Expert Thematic Workshop on Landscape Approaches for the post-2020 Global Biodiversity Framework, 3-6 Sep 2019, Kumamoto, Japan

FAO Globally Important Agricultural Heritage Systems – A Landscape Approach to Biodiversity Conservation

Aso GIAHS, Kumamoto (Photo by Evonne Yiu)

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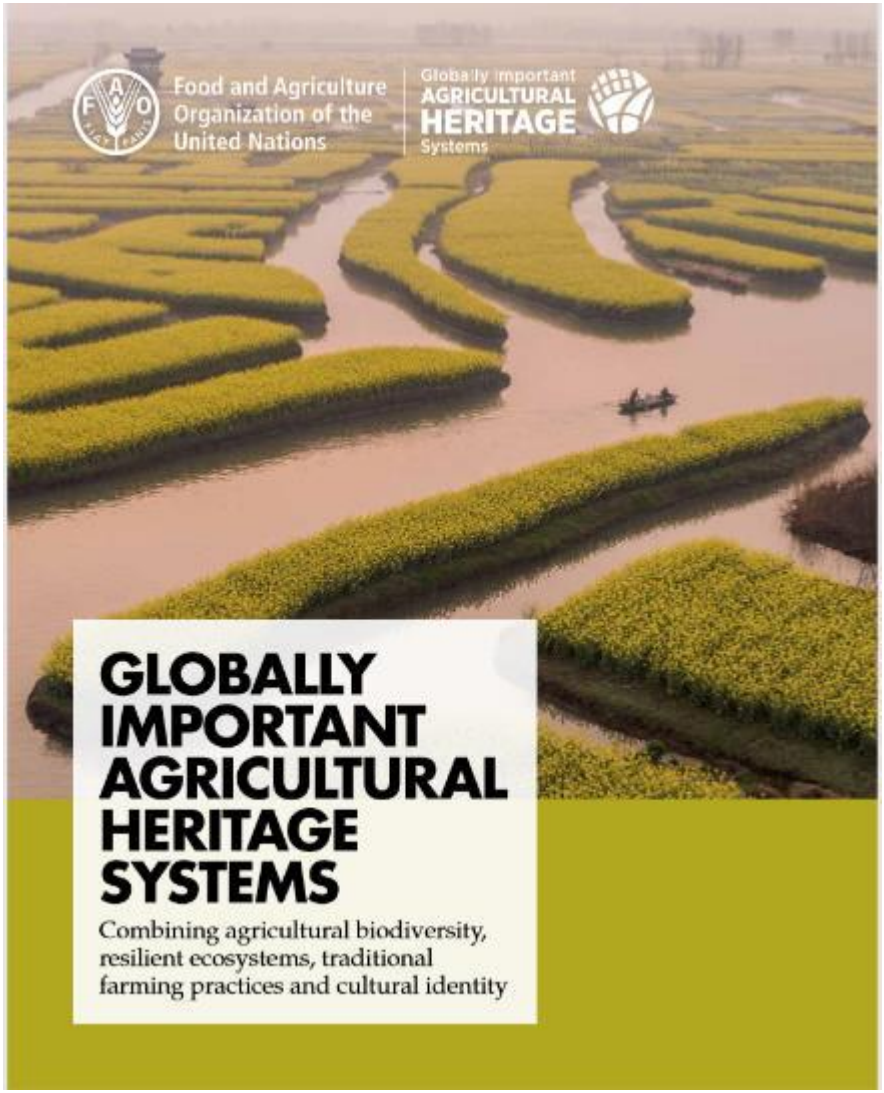
Globally Important AGRICULTURAL HERITAGE Systems



Globally **I**mportant **A**gricultural **H**eritage **S**ystems (GIAHS)

http://www.fao.org/giahs/en/

GIAHS for Sustainable Development

- GIAHS started as an initiative proposed by Food and Agriculture Organization of the United Nations (FAO) on the occasion of the 2002 The **World Summit on Sustainable Development (WSSD)** in Johannesburg, South Africa

- Designation framework for traditional agricultural land-use systems **contributing to sustainable development of agriculture** in developing countries that

- Launched a GEF funded project of 5 pilot sites in 2004
- First GIAHS designation in 2005
  - "Qingtian Rice-Fish Culture System" (Zhejiang Province, China)

- GIAHS became official FAO programme in 2016

- UNU assisted FAO since 2002 in establishing the GIAHS initiative and also gave technical assistance to GIAHS applications in Asia

The WSSD or "Earth Summit"(2002)

GIAHS and CBD

- GIAHS is relevant to the work of CBD, in particular:

COP 10 Decision X/34 Agricultural Biodiversity
"Strengthening approaches which promote the sustainability of agricultural systems and landscapes such as, but not limited to, the **Globally Important Agricultural Heritage Systems (GIAHS)** of the Food and Agriculture Organization of the United Nations, consistent with the Convention on Biological Diversity and other relevant international obligations"

CBD Article 8(j)
"Subject to its national legislation, **respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders** of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices"

Article 10(c)
"Protect and encourage **customary use of biological resources in accordance with traditional cultural practices** that are compatible with conservation or sustainable use requirements"

- FAO organized CBD SBSTTA 14 side event (2010), UNU side events at COP 10 (2010), COP 11 (2012) and COP 12 (2014).

