



Food and Agriculture
Organization of the
United Nations

Globally Important
**AGRICULTURAL
HERITAGE**
Systems



GIAHS Concept, Approaches and Actual cases

Agricultural Cultural Heritage in Austria
28 November 2018

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FAO



I. GIAHS Concept and Operation



**Disadvantageous
Conditions**

**Fragile Ecosystems: Limited Natural Resources:
Extreme Climate Conditions: Geographic Isolation**

Farmers' Attempts for Overcoming Difficulties

Farmers' Wisdom for Skillful Resource Uses (crop yield increase, etc.)

Remarkable and Unique Agricultural Systems with Global Value = GIAHS

Food and livelihood security

Enriched Agro-biodiversity

Local and Traditional Knowledge Systems

Cultures, value systems, social organizations

Remarkable Landscapes and Seascapes Features

**GIAHS
Selection
Criteria**

Five Criteria for GIAHS Designation

1. Food and livelihood security

The proposed agricultural system contributes to food and/or livelihood security of local communities.

2. Agro-biodiversity

Agricultural biodiversity, as defined by FAO as the variety of animals, plants and micro-organisms that are used directly or indirectly for food and agriculture, including crops, livestock, forestry and fisheries.

3. Local and Traditional Knowledge systems

Maintain local and invaluable traditional knowledge, ingenious adaptive technology and management systems of natural resources, including biota, land, water which have supported agricultural

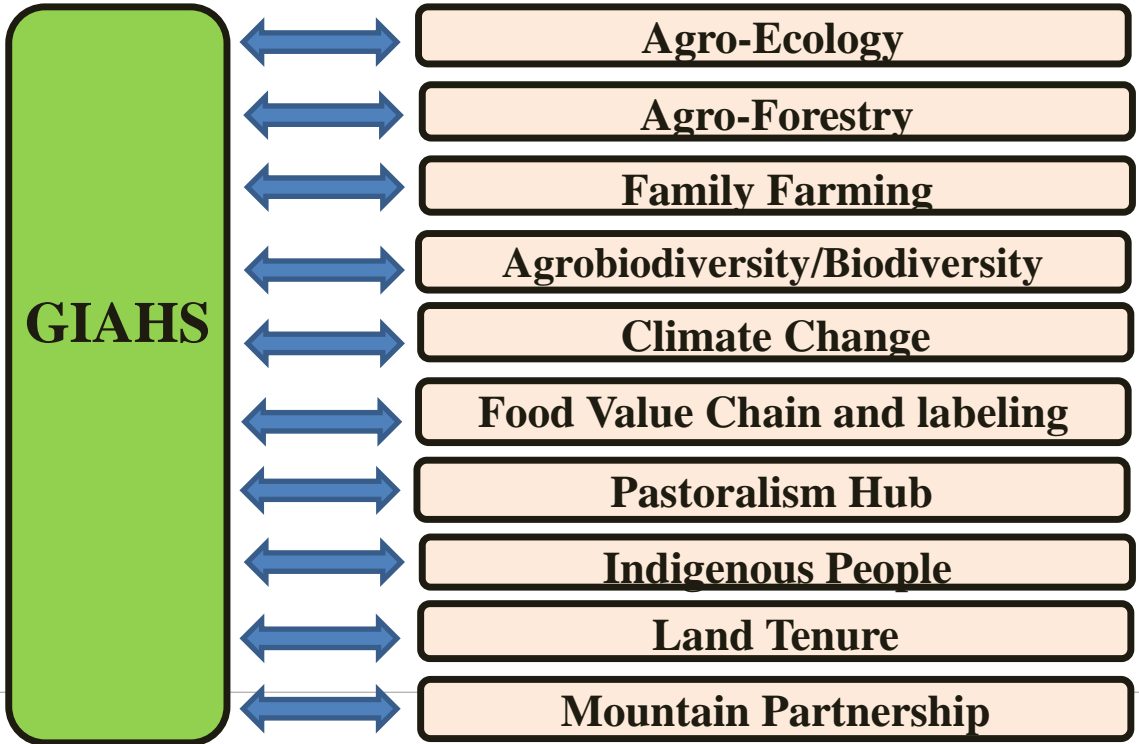
4. Cultures, value systems and social organisations

Cultural identity and sense of place/Social organizations, value systems and cultural practices associated with resource management and food production

5. Landscapes and Seascapes Features

GIAHS sites represent landscapes or seascapes that have been developed over time through the interaction between humans and the environment, and appear to have stabilized or to evolve very slowly

Multifaceted Nature of the GIAHS Programme (Relevance to FAO Activities)



What GIAHS Programme aims at?

