Food and Agriculture Organization of the United Nations

Globally Important AGRICULTURAL HERITAGE Systems

TWENTY YEARS

of Globally Important Agricultural Heritage Systems

20

GIAHS

20th anniversary

TWENTY YEARS
of Globally Important Agricultural Heritage Systems

Success stories of dynamic conservation for sustainable rural development

Food and Agriculture Organization of the United Nations
Rome, 2022

Required citation:

FAO. 2022. *Twenty years of Globally Important Agricultural Heritage Systems – Success stories of dynamic conservation for sustainable rural development*. Rome. https://doi.org/10.4060/cc2385en

ISBN 978-92-5-136979-1

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A female farmer showing her harvest

ACKNOWLEDGEMENTS

This publication was written on the occasion of the 20th anniversary of FAO's Globally Important Agricultural Heritage Systems (GIAHS) programme. It contains success stories from different agricultural heritage systems in Africa, Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, and the Near East and North Africa. The stories showcase the achievements of farming communities since their designation as GIAHS.

The authors of this publication are Aurélie Fernandez, Clelia Maria Puzzo, Federica Romano, and Hui Yin from the GIAHS Secretariat, Office of Climate Change, Biodiversity, and Environment, FAO. Alina Gerke, Communications Specialist, FAO-GIAHS Secretariat, co-authored and led the coordination of the publication. A big gratitude is expressed also to Professor Nobuyuki Yagi who co-authored this publication.

They wish to acknowledge the representatives from GIAHS member countries who contributed with information, qualitative data, and visual material: Arpakwa Ole Sikorei, United Republic of Tanzania; Zhaofang Zhang, the Center of International Cooperation Service (CICOS), Ministry of Agriculture and Rural Affairs of China; Tokushima Tsurugisan, Global Agricultural Heritage Promotion Council from Japan; the Consortium for the protection of Soave, Italy; José María Álvarez Coque from Spain; Luisa Guadalupe Benavente Escobar and Cesar Francisco Sotomayor from Peru; and Halima Khaled, Fateh Achour and Fouad Bendjedou from Algeria. Great support was provided by FAO Country and Liaison Offices during the information collection process. In this regard, the authors wish to thank Shoko Takahashi from the FAO Liaison Office in Japan, Raquel Medina Larico, Samir Demdoum and Diomedes Kalisa from the Country Offices in Algeria, Peru and the United Republic of Tanzania.

The authors also wish to thank Yoshihide Endo, GIAHS Coordinator, Office in the Office of Climate Change, Environment and Biodiversity, and Jeffrey Brez, Senior Communications Officer in the Office of Corporate Communications, for their technical guidance. Gratitude is also due to Ruth Raymond and Felicity Griffin for editing the publication, and to Kate Ferrucci and Simona Capocaccia (FAO) for graphic design and layout.

Finally, a special acknowledgement is extended to colleagues of the FAO Office of Corporate Communications, who supported the publication with thorough proofreading and constant suggestions for the layout. Gratitude is expressed to André Vornic, Anne Aubert, Guido Chiefalo, Laura Galeotti, Monica Umena and Raya Ubenova, as well as Fabrizio Puzzilli and Paolo Todini for realizing the digital publication.

JAPAN

Takachihogo-Shiibayama mountainous agriculture and forestry system

FOREWORD

Today hunger is rising exacerbated by the fallout from the COVID-19 pandemic, conflicts, widening social inequities, natural disasters and the climate crisis. Unsustainable agricultural and land practices, degraded ecosystems and biodiversity loss further threaten our ability to feed a growing world population – set to reach nearly 10 billion people by 2050.

The Food and Agriculture Organization of the United Nations (FAO) believes that promoting and strengthening sustainable agricultural practices, combined with traditional knowledge and innovation, is key to safeguarding our environment, protecting our biodiversity, and increasing the resilience of the 2.5 billion people whose livelihoods depend on agriculture: the small-scale farmers, Indigenous Peoples, fishers, herders and forest-dependent communities.

During the 2002 World Summit on Sustainable Development, FAO launched a Global Partnership Initiative for the conservation and adaptive management of Globally Important Agricultural Heritage Systems (GIAHS) as a response to the alarming global trends undermining family farmers and traditional agricultural systems. GIAHS was endorsed as an FAO Corporate Programme at the Thirty-ninth Session of the FAO Conference in 2015 in recognition of its innovative and holistic approach in supporting traditional farming systems.

Systems recognized by the GIAHS represent a living, evolving system of human communities in an intricate relationship with their environment. This unique programme identifies and safeguards these precious systems and their associated landscapes, agricultural biodiversity, knowledge systems and culture, while increasing the resilience of people´s livelihoods and implementing dynamic conservation strategies.

FAO has designated 67 systems in 22 countries. This not only values stunning natural landscapes, but also the agricultural practices (both traditional and innovative)

KENYA ▶
(Left) *Oldonyonokie/ Olkeri Maasai women looking after their livestock*

EGYPT ▶
(Right) *Female farmer collecting dried dates from Siwa Oases*

▲ CHILE
Livestock grazing in the lands of Chiloé

that combine building rural livelihoods with sustaining biodiversity and resilient ecosystems.

To celebrate the 20th anniversary of GIAHS, FAO has brought together this collection of success stories to highlight achievements where actions:

- ensure the protection of agricultural heritage systems by leveraging global and national recognition of the importance of agricultural heritage systems;
- build the capacity of local farming communities and local and national institutions to conduct good management of GIAHS systems and sustainably generate economic value; and
- promote an enabling environment and policies to support the conservation, adaptation and development of GIAHS systems.