GIAHS are “remarkable **land use systems and landscapes** which are rich in globally significant biological diversity evolving from the co-adaptation of a community with its environment and its needs and aspirations for sustainable development” (FAO,2002)

Ifugao Rice Terraces, the Philippines

ALGERIA

GHOUT SYSTEM

The farmers from El Oued Souf have developed a non-irrigated oasis system called Ghout, adapted since the fifteenth century to face violent winds and scarce water resources in a region off the Trans-Saharan roads.

A ghout is effectively a crater dug into the sand using the speed and the force of desert winds. Through the installation of fences made of poles of dry palm leaves organized in circular lines along the edge of the crater to be dug, strong wind provokes a phenomenon of turbulence to shape the ghout naturally. The bottom ground of a ghout is always located on the top of a water reserve. Thus, the objective of shaping a profound crater is to plant palms on the top of a water table, avoiding any kind of irrigation and drastically reducing evaporation.

The other main function of the ghout is to shelter the trees from the violent Saharan winds. Indeed, one of the main issues in the desert is sand silting, which can be reduced thanks to the traditional knowledge of the Remmala – "wind engineers" – who know how to detect water tables and protect the ghout. The presence of such shelters in the desert represents a precious eco-habitat for wild species in the region.

Overall, the ghout system gathers up to 26 different local varieties of palms, highly adapted to the Saharan context and offering long conservation of their fruits. Indeed, for more than two centuries the local varieties of dates produced by this system have enjoyed particular fame for their taste and visual quality.

In short, this sustainable and non-irrigated oasis system is mostly independent and self-sufficient, relying only on traditional knowledge. It has an adapted and local agrobiodiversity based on oasis life culture and food habits. The knowledge and techniques used here could also be a precious resource in the management of sand silting, which occurs in many other regions in the world. This system has allowed the farmers to respond to the needs of local people and safeguard the rich local biodiversity that is threatened with disappearance.

Source: http://www.fao.org/3/I9187EN/i9187en.pdf

KENYA AND TANZANIA

OLDONYONOKIE/ OLKERI AND ENGARESERO MAASAI PASTORALIST HERITAGE AREA

In southern Kenya and in Tanzania, Maasai have developed an agropastoral system over the centuries to adapt to scarce water supply and lack of grazing land availability. Maasai have succeeded in adapting the system to the surrounding environment and wildlife to satisfy both their own needs and the evolving needs of the cities nearby – instead of competing for resources they are functioning in synergy.

Their agropastoral system simultaneously integrates animals such as buffaloes, goats and sheep with endemic species and food plants such as maize and beans. Further, as the Maasai community is highly organized, they split core tasks such as grazing land research, water management, livestock movements, etc. To manage the needs of the animals and the community requires an important knowledge and understanding of nature and the climate in the region.

In this fragile environment, Maasai have skillfully shaped and maintained the landscapes through the ages in a way that is sustainable and respectful to wildlife. Thus, their agropastoral system must be preserved both to maintain the magnificence of the landscape linked to their unique identity and to keep their incredible knowledge about nature.

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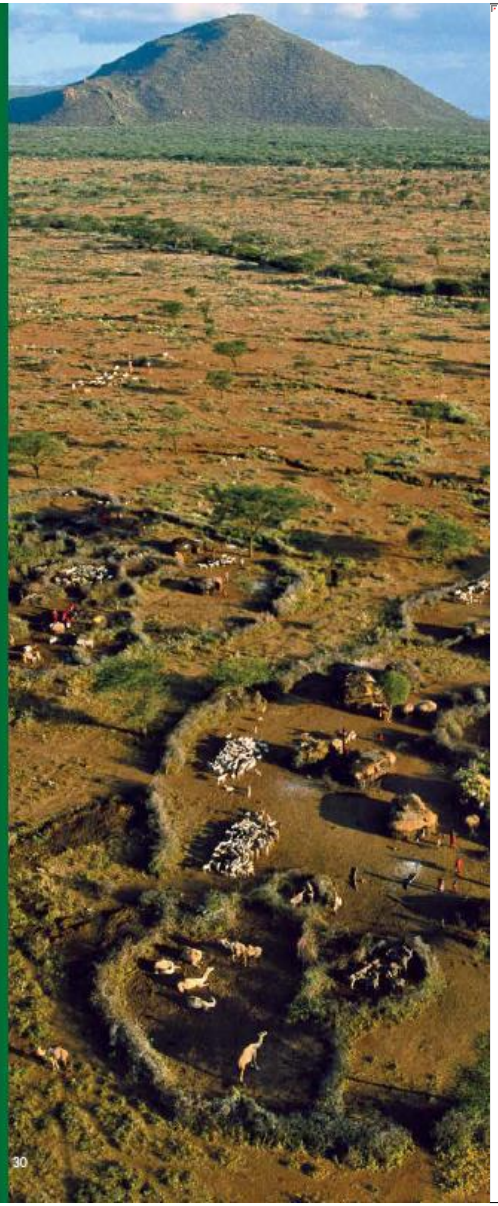