These systems are threatened by;

- **Social, cultural, environmental, economic changes (modernization, globalization, market economy)**
- **Accelerated process of Urbanization**
- **Neglect of diversified systems and local knowledge**
- **Low community involvement in decision-making**
- **Inappropriate policy, legal and incentive frameworks**

Designation as GIAHS

Dynamic Conservation

Dynamic Conservation

Farmers, Local Community

National and local

Policy makers, NGOs

Academia, Researchers

**Making Action Plan
for Dynamic Conservation**

All possible
Measures to
Achieve Dynamic
Conservation

**Conservation of Core Elements
of GIAHS (agricultural systems)**

- **Adaptation to Contemporary Environment**
- **Social/Economic Development**

**Action Plan
Implementation**

**Monitoring of
its Impacts**

Evaluation

Correction

Possible Measures for Dynamic Conservation

Knowledge dissemination on GIAHS

Strengthening the Systems and Capacity for Action Plan Implementation

Improved Management of Agricultural Resources

Conservation and Sustainable Use of Agrobiodiversity

Improvement of agricultural production methods

Sales Promotion of the Agricultural Products

Promotion of tourism and cultural activities and local cuisine

Empowerment of women and more involvement of local community in the decision making

Expected Outcomes

Positive mind set changes of local farmers

Promotion of agricultural production in the site

Increased Incomes and welfare of family famers

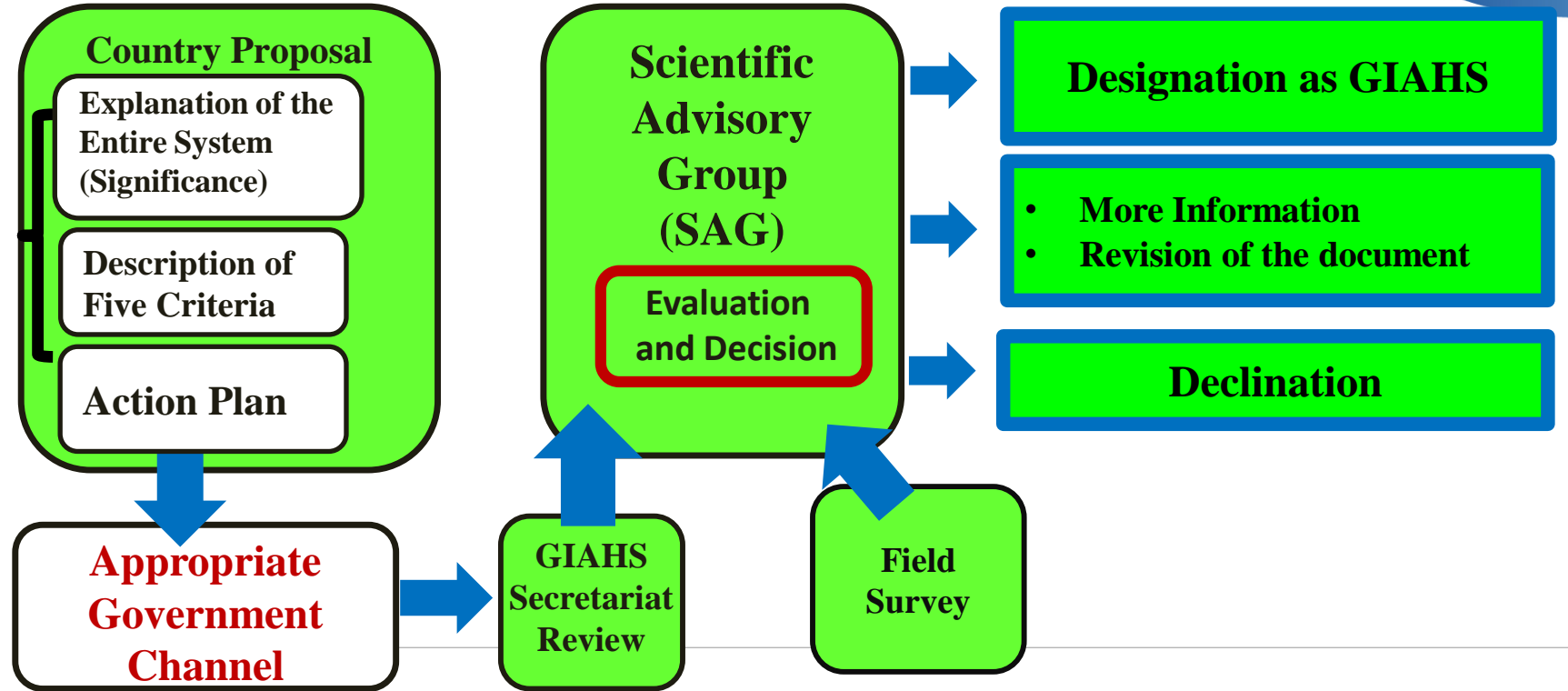
Enhanced Values of agricultural products