I hope these stories inspire you, so that we can all increase our efforts to ensure better production, better nutrition, a better environment and a better life for all: leaving no one behind.

QU Dongyu
FAO Director-General

INTRODUCTION

For two decades, the Globally Important Agricultural Heritage Systems (GIAHS) programme of the Food and Agriculture Organization of the United Nations (FAO) has assisted farming communities to safeguard traditional agricultural systems and associated landscapes, agricultural biodiversity, knowledge systems and cultures. The GIAHS approach is based on participatory development: it reflects local realities and supports initiatives by farmers, civil society organizations, governments and research institutions to attain sustainable rural development, and has influenced national policies and rural management systems.

This publication provides a snapshot of some of the GIAHS around the world to showcase their achievements in conserving agricultural heritage systems.

WHAT ARE GLOBALLY IMPORTANT AGRICULTURAL HERITAGE SYSTEMS (GIAHS)?

GIAHS are the result of the gradual co-evolution of local communities and their environments.

Agricultural communities have developed ingenious systems which optimize the utilization of resources while respecting, safeguarding and protecting them from exploitation.

In response to local challenges, communities have developed sustainable farming systems by conserving and using traditional knowledge, biodiversity and landscapes, while supporting their livelihoods and food security.

WHY DO WE NEED GIAHS?

GIAHS represent a pool of knowledge and practices that can provide solutions to current global issues and challenges and also contribute to achieving the objectives of the 2030 Agenda for Sustainable Development.

In response to unsustainable agricultural and land use practices that threaten global food security, and the livelihoods and cultural values of rural communities, GIAHS bear witness to people's inventiveness and ingenuity in using traditional and evolving knowledge, practices and technologies to manage resources, biodiversity and ecosystems, and to counteract advancing socio-environmental and biocultural loss. These systems provide the foundation for contemporary and future agricultural innovations and technologies. Not only do they demonstrate alternative approaches to modern systems but they also conserve the enormous diversity in global communities, cultures, histories and traditions.

THE EVOLUTION OF GIAHS

FAO launched the GIAHS programme at the World Summit for Sustainable Development in 2002 in response to global threats to family farming and traditional agricultural systems, such as climate change, community displacements and biodiversity loss.

Aiming to strike a balance between conservation, sustainable adaptation and socio-economic development, the programme helps to mitigate the threats faced by farmers while enhancing the benefits of farming systems. Using a multistakeholder approach, GIAHS provides technical assistance, promotes the value of traditional agricultural knowledge and stimulates markets for agricultural products, agrotourism and other market opportunities.

GIAHS is a people-centered approach focusing on knowledge systems, including (the) socio-organizational, economic and cultural features that underpin the conservation and adaptation processes in GIAHS without compromising their resilience, sustainability and integrity.

FAO has designated **67 systems** in **22 countries** with a further **15 proposals** currently being considered. The GIAHS programme has designated systems in Africa, Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean and the Near East and North Africa.

▲ TUNISIA
Bird's-eye view of the Ramli agricultural system in the lagoons of Ghar El Melh

GIAHS is open to proposals from systems that represent agricultural and cultural heritage values, and which are relevant to global concerns around sustainable development and biocultural diversity, including agrobiodiversity, and ecosystems management.

LEARN MORE

Globally Important Agricultural Heritage Systems
https://www.youtube.com/watch?v=DXtd0xfZupQ

RESOURCES

Background | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

How to make a GIAHS proposal
https://www.fao.org/3/ca8465en/ca8465en.pdf

SUCCESS STORIES
from GIAHS around the world

MOROCCO
Argan cultivation terraces

AFRICA

ASIA AND THE PACIFIC

EUROPE

LATIN AMERICA AND THE CARIBBEAN

NEAR EAST AND NORTH AFRICA

Shimbwe Juu Kihamba Agroforestry Heritage Site, United Republic of Tanzania

Diversification as a strategy for efficient use and management of resources

THE SYSTEM

Shimbwe Juu is a small village of the Chagga community, located on the slopes of Mount Kilimanjaro. In a semi-tropical climate, the villagers have practised agroforestry for centuries.

In 2013, the Government of the United Republic of Tanzania proposed Shimbwe Juu Kihamba Agroforestry Heritage Site as a GIAHS in the hope of finding sustainable solutions to the erosion of culture and the forest, and to improve environmental and economic opportunities.

The Shimbwe Juu Kihamba Agroforestry Heritage Site is an example of how synergy between humans, animals and the forest can contribute to a sustainable environment, using an integrated multilayered system to help overcome the challenges of soil infertility and water scarcity.

The vegetation structure of the *kihamba* (home garden) system comprises four main layers. The uppermost layer is formed by closely spaced trees, which provide shade, medicine, fodder, fruit, firewood and timber. Multiple varieties of bananas are

©FAO/FELIPE RODRÍGUEZ

▲ UNITED REPUBLIC OF TANZANIA
View on Mount Kilimanjaro

… (Before) we used … very strong pesticides but …(when) the project came we stopped doing that. In this whole village no one is using those industrial pesticides, we are using natural pesticides … (that we learned about) from the project.