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Source: http://www.fao.org/3/I9187EN/i9187en.pdf

PERU

ANDEAN AGRICULTURE

Andean agriculture is one of the best examples of the adaptation and knowledge of farmers to their environment over the last 5 000 years or more. Actual presence of indigenous agricultural knowledge includes terraces, ridge fields, local irrigation systems and traditional agricultural tools, crops and livestock spread at different altitudes.

Multi-millennial experiences and selection have led to the domestication of a lot of endemic species such as potatoes and quinoa. Added to that, local knowledge has led to the development of three main agricultural systems, each one related to altitude: the maize area (2 800–3 300 metres), the potato area (3 300–3 800 metres) and the livestock area with high altitude crops such as quinua and cañihua (3 800–4 500 metres). At each altitude band, native selected crops are cultivated.

Indigenous communities also form a strong social organization with their own norms and cultural rituals – such as the tribute to the Pachamama (mother earth) – leading both to sustainable practices and solidarity. Indeed, a strengthening sense of identity is probably one of the main goals to be achieved through agriculture here.

As these areas maintain most of the ancient traditional agricultural technologies, they should not be taken for granted – particularly in the current context where migration of younger people to the forest or towns may lead to a severe loss of knowledge and biodiversity.

Source: http://www.fao.org/3/I9187EN/i9187en.pdf

Globally Important AGRICULTURAL HERITAGE Systems

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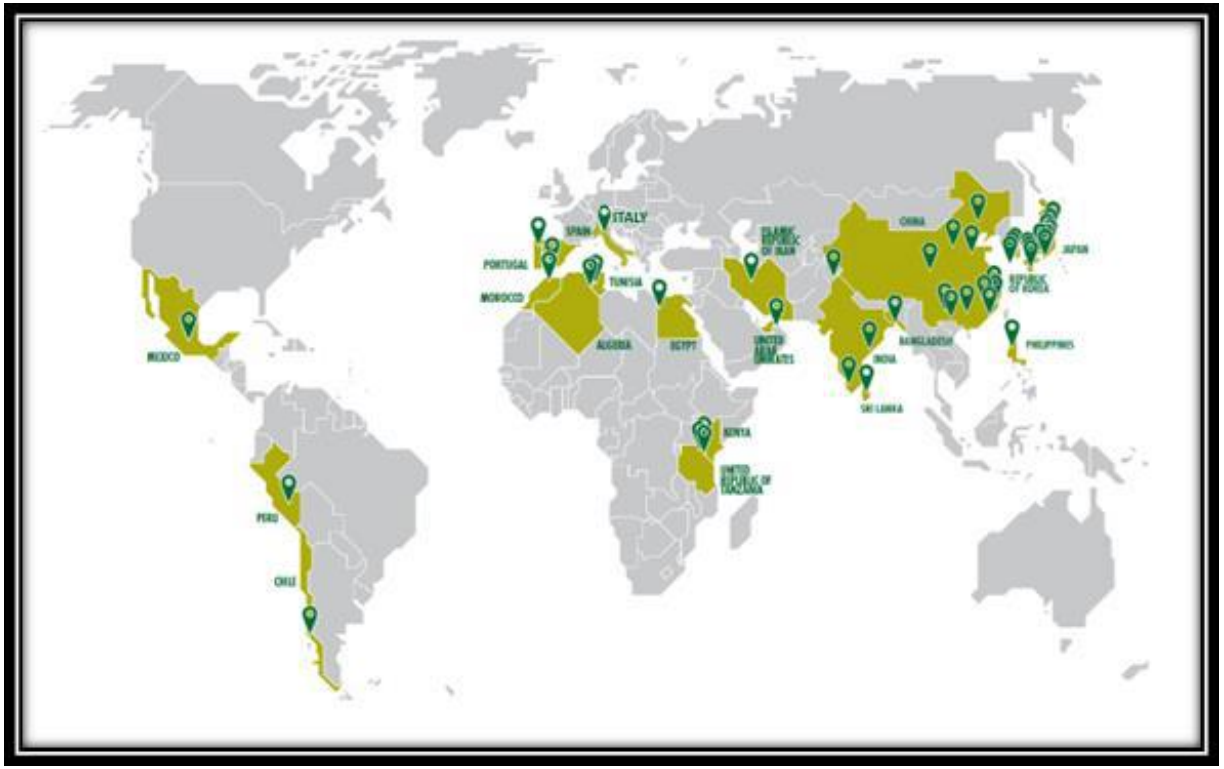
Around the World

