid the flooding. Now visitors are encouraged to participate in this activity

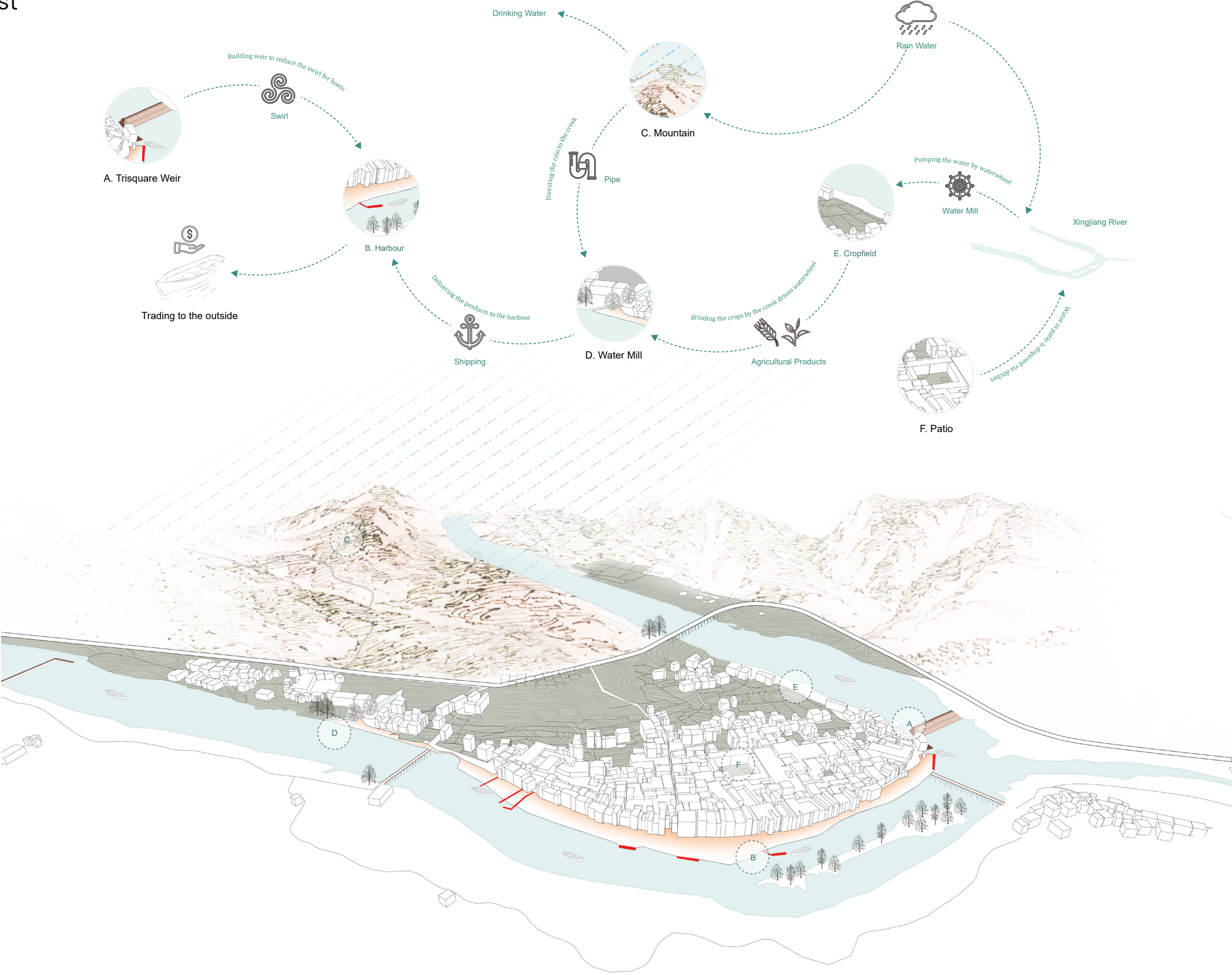
Existing People's Movement



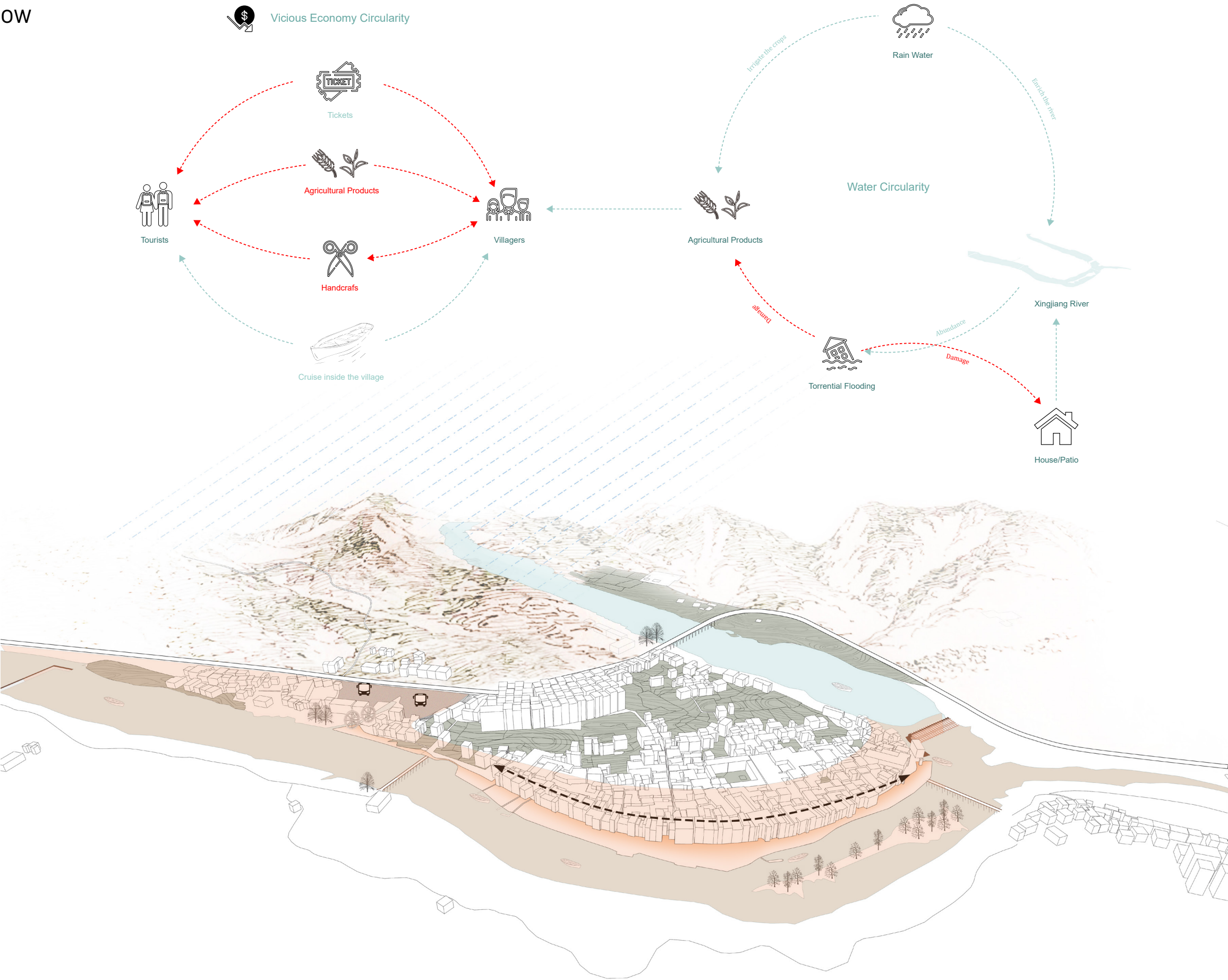
Tourists' Movement in Wangkou



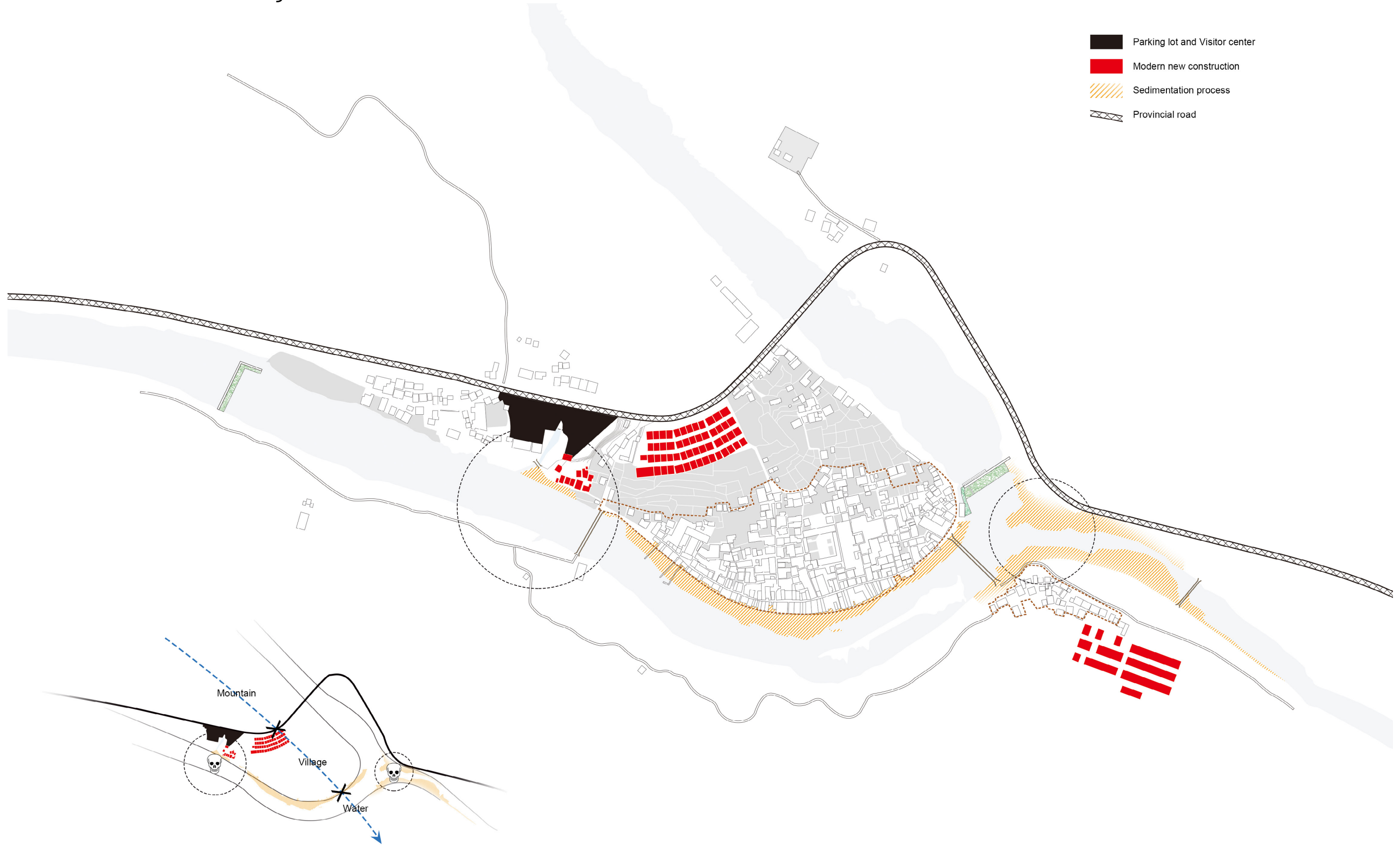
The Circular Life In The Past



The Vicious Circular Life Now



The Interferential Elements in the Village



Diagnosis and Proposal

Diagnosis

Water Issues

Regional flooding caused by rainstorm in the summer time	Re-valuation and Renewal of the Water tradition are needed	Lack of a circular water system (rainwater collection, water purification and disposal)
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Public Space Issues

New construction barrier to the human-nature relation	Lack of public space with quality inside of outside the village
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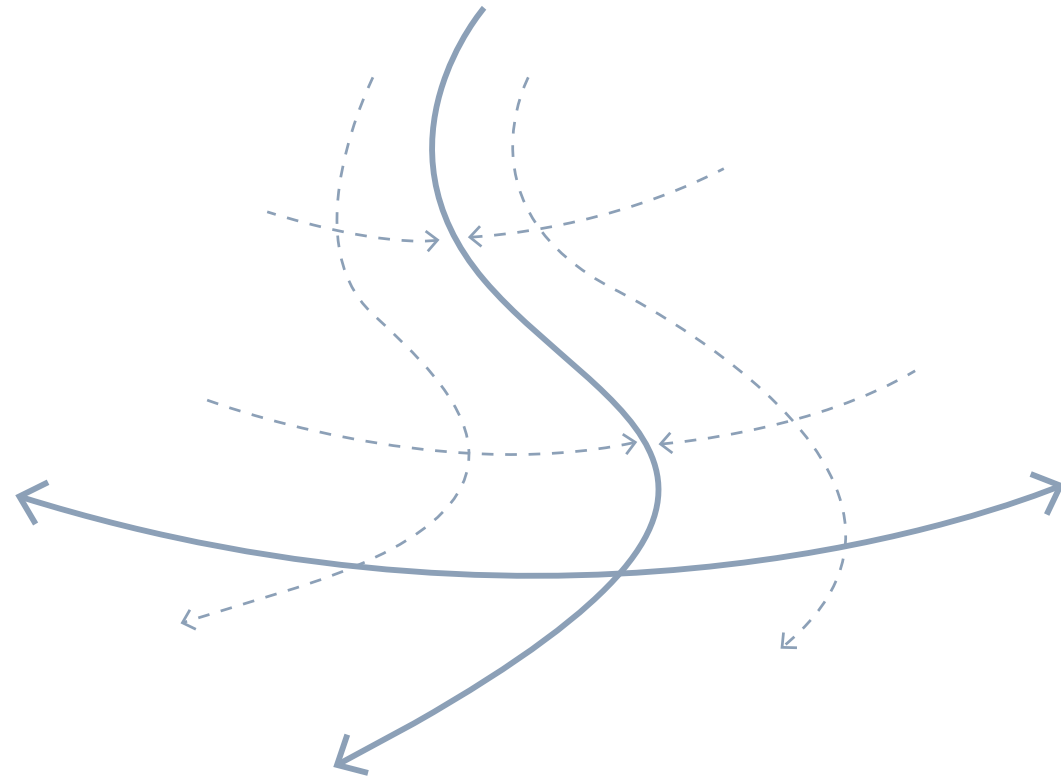
Industry Issues

Monotonous agriculture production (rape flower, tea, vegetable)	Vicious circle between the vendors and visitors
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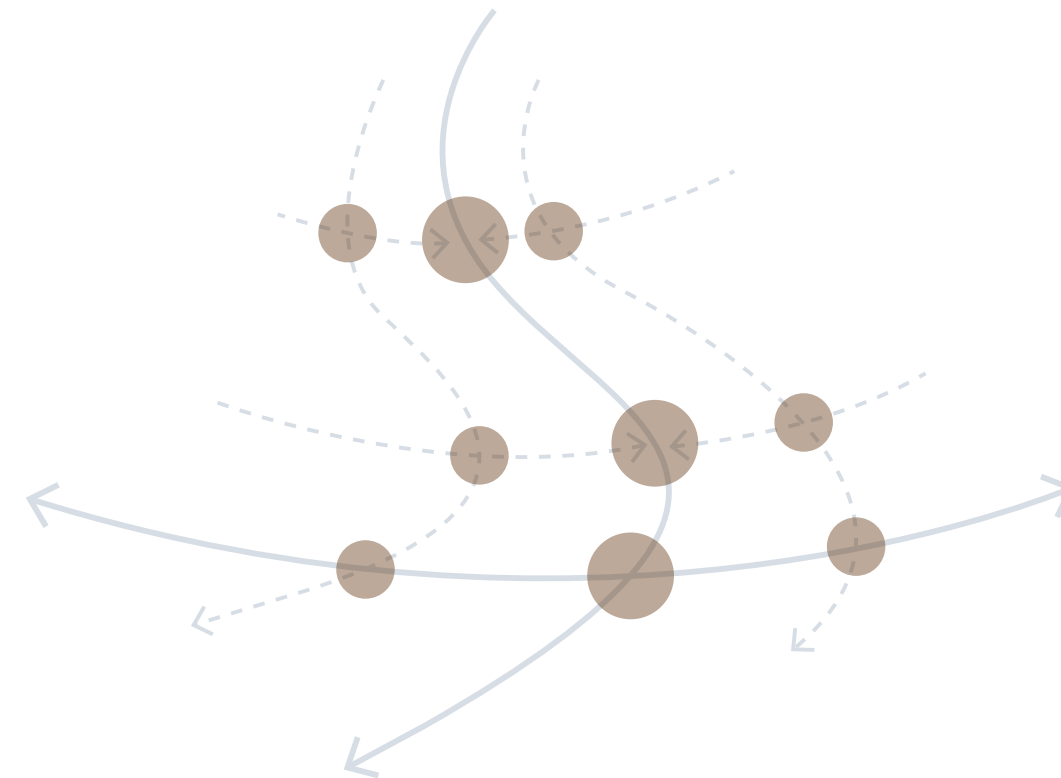
Culture and Tradition Issues

People's neglect to the Traditional Water activity and event	Disappearance of the ancient water works
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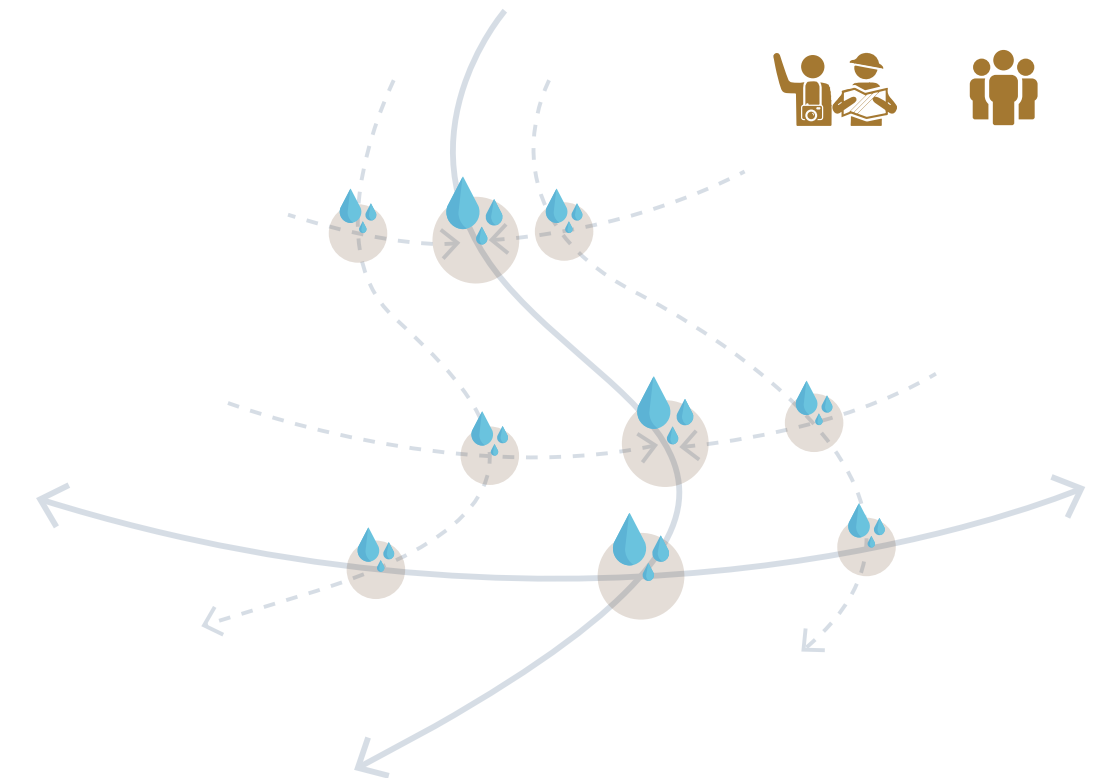
Proposal - Creating A New Balance of Living With Water



Introduce a new sustainable and circular water system in the village

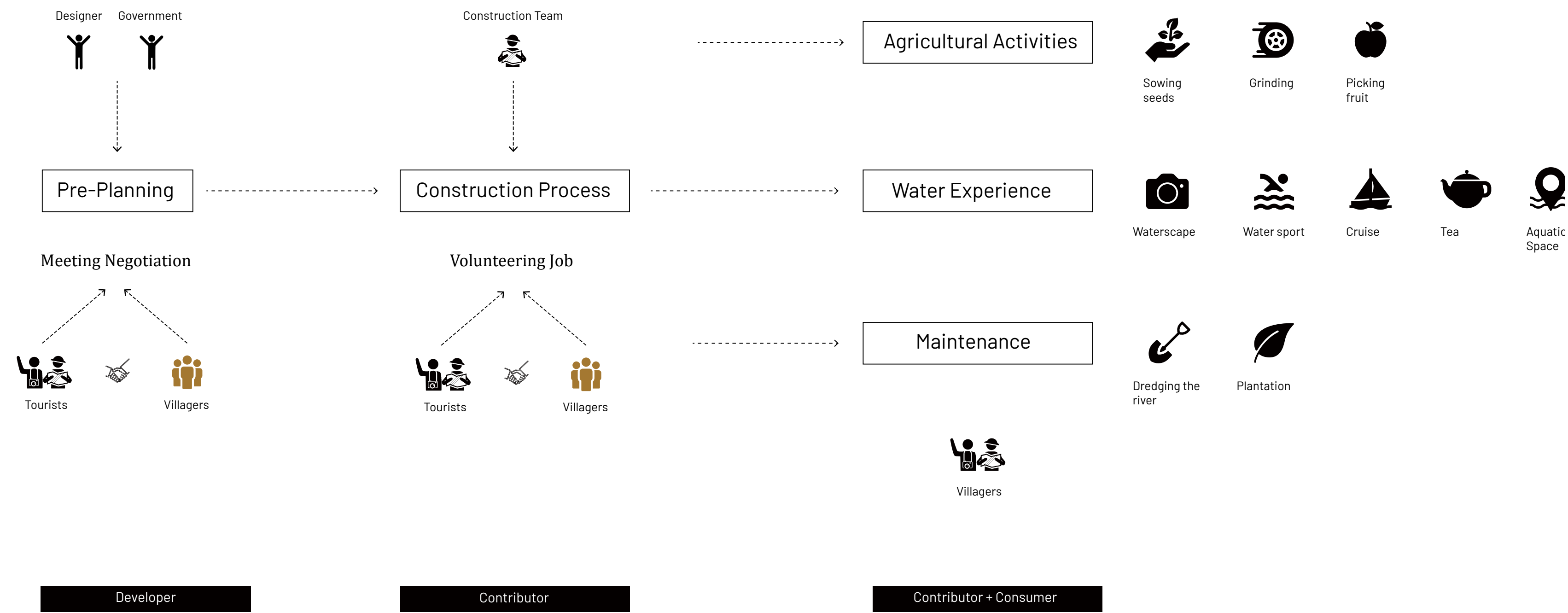


Activate multiple water public spaces based on the new water structure



Promote Villager and tourist's participation in the water activities in the water public space