Candida
Coffee producer and member of the council village and chairperson of women's organization

grown underneath the trees. Coffee shrubs grow beneath the bananas and various vegetable species grow under the coffee. This multilayer system maximizes the use of limited land and provides a large variety of local foods and cash crops, such as banana, cassava, yams, taros, ginger and pineapple all year around.

Kihamba are irrigated by furrows collecting runoff and by canals from rivers originating in the montane forest. These home gardens feature extraordinary biodiversity: over 500 different plant species, including 400 that are not cultivated but preserved in their natural habitat. Farmers raise animals such as cattle and chickens to enhance the nutritional status of their households and to increase farm income through the sale of milk, eggs, and other products.

This traditional system faces serious threats, including land scarcity due to population growth, the outmigration of young people which also disrupts the transmission of knowledge from one generation to the next, as well as changes in dietary habits, land use changes and fragmentation.

MANAGING THE *KIHAMBA*

The community bears a strong responsibility for custodianship of its agricultural land. The *kihamba* is central to the identity and culture of the Chagga people; it is the focus of social and ceremonial life. People are born, come of age, marry and are buried on their *kihamba*.

***Women in Chagga societies are the backbone of home-based farming as in* kihamba.**

Arpakwa M. Ole Sikorei
Member of Community Conservation and Culture

Traditionally, the *kihamba* is managed by the entire family with a clear division of labour: men prune coffee trees, remove unwanted suckers from banana plants, clear water canals and irrigate the gardens, while women are responsible for collecting firewood, weeding, feeding cattle, cleaning livestock sheds and milking.

Women also constitute more than 80 percent of the workers involved in coffee farming, especially during the harvest period. Selected men take on the role of supervisors of the *kihamba*. This responsibility is passed on to their sons who, starting from a young age, are daily involved in related duties.

LEARN MORE: ***Kihamba*** **– Chagga home gardens on the slopes of Mount Kilimanjaro** https://www.youtube.com/watch?v=JFaRs8L8QnY

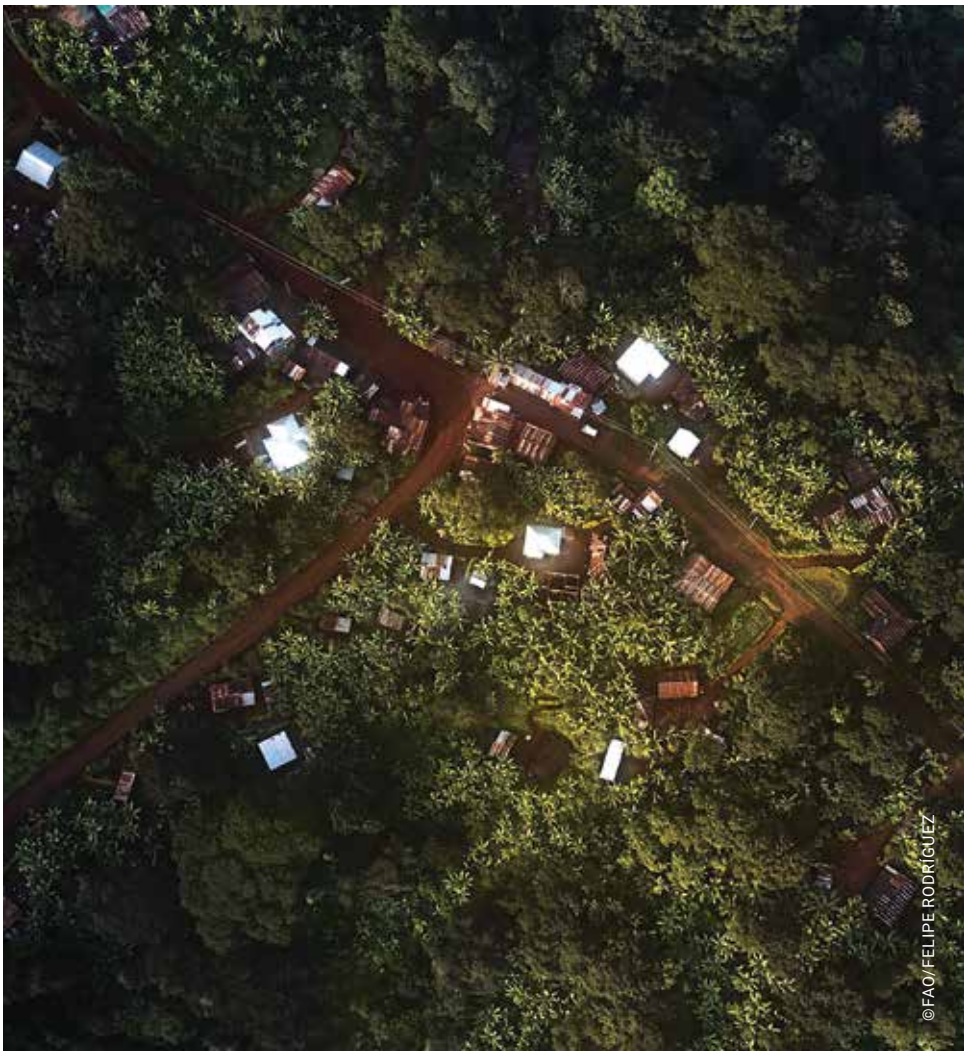
▲ UNITED REPUBLIC OF TANZANIA

Female farmer harvesting vegetables in the small village of the Chagga community

▶ *Farmer with fresh harvested coffee beans*

▲ UNITED REPUBLIC OF TANZANIA

Chagga women selecting bananas



◀ *Bird´s-eye view of Shimbwe Juu village*

▲ UNITED REPUBLIC OF TANZANIA

Growing coffee trees following traditional methods represents a sustainable opportunity for youth in Shimbwe Juu village