FAO GIAHS
(since 2002 to Aug 2019):

- 57 designations
- 21 countries
- ¾ in Asia



- Top 3 countries: China 15, Japan 11, Korea 4 (53%)
- European GIAHS first designated in April 2018
- Need to extend more GIAHS designations worldwide

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Countries with GIAHS Designations

(As at August 2019)

Asia and the Pacific (36)

- China (15), Japan (11), Korea (4), India (3), the Philippines(1), Sri Lanka (1), Bangladesh (1)

Africa and Near East (12)

- Iran (3), Tanzania (2), Morocco (2), Kenya (1), Algeria (1) , Tunisia (1), Egypt (1), UAE (1)

Europe and Central Asia (6)

- Spain (3), Italy (2), Portugal (1)

Latin America and the Caribbean (3)

- Peru (1), Chile (1), Mexico (1)

Types of GIAHS

Farming practice

Dong's Rice-Fish-Duck System (China)

Traditional tea-grass integrated system in Shizuoka(Shizuoka)

Genetic resources

Chiloé Agriculture(Chile)

Kuaijishan Ancient Chinese Torreya (China)

Land(sea)scape system

Oases System in Atlas Mountains(Morocco)

Jeju Batdam Agriculture (Korea)

GIAHS Designation Criteria (from Jan. 2017)

Characteristics of Global Importance

Historical and contemporary relevance;
Sustainable development; Biocultural diversity

1. Food & livelihood security

2. Agro-biodiversity

3. Local & traditional knowledge systems

4. Culture, value & social organizations

5. Landscape & seascape features

Action Plan

Policies, strategies & actions for dynamic conservation;
Multi-stakeholder involvement; Monitoring and evaluation

(Source: FAO, 2016)

GIAHS Criteria

2. Agro-biodiversity*

Ecological & Biodiversity Aspect

- The continuing use of many local varieties sustains agro-biodiversity (conservation of genetic resources and indigenous species) and can enhance related ecosystem functions, and contribute to overall biodiversity conservation
- Pollinators
- Agro-ecology

*Criterion was “Biodiversity and Ecosystem Functions” until 2016.

GIAHS Criteria
5. Landscape and Seascape Features

- **Land use Aspect**

❑The **sustainable and mosaic use** of production landscape/seascape through integrated co-management that will enhance ecological resilience

❑Beautiful and outstanding land/seascapes and associated features created as a **result of remarkable land use** for agriculture production and its conservation.

❑Such land/seascape should have economic, environmental and cultural value

GIAHS as an integrated "SYSTEM"

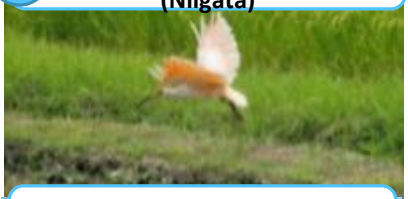
"Noto's Satoyama & Satoumi*"

FAO Globally Important Agricultural Heritage System (GIAHS)
Designated in 2011

*"Satoyama & Satoumi" is the Japanese term for Socio-ecological Production Landscape and Seascapes (SEPLS)

GIAHS in Japan

1 Sado's Satoyama in Harmony with Japanese Crested Ibis (Niigata)



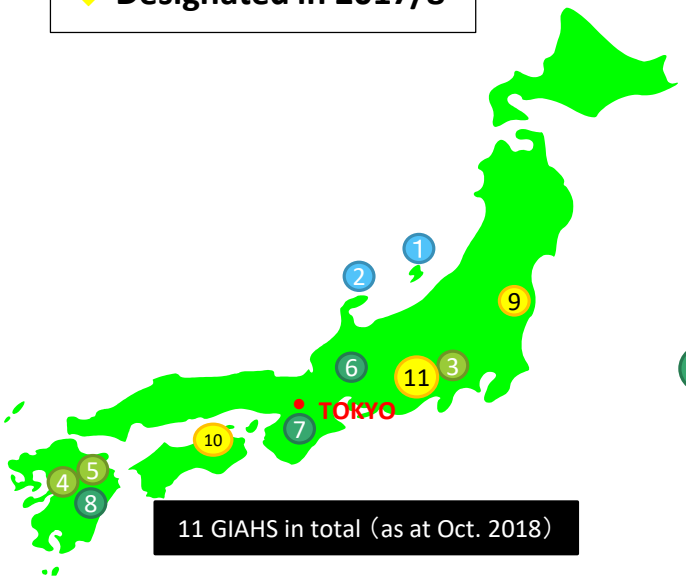
2 Noto's Satoyama & Satoumi (Ishikawa)