Conservation of agrobiodiversity

Further promotion of harmonization of agriculture with the environment

Development of value changes for GIAHS site farmers

GIAHS Designation Process



Scientific Advisory Group (SAG)



Region	Country	Name	Title and Institute/Office/University/Ministry
Africa	Kenya	Helida Oyieke	Chief Research Scientist at National Museums of Kenya
Asia/Pacific	China	Min Qing Wen	Professor of Center for Natural and Cultural Heritage Institute of Geographic Sciences and Natural Resources Research, CAS
Asia/Pacific	Japan	Kazuhiko Takeuchi	Senior Vice-Rector of United Nations University (Tokyo)
Europe	Italy	Mauro Agnoletti	Associate Professor of University of Firenze
Latin America and Caribbean	Brazil	Patricia Goulart Bustamante	Researcher of EMBRAPA (Brazilian Agricultural Research Corporation)
Near East	Tunisia	Slim Zekri	Associate Professor, Head of the Department of Natural Resource Economics, College of Agricultural & Marine Sciences, Sultan Qaboos University
North America	Canada	Anne MacDonald	Professor in Sophia University Graduate School of Environmental Studies (Japan)

II. GIAHS Sites in the World





52 sites
in
21 countries

Countries	Name of sites/systems	Year
Algeria	1. Ghout System (Oases of the Maghreb)	2011
Bangladesh	2. Floating Garden Agricultural Practices	2015
Chile	3. Chiloé Agriculture	2011
	4. Rice Fish Culture	2005
	5. Wannian Traditional Rice Culture	2010
	6. Hani Rice Terraces	2010
	7. Dong's Rice Fish Duck System	2011
	8. Pu'er Traditional Tea Agrosystem	2012
	9. Aohan Dryland Farming System	2012
	10. Kuajishan Ancient Chinese Torreya	2013
China	11. Urban Agricultural Heritage – Xuanhua Grape Garden	2013
	12. Jiaxian Traditional Chinese Date Gardens	2014
	13. Xinghua Duotian Agrosystem	2014
	14. Fuzhou Jasmine and Tea Culture System	2014
	15. Diebu Zhagana Agriculture-Forestry-Animal Husbandry Composite System	2017
	16. Zhejiang Huzhou Mulberry-dyke & Fish-pond System	2017
	17. Traditional Mulberry System in Xiajin's Ancient Yellow River Course	2018
	18. Rice Terraces in Southern Mountainous and Hilly Areas, China	2018
Egypt	19. Dates production System in Siwa Oasis	2016
	20. Saffron Heritage of Kashmir	2011
India	21. Koraput Traditional Agriculture	2012
	22. Kuttanad Below Sea Level Farming System	2013
Iran	23. Qanat Irrigated Agricultural Heritage Systems, Kashan	2014
Italy	24. Olive groves of the slopes between Assisi and Spoleto	2018
	25. Noto's Satoyama and Satoumi	2011
	26. Sado's Satoyama in Harmony with Japanese Crested Ibis	2011
	27. Managing Aso Grasslands for Sustainable Agriculture	2013
	28. Traditional Tea-grass Integrated System in Shizuoka	2013
	29. Kunisaki Peninsula Usa Integrated Forestry, Agriculture and Fisheries System	2013
Japan	30. Ayu of the Nagara River System	2015
	31. Minabe-Tanabe Ume System	2015
	32. Takachihogo-Shiibayama Mountainous Agriculture and Forestry System	2015
	33. Osaki Kodo's traditional water management system for sustainable paddy agriculture	2017
	34. Nishi-Awa Steep Slope Land Agriculture System	2018
	35. Traditional WASABI Cultivation in Shizuoka	2018
Kenya	36. Oldonyonokie/Olkeri Maasai Pastoralist Heritage	2011
Mexico	37. Chinampas Agricultural System in Mexico City	2017
Morocco	38. Oases System in Atlas Mountains (Oases of the Maghreb)	2011
Peru	39. Andean Agriculture	2011
Philippines	40. Ifugao Rice Terraces	2011
Portugal	41. Barroso Agro-Sylvo-Pastral System	2018
	42. Traditional Gudeuljang Irrigated Rice Terraces in Cheongsando	2014
Republic of Korea	43. Jeju Batdam Agricultural System	2014
	44. Traditional Hadong Tea Agrosystem in Hwagae-myeon	2017
	45. Geumsan Traditional Ginseng Agricultural System	2018
Spain	46. Malaga Raisin Production System in Axarquia	2017
	47. Salt production system of Añana	2017
Sri Lanka	48. The Cascaded Tank-Village System in the Dry Zone of Sri Lanka	2017
	49. Engaresero Maasai Pastoralist Heritage Area	2011
Tanzania	50. Shimbue Juu Kihamba Agroforestry Heritage Site	2011
Tunisia	51. Gafsa Oases (Oases of the Maghreb)	2011
UAE	52. Al Ain and Liwa Historical Date Palm Oases	2015