ACHIEVEMENTS

Since the Shimbwe Juu Kihamba Agroforestry Heritage Site was designated a GIAHS site in 2013:

- The Shimbwe Juu community have been trained in crop improvement and organic coffee farming using integrated pest management.
- Farmers have been provided with more than 12 000 coffee seedlings to replace old coffee trees.
- The community have been certified as organic coffee farmers, linking them with the organic coffee market.
- The Kilimanjaro Native Cooperative Union (KNCU) has established a coffee sales point in the village to facilitate marketing
- Sixty farmers have been trained in the establishment and management of vanilla plants and provided with cuttings for planting.
- FAO has overseen the establishment and official registration of the Engaresero Eramatare Community Development Initiative, a community-based organization (CBO), as part of strengthening sustainable tourism. The initiative offers guided tours to the growing number of visitors that the region saw before the COVID-19 pandemic. Due to the initiative the number of tourists has increased.

RESOURCES

Africa | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

Rice-fish Culture, Qingtian County, China

Rice and fish co-culture, a millenary agroecological practice that supports farmers' future and livelihood

THE SYSTEM

For over 1 300 years, farmers in Longxian village of Zhejiang in Qingtian County have raised fish in their paddy fields. An ecological symbiosis exists in such agricultural systems: the fish provide fertilizer, regulate microclimatic conditions, soften the soil, disturb the water, and eat pest larvae and weeds in the flooded fields, while the rice provides shade and food for the fish.

The products and ecological services arising from these ecosystems benefit both farmers and the environment. The fish and rice provide high-quality and nutritious food for the farmers and their families. The low cost inputs associated with the system increase efficiency, reduce the use of chemical fertilizers, pesticides and herbicides for insect and weed control, and help conserve agrobiodiversity and protect the environment. The rice-fish system in Longxian demonstrates an ingenious approach to generating ecological, economic and social benefits by encouraging essential ecological functions.

▲ **CHINA**
A bird's-eye view of Lonxian village, Qingtian

SUPPORTING TRADITIONAL AGRICULTURAL PRACTICES CAN BOOST THE VALUE OF PRODUCTS

Since its designation as a GIAHS site in 2005, Qingtian County has been exploring development and conservation practices with the goals of coexistence, sharing and prosperity. Under the Qingtian Action Plan, the government sought to enhance the development of the rice-fish industry. The collective operating income of 104 villages in the county increased from CNY 2 683 500 (USD 401 151) in 2017 to CNY 17 455 000 (USD 2 609 313) in 2021.

The brands of "Qingtian paddy fish" and "Qingtian paddy rice and fish" have been established as regional brands and certified as national geographical indications. Qingtian County's development of its rice and fish culture was selected by the local government as one of the top ten innovative practice cases of rural revitalization in Zhejiang Province in 2021.

▶ (Left) *A farmer is harvesting fish in rice paddy fields in Qingtian*

▶ (Right) *Products of "Qingtian paddy rice and fish"*

▲ CHINA
The first rice-fish themed restaurant founded by farmers in Qingtian County

GIAHS improves the life of farmers by safeguarding agricultural heritage who constitutes their livelihoods, culture and point of reference.

Lizhen Wu
A local female farmer who set up the first rice-fish themed restaurant in Qingtian County

The Rice-fish Culture system has been widely publicized and has encouraged many young people and overseas Chinese to return to their hometowns to start businesses.

Lizhen Wu, a farmer from the Qingtian site, founded the county's first restaurant, which now has an annual income of more than CNY 500 000 (USD 74 744), and was awarded the Model Farmhouse in Zhejiang Province, an award established by the local authorities that recognizes remarkable achievements in the agricultural sector.

Yuepin Jin returned from France to learn fish incubation and traditional rice-fish culture. He established a rice-fish farming demonstration site, a breeding centre for the local koi carp fish, and a rice-fish farmers' cooperative, with registered trademarks for the products. He also helped win both the rice and the fish national certifications as "green food" in recognition of their natural qualities and environmental value. FAO recognized Yuepin Jin as a "model farmer" in 2014 for his success as a rice-fish farmer.

▲ **CHINA**
Farmers performing the traditional Qingtian fish lantern dance

Returning from Ecuador, Xiao'ai Yang founded an agricultural heritage-themed hotel in Shaoshan village and an international research and learning camp in Fangshan town to teach young people to learn about GIAHS and help them to experience farming life.

LEARN MORE:

Growing rice and fish together in China
https://www.youtube.com/watch?v=2vhpsM5uriM&t=208s

ACHIEVEMENTS

The Rice-fish Culture of Qingtian County was the first GIAHS site in the world. Since being designated in 2005:

- Qingtian County has established a committee to support the conservation and development of agricultural heritage and has formulated two ten-year plans to protect and promote rice-fish symbiosis.
- Twenty traditional rice varieties have been returned to cultivation. Around 30 farmers have directly participated in the conservation of the diversity of rice and fish species in Qingtian, and a research centre for Rice-fish symbiotic germplasm resources has been established.
- The county´s rice-fish symbiosis model has been actively extended with the support of the government and local communities to a total of 1 600 hectares, with increased earnings of more than CNY 15 000 (USD 2 242) per hectare, benefiting more than 52 000 people.
- Over 30 training courses have been held on rice-fish symbiosis conservation techniques as well as two advanced training courses on GIAHS in the framework of South–South Cooperation.