3 Traditional tea-grass integrated system (Shizuoka)

4 Managing Aso Grasslands for Sustainable Agriculture (Kumamoto)

5 Kunisaki Peninsula Usa Integrated Forestry, Agriculture &Fisheries System (Oita)

- Designated in 2011
- Designated in 2013
- Designated in 2015
- Designated in 2017/8



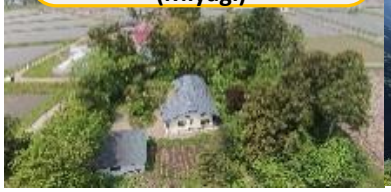
11 GIAHS in total（as at Oct. 2018）

6 Ayu of the Nagara River System (Gifu)

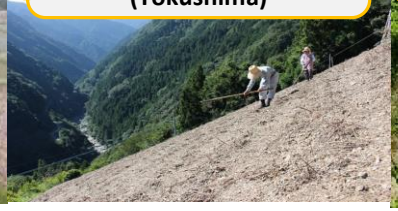
7 Minabe –Tanabe Ume System (Wakayama)

8 Takachihogo-Shiibayama ountainous Agriculture & Forestry System (Miyazaki)

9 Osaki Kôdo's Traditional Water Management System for Sustainable Paddy Agriculture (Miyagi)

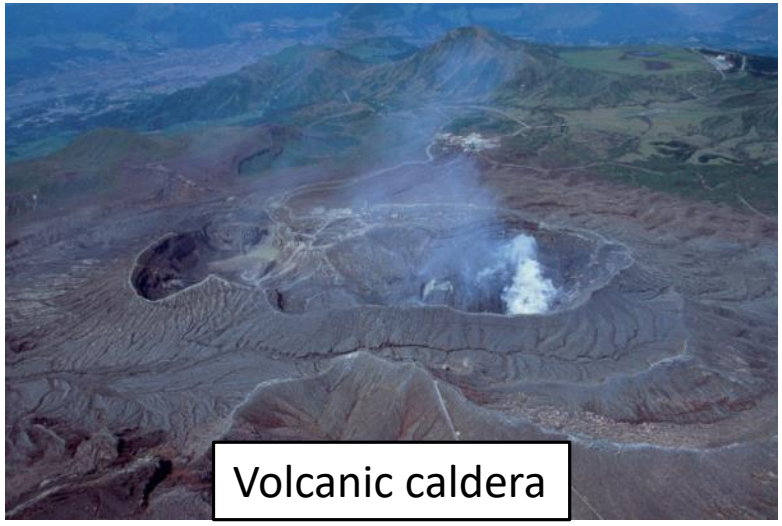


10 Nishi-Awa Steep Slope Land Agriculture System (Tokushima)



11 Traditional Wasabi Cultivation in Shizuoka

Aso Region
- FAO GIAHS (2013) & UNESCO Global Geopark (2014)


Volcanic caldera


Grasslands


Burning of grasslands


Red cattle grazing

GIAHS "Managing Aso Grasslands for Sustainable Agriculture"

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Vast grasslands around huge volcanic caldera, maintained by local communities through integrated landscape approach and traditional farming practices such as mowing, burning, grazing and composting etc, for sustainable agriculture.