Promote Village and Tourist's participation in the Watery Rural Life



Principles From The Relevant Case Study

PROJECT:

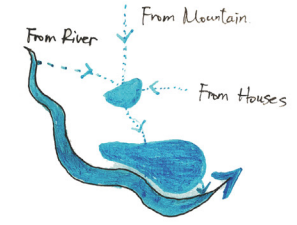
Hongcun Traditional Water System

Gaohuai Village Rural Revitalization
Overall Planning, China
- L.J.Design Limited

Hesilu Village Landscape, China
- Sasaki

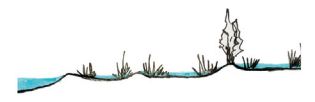
Renewal of Fengqiao Town, China
- Architectural Design and
Research Institute of Zhejiang

Direct water and Retention in the Village



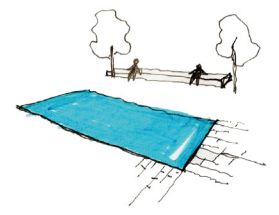
The Idea of directing water from the Moutain, river and house for daily use, agriculture and fire-fighting

Water Purification by Gravity



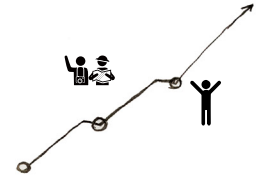
Gravity drives the water purification system with indigenous plant

Modernize The Village with new Element



Adding Urban Design Element and adapt it to the indigenous environment

Enhance Tourists and Villagers' Participation in The Build-up Process



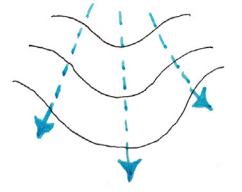
Promot tourists and villagers' participation in the design process and maintenance of the village

Water Retention as Piublic Space



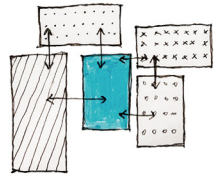
Turn the water retention area in the village to public space for social activity and events

Using The Force of Topography



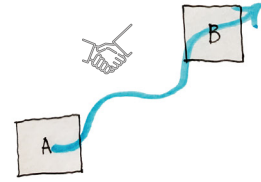
Use the forces of nature, minimal manual interference

Hybridization of Agro-activity



Establish connection & sequence between activities

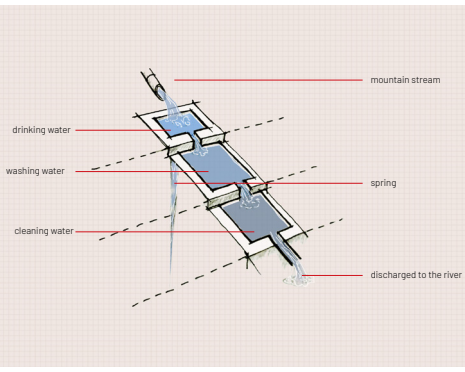
Increase Cross-district Networks



Put pressure for an integrated territorial landscape transformation

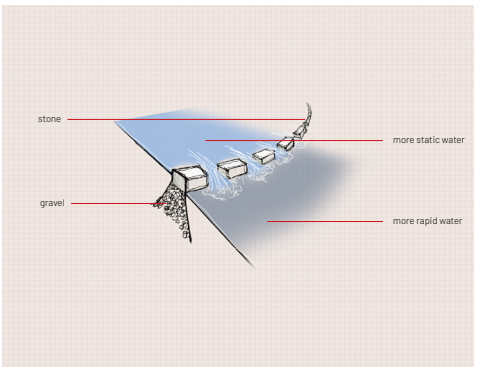
Principles From Studying The Traditional Water System in Wuyuan

三叠井 Triple Terraced Wells



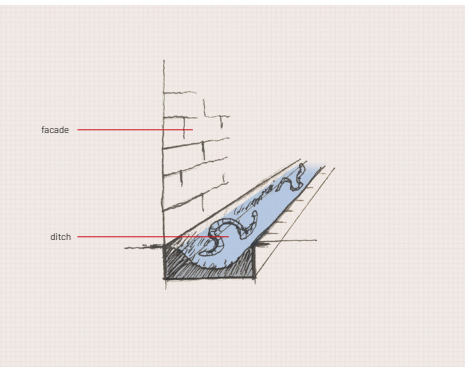
The terraced water pools or wells that recycle the water

石堰 Catch dune



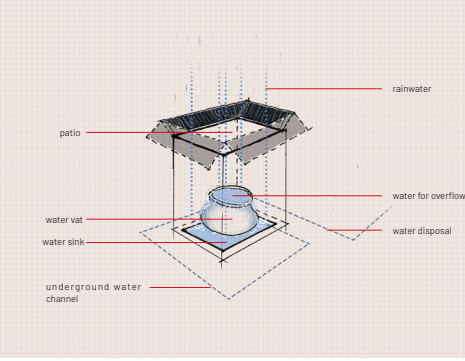
A Stone Structure that Catches the water to rise its level

排水明沟 Ditch



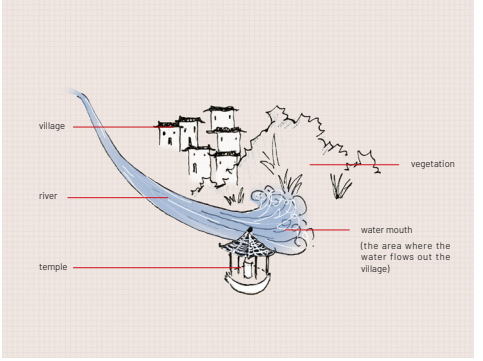
The ditch attached to the facade to discharge the water

天井 Courtyard



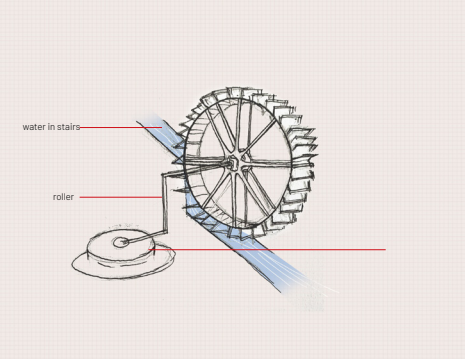
The Architectural structure used to catch the rainwater and light

水口 Water mouth

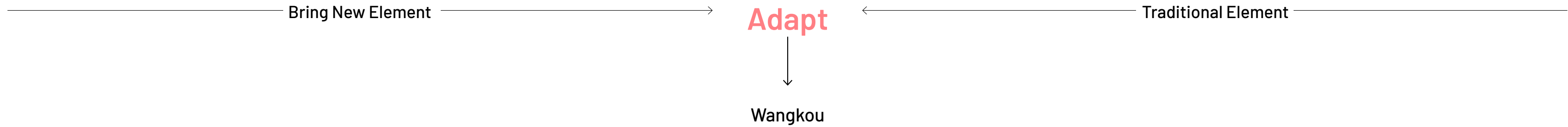


The area where the water flows out the village

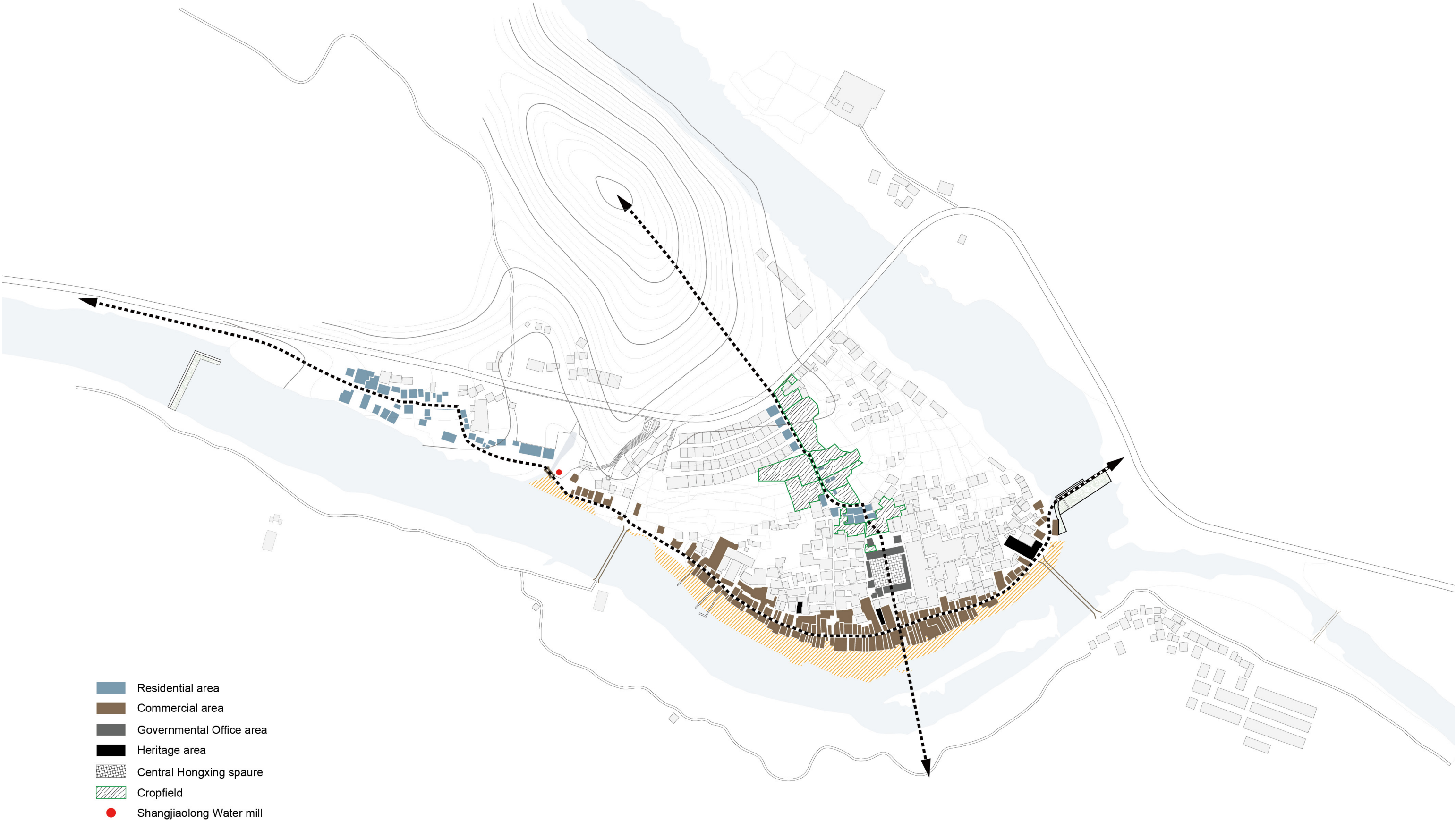
水春作坊 Waterwheel Grinding



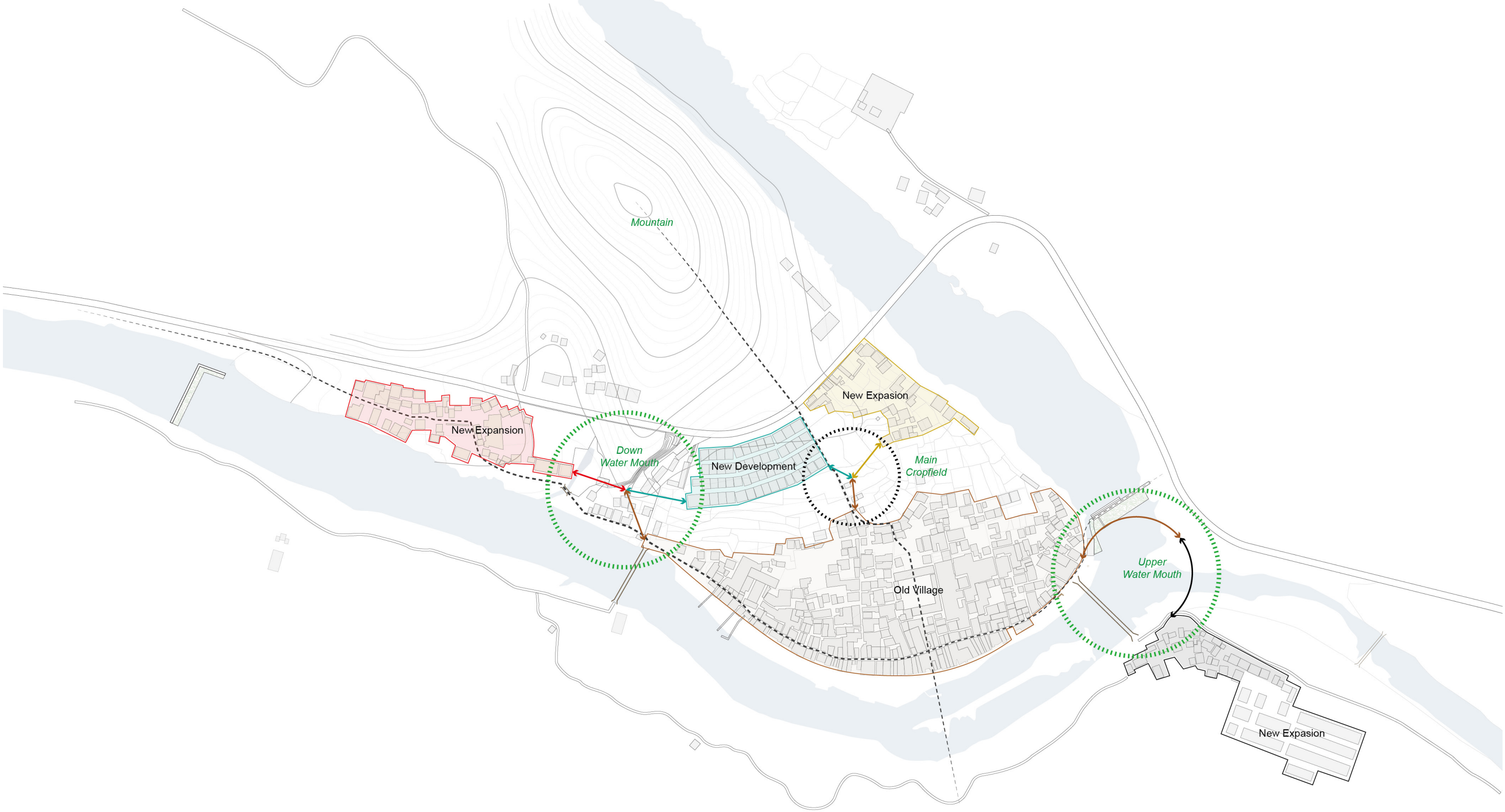
The Structure that utilize the height different dynamic of the water



Emphasize Two Main Axes as The New Framework of Wangkou

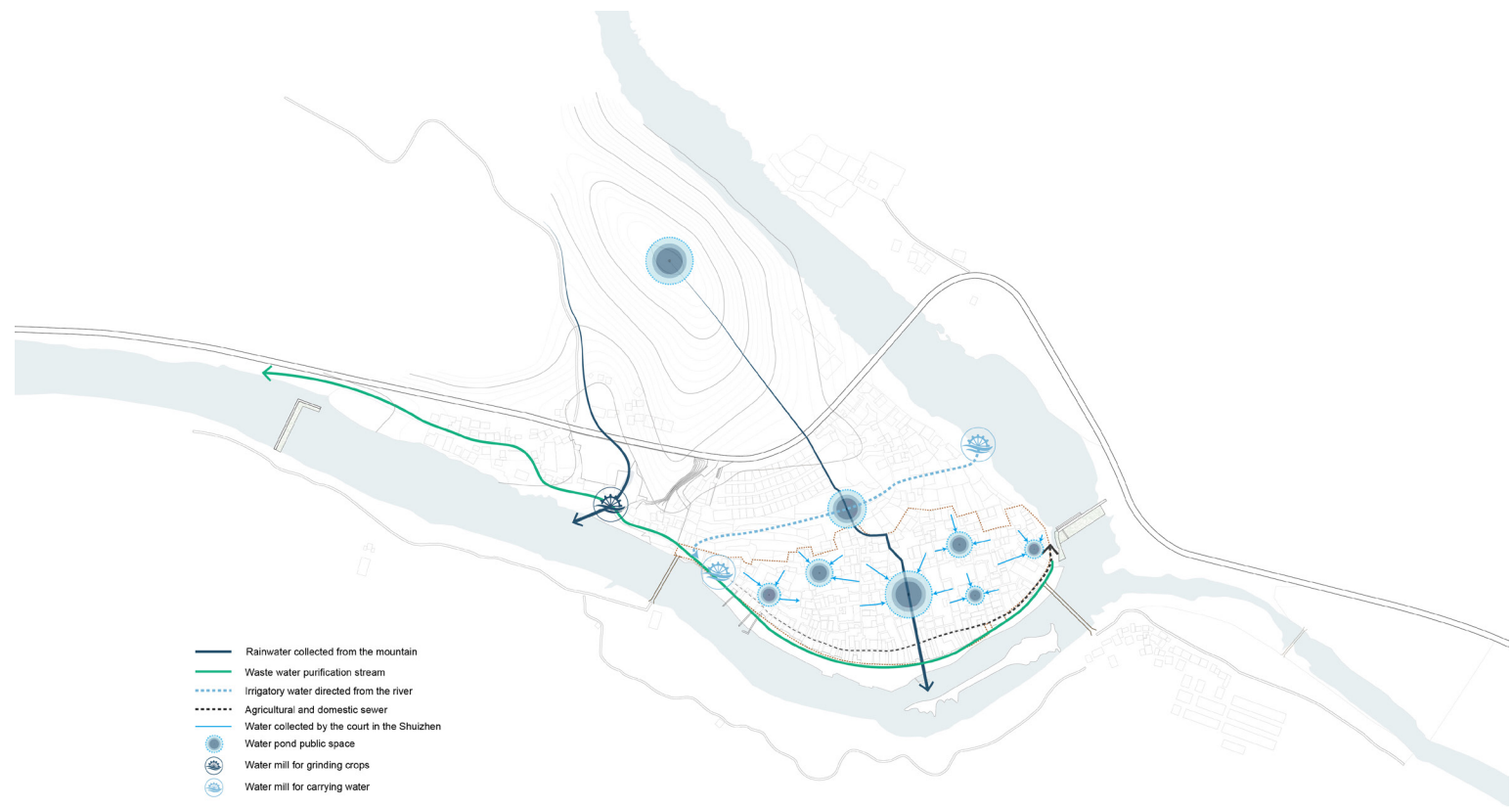


Junctions as The Binders to Increase Inter-district Network



Motivations

Motivations 1 - Introduce A New Circular Water System



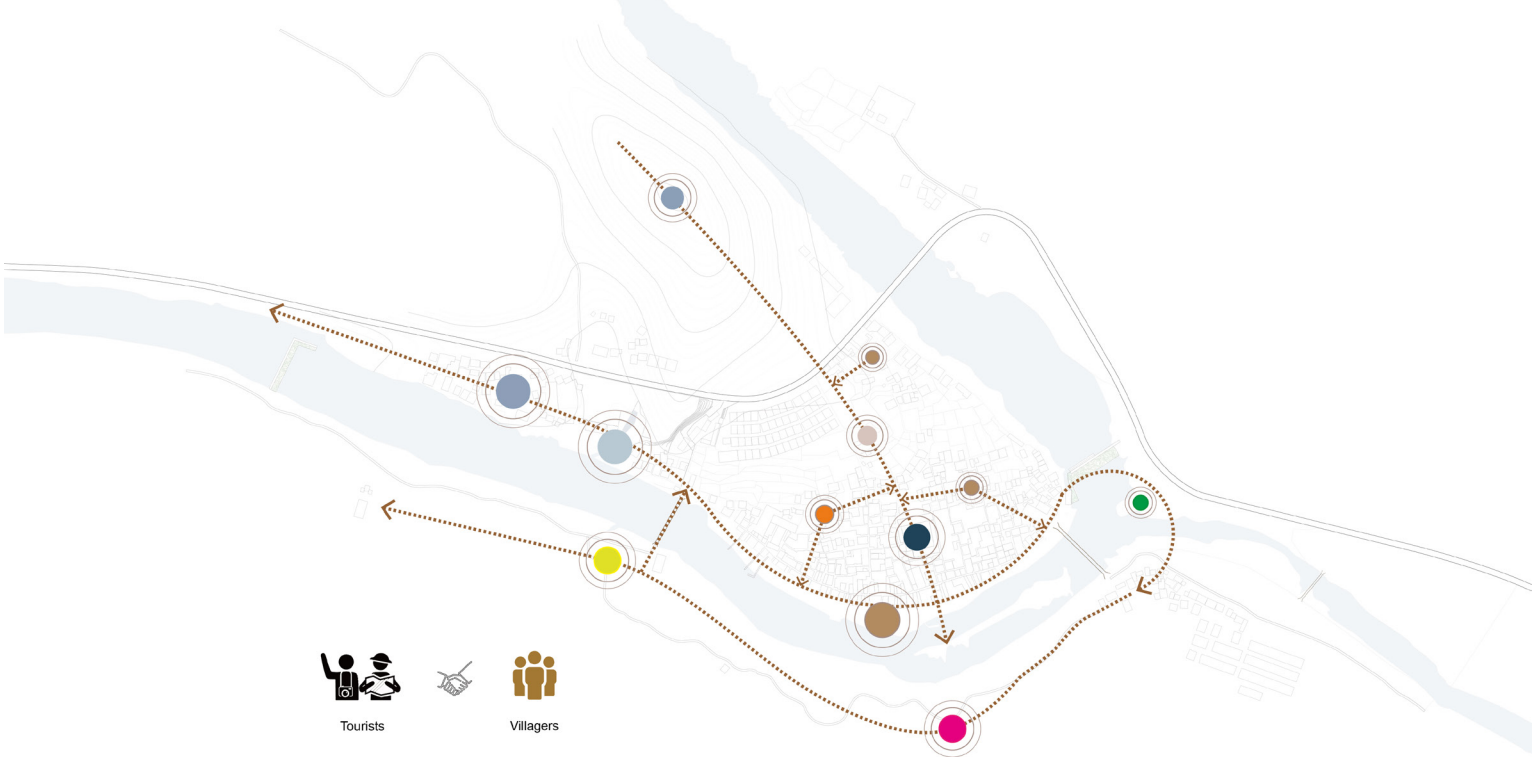
Motivations 3 - Enhance Cultural Aspect of The Village