- An alliance for the conservation and development of GIAHS (China) was established to promote co-production, sharing and enrichment. The Qingtian rice–fish symbiosis model has been introduced to six provinces and municipalities.
- Schoolteachers, researchers and promoters have incorporated traditional knowledge of the Rice-fish Culture system model into early childhood books, primary and secondary school textbooks and high school geography courses.

Rice-fish Culture deserves the model of agricultural heritage by its harmony among heaven, earth and human. Qingtian County lives up to the pioneer for exploring the road to common prosperity by its connectivity between China and other countries.

Qingwen Min
Professor at the Institute of Geographic Sciences and Natural Resources Research of the Chinese Academy of Sciences.
Chairman of the Expert Committee on Globally Important Agricultural Heritage Systems, Ministry of Agriculture and Rural Affairs of China

▲ **CHINA**
Traditional fish ponds in Qingtian County

RESOURCES

Asia and the Pacific | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

▶ *Fish statue in Qingtian County to acknowledge traditional rice-fish agriculture*

Nishi-Awa Steep Slope Land Agriculture System, Japan

A model of adapting to weather disasters and social changes under the harsh conditions of steep slope land

THE SYSTEM

The history of the Nishi-Awa Steep Slope Land Agriculture System is said to date back to shifting cultivation in the latter part of the Japanese Jomon period (3000 BCE), predating the introduction of rice growing to Japan.

Farmers have developed a range of practices to reduce erosion and adapt their cultivated crops to the local environment. The farmers allocate land for cropping, grassland, and residential areas on the mountainsides, leaving the steep slopes intact. The soil is preserved by using drainage management techniques, such as building ridges along contours (both stripping and planting), achieving a dam effect that prevents soil runoff due to rain.

▲ **JAPAN**
A female farmer harvesting a local grain called Hadakamugi

©TOKUSHIMA TSURUGISAN GLOBAL AGRICULTURAL HERITAGE PROMOTION COUNCIL

▲ JAPAN

A farmer ploughing on the Nishi-Awa Steep Slope Land Agriculture System

UNDERUTILIZED CROPS AND LOCAL GASTRONOMY ARE THE CORNERSTONE OF FARMERS' ADAPTATION AND FOOD SECURITY

- Carefully selected through many generations, the region's grains provide nutritious food for local communities. Farmers in Nishi-Awa cultivate a wide range of indigenous species, such as Japanese barnyard millet, foxtail millet, proso millet, finger millet, great millet and buckwheat.
- The rich diversity of grain, vegetable, and fruit varieties produced on these mountainsides is embedded in the food identity and daily lives of the people.
- Farmers have developed a rich knowledge of how to preserve food so that it is available throughout the harsh winters.
- Traditional agricultural festivals and rituals, such as praying for rain, reinforce cultural identity and strengthen relationships among the local communities involved in sloping land agriculture.

The GIAHS designation has led to the implementation of multipurpose agricultural policies, through the involvement of diverse actors. We hope to further increase the recognition of our site to the world and increase farmers' income through branding of agricultural products.

Masahito Oshima
Tokushima Tsurugisan Global Agricultural Heritage Promotion Council member and Tsurugi town officer

▲ **JAPAN**
Traditional way of processing crops in the Tokushima Tsurugisan community

ACHIEVEMENTS

Since the designation of the Nishi-Awa Steep Slope Land Agriculture System as a GIAHS site in 2018:

- With support from the Tokushima Tsurugisan Global Agricultural Heritage Promotion Council, local agricultural products have been certified with a Nishi-Awa brand to guarantee the value, nature and origin of the products.
- The Iya Valley production cooperative was organized in 2016 by local citizens. They reclaimed abandoned farmland and started small-scale commercial millet production. The activity links youth, urban citizens, the private sector, non-governmental organizations (NGOs), non-profit organizations (NPOs) and universities.

We make almost everything, as farmers in Japan are said to make "one hundred products". Everything that is produced here is so delicious, from cabbages to carrots! It is important to for the young generation to be interested in agriculture, and to inherit this wonderful legacy.

Hamako Isogai
Local farmer from Tsurugi town area

▲ **JAPAN**
The Tokushima Tsurugisan cuisine consists of many local crops used for cooking

- In 2021, six traditional grains (soba, kokibi, takakibi, awa, hie, and yatsumata) from the Iya Valley were registered by the Slow Food Ark of Taste.[1]
- The community-organized cooking classes focused on traditional recipes featuring local produce. The classes targeted stakeholders such as agritourism hosts, restaurant owners and young people.
- Rural tourism has been recognized as a key component in promoting understanding of GIAHS, through direct experience of farmers' lives, their unique techniques, agricultural tradition, biodiversity, landscape, and gastronomy.

LEARN MORE

Steep Slope Land Agriculture System in Nishi Awa
https://www.youtube.com/watch?v=s-_42KYcVSM&t=1s

RESOURCES

Asia and the Pacific | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

[1] The Ark of Taste is the Slow Food movement's international catalogue of endangered heritage foods.