Grass burning by volunteers

Grassland flora

Biodiversity Conservation

Grasslands

Grass compost

Grassland management

Grass mowing

Forests

Manure

Cattle Grazing

Farm products

Fields

Product branding

阿蘇 草原再生

Paddies

Meat products

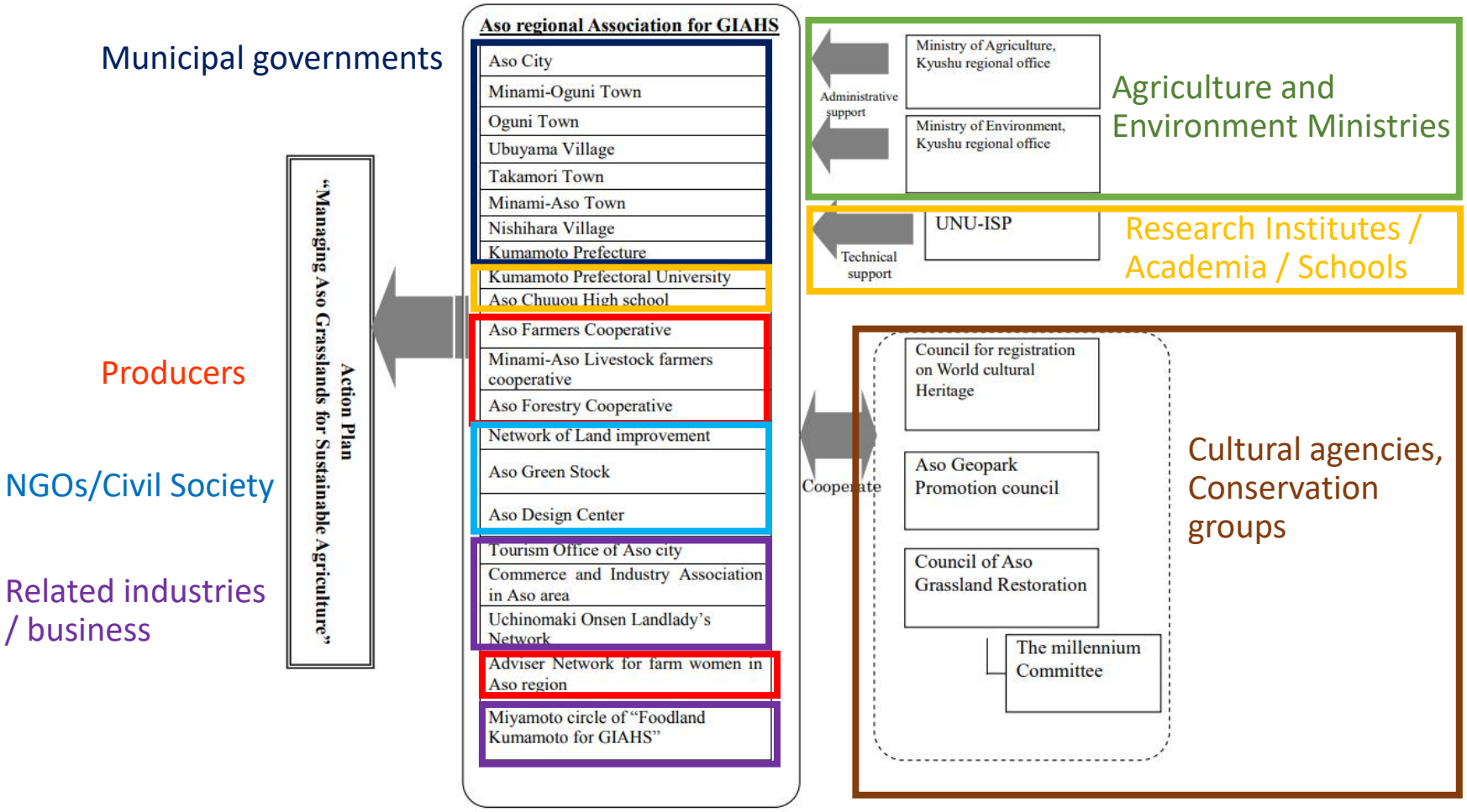
Cow manure

