Traditional Chiloé island agriculture is a highly integrated and self-sufficient system. It relies on the agrobiodiversity supported by traditional agricultural practices to efficiently use natural resources from the sea, forest and livestock for soil health improvement and for integrated pest management.

The Zhejiang Huzhou system includes traditional and agroecological knowledge through the cultivation of mulberry trees, silkworm rearing, and fish cultivation, based on a complex irrigation system. This system allows farmers to meet their needs, while protecting biodiversity and the landscape.

### GLOBALLY IMPORTANT AGRICULTURAL HERITAGE SYSTEMS (GIAHS)

#### SUPPORTING KNOWLEDGE INTENSIVE SYSTEMS FOR SUSTAINABLE FOOD PRODUCTION: PRESENTATION OF TWO GIAHS SITES THAT RELY ON AGROECOLOGY

**Chiloé Island Agriculture, Chile**

Traditional Chiloé agriculture is a highly integrated and self-sufficient system. It relies on the agrobiodiversity supported by traditional agricultural practices to efficiently use natural resources from the sea, forest and livestock for soil health improvement and for integrated pest management. The ancestral practices of farmers date back to the domestication of wild native crops and have contributed to shaping the landscape.

**Chinese Silkworm-Mulberry-Fish System**

The Zhejiang Huzhou system originated more than 2 500 years ago. It includes traditional and agroecological knowledge through the cultivation of mulberry trees, silkworm rearing, and fish cultivation, based on a complex irrigation system. This system allows farmers to meet their needs, while protecting biodiversity and the landscape.

### HOW DOES THE CHILOÉ SYSTEM WORK?

Being extremely rich in agrobiodiversity, the system has many native varieties and crops, such as quinoa, garlic and over 200 varieties of indigenous potatoes, which are resistant to Phytophthora infestans disease.

The system makes use of many ecosystem services: seaweed as bio-fertilizer and fungal disease control; cattle and sheep manure for soil nutrient management; and medicinal and aromatic plants as insect control agents, and pollination promoters from the forests.

### A SUCCESSFUL GIAHS STORY

Since its designation in 2017, a professional body has been established to manage, develop and promote the dynamic conservation of the site. In addition, it has attracted financial support from different departments, such as reform, water conservancy, agriculture and forestry, concentrating many financial resources on the construction of the GIAHS reserve. Lastly, the consciousness of preserving such a precious site is enhanced through displays, sales activities, multi-channel dissemination and communications in farmers’ newspapers and other network platforms.

**Chinese Silkworm-Mulberry-Fish System**

This system integrates symbiotic relationships at several scales. Various species of fish are bred in the same pond and farmers manage to contain the spread of insect larvae, thus preventing the fields from being infected. An aqua-cycle of resource providers is established: mulberry leaves are fed to beneficial worms; worm feces is fed to fish; and fish feces is used as fertilizer for mulberry trees. This virtuous balance is a closed cycle. In addition, water sources have been shaped to minimize the impact of flooding and regulate the regional microclimate.

### HOW DOES THE HUZhou SYSTEM WORK?

This system integrates symbiotic relationships at several scales. Various species of fish are bred in the same pond and farmers manage to contain the spread of insect larvae, thus preventing the fields from being infected. An aqua-cycle of resource providers is established: mulberry leaves are fed to beneficial worms; worm feces is fed to fish; and fish feces is used as fertilizer for mulberry trees.