Motivations 2 - Activate Multiple Public Spaces Based on The Water System



Motivations 4 - Promote People's Participation



Design Implement

Design Exploration - Axis 1

Landscape Components of Axis 1



Design Exploration - Axis 2

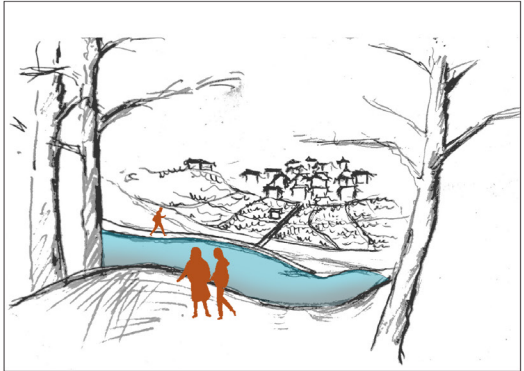
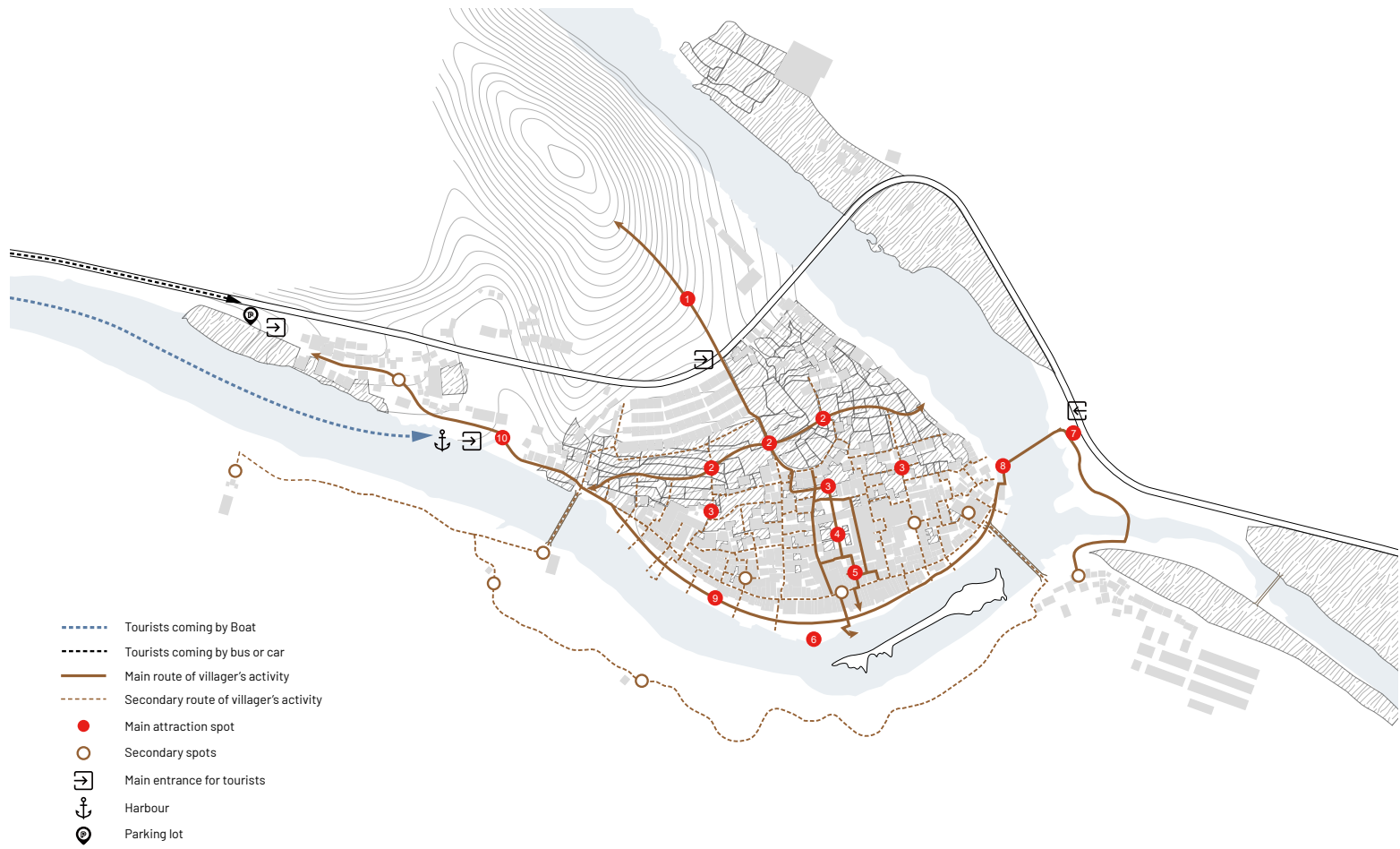
Axis 2 as The Link to Increase Inter-district Connection



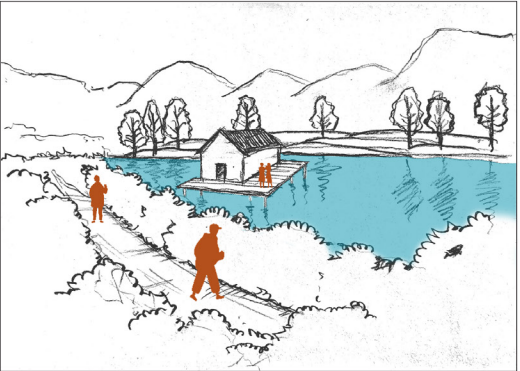
Landscape Components of Axis 2



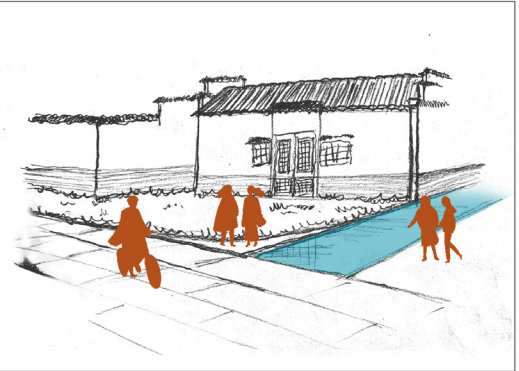
The new water public space network for inhabitants and tourist



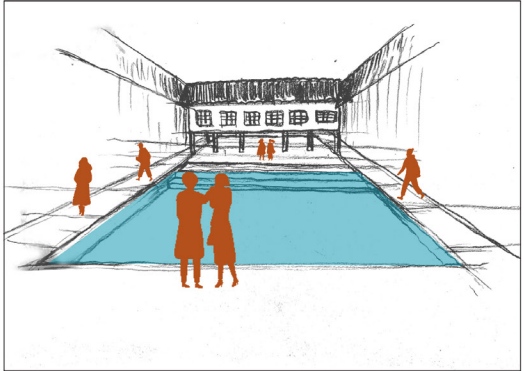
1 Recreational Mountain-scape



2 Agricultural Cropfield and Cottage



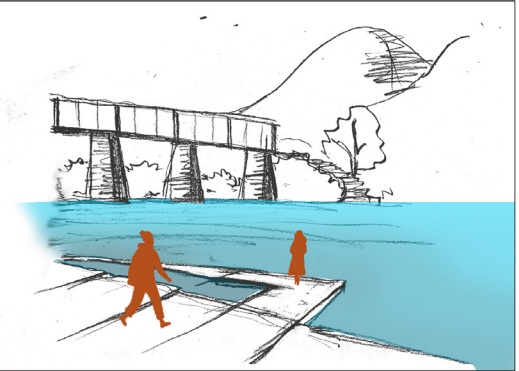
3 Private Garden Landscape



4 Hongxin Water Sqaure



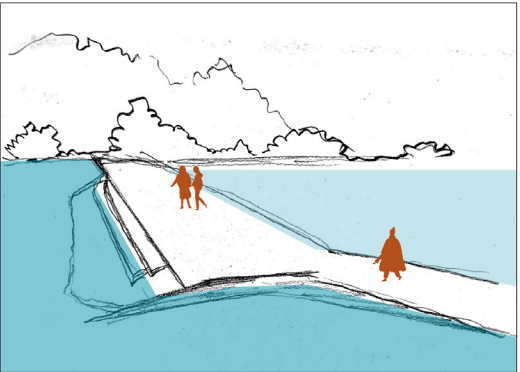
5 Ancient Alley Scape



6 Waterfront - Old Harbour heritage



7 Water Purification Stream



8 Ancient Weir

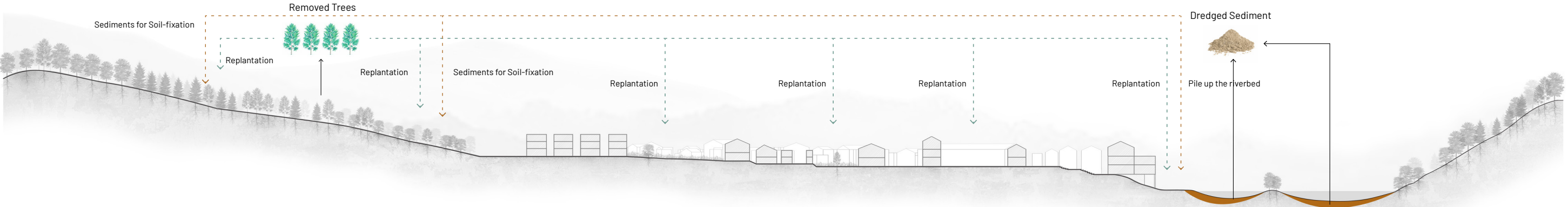
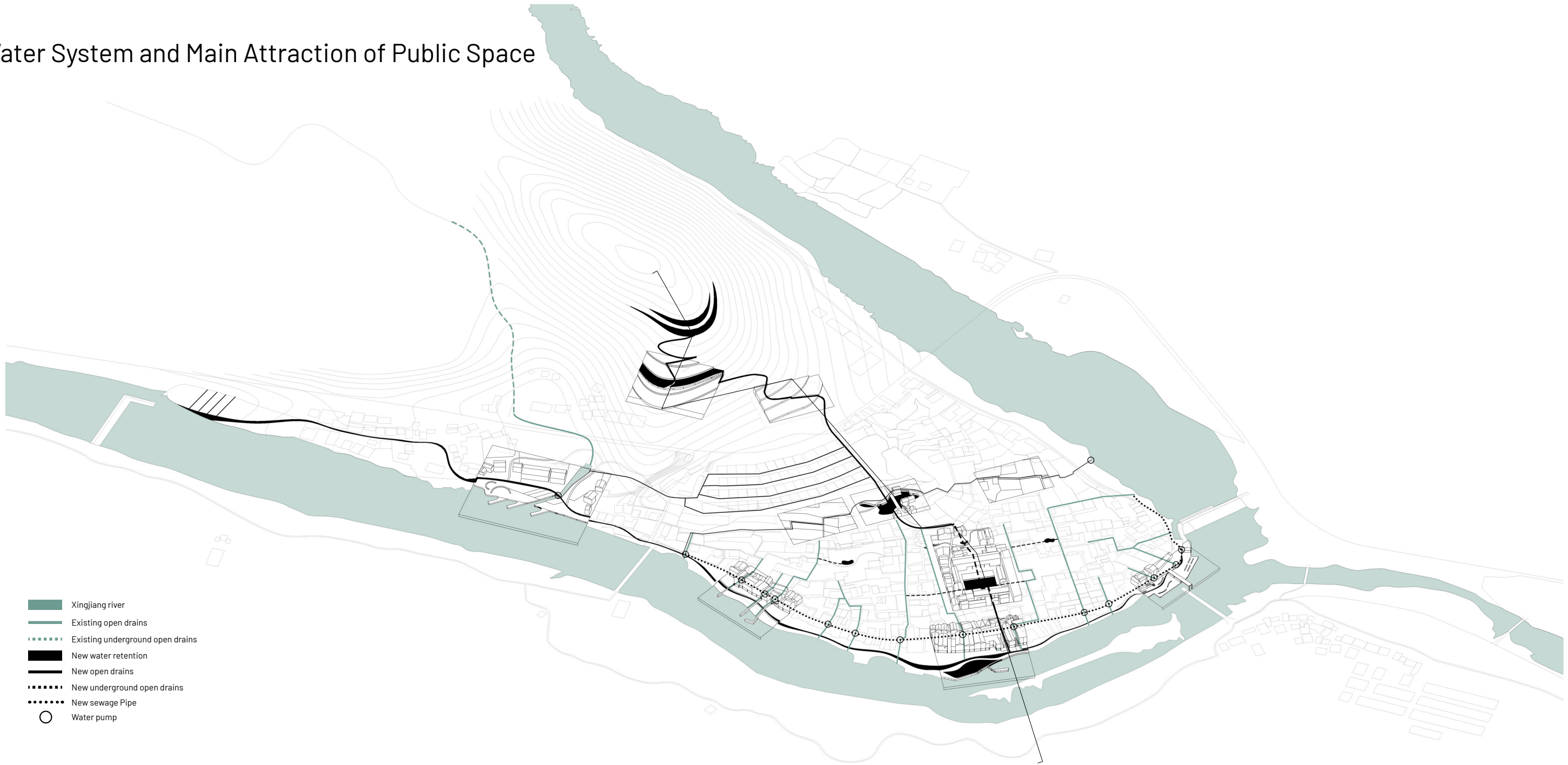


