



Food and Agriculture
Organization of the
United Nations

Globally Important
**AGRICULTURAL
HERITAGE**
Systems



Identification of a composite agricultural heritage system

Liu Moucheng

Chinese Academy of Sciences

Sep. 30, 2021

Introduction

- In June 2005, Qingtian Rice-Fish Culture System in China was designated as one of the first five GIAHS pilot sites in the world.
- In February 2009, FAO/GEF GIAHS project was officially launched in Beijing.



- In 2012, China-NIAHS program was launched officially.

农业部文件

农企发〔2012〕4号

农业部关于开展中国重要农业文化遗产 发掘工作的通知

各省、自治区、直辖市及计划单列市休闲农业行政管理部门，新疆生产建设兵团农业局：

我国悠久灿烂的农耕文化历史，加上不同地区自然与人文的巨大差异，创造了种类繁多、特色明显、经济与生态价值高度统一的重要农业文化遗产。这些都是我国劳动人民凭借着独特而多样的自然条件和他们的勤劳与智慧，创造出的农业文化典范，蕴含着天人合一的哲学思想，具有较高历史文化价值。但是，在经济快速发展、城镇化加快推进和现代技术应用的过程中，由于缺乏系统有效的保护，一些重要农业文化遗产正面临着被破坏、被遗忘、被抛弃的危险。为加强我国重要农业文化遗产的挖掘、保护、传承和利



- In August, 2015, MOA issued and implemented the *Regulation on the Administration of Important Agricultural Heritage Systems*.
- It is the **FIRST** legal document on the administration of agricultural heritage systems in the world.



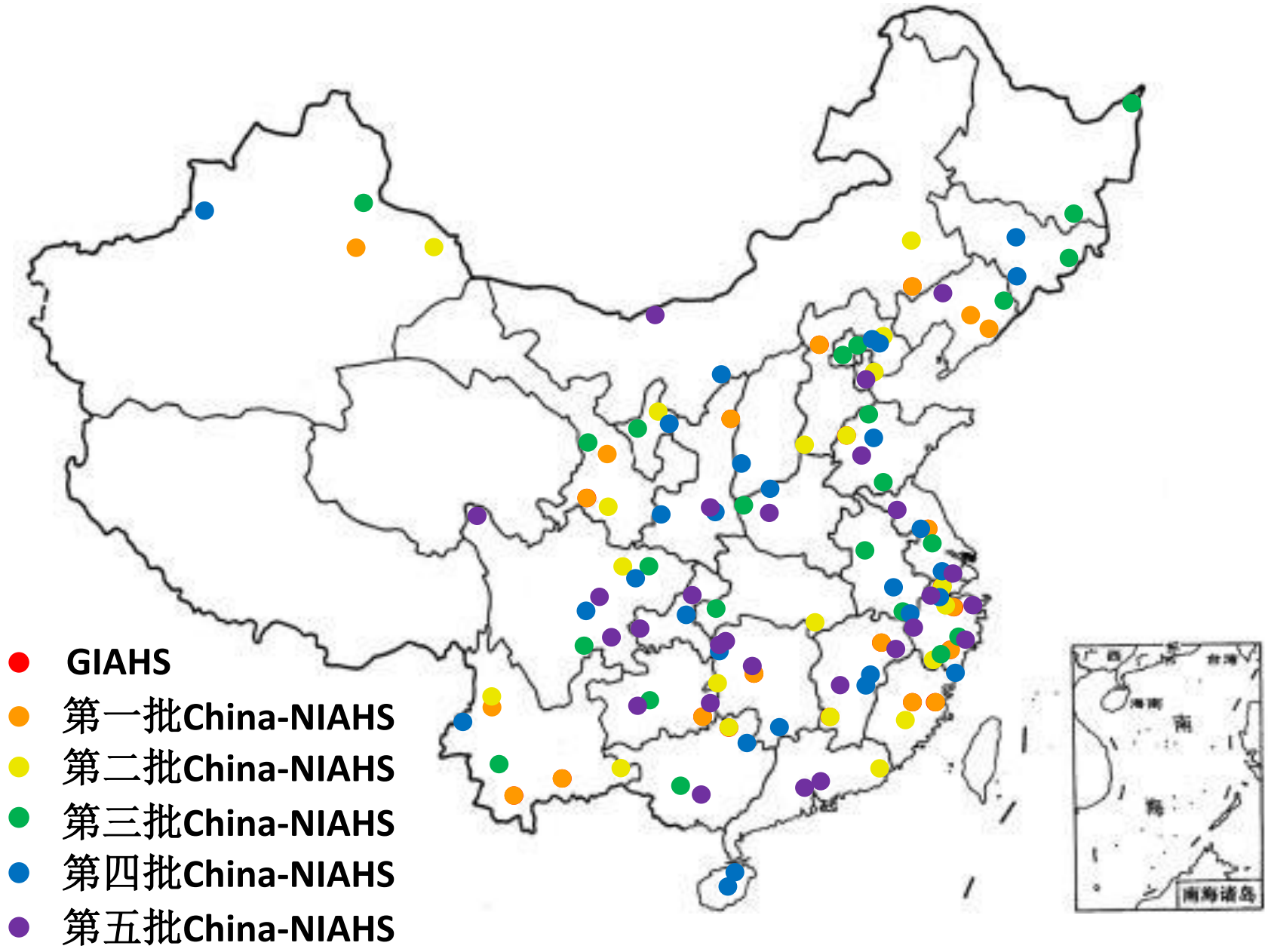
中华人民共和国农业部公告

第 2283 号

《重要农业文化遗产管理办法》业经 2015 年 7 月 30 日农业部第八次常务会议审议通过, 现予公布, 自公布之日起施行。

特此公告。









AWARD CEREMONY

Award Ceremony

GIAHS
19 April 2018



CHINA

ITALY

ITALY

SPAIN

SPAIN

UNITED REPUBLIC OF TANZANIA

JAPAN

JAPAN



“Like the **Garden of Eden**, I have never seen so magnificent a landscape. If authors of the *Genesis* had seen the beautiful scenery in Diebu, they would have put the place of origin of Adam and Eve here”.

