

The Agricultural, Forestry, and Livestock System of Okuizumo

People who lived in Okuizumo long ago used natural resources such as iron sand, charcoal, and clay to produce iron. Then, using forest and water resources, they produced food by cultivating farmland, developing a sustainable agriculture that supported their livelihoods. This agricultural, forestry, and livestock system has been passed down to this day.

Traditional Water Maintenance

Water Usage

Cool and clear water containing minerals accumulated in the forests is brought to the rice fields. The waterways that take in water from rivers deep in the mountains are maintained and operated, and water resources are secured by storing water in reservoirs. This is jointly carried out by water use organizations such as waterway unions, and in this way, rice is cultivated.



Fertilizer Application

Circular Agriculture

Rice Straw, Mountain Grasses

Cattle Manure and Compost

Feed and Bedding



Mountain Usage

The demand for charcoal decreased from the mid-1950s, but along with use of raw timber, such as in the cultivation of log-grown *shiitake* mushrooms through the cyclical use of forest resources, forest resources are also used for charcoal production and as livestock bedding or building materials. This maintains the water resource recharging function of the forests.



Farmland Usage

Fertilizer composed of cattle manure and composted mountain grasses is applied to the fields to improve soil quality, and currently, Nita brand rice is being produced here.

Also, as an area that produces Okuizumo cattle (Japanese black), cattle breeding and raising maintenance techniques and the foundation for cattle breeding have been inherited, and agriculture linked with livestock raising is being conducted.

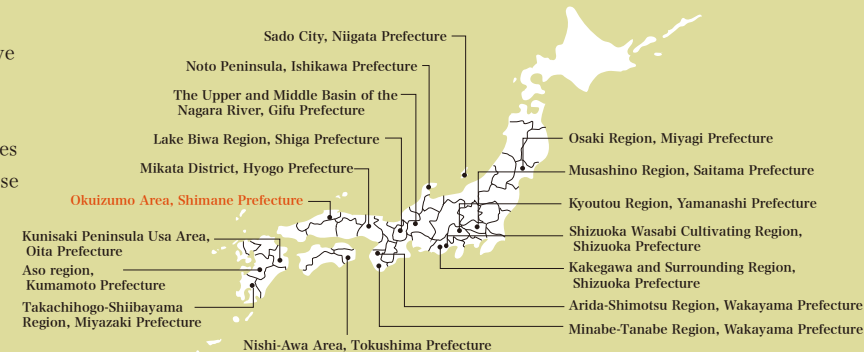


GIAHS: Globally Important Agricultural Heritage Systems

GIAHS refers to agriculture, forestry, and fishery industries that have been inherited over multiple generations while adapting to society and the environment, and the culture, landscape and seascape, and agricultural biodiversity that have been nurtured in close connection with them, mutually connecting and coming together in areas where globally important traditional agriculture, forestry, and fishery industries are conducted (agriculture, forestry, and fishery systems). These systems are recognized by the Food and Agriculture Organization of the United Nations (FAO).



GIAHS Locations in Japan (as of August 2025)



Location

A mountainous area located in southeast Shimane Prefecture between elevations of 250~700m

Agricultural Data

1,311 agricultural management bodies, 2,970 people involved with agriculture, 2,014ha of cultivated land area (2020 Agriculture and Forestry Census)



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Videos currently streaming
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Globally Important Agricultural Heritage Systems Japanese Nationally Important Agricultural Heritage Systems

Okuizumo Town, Shimane Prefecture

Sustainable Water Management and Agricultural, Forestry, and Livestock System Readapted from *Tatara* Ironmaking in the Okuizumo Area



Terraced rice field landscape readapted from an iron sand mine site (Fukuyori community)



GIAHS Promotion Association of the Okuizumo Area

From *Tatara* Ironmaking to Sustainable Agriculture

In Shimane Prefecture's Okuizumo area, a traditional ironmaking process called *tatara* was conducted mainly by iron producers including the Sakurai and Itohara families, with its peak coming between around 1600 CE to the early 1900s. *Tatara* was connected to rice cultivation, cattle raising, and forestry, and ironmaking and agriculture supported the livelihoods and economy of the area. In the times when mining for iron sand was conducted in the area, waterways and reservoirs were constructed to bring water to hilly areas at the bases of the mountains, and those hillsides were cut down using a method called *kanna-nagashi* to mine for that iron sand. After this, those mined areas were renewed as farmland.

The waterways and reservoirs used for iron sand mining were readapted for agricultural use, and buckwheat was sown in the previously mined areas in order to improve the soil quality there, as they were mostly areas of barren soil with no nutrients. Also, by applying compost and barnyard manure from the cattle used for transport in the ironmaking process to the rice fields, agricultural productivity was increased.

Furthermore, while the water source recharging function of forestry resources is maintained through their cyclical usage, a waterway system that provides water resources without waste and customs of water use and maintenance continue to be passed down, and sustainable agriculture, forestry, and livestock raising is carried out, centered around rice cultivation, cattle (Japanese black), and forestry.



The Only Place Continuing the *Tatara* Ironmaking Method



Sakurai Family Residence (Former Iron Producers)



Itohara Family Residence (Former Iron Producers)



Agriculture

Food and Livelihood Security

Cyclical Agriculture that Coexists with Nature

- Agriculture that is linked with livestock raising, centered around rice cultivation, where fertilizer which comes from breeding and raising cattle (Japanese black) is applied to farmland, has been inherited.
- Multi-faceted agricultural operations are carried out where rice cultivation, cattle raising, and production of specialty forest products and buckwheat cultivation are combined.
- Production of rice, cattle (Japanese black), buckwheat, and non-timber forest products accounts for approximately 90% of Okuizumo's agricultural production output.