9 Viewing Platform

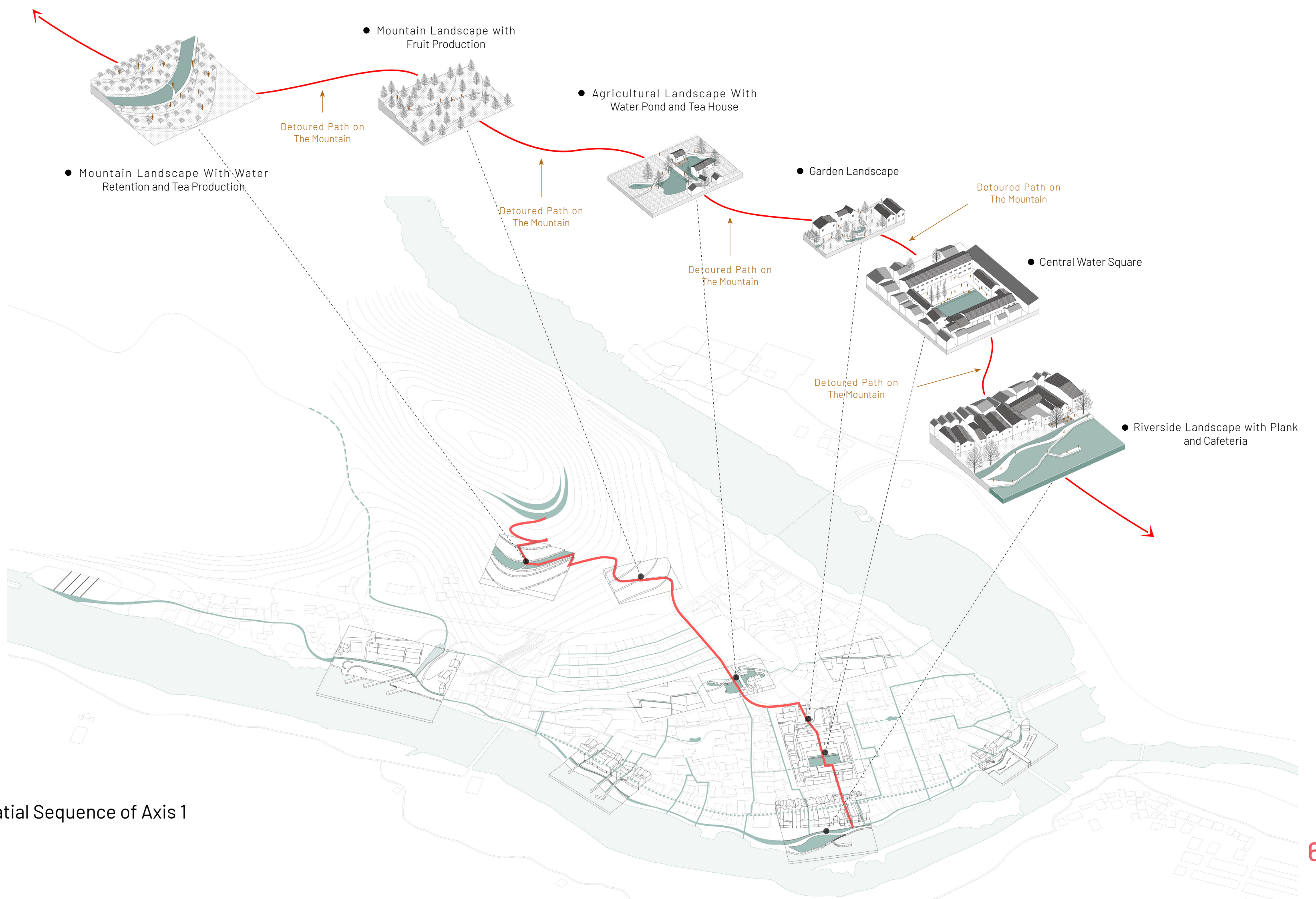
Proposed Master Plan

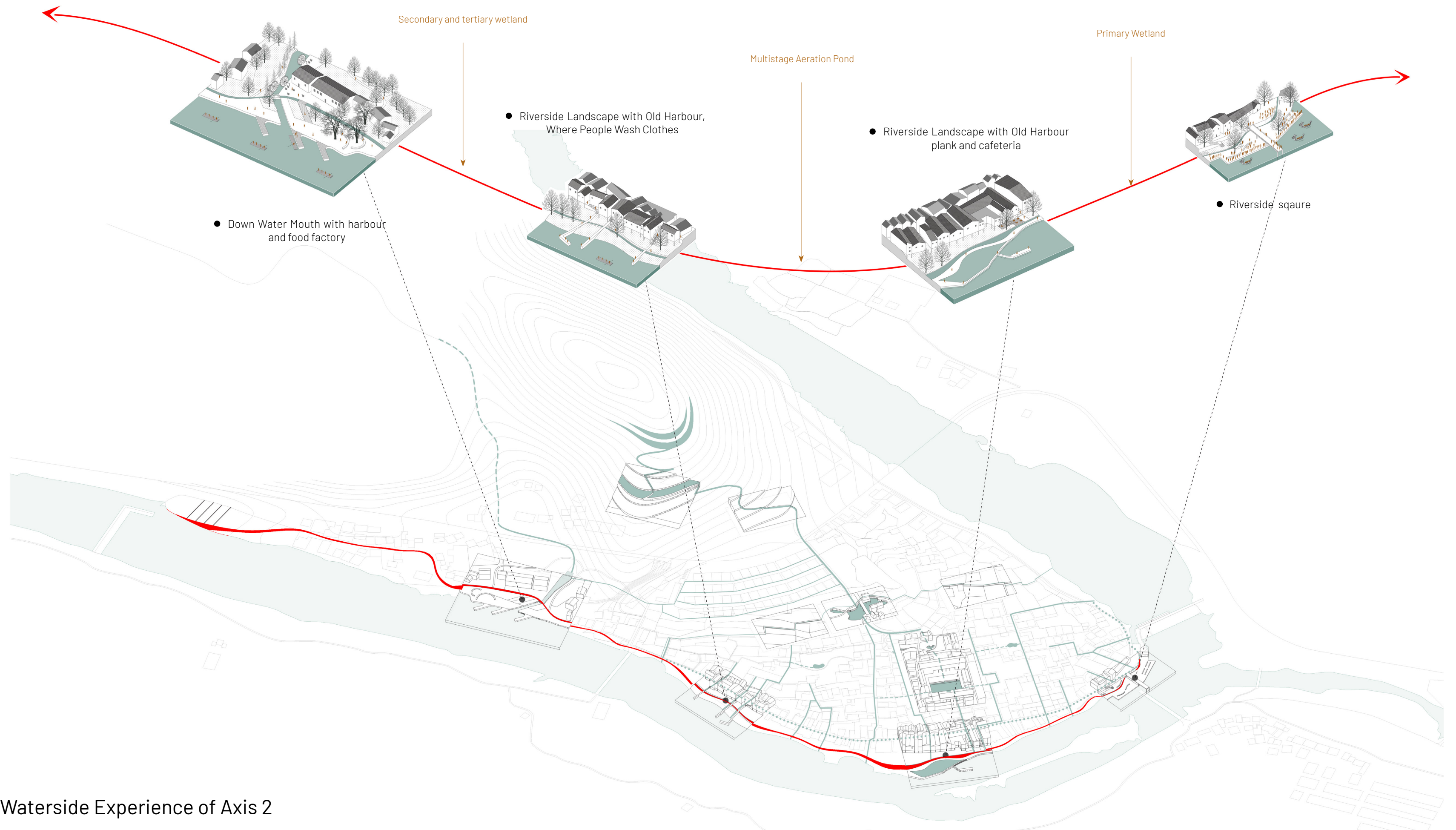


Proposed Water System and Main Attraction of Public Space

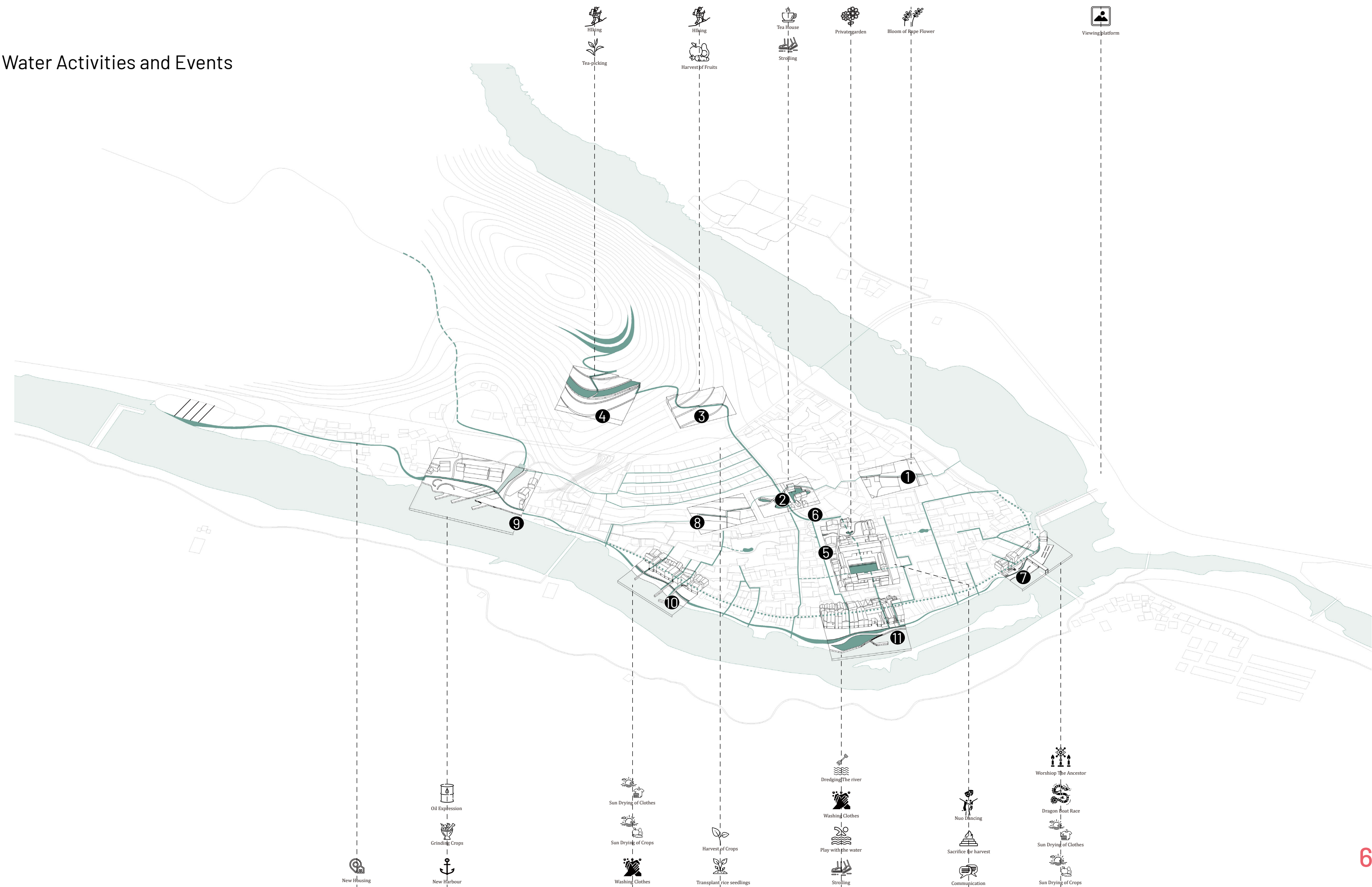


Spatial Sequence of Axis 1

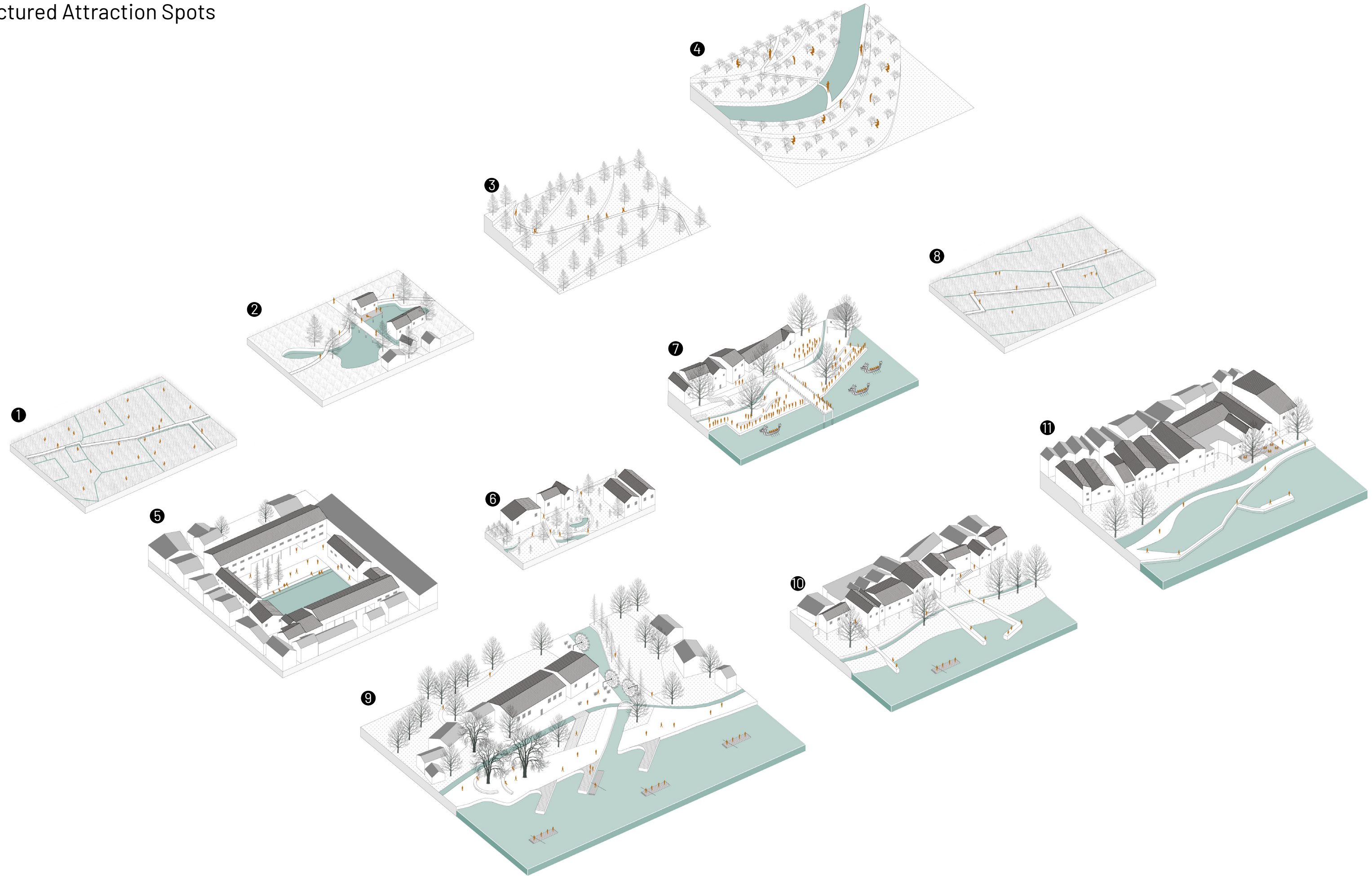




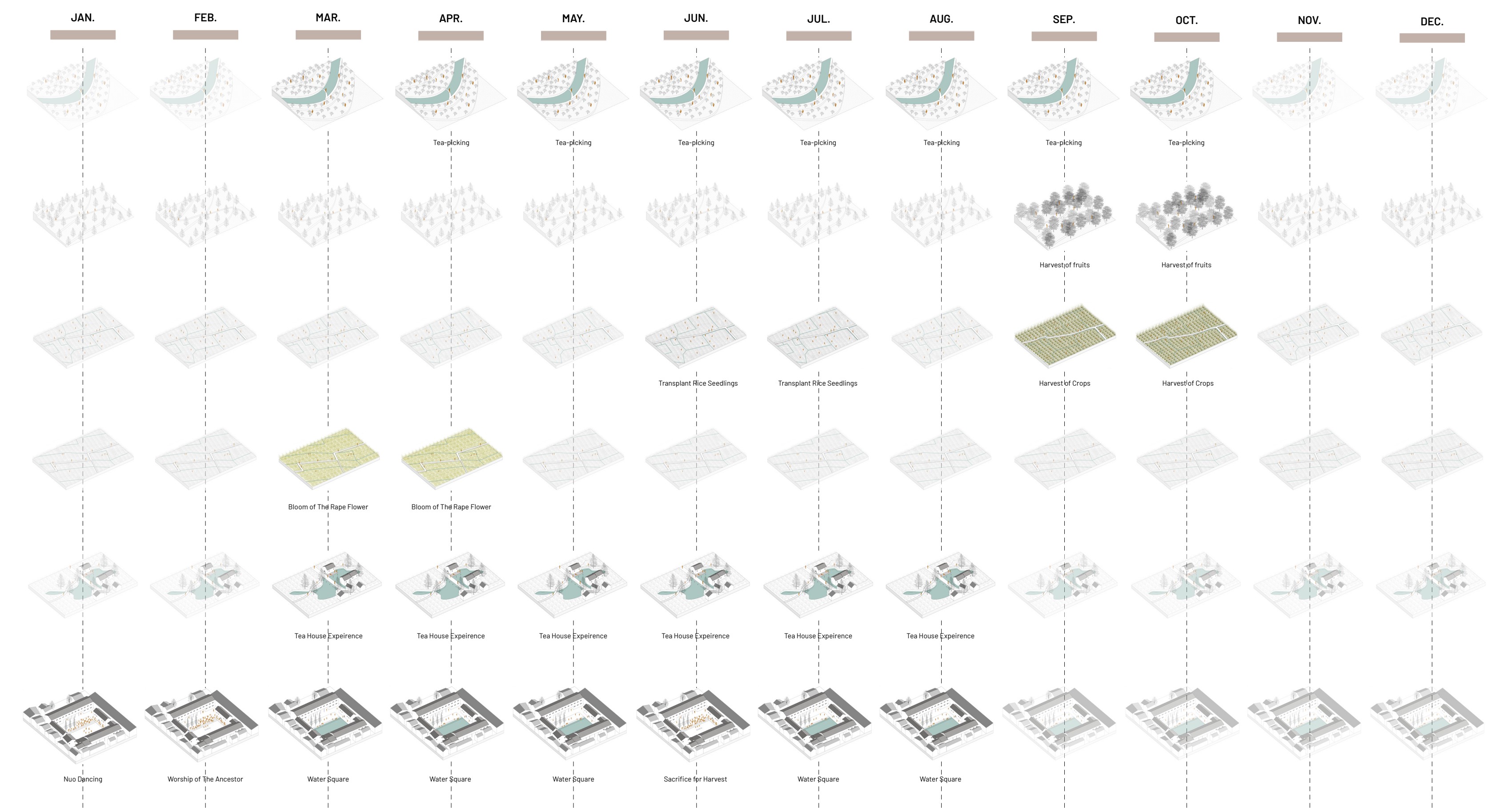
Water Activities and Events

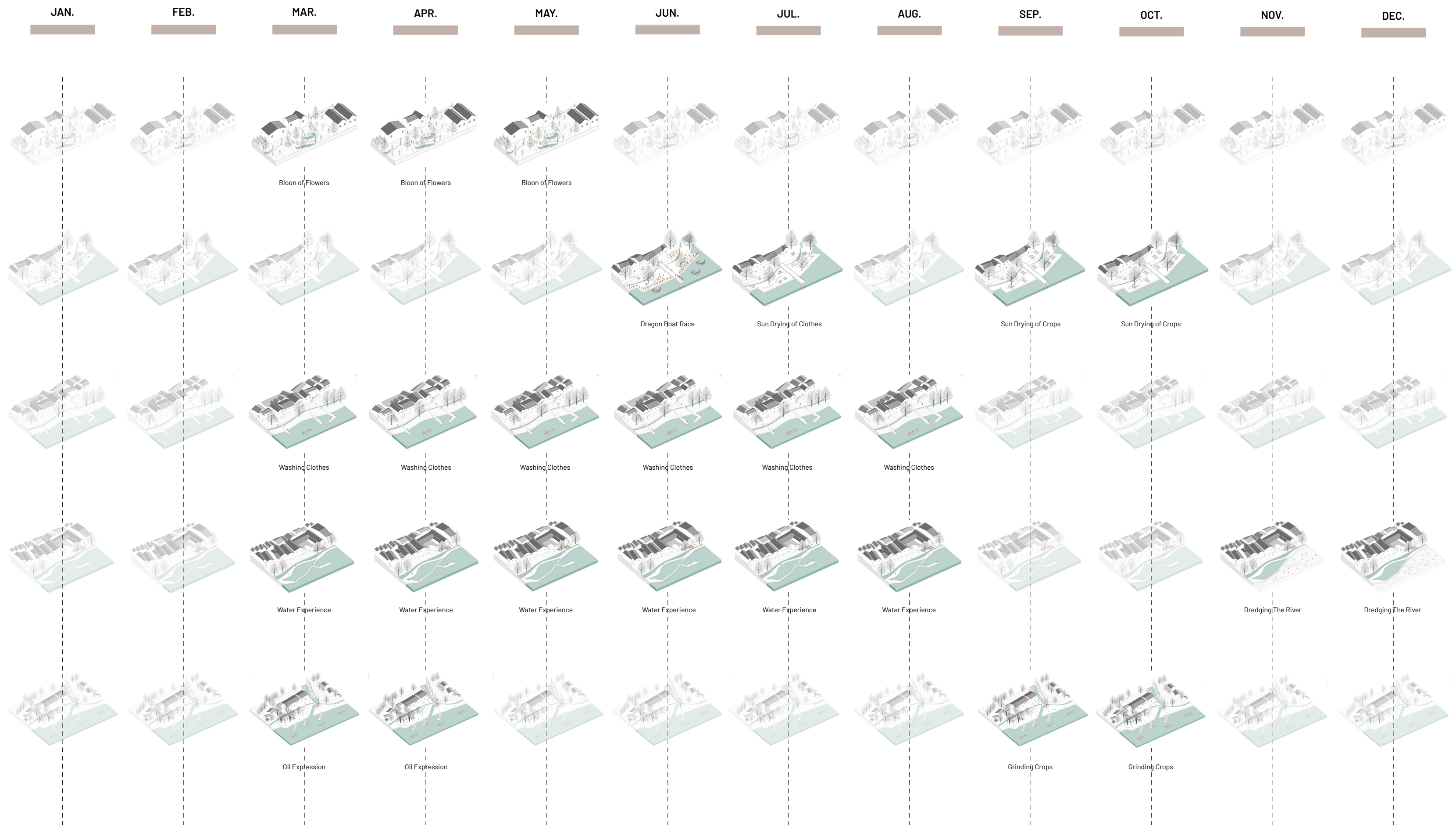


Acupunctured Attraction Spots

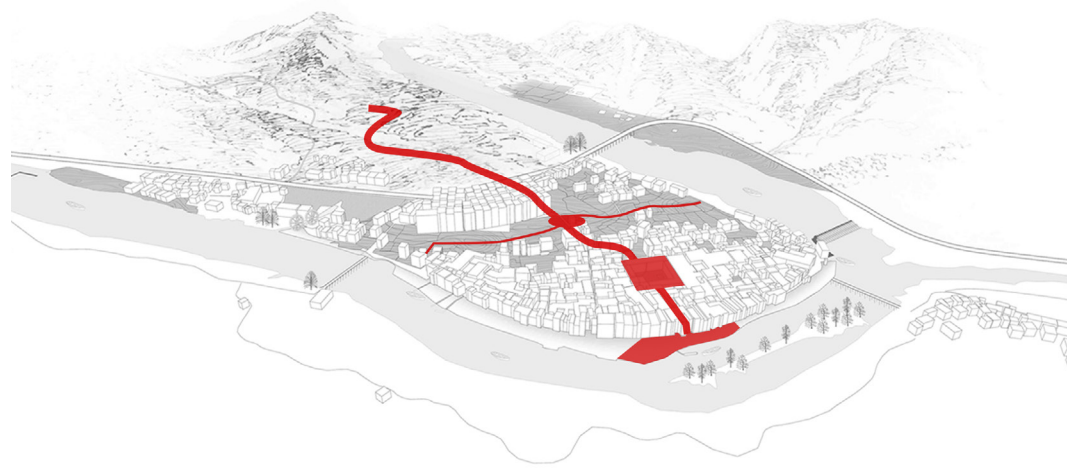


Proposed Annual Water Activities and Events





The Implementation of Master Plan in Phases



Phase1: Axes 1 as A New Trigger

The first realization of the design is the axes 1 that includes most of the spatial and cultural qualities of the village, which can be a new blood in the village. More villagers would participate in the public life here and more tourists would come here for it. They start to realize the true value of the village.



Phase2: Continuous Waterside Experience

After the completion of the axes 1, it is predicted that more people are willing to devote themselves in building up the new environment of the village, so villagers, tourists and construction team would cooperate and realize the waterside landscape.

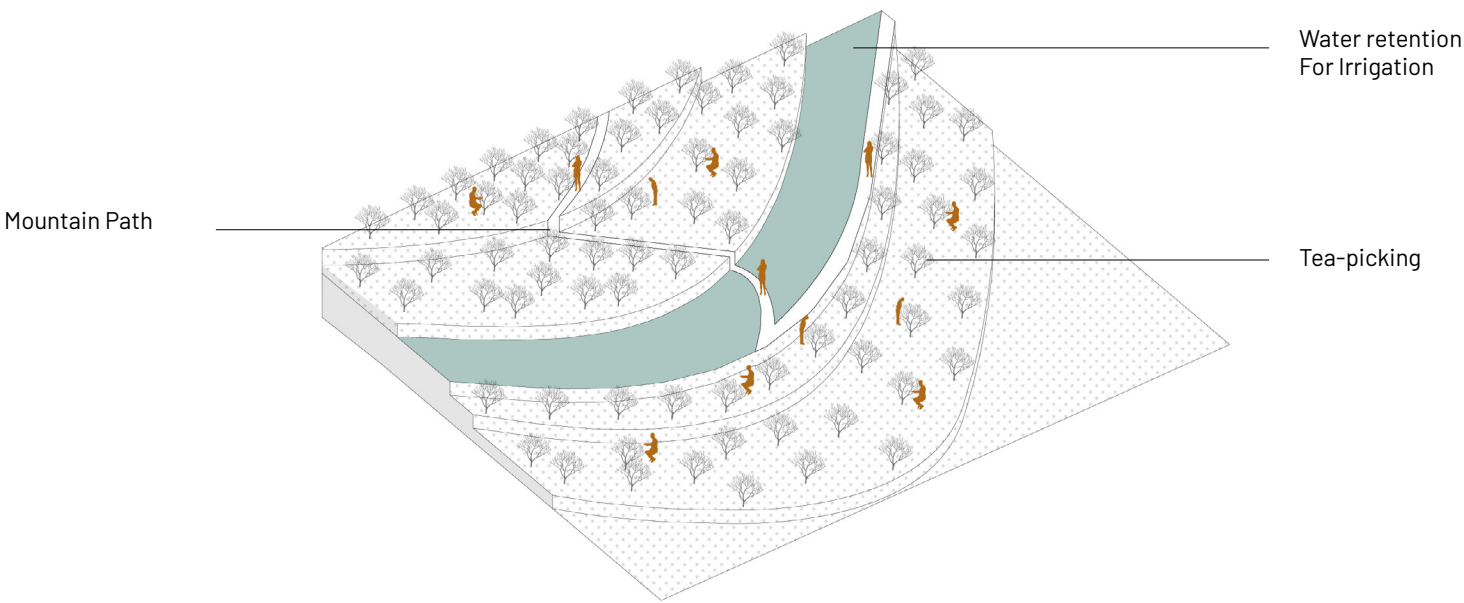


Phase3: New Development for a brighter future

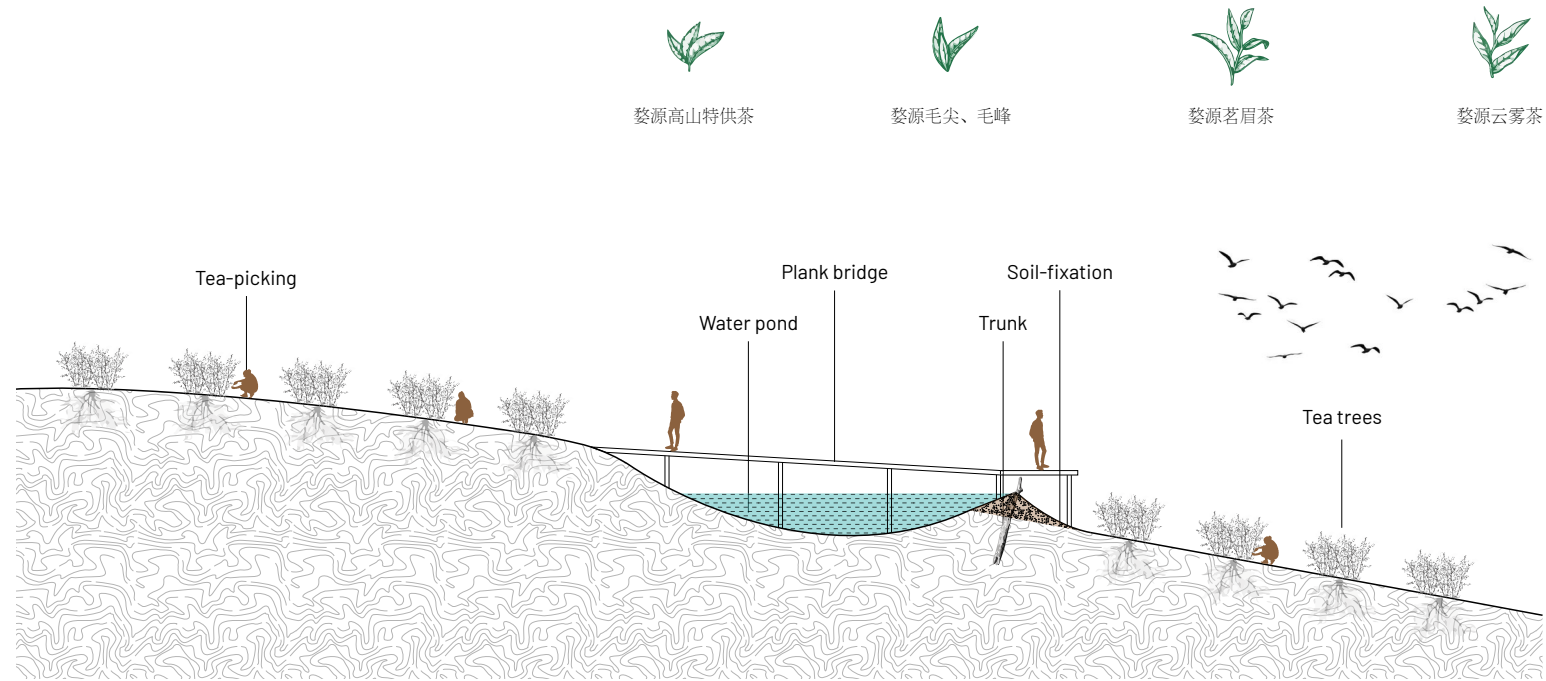
The new housing development is constructed in the phase3 due to the increasing needs for the expansion of the village. By doing this in the third phase, the connection between the old and new part of the village is gradually connected.