——**Joseph Rock, 1925**

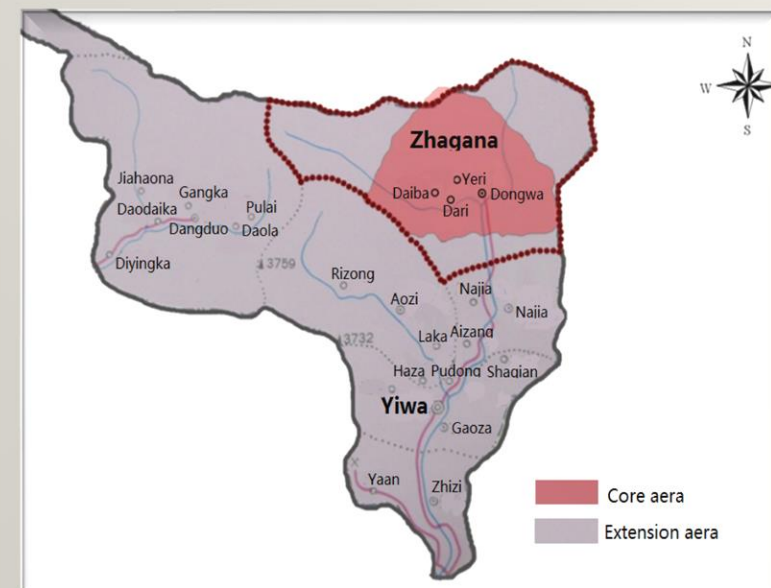
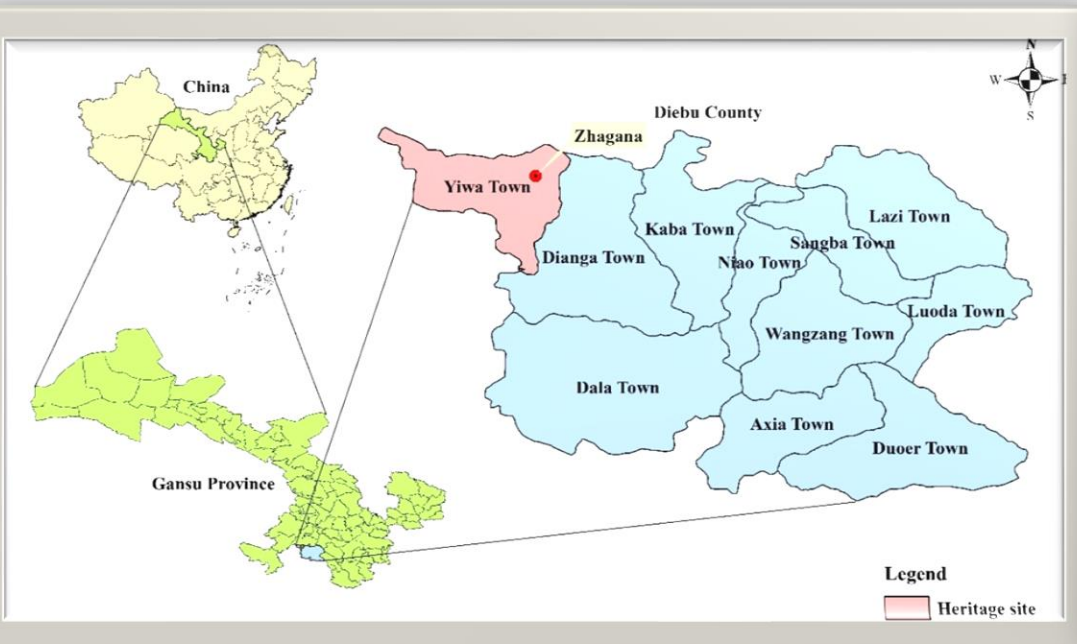




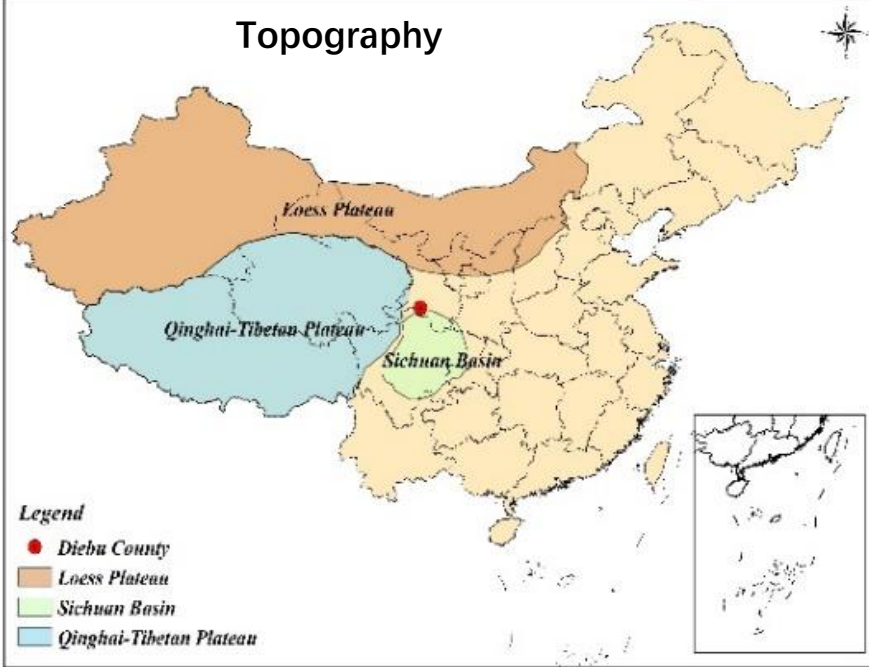


Location

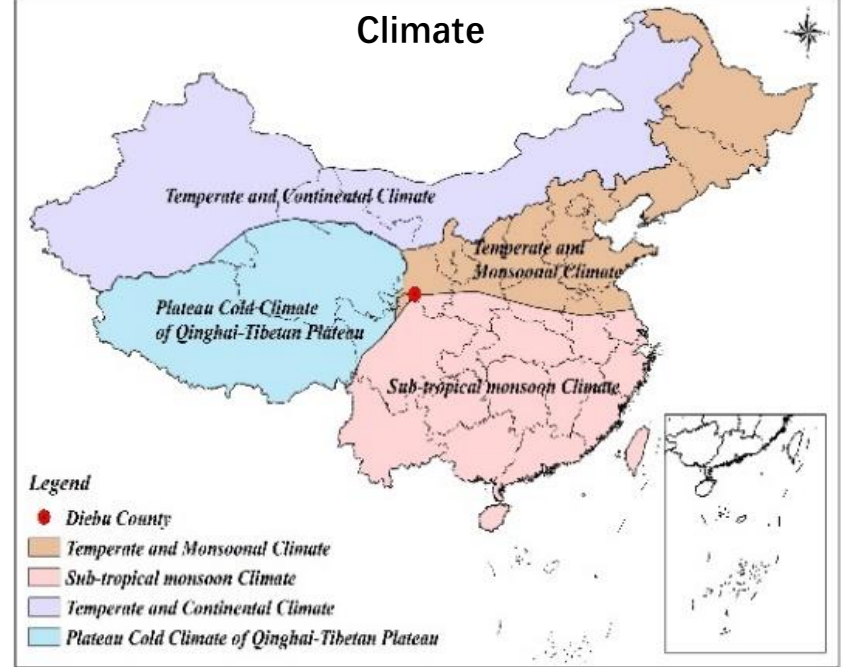
- The system is located in Zhagana Administrative Village, Yiwa Township, Diebu County, Gansu Province, ranging from $103^{\circ} 08'49'' \sim 103^{\circ} 10'15''$ E and $34^{\circ} 09'40'' \sim 34^{\circ} 10'80''$ N.
- Zhagana Administrative Village consists of 4 natural villages, namely, Yeri, Dongwa, Daiba and Dari.