Soave Traditional Vineyards, Italy

Social sustainability and traditional knowledge linked to viticulture

THE SYSTEM

The Soave Traditional Vineyards have provided income to more than 3 000 families over the past 200 years. The grape growers in the Soave area use various approaches to protect the environment, including ecological corridors, marginal areas, namely land that usually has little or no agricultural value, and minor crops such as cherries, olives and peas.

The area features two indigenous grape varieties: Garganega, an ancient and renowned vine, and Trebbiano di Soave, which have been known since Roman times.

Witnessing Italians' agricultural heritage should not become a once-in-a-lifetime experience, but an ever-lasting occurrence for everyone.

Gaetano Tebaldi
Mayor of Soave

▲ ITALY
A bird's-eye view of Soave Traditional Vineyards

The Soave agricultural system uses traditional methods to grow vines and ensures that income is distributed fairly among the stakeholders in the production chain, including farmers, wine producers and bottlers, even during the most difficult periods. Despite being characterized by small estates, the system has succeeded in remaining competitive, thanks to cooperation and innovation.

TRADITIONAL KNOWLEDGE OF LOCAL COMMUNITIES

The idiosyncratic landscape of the area features vineyards on hilly lands, and ancient trees among the vines and buildings. To prevent soil erosion and limit surface runoff, farmers use contour ploughing, which follows the contours of the hills and slopes and is perfectly adapted to the Soave site.

Typical of the area is the Veronese pergola system, which uses scaffolding and tie rods to support the vine shoots. The system, which is thought to date back to ancient times, suits the production of fine white wines as the slopes are oriented towards the south, which exposes the grapes to long hours of sunshine. The way the slopes are built, however, does not allow for much mechanization. The grape grower must maintain and manage the canopy, and harvest by hand. In addition to the pergola, farmers build dry-stone walls to mark the roads, and embankments to create terraces on the slopes.

Soave has held a variety of festivals and events to celebrate agriculture for generations. The *Festa dell'Uva* (Grape Festival), held on the third weekend of September, is the most prestigious. It started in 1929 and was the first of its kind in Italy. Today, there is an annual competition to determine the best grapes; a local association hangs the grapes under the medieval gate to make a particular sweet wine. These productive activities emphasize the importance of preserving agricultural traditions as a key element for cultural and social cohesion in Italian local communities.

▲ ITALY
Farmers harvesting grapes in a Soave Traditional Vineyard

ACHIEVEMENTS

Since the designation of the Soave Traditional Vineyards as a GIAHS site in 2018:

- The Veneto Region has announced plans to allocate more financial resources to the management of the terraced areas.
- The Soave Wine Consortium has requested that the Veneto Region include the terraced areas of the Soave area in the regional list of historical and exceptional vineyards.
- A phytosanitary commission has been set up, where farmers meet weekly to coordinate actions regarding less invasive and more conservative pest and disease treatments.

The Soave Traditional Vineyards are a site of great value, requiring huge investment for maintenance and protection. The GIAHS recognition has prompted a generational change in the management of farms and wine companies, stimulated investment by government and local authorities, and triggered a virtuous circle where winemakers become the drivers for conservation and sustainable development.

LEARN MORE

Link to the GIAHS website dedicated page
https://www.fao.org/giahs/giahsaroundtheworld/designated-sites/europe-and-central-asia/soave-traditional-vineyards/en/

▲ **ITALY**
Soave Traditional Vineyards

It is a great, great satisfaction that, since its designation as a GIAHS site, Soave is now among the most important agricultural and wine systems in the world for its ability to maintain centuries-old traditions, despite innovations that characterize a modern, efficient and income-generating production system. Soave becomes an example for all humanity, and for this we can only be happy.

Sandro Gini
President of the Soave Wine Protection Consortium and producer

▶ *Female farmers examining freshly harvested grapes*

RESOURCES

Europe and Central Asia | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

Historical Irrigation System at the Horta of Valencia, Spain

Adaptation through the efficient use of water resources and strong social organizations

THE SYSTEM

Located in Valencia in northeastern Spain, the Horta is characterized by an urban agricultural system composed of multiple irrigation channels, roads, network ditches (*acequias*), farms, rural constructions, and different land uses. Agricultural patterns have created a complex and highly resilient landscape in a densely populated coastal region. The area produces a variety of fruits and vegetables, as well as rice and fish.

The Horta is influenced by its multiple environments, including the Mediterranean coast, the banks of the Turia River and the Albufera Lagoon. The agricultural system is managed by historical institutions such as the Tribunal de las Aguas, the oldest court of justice in Europe, which has authority over all *acequias* and is responsible for enacting and enforcing traditional rules for water distribution. Another important institution is La Tira de Comptar, founded during the Arab domination and made official by King James I in 1238. It currently guarantees the supply of fresh produce to the city and the right of farmers to participate in fruit and vegetable markets, as well as regulating their agricultural activities.

▲ SPAIN
A bird's-eye view of the Historical Irrigation System at the Horta of Valencia

ACHIEVEMENTS

Following the designation of the Historical Irrigation System at the Horta of Valencia as a GIAHS site in 2019:

- The area has received significant national and global recognition and has attracted visitors, experts and scientists from around the world.
- Coordination between sectors has improved, supported by the creation of a GIAHS management body, the Consell de l'Horta.
- The City of Valencia created the *Consell Alimentari*, an advisory body to strengthen links between local fresh food producers and school procurement.
- Innovative projects are underway, such as the redevelopment of the *Porta ApHorta* (a pun on "door to door") by the Municipality of Valencia and the Tira de Comptar – a historical local market where small farmers of the Valencian Horta sell their fresh and recently harvested products.