Intervention on The Mountain

Tea-picking Season **MAR. - OCT.**

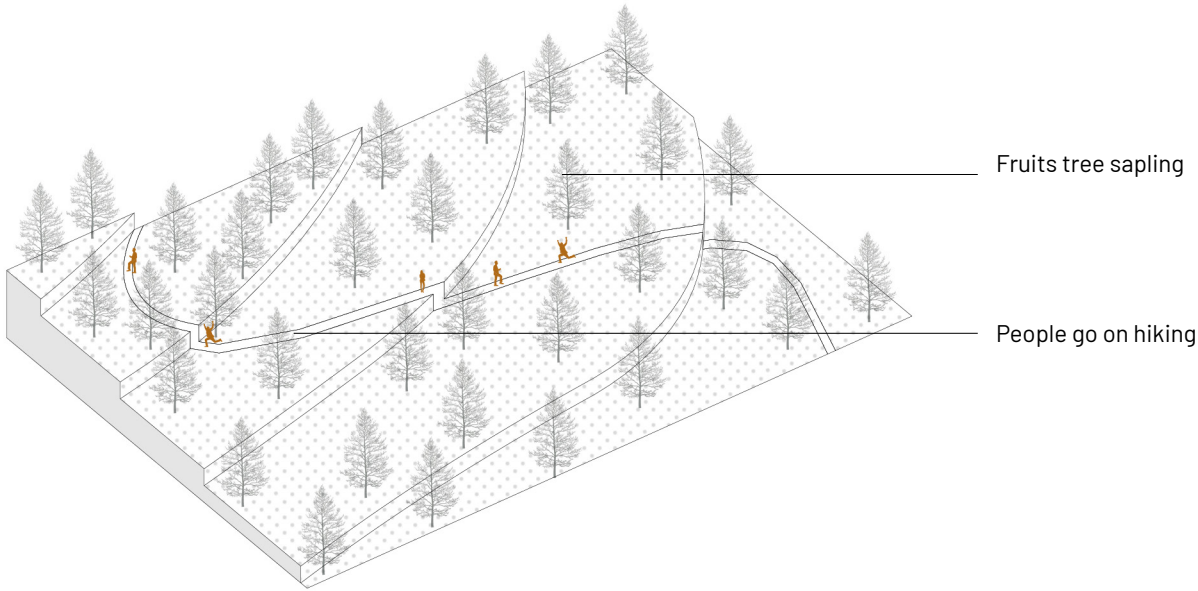
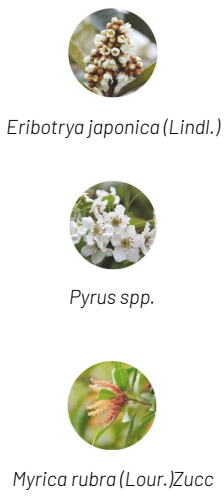


Section and Detail



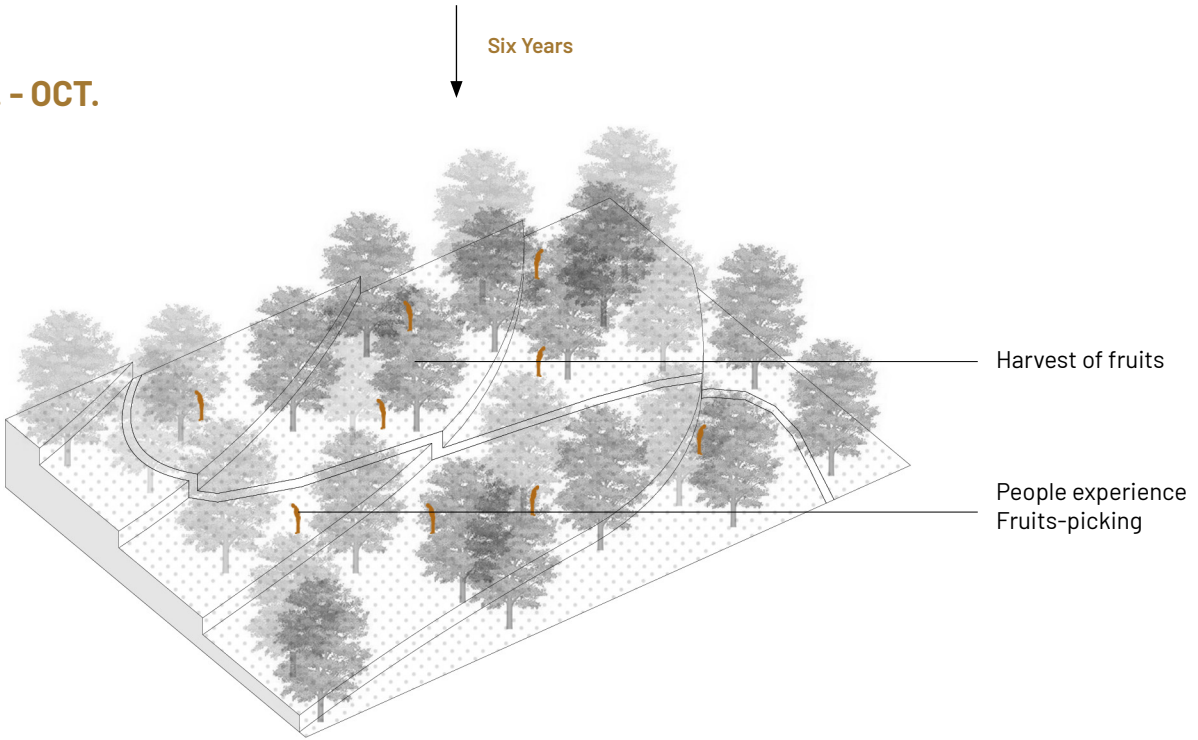
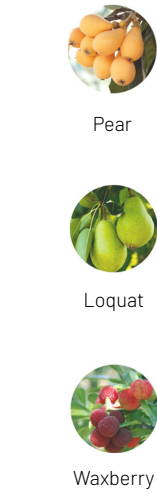
Plantation of Fruits Trees **At The Beginning**

Bloom season



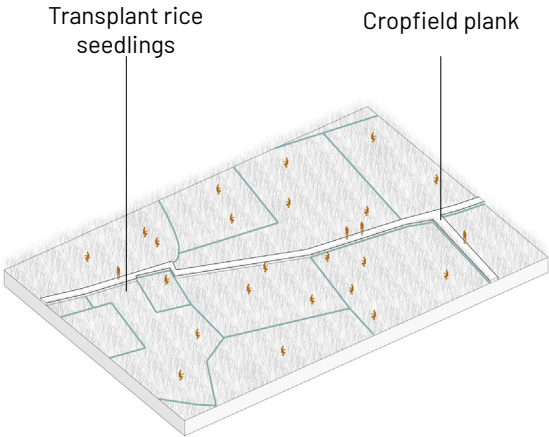
Harvest of Fruits **SEP. - OCT.**

Harvest season

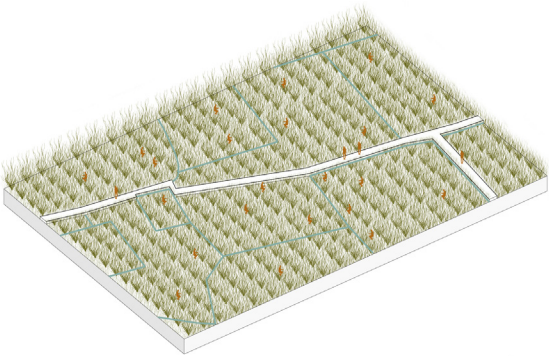


Intervention on The Cropfield

Transplant Rice Seedlings **JUN. - JUL.**

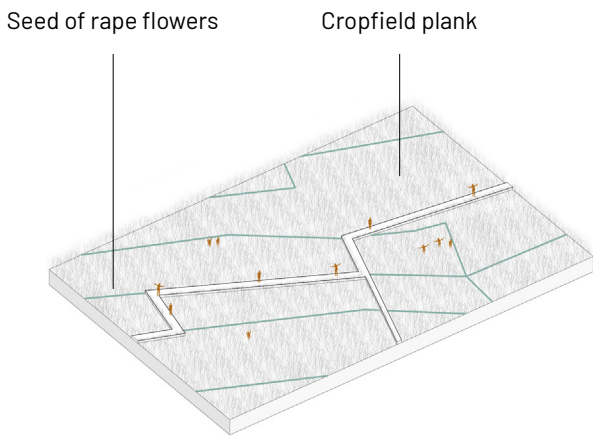


Harvest of The Crops **SEP. - OCT.**

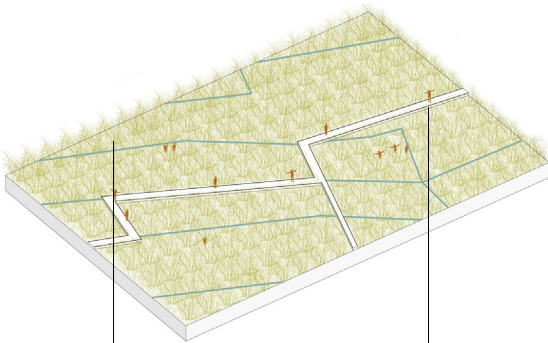


Transplant Rice Seedlings Match

Seedling of The Rape Flower

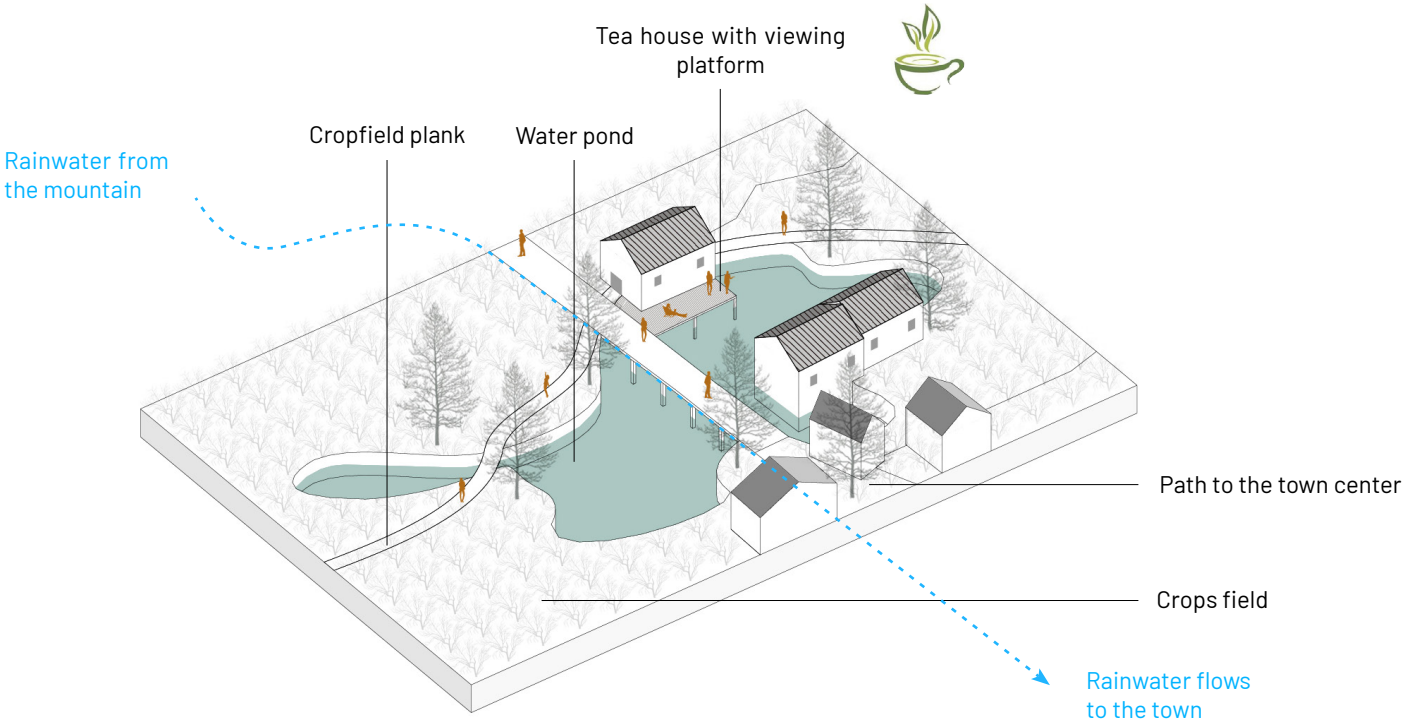


Bloom of The Rape Flower **MAR. -**

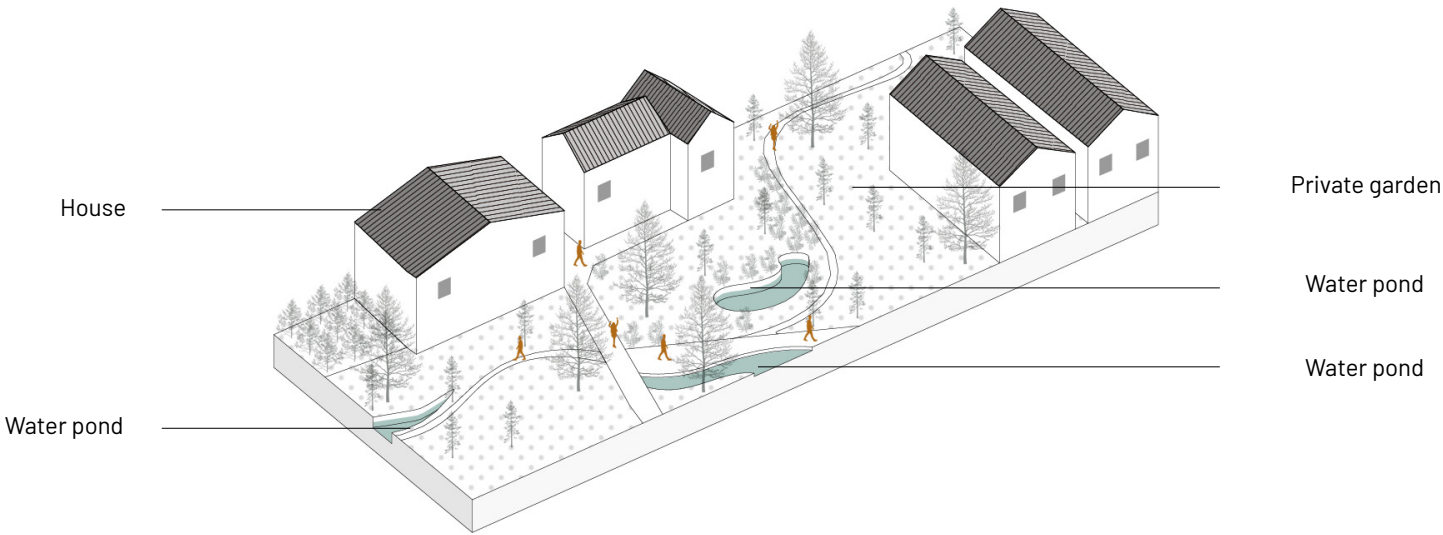


Rape Flower Sea

Tea Houses in The Cropfield **MAR. - AUG.**

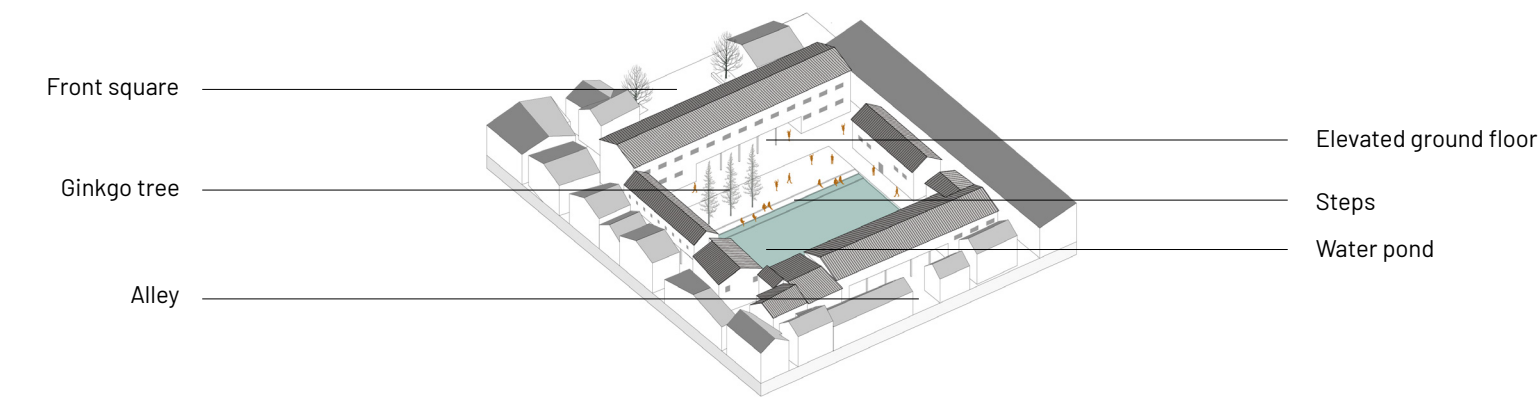


Bloom of Private Garden **MAR. - MAY.**

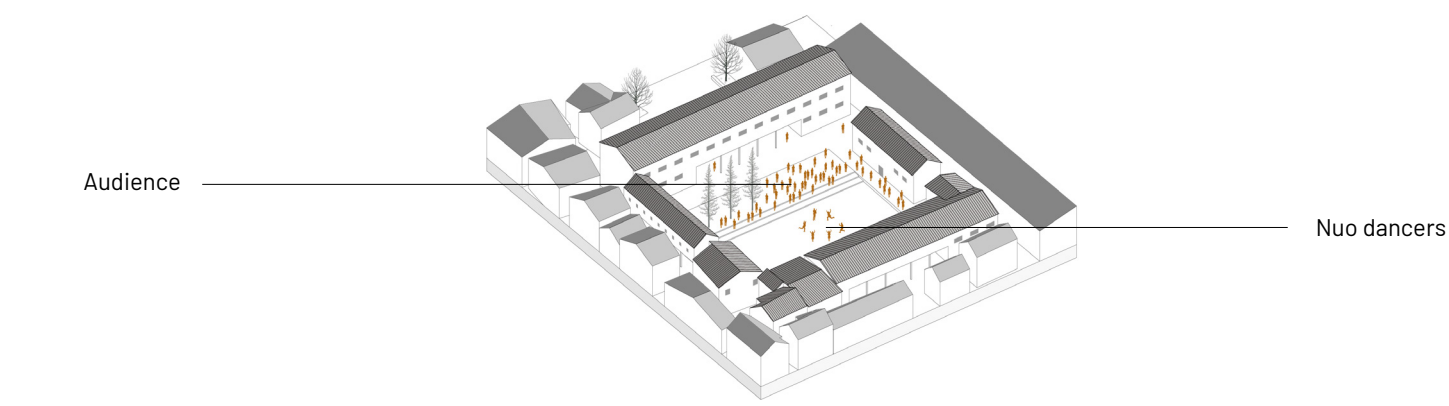


Intervention on The Town Center

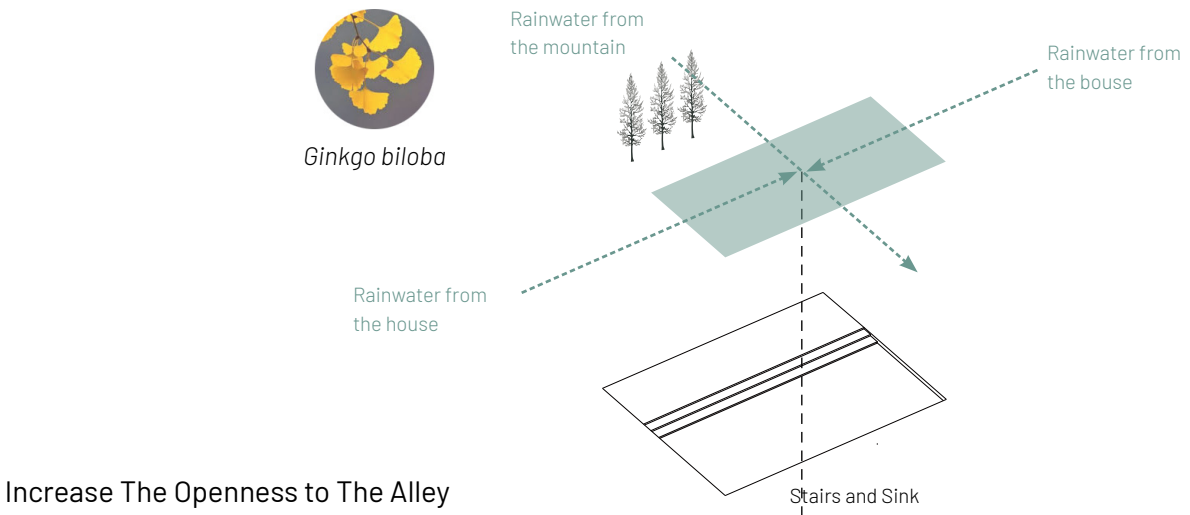
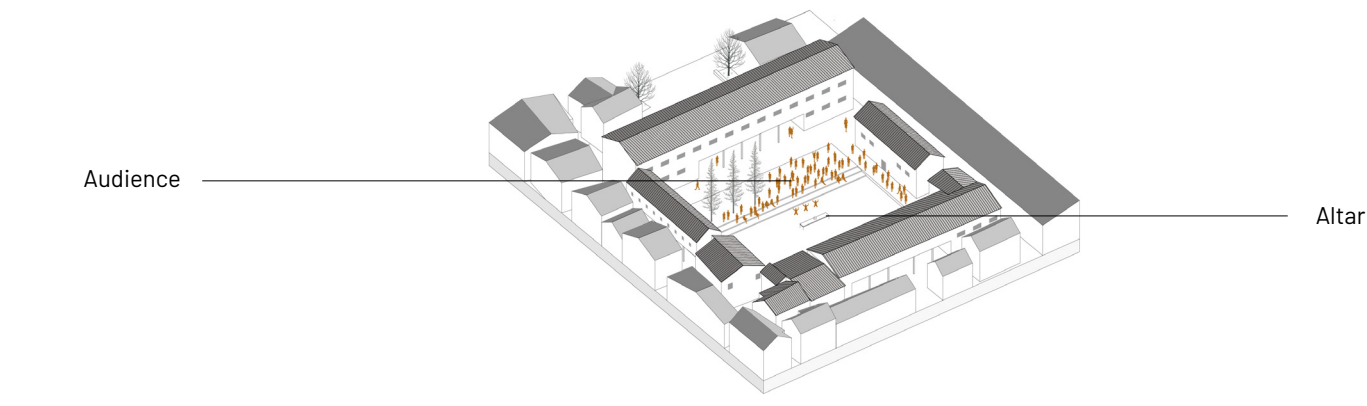
Sqaure Water Experience **MAR. - AUG.**