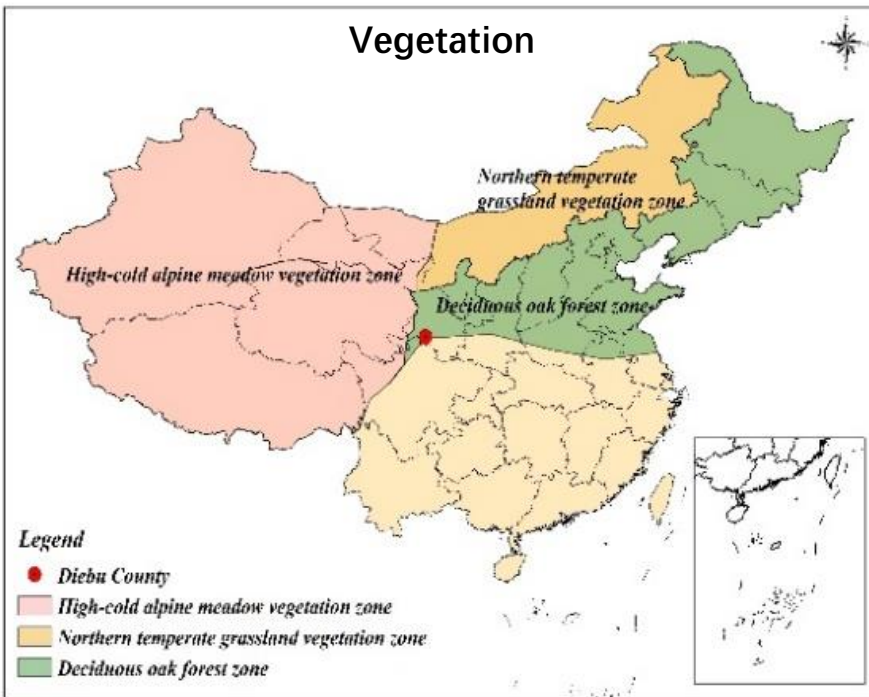
Topography



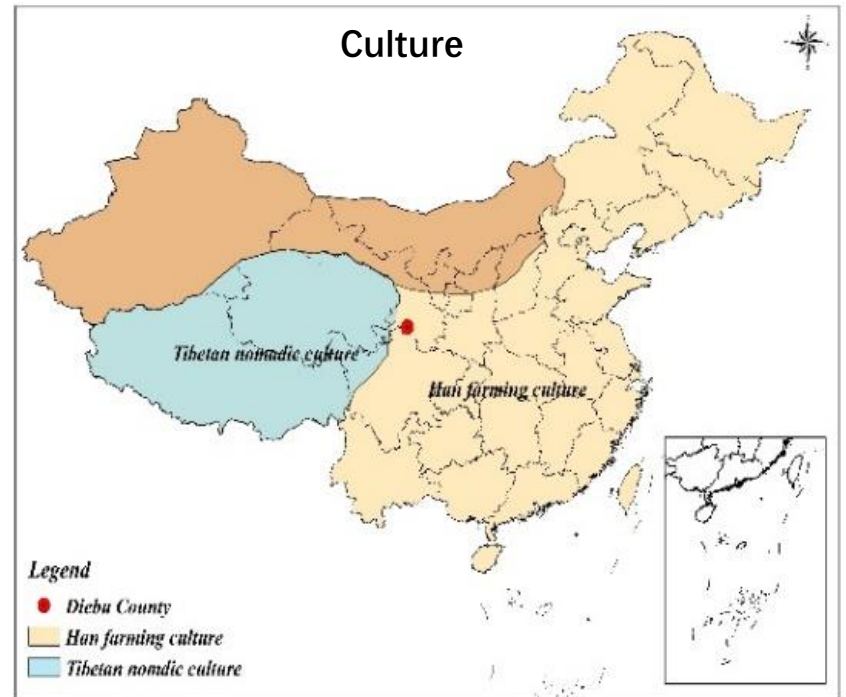
Climate



Vegetation

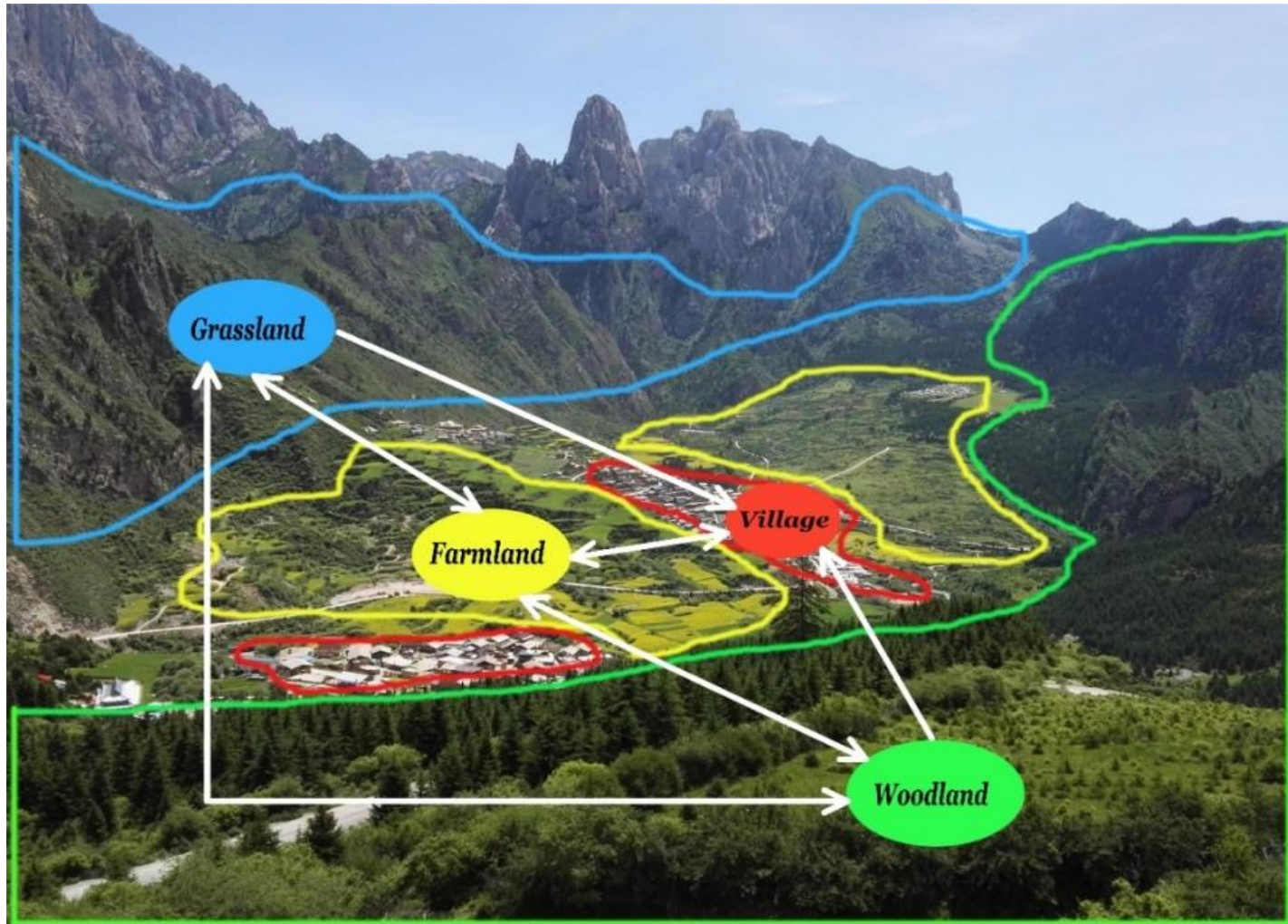


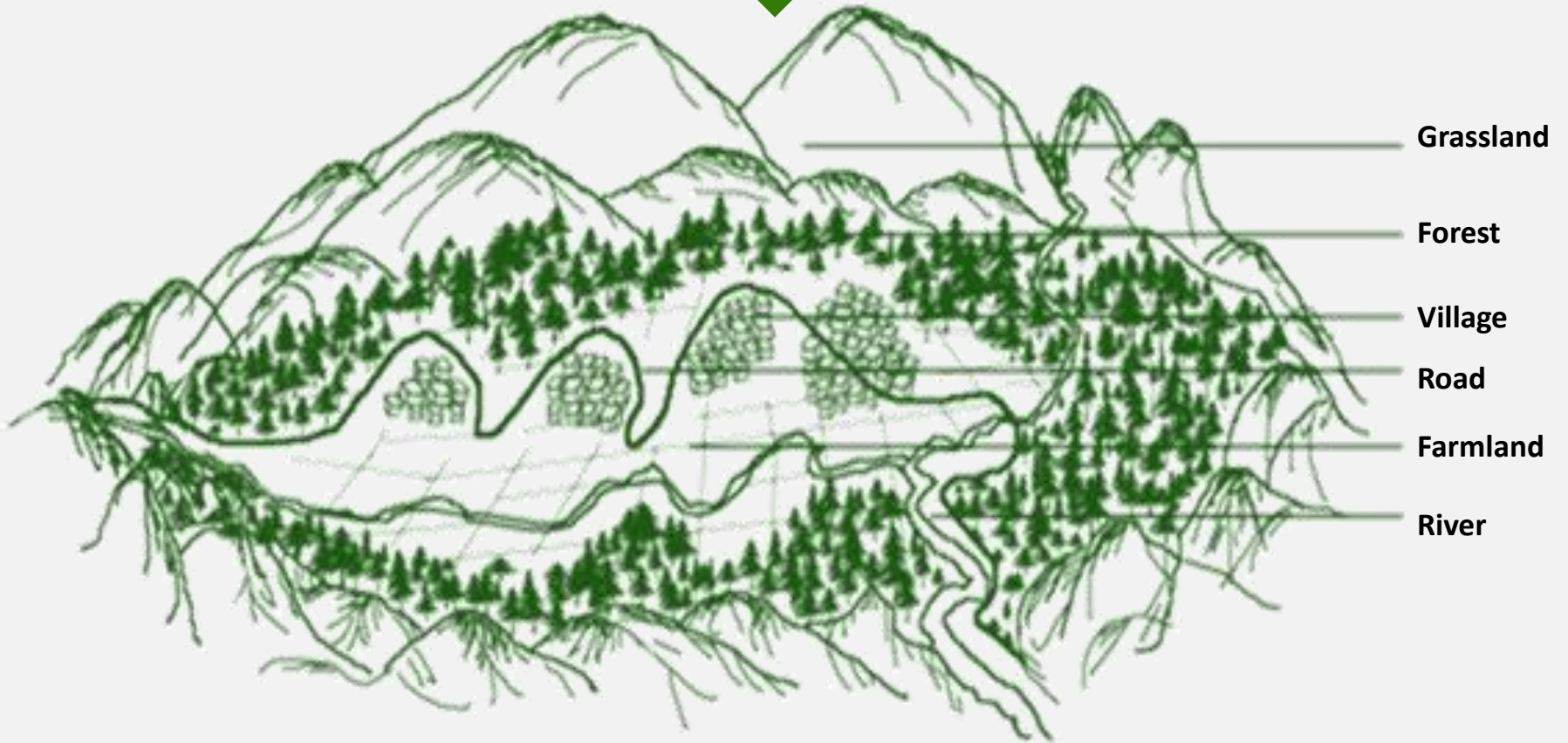
Culture



Composite system

A Relatively Closed but Complete, Integrated but Self-sufficient Mode of Agricultural Production.





On the upper part with an altitude of more than 4,200 m, naked bedrock is the primary landform due to cold climate, and rare rainfall, where the well-known Tibetan medicinal herbs grow.

At an altitude of 3,600-4,200 m, air temperature slightly rises and rainfall increases, this part of the mountains is a natural pasture.



