Globally Important Agricultural Heritage Systems (GIAHS) Nishi-Awa Steep Slope Land Agriculture System

## Globally recognized

## Agriculture and Living in Nishi-Awa



Tokushima Tsurugisan Global Agricultural Heritage Promotion Council



Consisting of Mima City, Miyoshi City, Tsurugi Town and Higashi-miyoshi Town in the western part of Tokushima Prefecture, the Nishi-Awa area is dotted with approximately 200 villages sitting in the mountainous region of 100 – 900 meters above sea level. These villages all stand on the steep slopes, some of which are as steep as 40 degrees. For farm work on a mountainous slope, it is a common practice to develop a flat land and make terraced fields. In the Nishi-Awa area, however, farming takes place on the slopes as they are. The people have cultivated their own techniques and wisdom to

protect the nature, their lives and their villages. Everything about the area including the landscape of the villages, the food culture, and the traditional events relating to the farming which have been passed down through over 400 years, is all

considered "Steep Slope Land Agriculture Systems." It has been recognized that this system is sustainable for

the future and has the potential to be of use in resolving the global problems such as food supply and agriculture crisis and ecological destruction.

Beauty of slope

On the slope of the steep mountains and deep valleys, houses and fields stand as if they were electronic stuck on the t Stuck on the land, creating a unique landscape that is hard to find anywhere else in the world.

<sup>inclination</sup> of 40 degrees!

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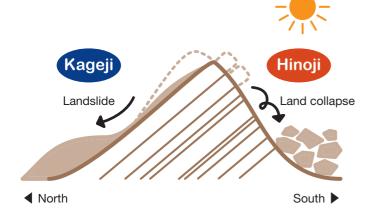
#### Kageji and Hinoji

The "Steep Slope Land Agriculture System" is an agricultural system that was invented on a slope. Now, how were the mountain slopes in Nishi-Awa born?

The Nishi-Awa area stands on one of the largest geologic faults in Japan called the Median Line of Japan, which was formed by huge plates (bedrocks) clashing together. The faults move dynamically on this line, thus creating a mountain as the land was raised or deformed.

As the plate moved from south to north, the land was pushed up intensely and formed mountain range. Besides, as the land was made of weak layers of green schist (the fracture zone), the slope facing north easily caused landslides and did not get much sunshine although they were gentle slope (Kageji); on the other hand, the ones facing south had a good amount of sunlight although they were steep slope due to land collapses (Hinoji). People started to live on the sites of these land collapses and landslides, which is believed to have been the origin of the Nishi-Awa area.

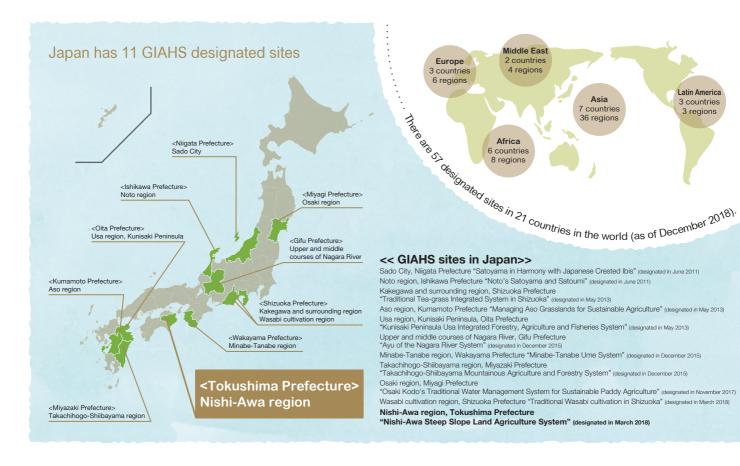
The fracture zone contains a lot of groundwater which led to land slides and also left a lot of water sources. Although it is located halfway up the mountain, the Nishi-Awa area is blessed with spring water; this is why people were able to form villages here.



#### Five points that have been globally recognized!



Having a landscape that has been cultivated over many years



The techniques blessed with rich eating habits in the mountainous area are wisdom for solving the food crisis in the world.