Rice

Grassland Regeneration

Aso Region, Kumamoto Prefecture

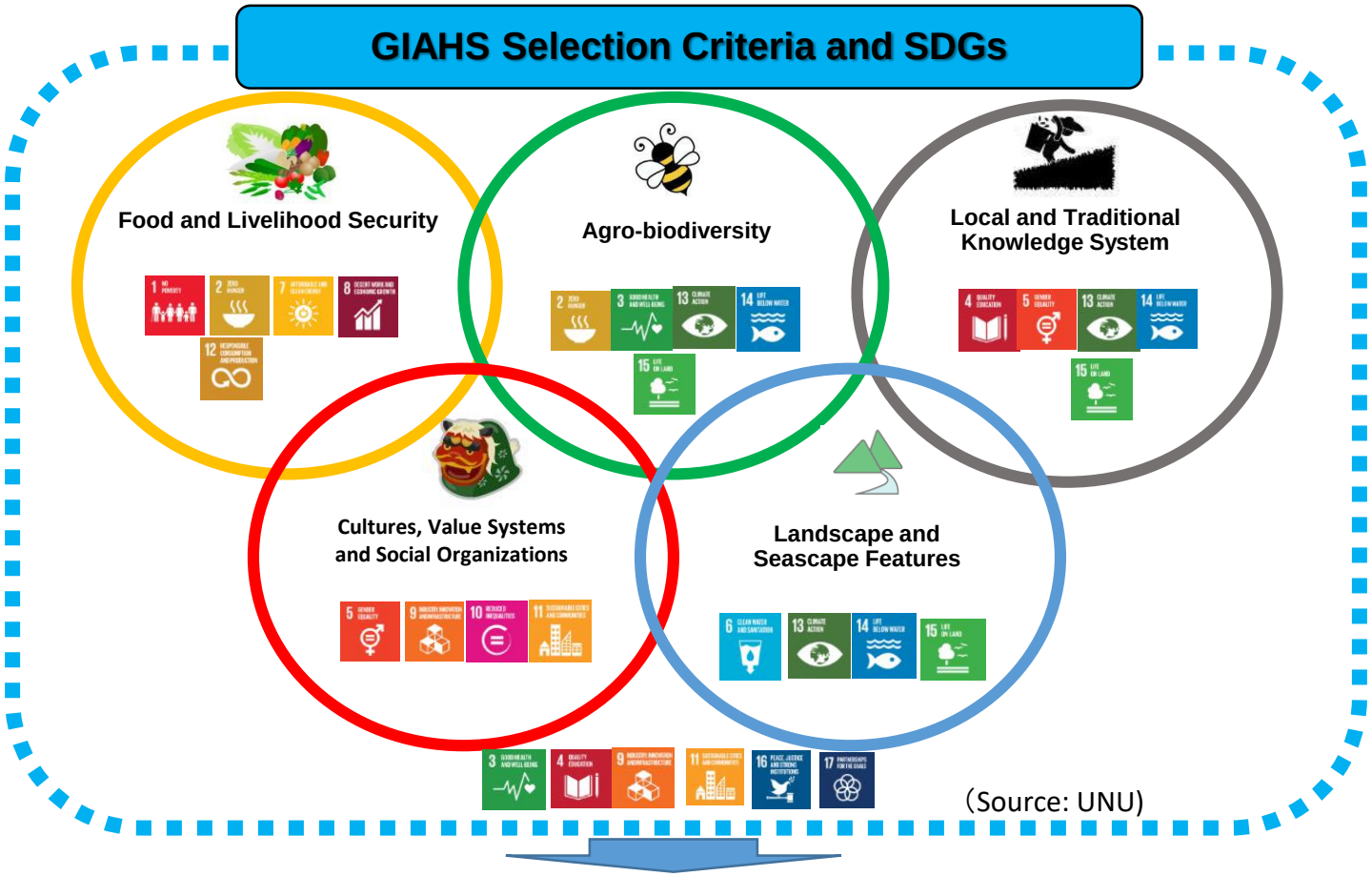
Aso GIAHS Action Plan (2013)



Landscape approach of dynamic conservation implemented by Aso GIAHS Promotion Association and supported by co-management efforts from diverse stakeholders