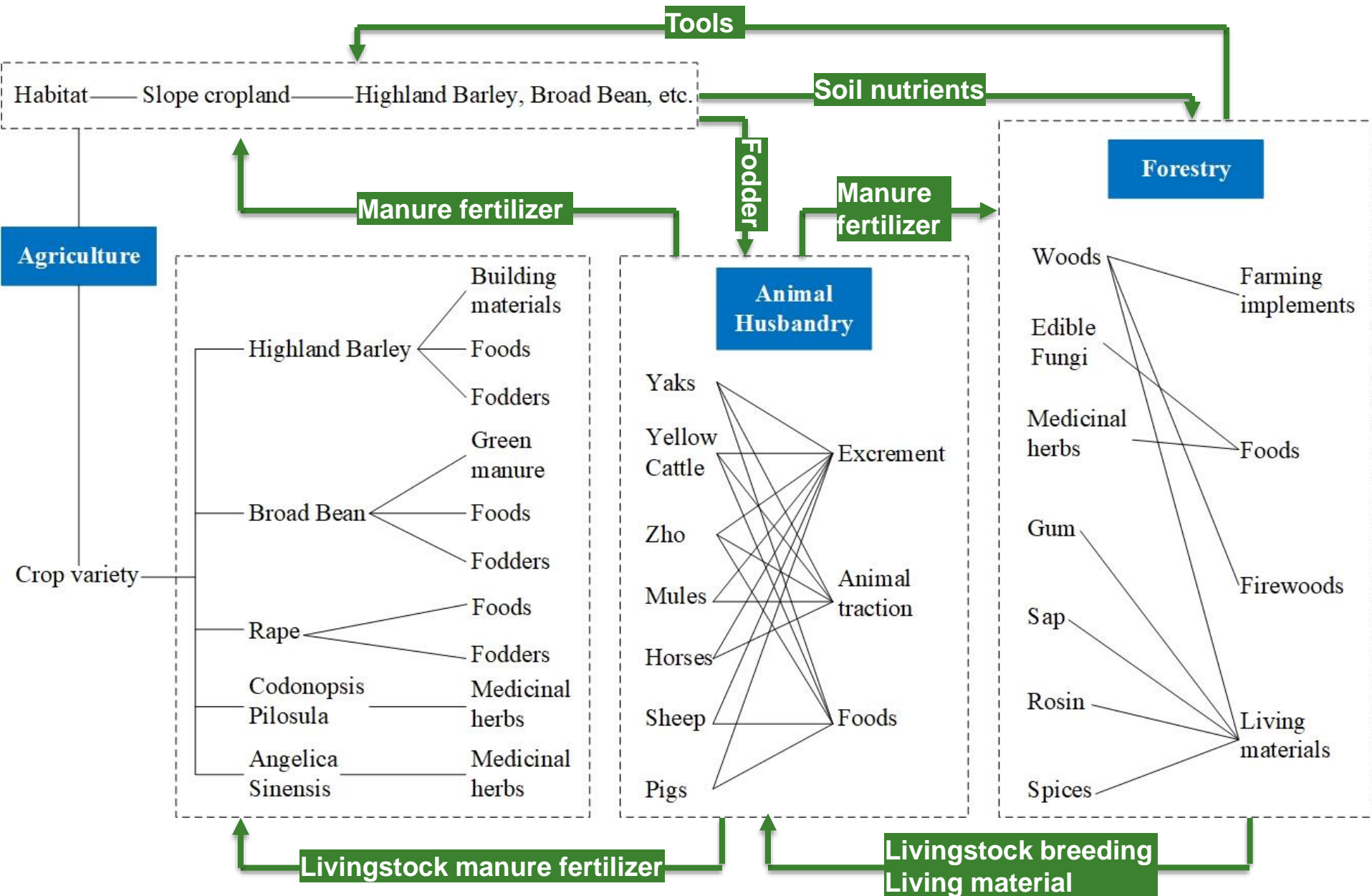


At an altitude from 2,400 to 3,600 m, a humid climate and snow water gives birth to forest and variety species, such as animals, wild vegetables, Tibetan medicines and wild fungi, etc.

At a relatively low altitude, there are good farmland for crops and vegetables.



Composite system



Agro-pastoral integration:

- Provision of fodder (crop residues and grains) by cropping
- Provision of manure, draft animal by animal husbandry
- Rotation and fallow of cropland for pasture
- Soil conservation by pasture
- Watershed conservation by alpine grassland



Agro-silvo integration

- Provision of eco-functions by forests
- Provision of fuel wood and materials by the woods in the fields
- Enriching soil nutrients by intercropping, rotational cropping and composting of straws