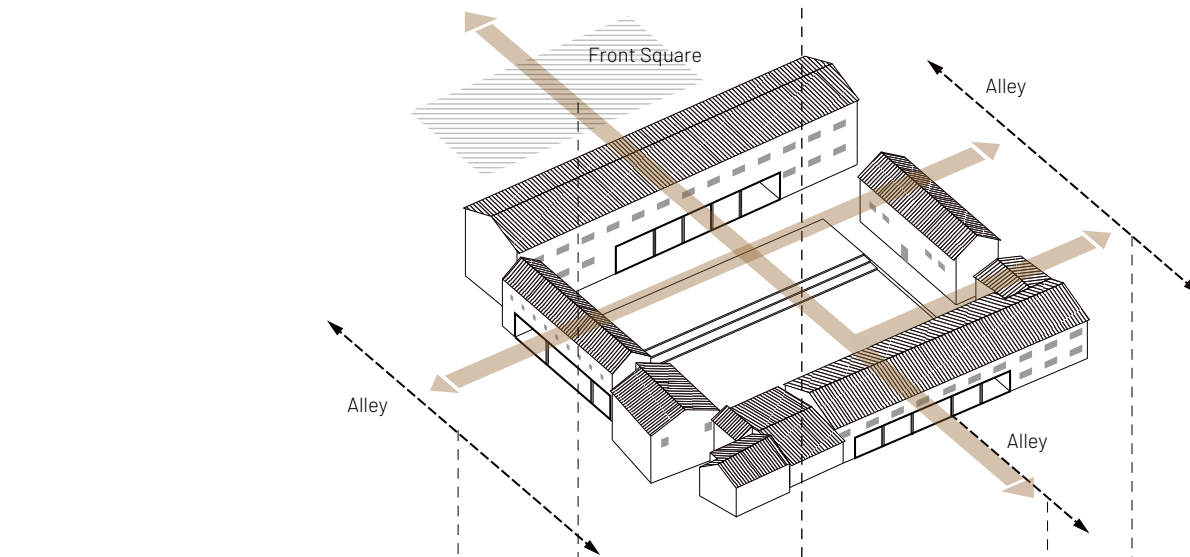
Nuo Dancing **JAN.**



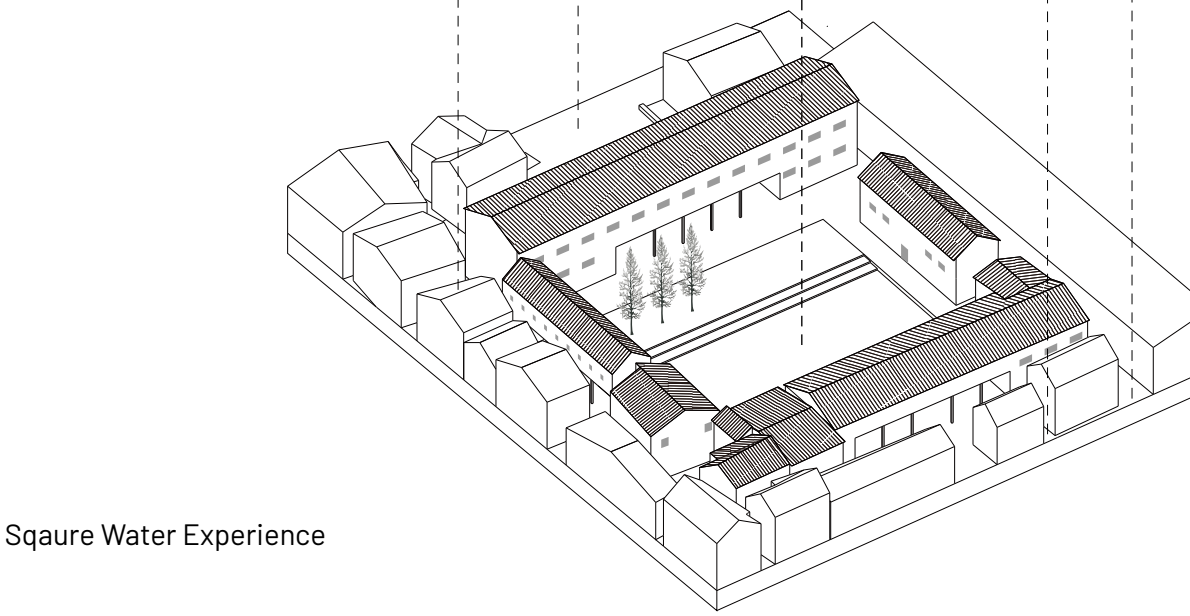
Worship to The Ancestor **FEB.**
Sacrifice for Harvest **JUN.**



Increase The Openness to The Alley



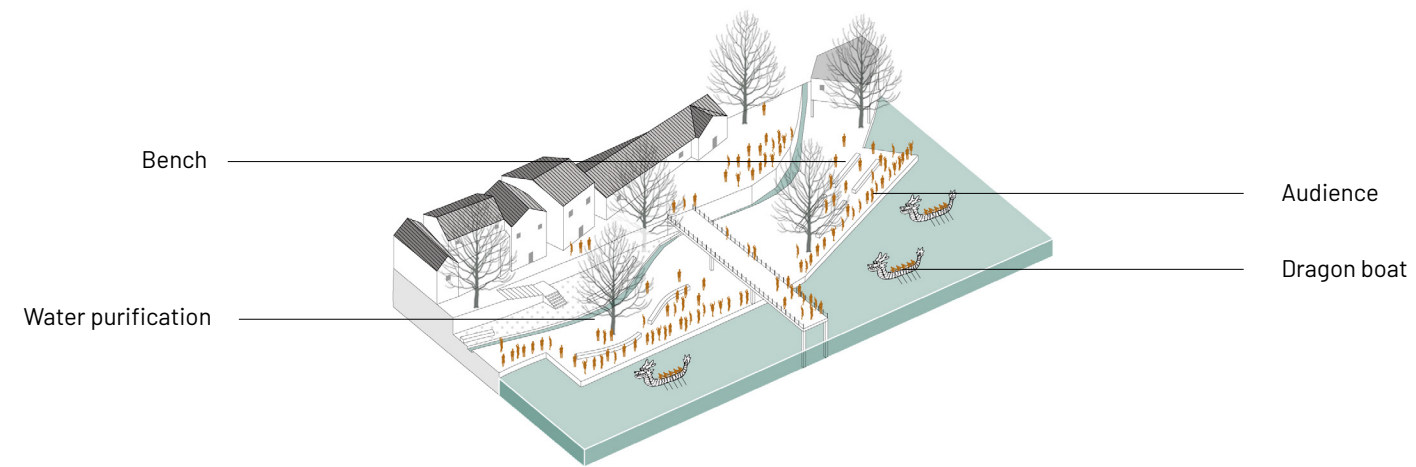
Hongxing Square A New Village Center



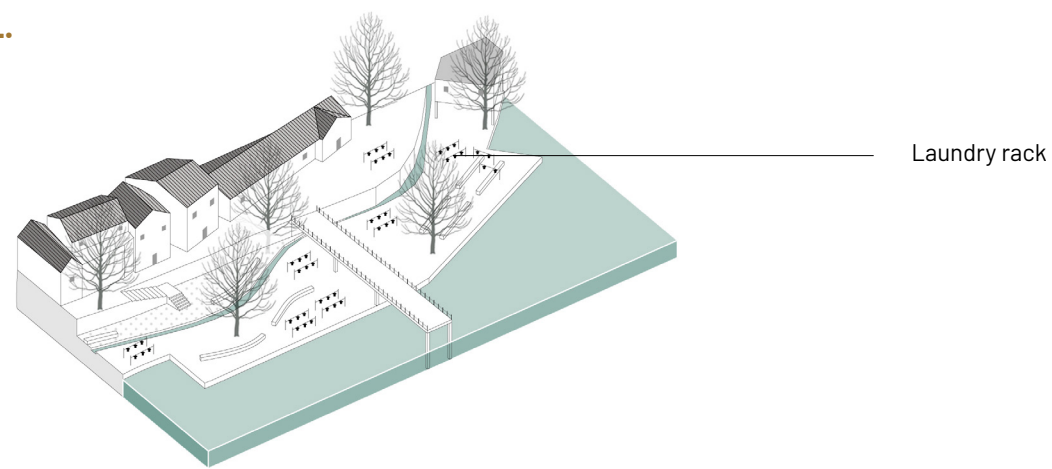
Sqaure Water Experience

Intervention on The Riverside

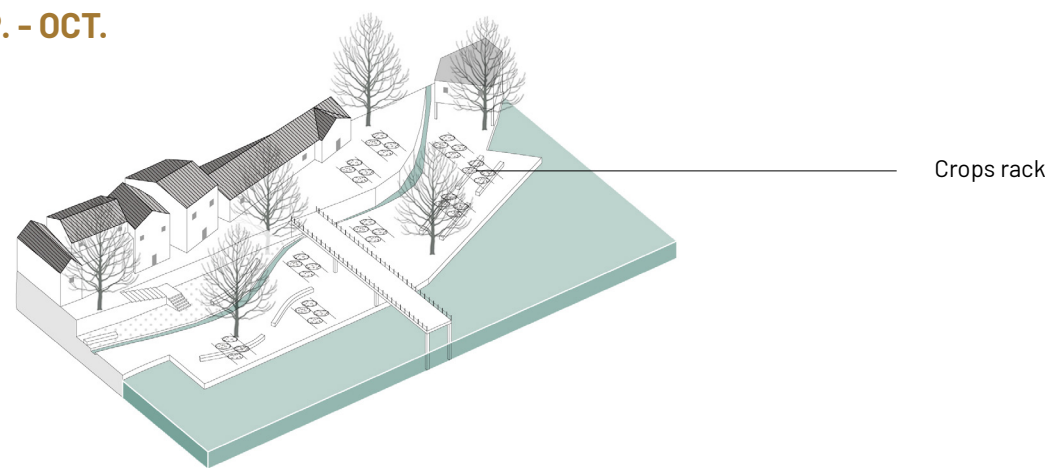
Dragon Boat Race **JUN.**



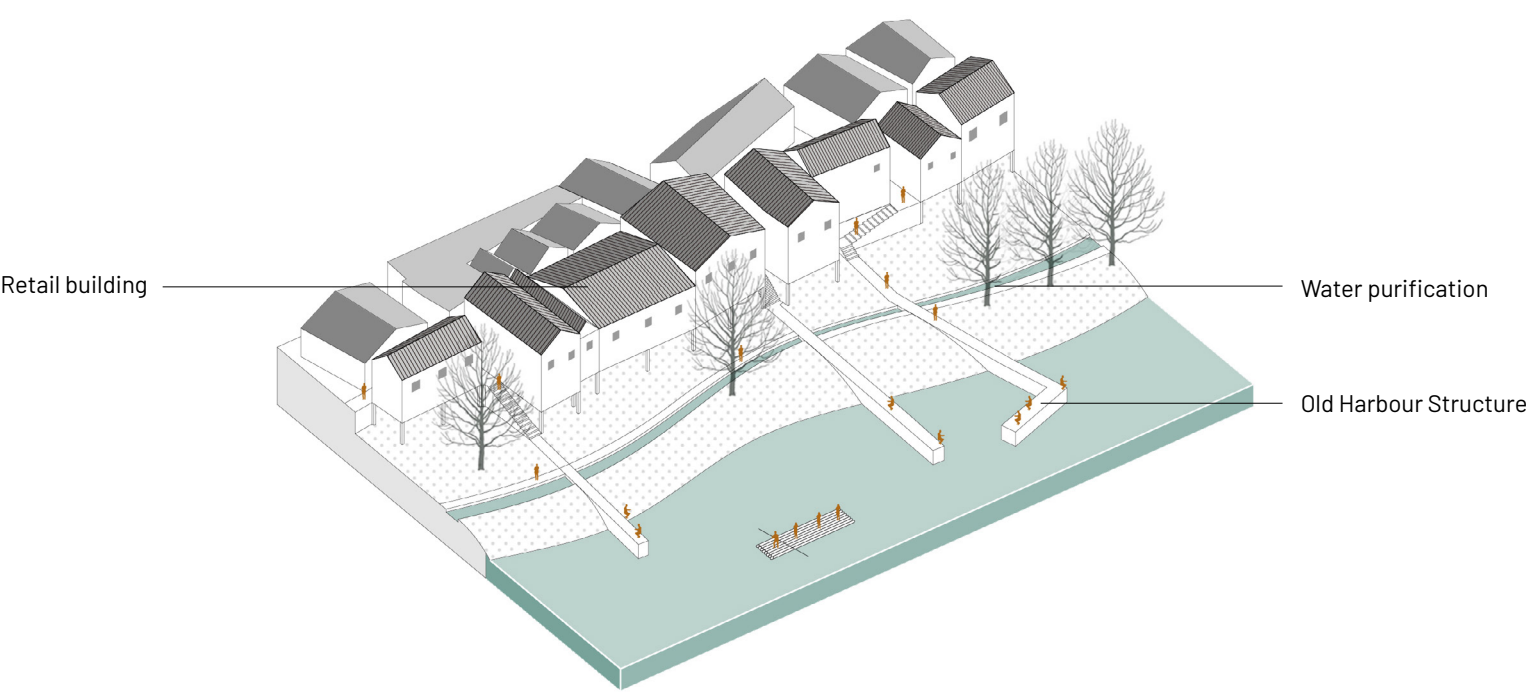
Sun Drying of Clothes **JUL.**



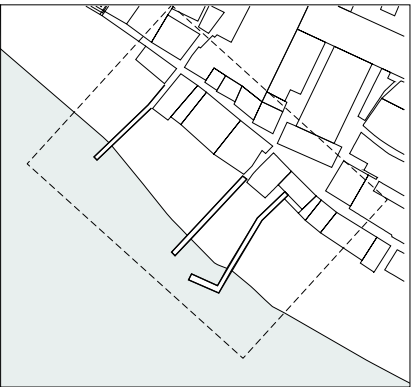
Sun Drying of Crops **SEP. - OCT.**



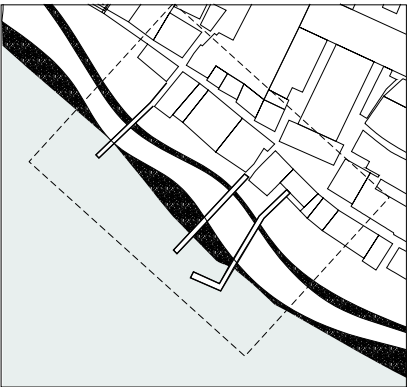
Washing Clothes and Water Experience **MAR. -**