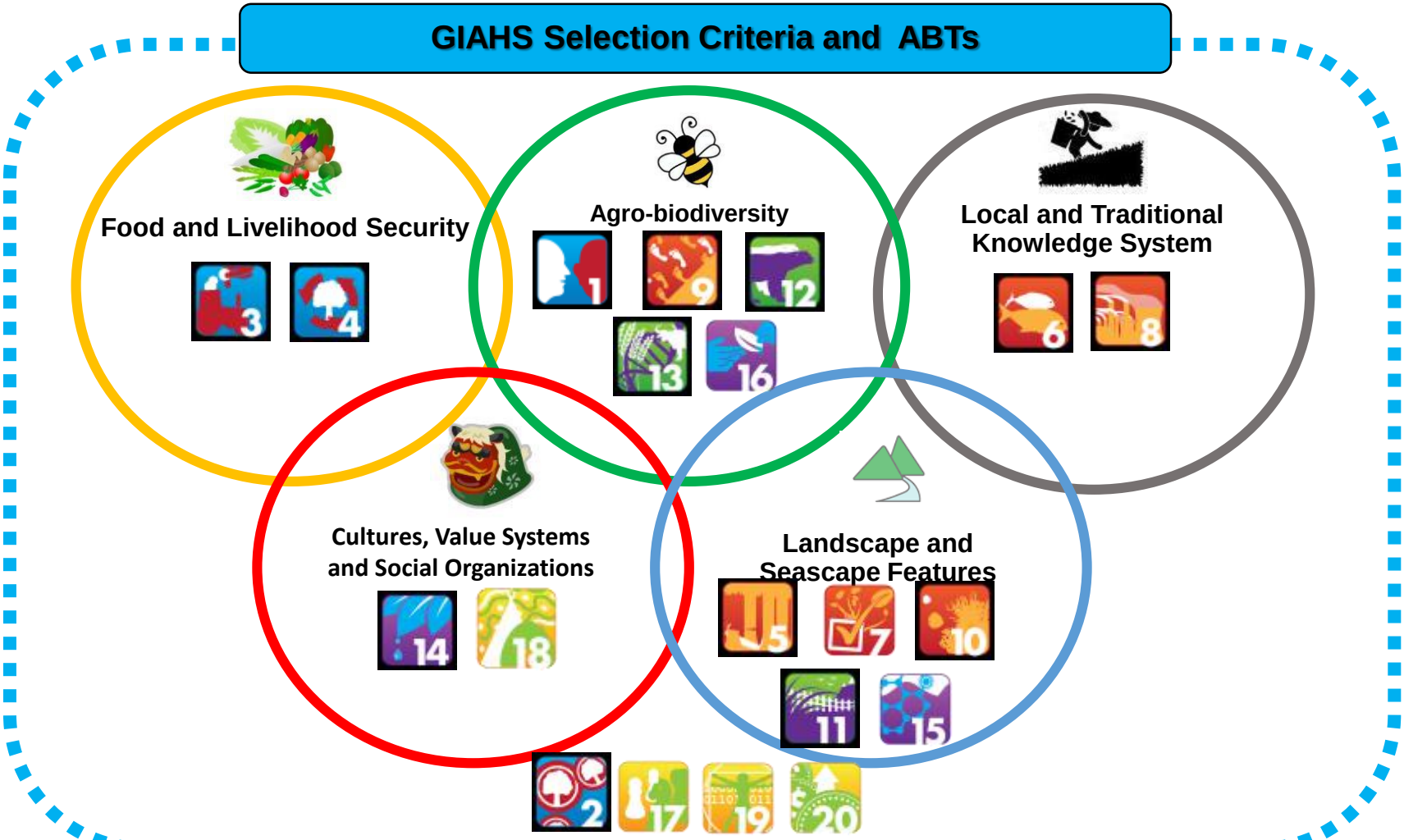
GIAHS and SDGs

- UNU was asked to provide views to FAO GIAHS Secretariat on how GIAHS can contribute to SDGS
- According to the 5 key criteria, GIAHS can contribute to all 17 SDGs



GIAHS and ABTs

- GIAHS can also contribute directly and indirectly to achieving ABTs



20 ABTs

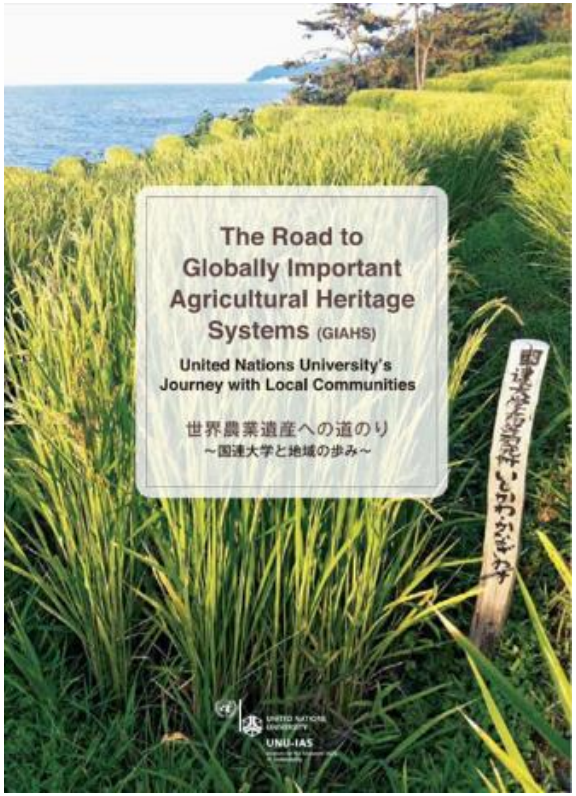
United Nations Decade on Biodiversity

GIAHS for Biodiversity Conservation

- Relevance and potential of GIAHS' contribution to biodiversity is recognized by CBD and increasing so within FAO (e.g. FAO Biodiversity Platform)
- Conservation of GIAHS takes a landscape management approach involving multi-stakeholders with array of expertise
- Accounting the GIAHS conservation activities under the National Biodiversity Strategic Action Plans (NBSAPs) can make NBSAPs more comprehensive, and also a good tool to promote mainstreaming of biodiversity into the agriculture related ministries/agencies/sectors
- SEPLS that have traditional agriculture systems can also consider becoming GIAHS or apply GIAHS dynamic conservation approach to enhance ecological resilience and local livelihoods

The Road to GIAHS
- UNU's Journeys with Local Communities-

Documenting the decade long journey of UNU's research and conservation work on GIAHS with the local communities in East Asia, featuring farmers and other stakeholders' voices on the GIAHS programme, and showcasing key GIAHS sites in Japan



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or

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Fire-belt grass cutting on Aso Grasslands

THANK YOU!

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17 GOALS TO TRANSFORM OUR WORLD

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