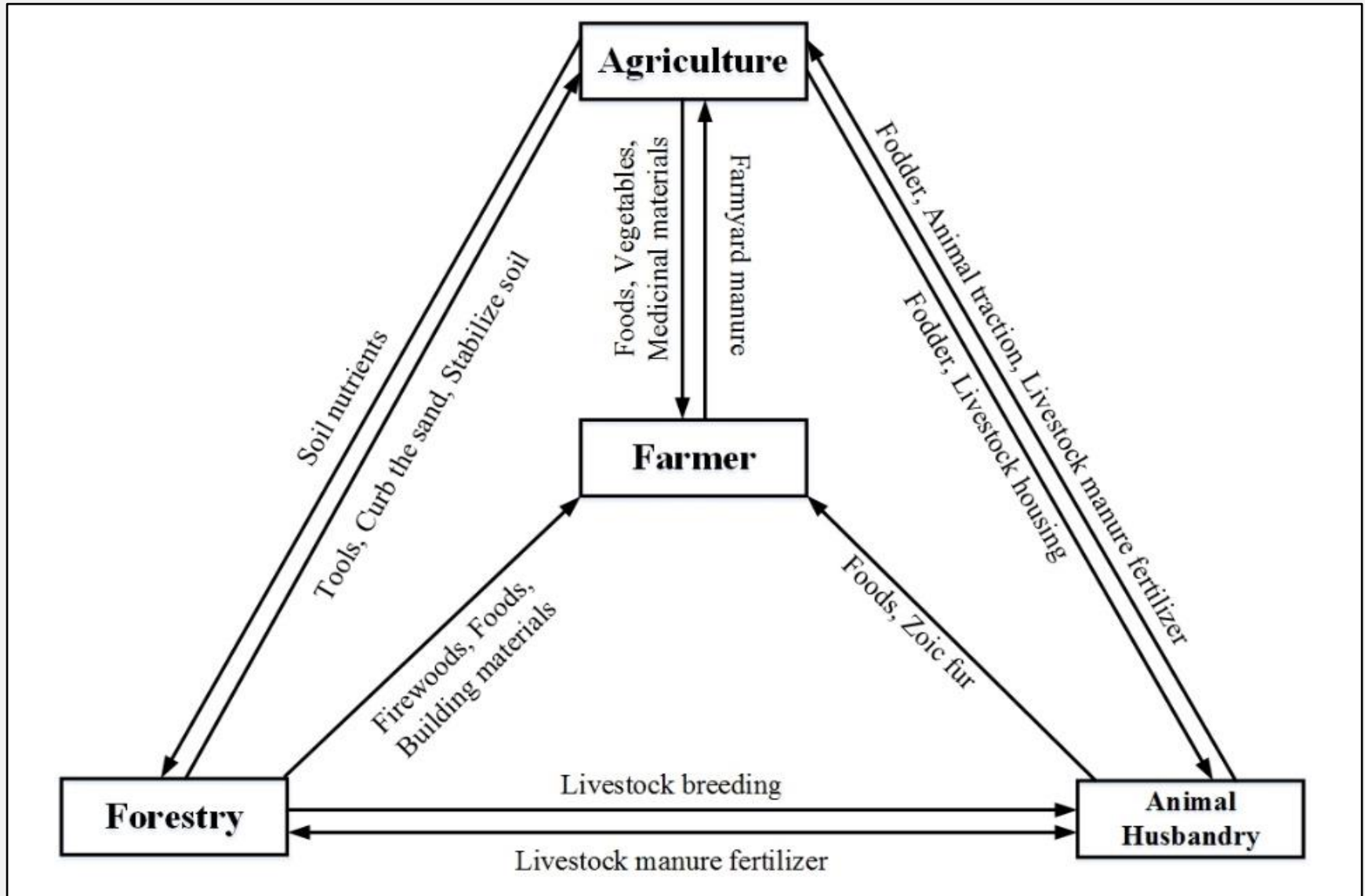


Silvo-pastoral integration

- Forage production and grazing areas by forests, including ground covers and fodder trees for animals
- Shade by trees for animals outside village
- Bedding materials collected from forests for animal sheds inside village
- Manure left by animals
- Plant seed dispersal by animals