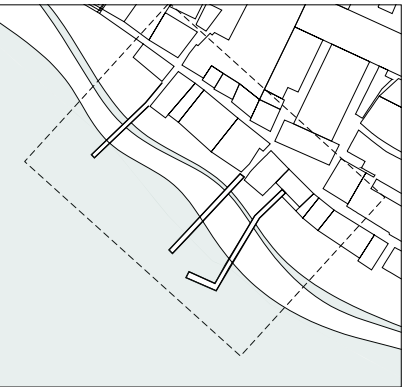
Generate Idea



Perserve the existing
harbour strcture



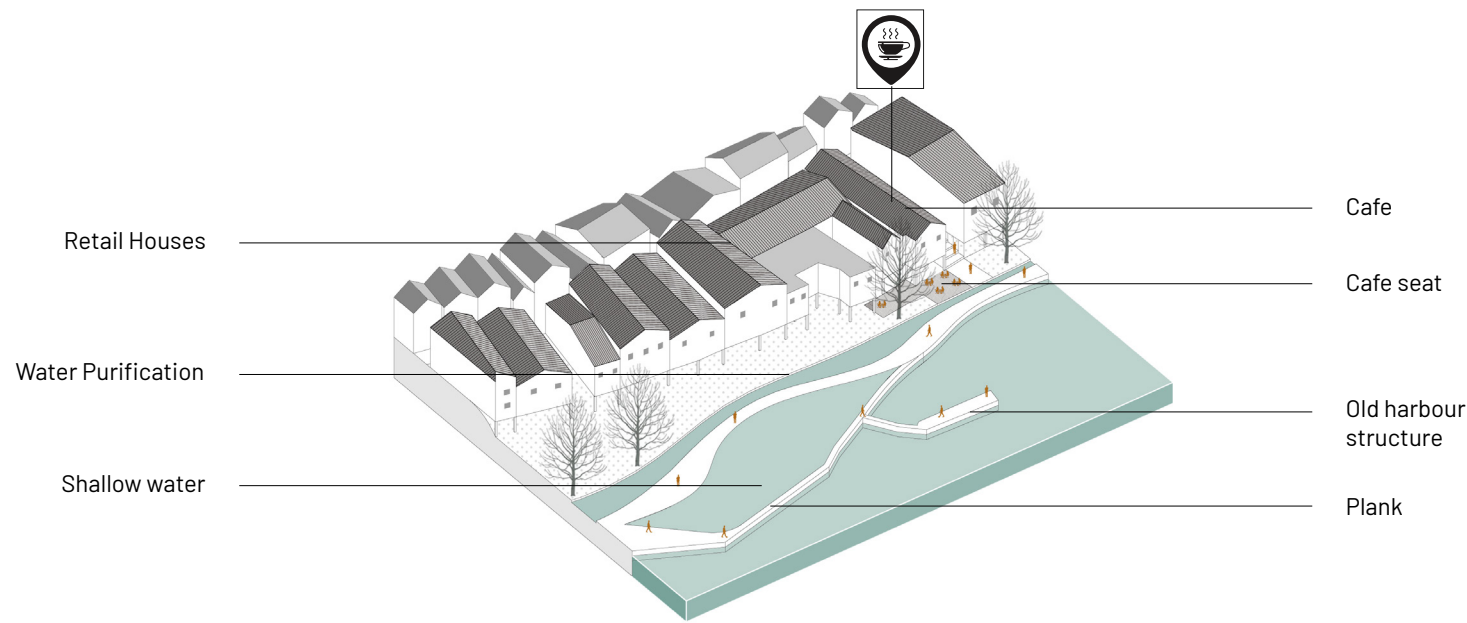
Dredge the river and dig
out a brook



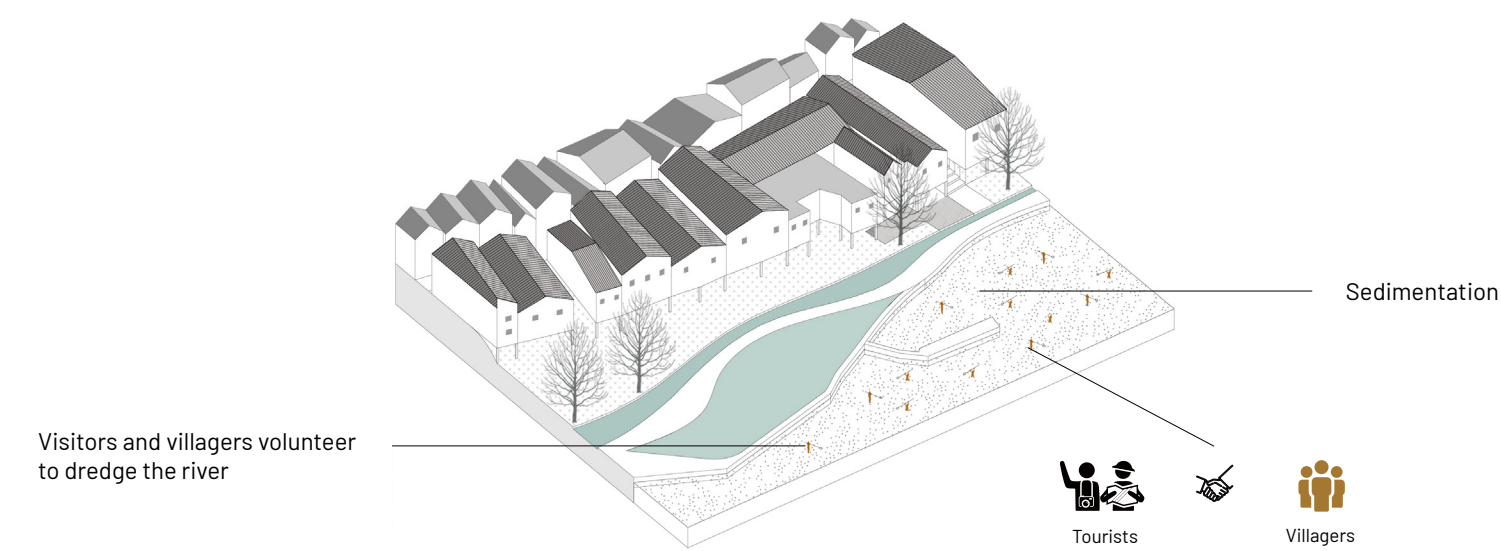
Creat Public space

Intervention on The Riverside

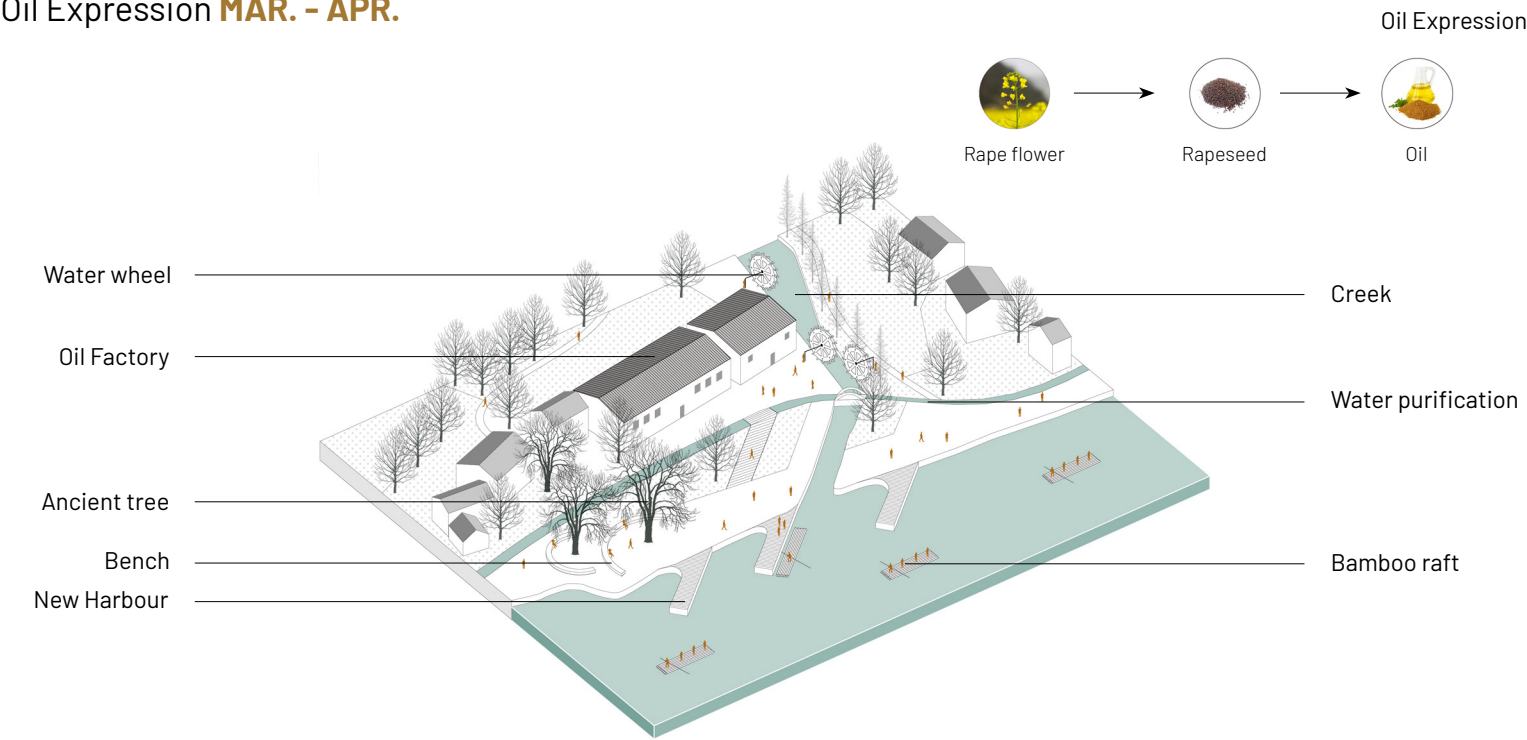
Dragon Boat Race JUN.



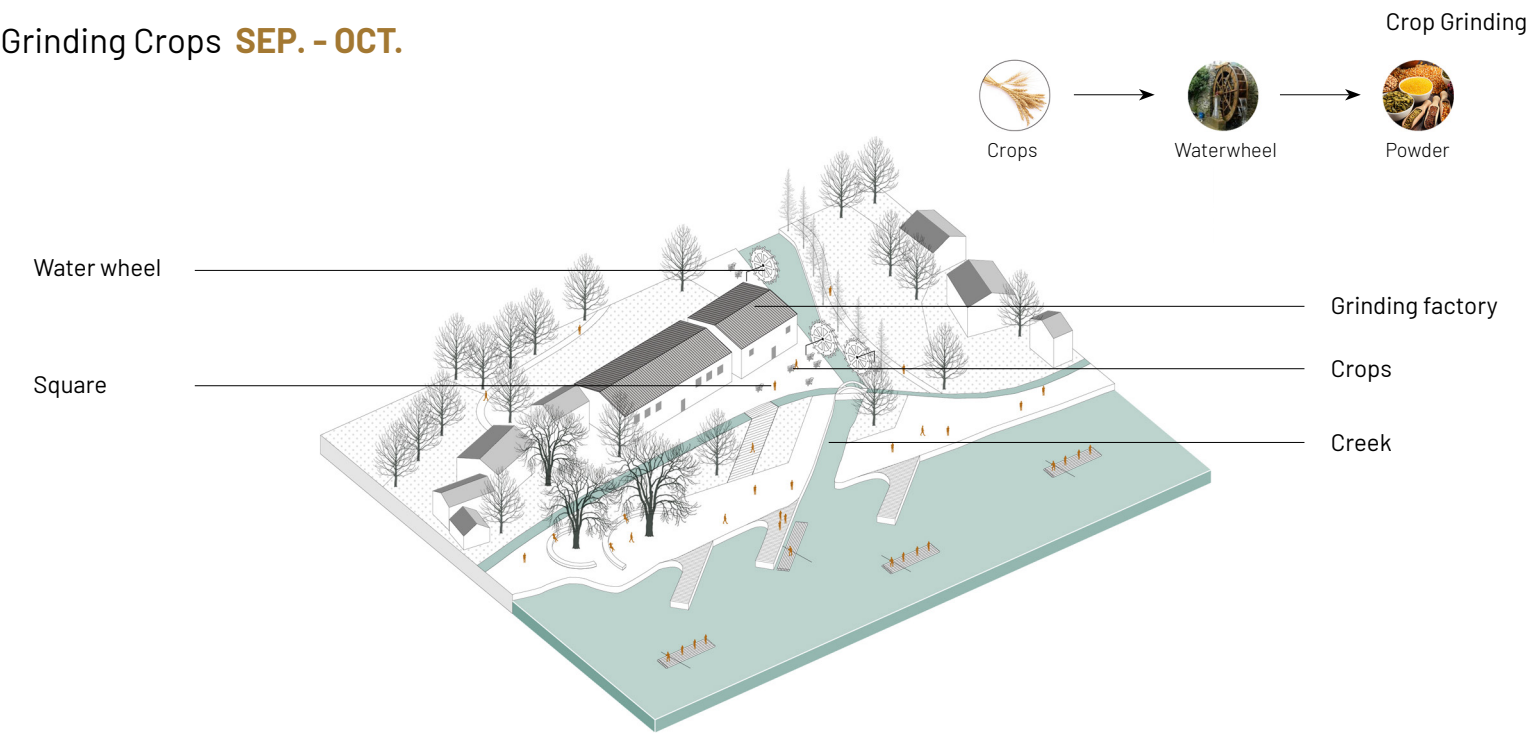
Dredge The River NOV. - DEC.



Oil Expression MAR. - APR.

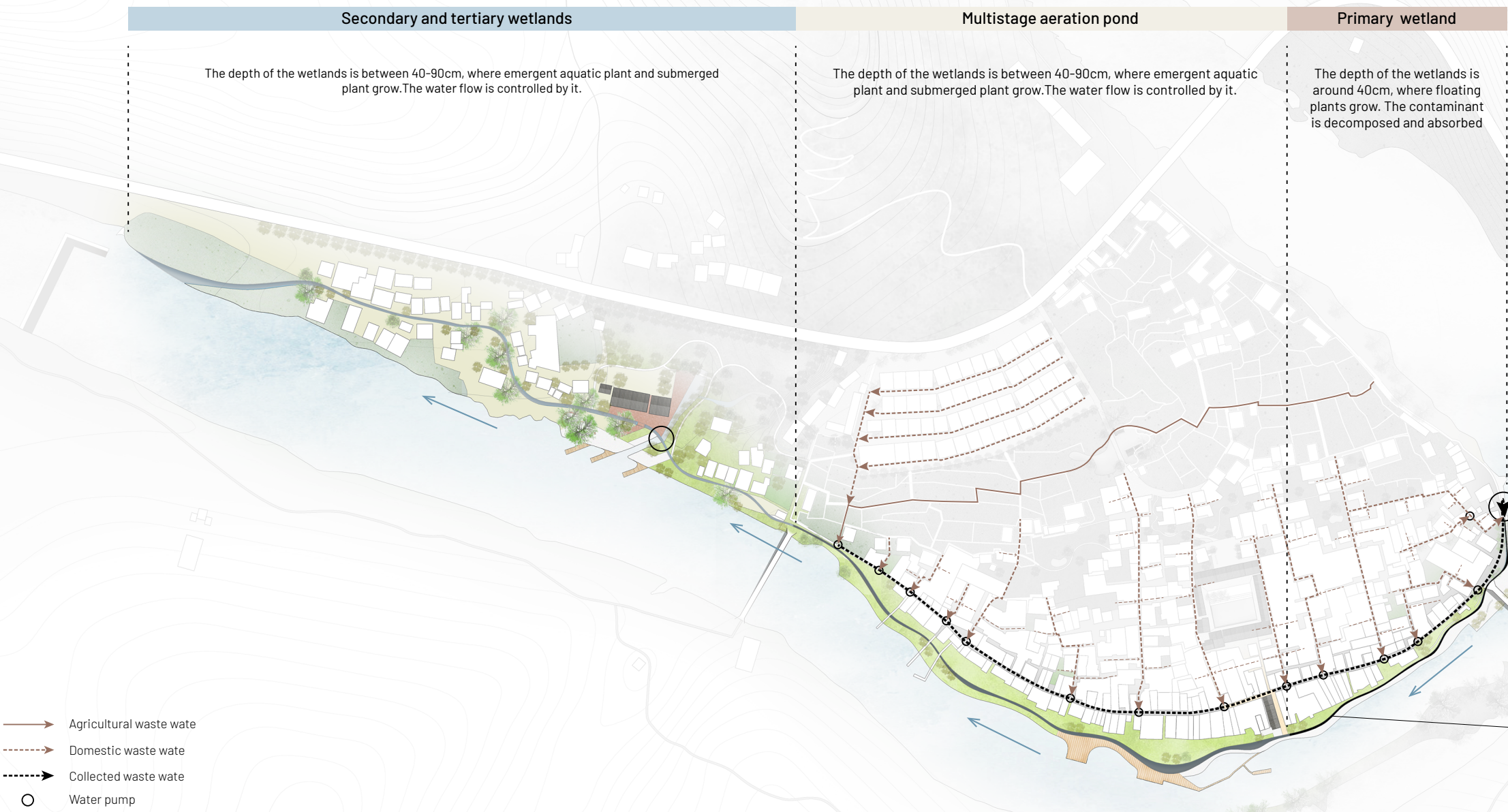
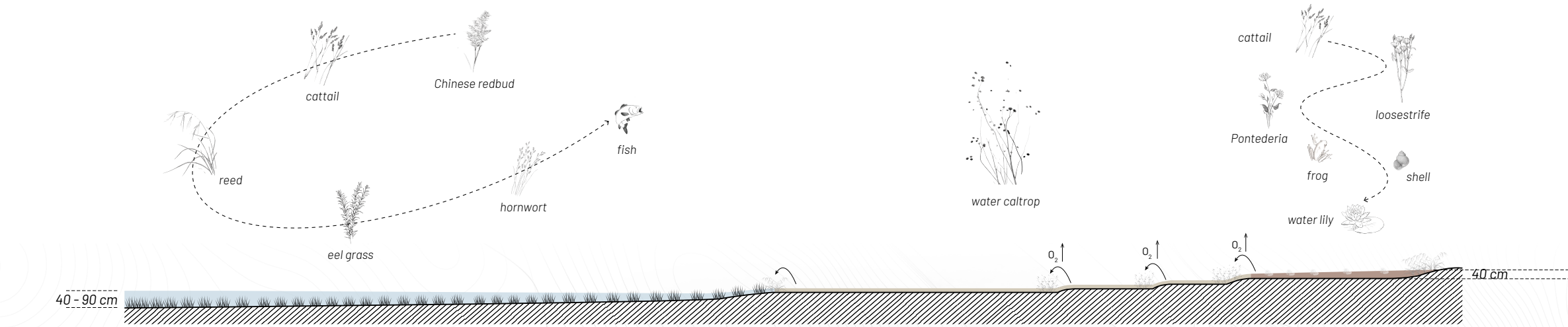


Grinding Crops SEP. - OCT.



Detailed Design

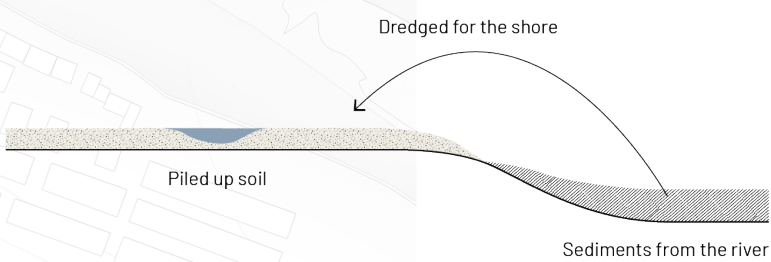
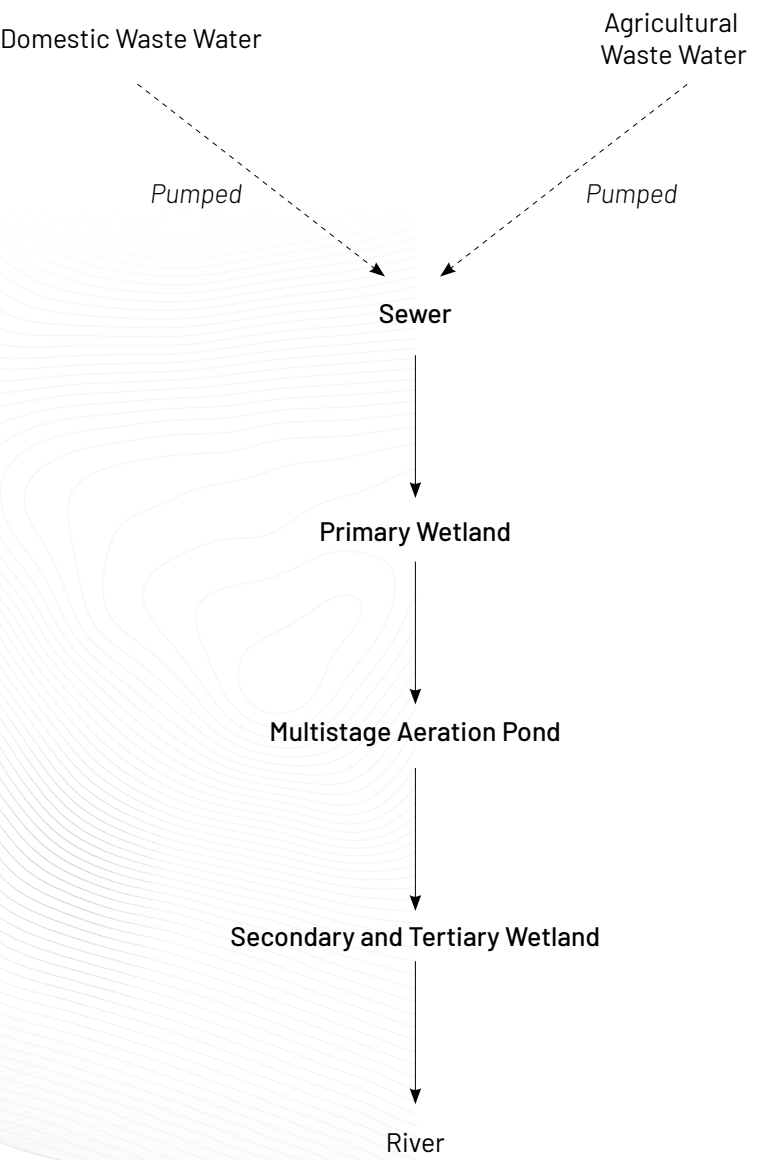
Water Purification System



Water Purification System



Proposed Annual Water Activities and Events





Little Brick Block



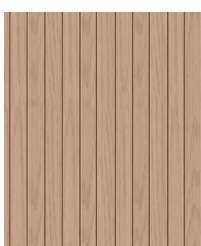
Slates



Quartzite



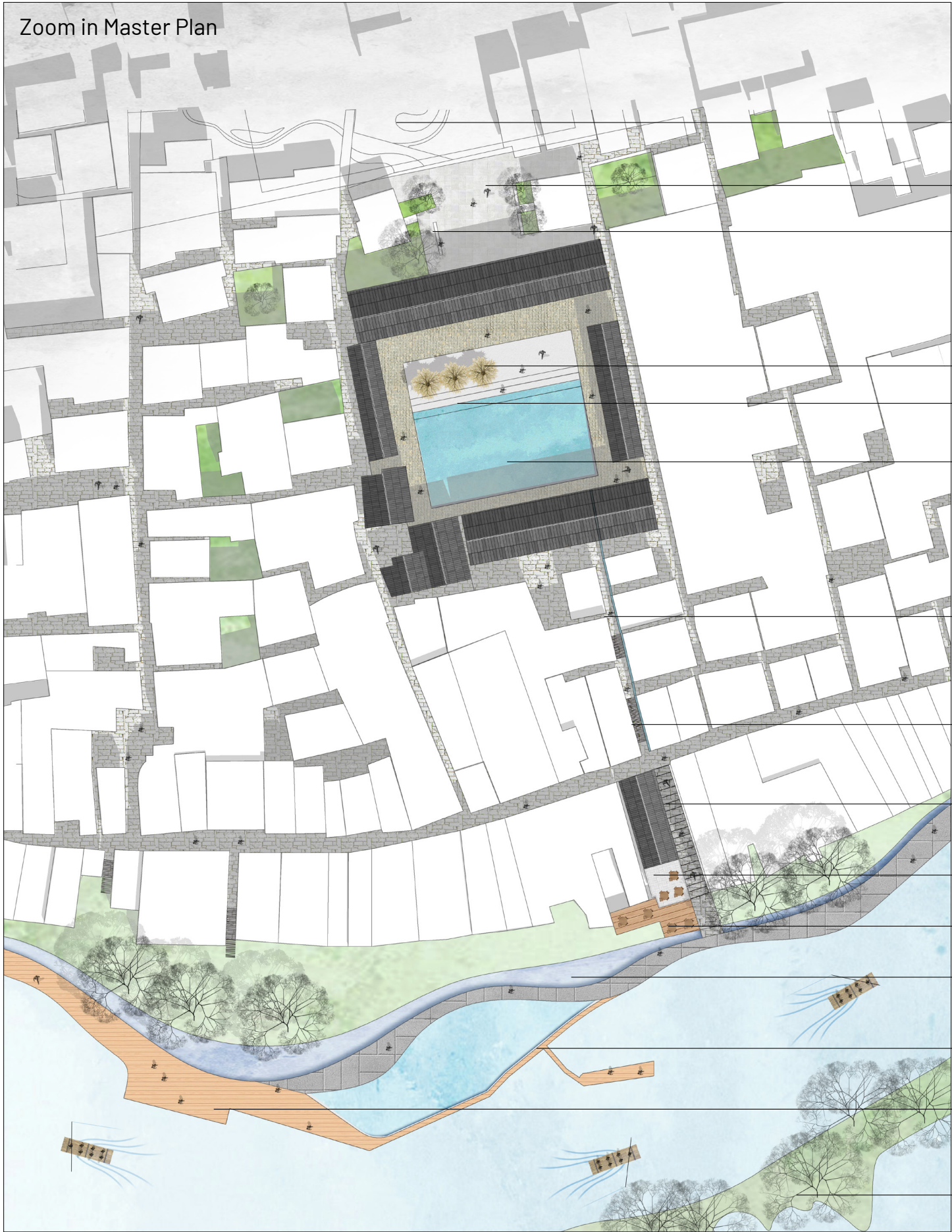
Brick Block



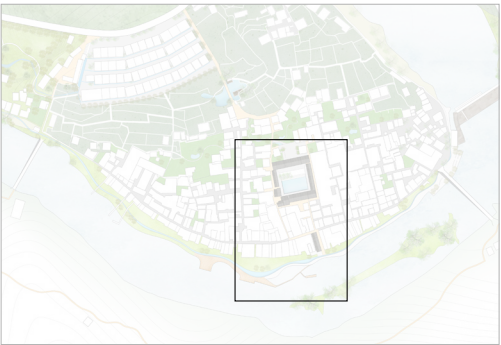
Wooden Plank



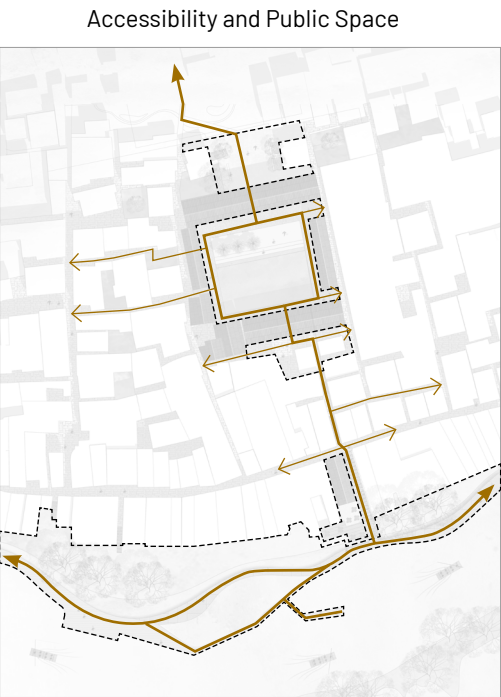
Concrete



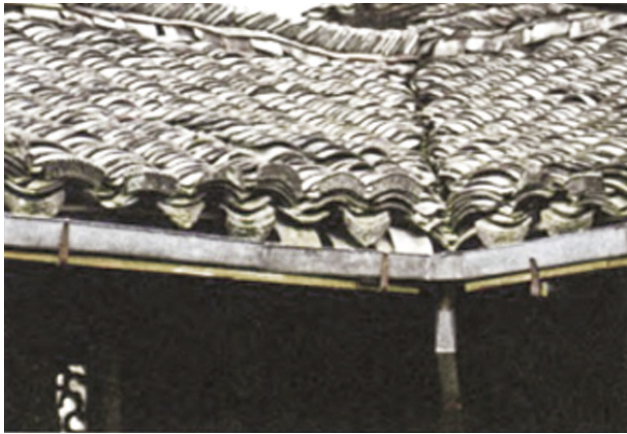
LEGEND	
Vegetable Garden	
Front Square	
Bench	
<i>Ginkgo biloba</i>	
Steps	
Water Pool	
Highlighted Alley	
Steps	
Steps	
Cafe Platform	
Cafe Platform	
Water Purification	
Wooden Plank	
Wooden Platform	
Green Island	