GIAHS recognition has given our community the opportunity to imagine a brighter future for our area, its conservation, the maintenance of artisanal and traditional fisheries, representing above all an insurance for our cultural identity.

Amparo Aleixandre
Secretary-General of the Community of Fisherfolks El Palmar

▲ **SPAIN**
A variety of vegetables are grown in the Historical Irrigation System at the Horta of Valencia

- Valencia aims to achieve carbon neutrality by 2030 and the Horta is at the centre of this vision. Sustainable production, reduction of environmental impact of farming activities, waste reduction, agroecological farming and reduction of chemicals are some of the strategies being developed.

The system has proved very resilient in crises. During the pandemic, very little impact was felt in the rural area. Proximity to the city, short value chains and consumption of local agricultural produce resulted in the capacity of the Horta to contribute to the food security of millions of people.

Daud Marwan
Farmer and seller at Mosen-Sorell Market, Valencia, Spain

◀ (Left) *A traditional* alqueria *building was restored and became the headquarters of Consell de l'Horta, the newly created GIAHS management organization*

◀ (Right) *Vegetables from the Horta sold through Porta ApHorta*

▲ **SPAIN**
The water channel in the Historical Irrigation System at the Horta of Valencia

LEARN MORE

Video impressions: The resilience of the Horta of Valencia in times of COVID-19
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RESOURCES

Europe and Central Asia | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

▶ *Local farmers' market in the town of Godella*

Andean Agriculture, Cusco–Puno Corridor, Peru

Dynamically conserved Indigenous Peoples' agricultural knowledge of resilience and adaptation for over 5 000 years

THE SYSTEM

The Andean Agriculture, Cusco–Puno Corridor in Peru is an outstanding example of farmers' wisdom and adaptation capacity that allows them to live in harmony with their ecosystems. The system comprises remarkable structures and practices, including terraces, ridges, irrigation systems and traditional agricultural tools, crops and livestock spread over different altitudes.

The Andean Agriculture, Cusco–Puno Corridor is a network of cities, territories and rural populations that have preserved their agroengineering practices for over five millennia in high Andean ecosystems that range between 2 500 and 5 000 metres. The social and cultural practices of farmers promote responsive, harmonious and respectful management of the environment: key factors that have achieved advances in agricultural management and food security.

▲ PERU
Landscape of Andean Agriculture, Cusco–Puno Corridor

SOCIAL ORGANIZATION AND TRADITIONAL KNOWLEDGE

The communities in the Cusco–Puno Corridor maintain a form of social organization with its own rules and regulations, recognized by the law of peasant communities. Minca, or voluntary collective work, is a tradition where the whole community comes together, to plough, harvest, package and process agricultural products.

A communal approach to work shows that agriculture holds great sociocultural significance for the communities in the Andean Agriculture, Cusco–Puno Corridor. Their traditions and cultural rituals acknowledge and pay tribute to the environment that provides food for them, such as the celebration of Pachamama (Mother Earth) and the *apus* (local gods represented by hills, mountains, rivers and atmospheric phenomena).

The area is rich in agrobiodiversity, thanks to the maintenance of traditional agricultural systems and the use of ancestral knowledge to interpret environmental signals (biological, atmospheric and astronomical indicators).

▶ *Farmers harvesting potatoes in the Andean agricultural system*

After the designation as GIAHS, women are strengthened, empowered and better organized thanks to several female activity groups that have been established to promote local women in that area.

Valentina Avilés Tapara
A farmer in Cusco Region, Peru

▲ **PERU**
Andean people have domesticated a suite of crops and animals

The crop rotation system has also been used by traditional communities as an important component of soil management to avoid soil depletion and overexploitation of resources. Every year, crops on communal land are rotated in a cycle that can last five to twenty years. Different seeding times are traditional practices applied to reduce the climatic risks.

I live in the community of Caritamaya, Puno, I am 62 years old. I am a former president of the Caritamaya community, I live from agriculture, therefore I can say that every year is not the same, there is always frost, drought, hail, different winds every year. Frost is what devastates our crops the most. In our aynokas we sow first year potato, second year quinoa, third year barley, oats.

Valentín Perqa Charaja
Peasant community of Caritamaya
in the Acora Puno Region

ACHIEVEMENTS

Since the designation of the Andean Agriculture, Cusco–Puno Corridor, in Peru in 2011:

- The area has recovered crop diversity and variability through the strengthening of traditional practices and remuneration mechanisms.

▲ **PERU**
A woman conserving quinoa in the Andean agricultural system

- The communities' agrobiodiversity products have been promoted in local markets.
- Traditional agrobiodiversity knowledge has been included in educational institutions. Grandparents, parents and children participate to strengthen the handing on of intergenerational traditional knowledge, further contributing to valuing of their culture and livelihoods.
- Meetings have been held with young farmers to involve them, and to engage their interest in conserving agrobiodiversity, and combining sustainable traditional agricultural methods with innovative ones.
- Increased participatory management of risks affecting the conservation of agrobiodiversity, ecosystems, traditional knowledge and culture.
- Increased participatory management of risks affecting the conservation of agrobiodiversity, ecosystems, traditional knowledge and culture.
- Participation in developing strategic management plans: concerted development plans, municipal environmental commissions, environmental management instruments.
- Inclusion of a series of lessons on traditional knowledge in local education curricula.