Composite system



Satisfy the daily needs



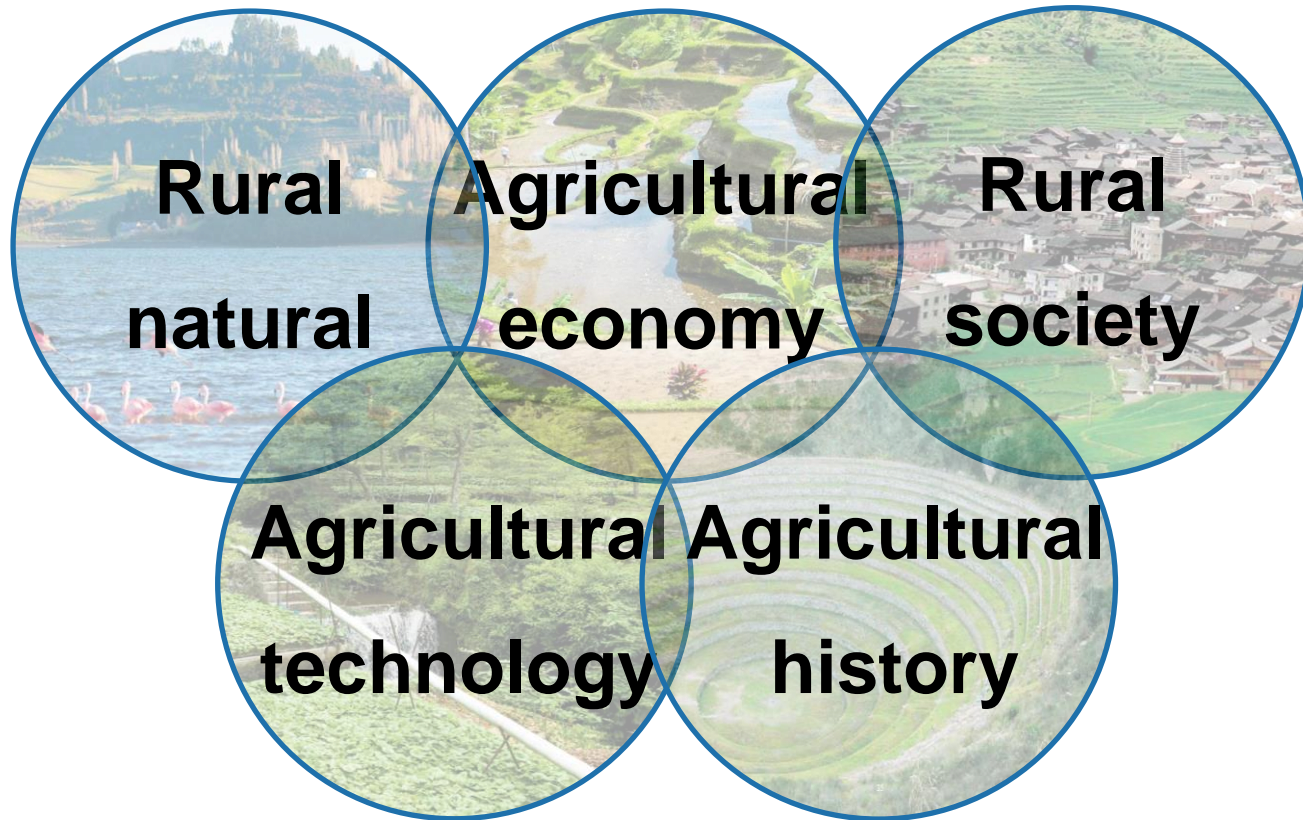
Meet normal production needs

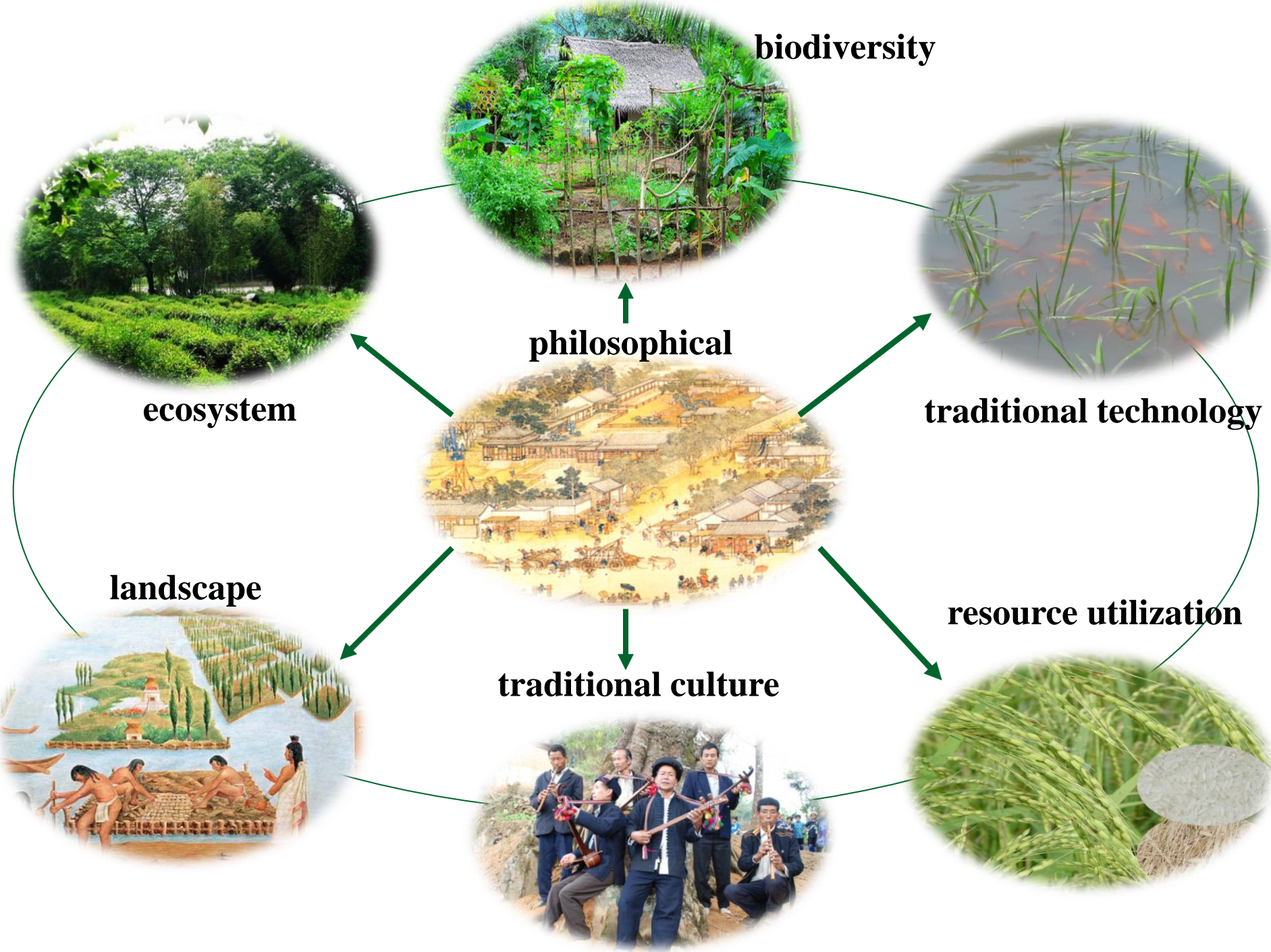


Supporting traditional lifestyle and culture

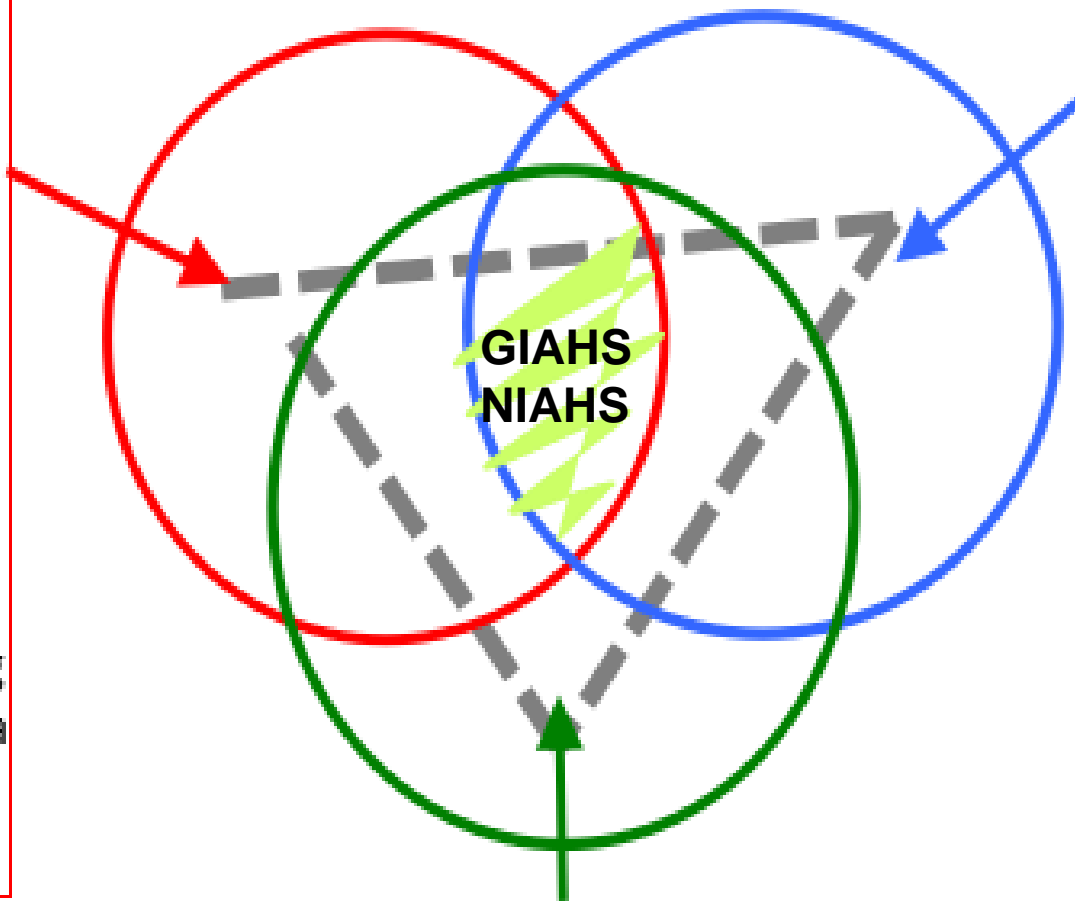


Core elements





- International and Governmental actors**
- International level:
- FAO-GPIU
 - FAO Beijing
- National level:
- MOA as NFPI
 - GIAHS China Office/CNACH in CAS as NPF
- Local level:
- GIAHS leading group headed by a county governor
 - Town government



- Social actors**
- research institutes
 - universities
 - experts and researchers
 - NGOs
 - Media
 - Qingtian RFC
 - World Agricultural Heritage Conservation Center
 - Consumers