Zoom in frame

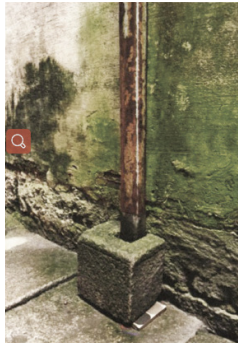


05.4 - Detail Design



1. 青瓦屋檐 Tile Eave

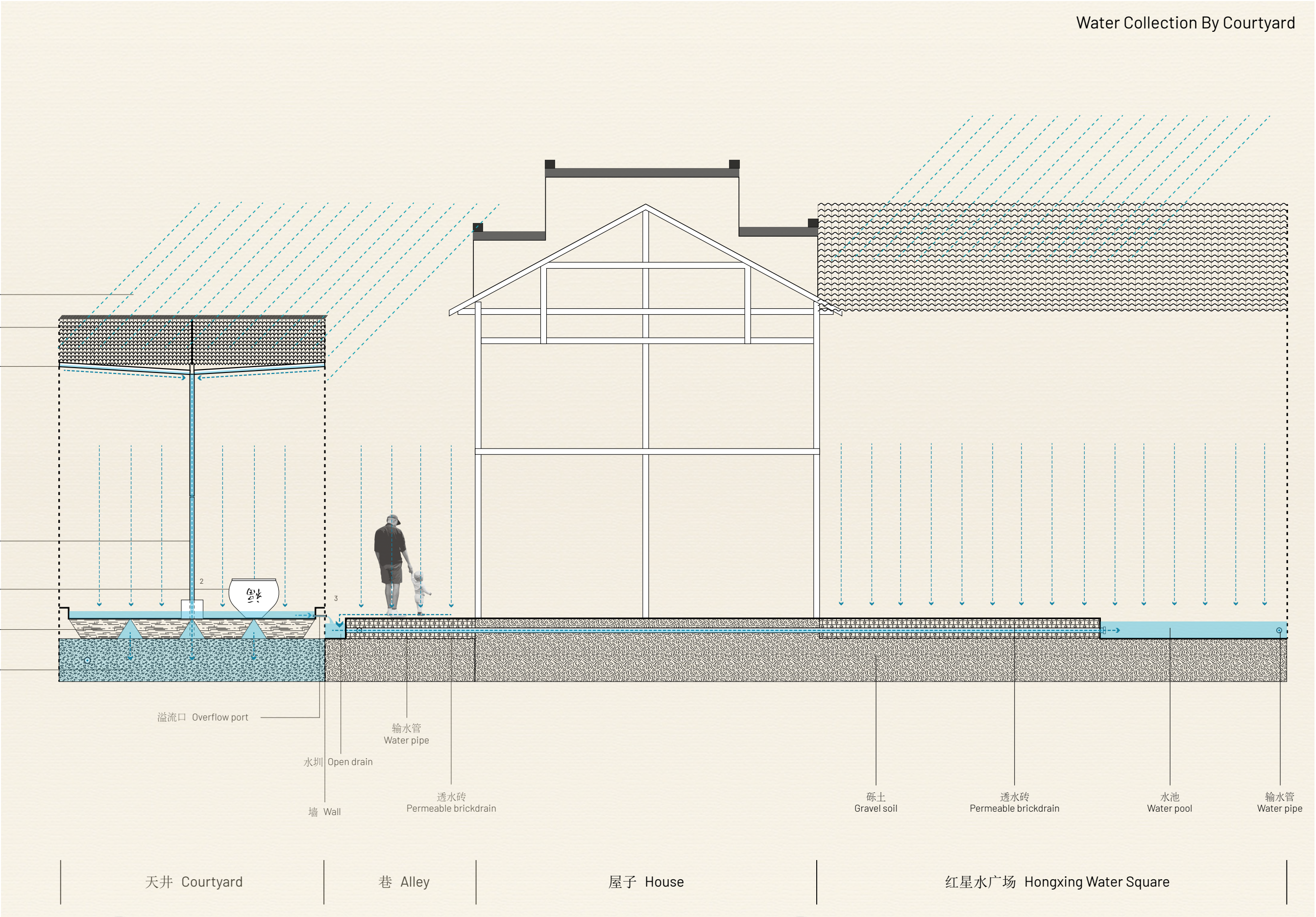
- 雨露 Rainwater
- 天井 Courtyard
- 水枳上水口 Upper water pipe
- 水枳下水口 Down water pipe
- 集水缸 Water vat
- 梯形条石 Trapezoidal stone
- 砂土，贝壳碎 Sand, broken shells



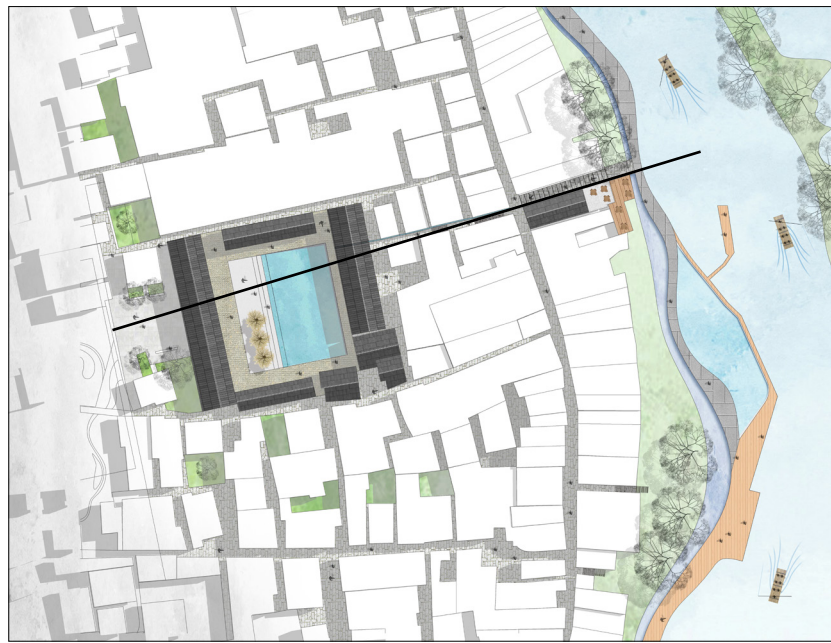
2. 水枳下水口 water pipe



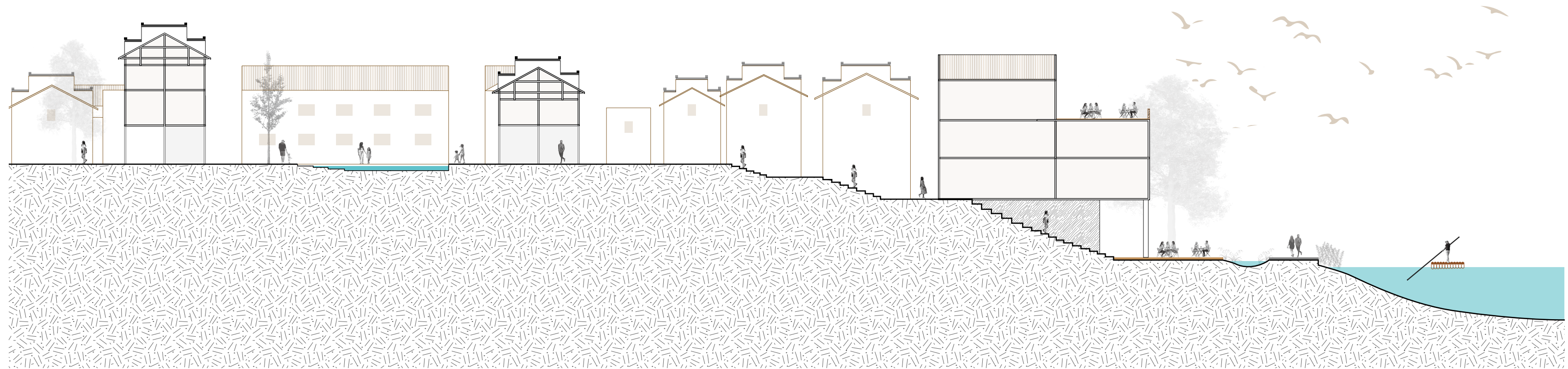
3. 溢流口 Overflow port



A Continuous Water Experience



Section



Hongxing Water Square



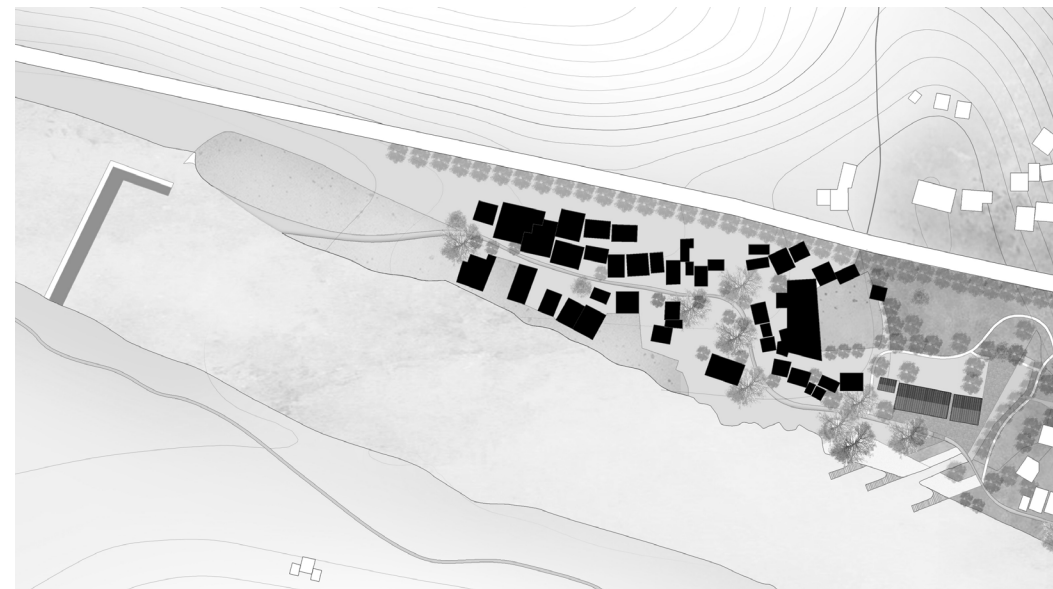
Hongxing Water Square - Nuo Dancing



05.4 - Detail Design

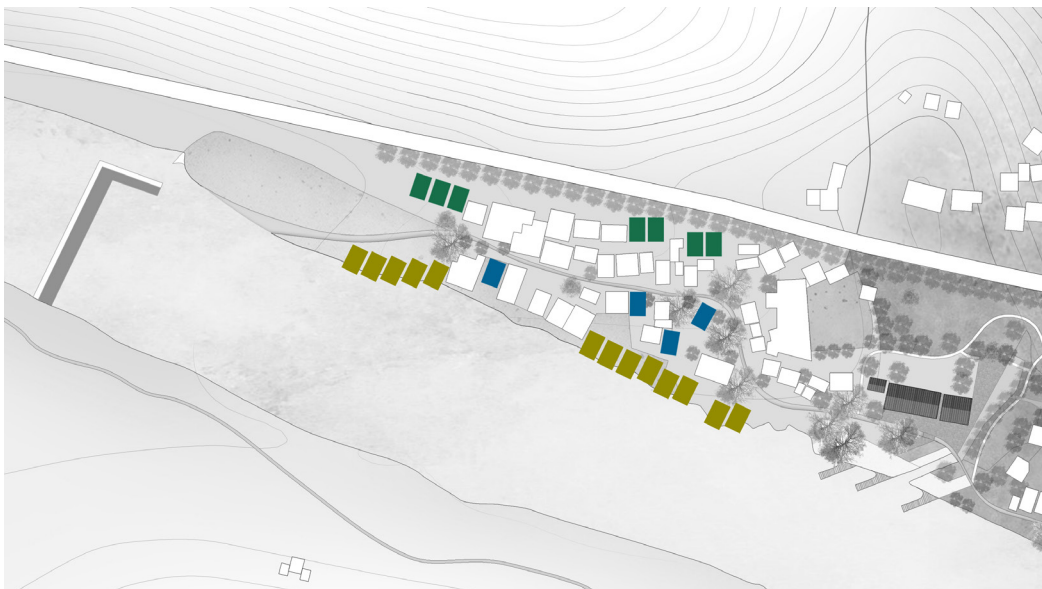
New Housing and Tourism Development

Accessibility and Public Space



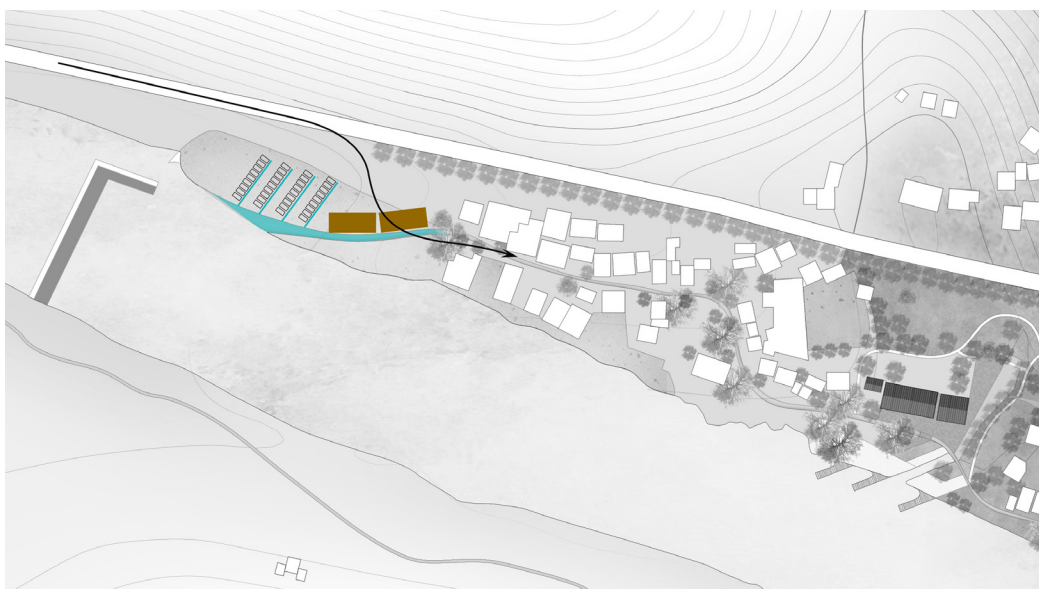
The existing housing pattern in the new expansion area is fragemental, With the introduction of new water purification stream, The Fragments are binded.

Accessibility and Public Space



With the increasing needs for new housing development, The new expansion site is an ideal area to put new housing projects. There are three building typologies based on where they were placed in this area. The are riverside housing, Forest housing and streamside housing.

Accessibility and Public Space



Since the existing visitor center and parking lot are replaced by the green space. New parking lot will be placed here in the mouth of the stream. And the visitor center will positioned here as well.

Reference of The Image of New Housing Typology

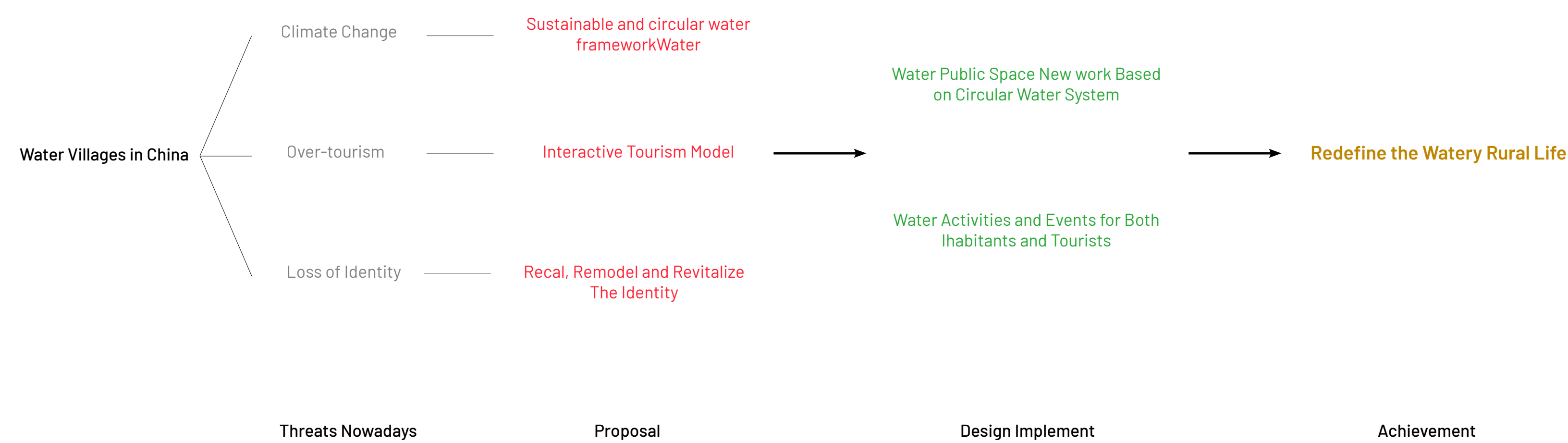


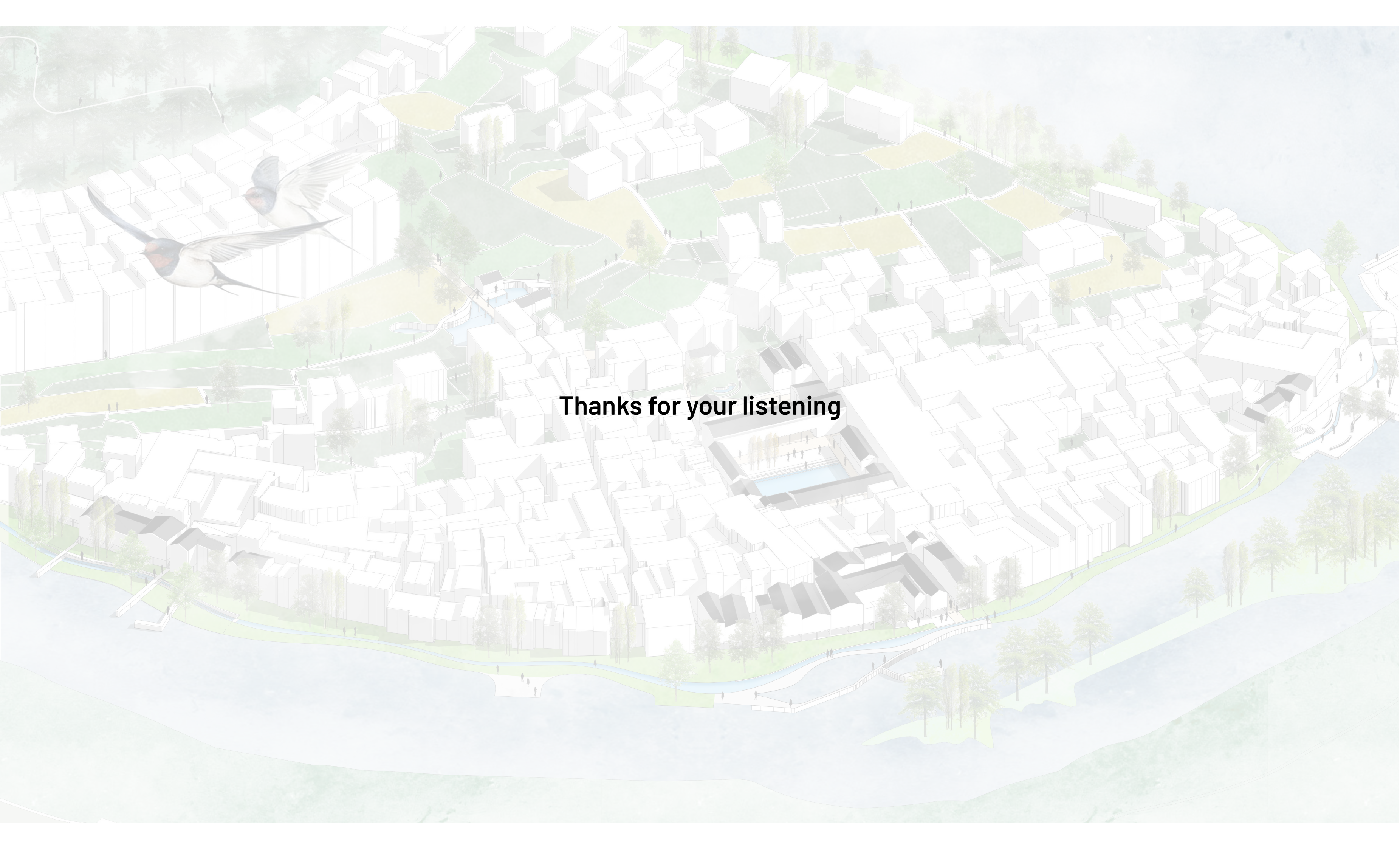


Reflection

Research Question

How to balance the **scenic and circular qualities of the waterscape** of Wuyuan district for inhabitants and tourists in the future?





Thanks for your listening