Nita-mai (Nita brand rice)



Okuizumo cattle (Japanese black)



Log-grown *shiitake* mushrooms



Buckwheat noodles



Environment

Agro-biodiversity

Preservation of Genetic Resources

- Through agriculture, the environment of the waterfront areas of paddy fields and waterways, the grasslands along the ridges of terraced rice fields, and forests is preserved.
- Through agriculture, the ecosystem is preserved and maintained, and it is inhabited by diverse flora and fauna.
- By maintaining the forest environment, it has become a habitat for flower-visiting insects, improving the bearing rate of buckwheat, which preserves genetic resources.



Nodding anemone



Loach



Freshwater crab



Autumn darter



Fire-bellied newt



Black-spotted pond frog



Traditional Knowledge

Local and Traditional Knowledge System

Cyclical Use of Resources

- The waste matter of cattle is reused as fertilizer and applied to the fields to improve soil quality. 【Farmland Usage】
- Production of charcoal and mushrooms through the cyclical use of forests is conducted. 【Forest Usage】
- The joint maintenance and operation of waterways and reservoirs and customs of water use and maintenance in order to safely supply water are inherited. 【Water Usage】



Culture

Cultures, Value Systems and Social Organizations



Oro-Atago Festival
(Prayers for fire prevention and abundant harvests)



Izumo *soba*



Sasamaki



Cattle manure and compost (*Mayaguro*)



Soil Improvement through the Application of Fertilizer made from Cattle Waste



Charcoal production



Production of non-timber forest products such as mushrooms



Waterway networks that safely supply water resources to terraced rice fields



Mizu-otoshi, drainage facilities that prevent the collapse of waterways

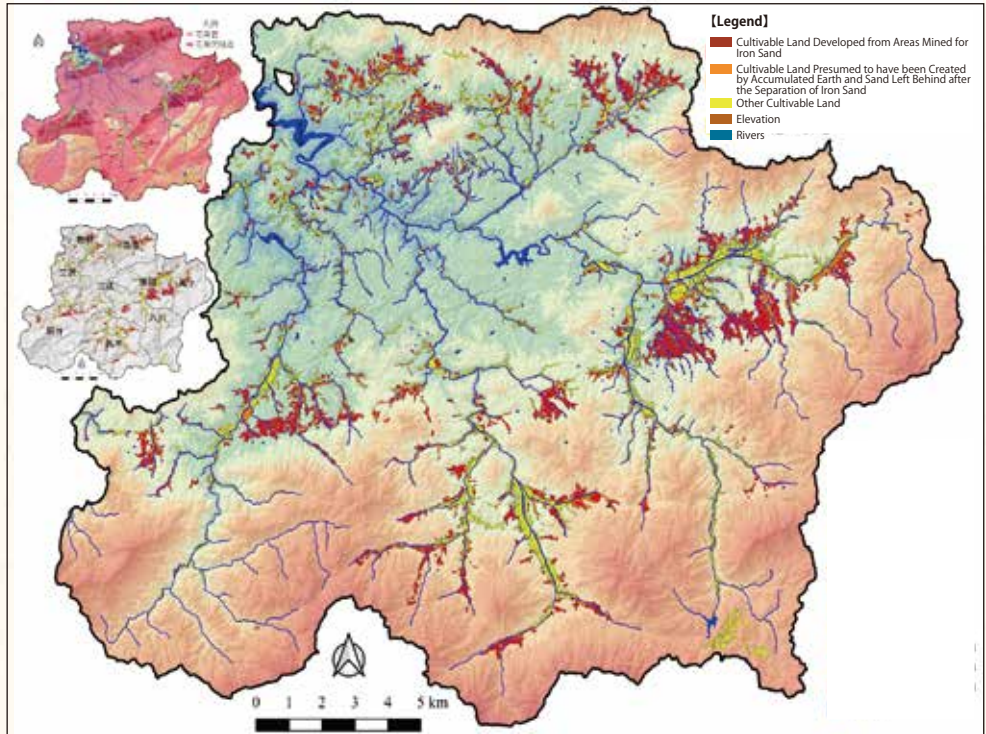
- Traditional events and local festivals connected to agriculture have been passed down. (Oro-Atago Festival, Ai Oshiko Ritual, etc.)
- Local food thrives within the four seasons, agriculture, and the lives of people here. (e.g., food culture such as Izumo *soba* buckwheat, noodles, *sasamaki* (rice-flour dumplings wrapped in bamboo leaves), etc.)
- Prayers for abundant crops, gratitude shown towards the harvest, prayer requests for the safety of cattle, etc., are held in the area. (Values)
- Water use organizations such as waterway unions jointly maintain the waterway networks, and the regulation of water usage is conducted. (Social Organizations)



Landscape

Landscape Features

Distribution of Cultivable Land Originating from Iron Sand Mining in Okuizumo Town



View from the Fukuyori Observation Platform
Through readapting the waterways and reservoirs, the areas mined for iron sand were developed into terraced rice fields.



Kanna-zankyū, a small hill that was not cut down for iron sand mining (Inahara, Okuizumo Town)
On small hills such as this, there were graves, sacred trees, or small shrines, so they were not cut down, and a unique landscape has been preserved.