Economic actors: farmers' cooperatives, enterprises, other businesses

Biodiversity

Species	Varieties
Wheat	Winter: Laohongmai, Mazhamai, Ganmai 23, Shannong 184, Feimai, Wudu 5, Zhongyin 2, etc Spring: Shuwan 751, Shuwan 761, Gaoyuan 338, Jin 2418, Linnong 14, Weichun 1, Mianyang 11, Mianyang 12, Ke 13, Pingliang 36, etc
Highland barley	Local: long-bearded highland barley, Dulihuang, Aiganqi, etc Introduced: Liuleng, Zanglan, Mudan (yellow highland barley), Aiganqi, Ziqingke, Ganqing 2, Ganqing 3, Ganqing 4, Ganqing 5, Kangqing 3, Aqing 4, Kunlun 14, Kunlun 15, Beiqing 9, Zangqing 2000, Zangqing 13, etc
Corn	Local: Jinhuanghou, Xiaojinhuang, etc Introduced: Zhongdan 2, Yedan 4, Yuyu 22, Jinsui 2, Shendan 16, Jinhuang 828, etc
Millet	There is only one variety.
Buckwheat	Sweet and bitter varieties.
Broad bean	Local: Baimaya, Hongmaya, Yangyan, etc Introduced: Linxia Dabaican, Chuncan 12, Chuncan 14, Lincan 5, Lincan 6, Lincan 7, Chunlin 6
Potato	Local: Yuejin, Kangji 1, Sijinhuang, Xiaobaihua, etc Introduced: Qingshu 9, Longshu 10, Longshu 3, Daxiyang, Zihuabai, Sijinhuang, etc
Pea	Local: big and white pea, spotted colored pea, etc Introduced: Yinwan 2
Rape	Local: Xiao Youcai, Aoluo Youcai, Huangjie, 78J-1, 78J-2, 78J-3 (Gannan 1), etc Introduced: Qingza 4, Qingza 5, Huaxie 1, Gannan 4, Gannan 5, Haoyou 11, etc
Radish	Green radish, water radish, etc
Tomato	Introduced: Jiafeng 10, Zhongshu 4, Jinpeng 3, etc
Cucumber	Introduced: Hangkong 10, Taishan 10, etc

Species	Breeds
Cattle	Wild yaks, wild dzos, yellow cattle
Sheep	<p>Local: Mountain-Valley Tibetan sheep, Green Goat</p> <p>Introduced: Oura-type of Tibetan sheep</p>
Horse	Mostly Hequ horses
Pig	<p>Local: Juema Pigs</p> <p>Introduced: Min County black pigs, Changbai pigs</p>



Eco-function

Cold, Arid and Ecologically Vulnerable Area

Priority Area for Biodiversity Conservation

The System

The Upper Reaches of the Watershed of the Yangtze River and the Yellow River

Important Area for Water Conservation



- Providing local residents with diversified and quite a full array of material products.
- Playing an important role in maintaining regional ecological balance and security through biodiversity, water and soil conservation.



Indigenous Knowledge

- Knowledge of Traditional Farming
 - Crop rotation and land retirement systems
 - Production and management experience of “weather-dependent” alpine agriculture
 - Traditional farming methods
- Prevention and Control of Diseases and Insect and Wildlife Pests
- Compost Fertilization
- Knowledge of Grazing Management



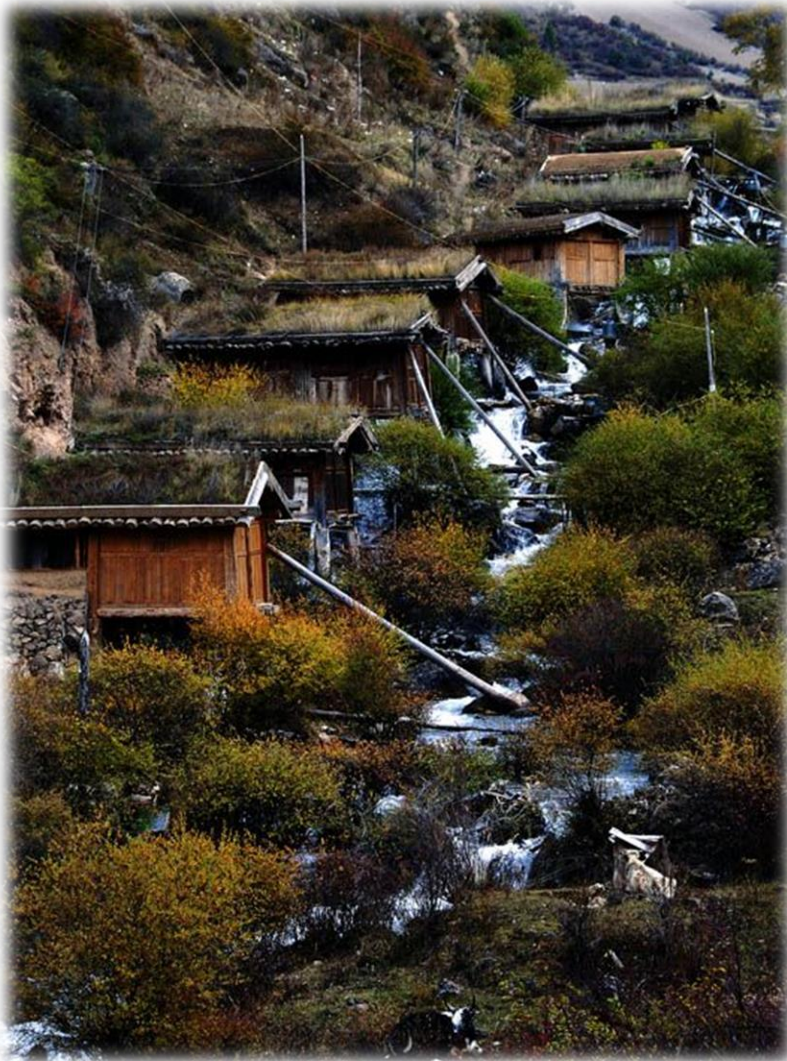
Adaptive Technologies

- Highland Barley Farming Technologies
 - Land preparation, Fertilization, Sowing preparation, Sowing, Field management, Harvest and storage
- Agriculture-Forestry-Animal Husbandry Integration Technologies
 - Agriculture-forest integration
 - Agriculture-animal husbandry integration
 - Forest-animal husbandry integration



Agro-Culture

Water Mills



Losar festival



Welcome to Zhagana!