RESOURCES

Latin America and the Caribbean | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

Ghout Oases system El Oued, Algeria

Outstanding wind management adapted to life in the desert

THE SYSTEM

The *ghouts* are unique oases located in the Wilaya of El Oued in southeastern Algeria. Since the fifteenth century, the local Sufi communities have grown date palms by controlling desert winds. Using palm leaves as windbreaks, the farmers create a depression in the dunes about ten metres deep. The palms are planted directly above the water table where they have direct and ongoing access to scarce groundwater resources.

> ***The ghout is a symbol of stability for us, it is part of our life and our heritage, and to preserve it is our duty because it transmits a message from grandparents to children on the challenge of difficult nature.***
>
> **Toumi Messaoud**
> Farmer in the region of Ktef, M'iah Ouanssa, El Oued

▲ ALGERIA
Bird´s-eye view of the Ghout Oases system El Oued

The desert communities have made agriculture possible without irrigation or energy expenditure by creating green oases on immense stretches of sand. The *ghouts* represent a unique and valuable source of livelihood for farmers living far from urban areas. They are also an inspiration in terms of technical innovation to cope with desertification and climate change.

BIODIVERSITY FOR FOOD AND LIVELIHOOD SECURITY

The *ghouts* are home to a rich diversity of wildlife, as well as cultivated agricultural biodiversity. Faced with the difficult climate, farmers have long selected date palm varieties adapted to the local circumstances.

The conservation of these date palm varieties draws on ancestral knowledge of how to manage, fertilize, multiply and harvest them. Today, 26 varieties of date palm are cultivated in the *ghouts*, all of them known for their outstanding taste. Thanks to the microclimate created by the oases, it is also possible to cultivate other vegetables and cereals and to raise small livestock.

ACHIEVEMENTS

Since the designation of the *Ghout* Oases system El Oued in 2011:

- Five associations have been created to foster the empowerment of local farmers and to develop income-generating activities. For example, farmers have revived the production of almost extinct products from small goat breeding. Local breeds of pigeons have also been reintroduced to generate additional income.

▲ **ALGERIA**
Inspection of palm trees at the Ghout *Oases system El Oued*

- Faced with the threat of excessive groundwater pumping, the Algerian Government issued a decree limiting pumping from the aquifers on which the *ghouts* depend. In addition, the replacement of dried-out date palm trees has been initiated in collaboration with national institutes.
- The GIAHS designation has led to renewed interest among consumers. Today, *ghout* dates sell at three times the price of dates from conventional systems.
- Women have been trained to develop crafts and products based on the processing of dates.
- The *ghouts* are real islands of activity with unique development potential. Tourist circuits have been developed to further diversify the activities of farmers and strengthen their livelihood security.

◀ (Left) *The palm dates from the* ghout *are recognized for their high-quality flavour and long conservation properties*

◀ (Right) *Natural fences made of palm tree leaves are arranged in the dunes to take advantage of the winds and excavate sands*

▲ ALGERIA
Palm trees in the ghout *are planted at the outcrop of water tables allowing to reduce evaporation*

The* Ghout *Oases system El Oued is a symbol of defiance for the Sufi peasant, who was able to adapt the harsh nature and turn the desert sands into a green paradise. (For) an academic researcher, the* ghout *system is a renewable treasure, an open book on nature that preserves and documents our ancestors' traditions, customs, and genius. We must learn many lessons from our ancestors who settled in the Souf Oasis so that we can cross into the future safely and according to sustainable development foundations.

Bachir Khezzani
Academic researcher, Faculty of Natural Sciences, University of El Oued

RESOURCES

Near East and North Africa | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations (fao.org)

THE FUTURE OF GIAHS

The year 2022 marks GIAHS' twentieth anniversary, a celebration that would not have been possible without the many generations of people that have lived in harmony with nature around the world.

Terraced fields are created in mountainous areas. Water channels are constructed in dryland areas. Lands are elevated to fight against floods in wetland areas. Organic fertilizers made from straw and the manure of farm animals are applied in the field. Forests are maintained around agricultural fields to facilitate rainwater availability. Such agroforestry areas also maintain biological diversity, which supports pest control.

Agricultural systems may have very different characteristics, but they share an important social significance to their communities. Maintaining the systems requires continuous collaboration within farming communities, and this is reinforced through local festivals and other cultural activities.

Today, keeping traditional agricultural systems alive is more challenging than ever before. Young people are opting to live in the cities, leaving the future of these systems in doubt. For the past twenty years, FAO has supported traditional systems through its GIAHS programme, helping farmers to conserve knowledge and skills while protecting biodiversity and improving livelihoods. We are fully committed to continue our support for these agricultural systems – and to expand them significantly – well into the future.

Professor Nobuyuki Yagi
Chair of Scientific Advisory Group for GIAHS at FAO
Professor, University of Tokyo


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As an institution but also as individuals it is our duty to preserve and safeguard ***the values of agricultural heritage*** *around the world, so that* ***future generations*** *can witness its* ***prominent features and benefit*** *from its potential to* ***assure livelihoods, food security and a healthy environment.***

Yoshihide Endo
Programme Coordinator of the GIAHS Secretariat at FAO

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PORTUGAL
Barroso Agro-sylvo-pastoral System

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ISBN 978-92-5-136979-1

9 789251 369791

CC2385EN/1/10.22