### The food culture of eating grains that has been going on since ancient times

The culture of eating grains has a deep connection with the origin of this area; Tokushima Prefecture's ancient name "Awa" is said to have come from Awa (foxtail millet) grown in the burnt filed. The production of grains with a long history since the Jomon period declined in many parts of Japan due to the introduction of rice farming to Japan. However, in the Nishi-Awa area where there is little land suitable to make paddy fields, grains used to be grown by slash-and-burn cultivation, and they are still grown and utilized for the people's daily lives today.







## Self-sufficiency and barter

It is difficult to run large-scale farming on slopes, so the people here have been cultivating small quantities of a large variety of foods; they have been basically self-sufficient for their food. Also, farm products to be grown are different between Hinoji and Kageji, so they exchange products they harvested to make each other's diet rich.

Today those products are sold at farmers markets for people outside the area to enjoy the blessings of the steep sloping fields and make their living colorful.







#### Specialty products and tourism branded with "Nishi-Awa"

Various agricultural products such as Goushuimo potatoes are harvested on the well-drained steep sloping fields. Specialty products and processed goods branded with "Nishi-Awa" have been collecting attention. In addition, there are regional attractions for tourists, such as programs to experience the lifestyle and food culture of the people living in





the severe nature through activities in the farmers' restaurants and private inns.



## **Rich repository of living creatures and plants**

Lifestyles in Nishi-Awa have wisdom for preserving genetic resources.

## Passing down precious genetic resources to next generations

Grains grown in Nishi-Awa are more than 40 varieties, including finger millet which is eaten in East Africa. Not only that, a large number of indigenous varieties such as buckwheat, corn, fruit trees, home-made tea leaves, and traditional vegetables also support the people's daily diet.

Furthermore, the farmers have been collecting and preserving seeds of the original species of grains and vegetables. It is believed that once

these seeds become extinct, it is difficult to bring them back. In order to pass down such precious genetic resources, Iya Grains Production Association has been established.





### Biodiversity protected by people



It has been confirmed that Kaya-ba, a place to collect Kaya (grass hay), hosts 282 kinds of plants, including rare kinds such as Adonis shikokuensis. It also provides an important habitat for 28 species of birds including rare ones like Eurasian sparrowhawk, 241 species of

insects including endangered species, as well as 9 species of mammals. Cutting and collecting Kaya on a regular basis makes short plants

exposed to sunlight, which creates the environment for a wide variety of plants to grow. It also makes easier for birds to find prey; as a result, the precious ecosystem has been preserved. The biodiversity has been preserved by the farmers controlling the natural environment.





## To protect traditions and nature

The techniques to improve soil environment are wisdom for helping the agriculture in mountainous regions in the world.

#### Koeguro

One of the unique characteristics of Nishi-Awa Steep Slope Land Agriculture System is Koeguro. Koeguro is hay collected and piled up in a cone shape to dry. The hay is then cut into small pieces and laid over the soil surface, which fertilizes the soil and prevents the runoff of soil. It also prevents the growth of weeds, eases the heat in summer and the cold in winter, as well as prevents the soil from drying.

The word Kaya collectively refers plants such as pampas grass and cogongrass. There used to be Kaya-ba (grasslands) in farm villages in many parts of Japan and hay was used as feed for the livestock (Hago), fertilizer for the fields (Koe), and as material for thatched roof. In

Nishi-Awa, there are still Kaya-ba utilized for farming today.





## Traditional farming tools manufactured by blacksmiths

Farming on slopes requires special skills: cutting dried hay into small pieces and laying them over the fields to prevent the soil from running off, for example. If the soil flows downward, it has to be returned upward by using a traditional tool called Sarae. There is another special tool to crush gravel called Tsubute that are found a lot in the fields, to make good soil. These tools are not commercially available. The blacksmiths in the villages called Kajiya have been manufacturing tools that are designed in accordance with the inclination of the sloping field.



## Culture that has taken root in the region's climate



The traditional cultures in Nishi-Awa are wisdom for preserving the landscape and culture of the villages in the original state.

### Preserved foods and local cuisines

In the mountainous villages, it is customary to sun-dry harvested products to make preserved foods full of flavor. The products are sun-dried, hanged from a rudder-like tool called Hade or under the eaves. The wind that blows down from Mt. Tsurugi in winter is perfect



for making dried foods, producing the village's specialty products such as dried sweet potato and dried persimmon.

Potatoes are stored in a hole about two meters deep dug under the floor of barn called Imoana or Imotsubo. The temperature and humidity



of the storage hole is maintained by using straw and chaff, so Goushuimo potatoes and sweet potatoes, as well as seed tubers, are preserved well. Simple rural dishes such as

rice and soba porridge, Mochi (rice cake) made from grains, and Dekomawashi made from Goushuimo potatoes have been passed down for generations.

## Traditional events

As recreational activities between busy schedules of farm works, traditional events have been cherished and handed down until today. It is believed that "Nishiiya-no-Jindaiodori," a nationally designated important intangible folk cultural property, dates back its history to the early Heian period which is more than 1,000 years ago. An agricultural festival called "Oinokosan," which is hardly seen in many parts of Japan today, is still practiced by children in this area. Many work songs which have been still sung were created during hard farm works; the farmers sing them to the mountains and valleys while working and their voices are impressive. For Iya-no-Konahikibushi, one of the work songs, a national singing contest is held in the local city.

Each district has a small temple hall which is a symbolic place for information exchange and mutual support between the villagers, where traditional events such as Gomataki, Daishiko and Juzumawashi are still practiced.



# Landscape where people and environment are in harmony with each other

The techniques of the agricultural life in Nishi-Awa are wisdom for looking for symbosis of people and the nature.

People living on the slopes called Togenkyo

Buckwheat white flower field on the slope



Koeguro, a special feature of Nishi-Awa



The landscape that is only found in Nishi-Awa has been created by those who live a farming life on the slopes. It has been nurtured by long history of people and the nature living together.

## Nishi-Awa MAP / ACCESS

Nishi-Awa is the area consisting of two cities and two towns located in the western part of Tokushima Prefecture: Mima City, Miyoshi City, Tsurugi Town and Higashi-miyoshi Town. Occupying one third of the total area of Tokushima Prefecture, the Nishi-Awa area has Mt. Tsurugi which is the second highest mountain in western Japan and the Yoshino river which is one of the three rivers which is subject to flooding in Japan. Not only the precious agricultural heritages but the original Japanese landscapes such as "Iya Kazura-bashi Bridge," one of the three unique bridges in Japan (a nationally designated Important Cultural Property), and "Udatsu Old Street," a beautiful old street from the Meiji era, still remain in this area.



This map has been created by using the numerical map 200000 (map image) and the numerical map 50 meters mesh (altitude) issued by the Geospatial Information Authority of Japan with an approval from the head of the said institute. (Authorization number Hei 30Joshi, No. 1383)

# Globally Important Agricultural Heritage Systems (GIAHS)

The Globally Important Agricultural Heritage Systems (GIAHS) is a system in which regions practicing traditional ways of agriculture, forestry and fishery that are considered especially important in the world are granted with accreditation by the Food and Agriculture Organization (FAO).

Certified with this accreditation are "systems of agriculture, forestry and fishery industries" including the traditional ways of agriculture, forestry and fishery and the things associated with them including people, cultures, food and landscape, and these systems are preserved as "living heritages."

There are 57 designated sites in 21 countries in the world, including 11 sites in Japan (as of December 2018).

The Nishi-Awa Steep Slope Land Agriculture System is the first to have been designated as GIAHS in the Chugoku and Shikoku areas in Japan. (designated in March 2018)



#### Concept of the logo of the Nishi-Awa Steep Slope Land Agriculture System

An ear of grains, which has supported the food self-sufficiency in Nishi-Awa since ancient times, is placed at the center of the logo. Placed around it are inclined fields symbolizing the steep slope land agriculture system, Koeguro used to fertilize soil, and the landscape in harmony with nature. The logo has been created in the hope that the eco-friendly and sustainable agriculture methods and living in this area will last long.