Case 1: Floating Garden in Bangladesh

- Use ~~invasive plants and other organic material~~ to produce the floating bed-garden
- Multi-crop production and use of the degraded floating bed as fertilizer
- Require low energy input



Result of adaptation by the farmers to the floods and arable land pressure



Case 2: Agroforestry on the slope of Mt. Kilimanjaro

- Mix cropping system featured with several layers of vegetation
 - Endemic timbers, banana, coffee/fruit trees as well as staple crops

Provide sun shades and micro-climate for favourable conditions to all crop production and soil management







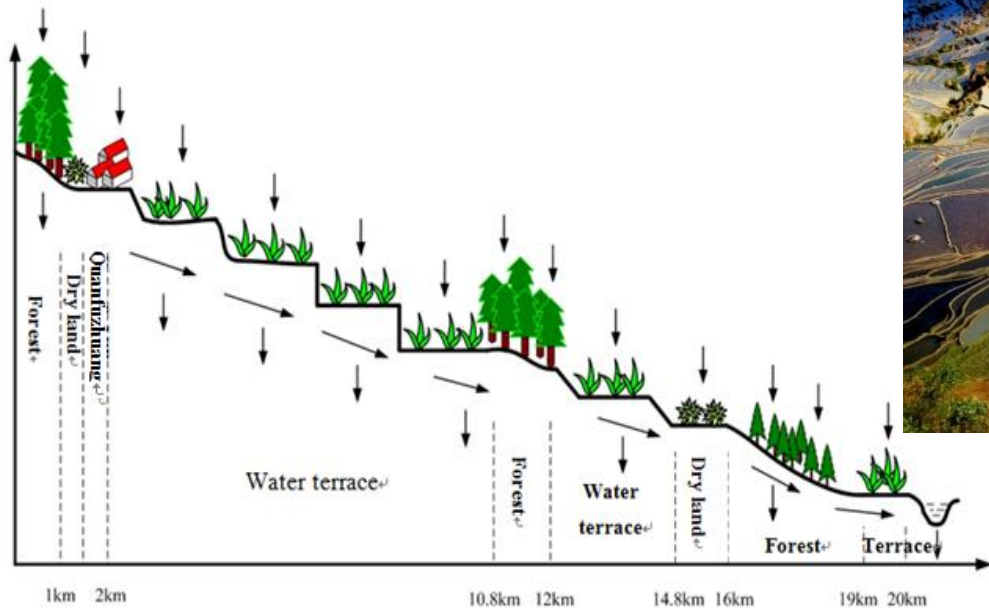
➤ Ingenious local traditional knowledge includes;

- Rain fall and pasture growth pattern
- Types of grass to be used for feeding different kinds of animals (cattle, sheep, goat, etc.) and for other uses (such as medicine)
- Sustainable use of natural pasture
- Movement of wild animals
- Animal breeding

Case 4: Hani Rice Terrace (China)

- Magnificent landscape
- Land management with integration of forests, habitations and rice paddy fields = highly adapted water management in dry season threatened area
- Maintenance of locally adapted rice varieties

Adaptation to harsh dry season and mountainous areas into highly productive and sustainable production system



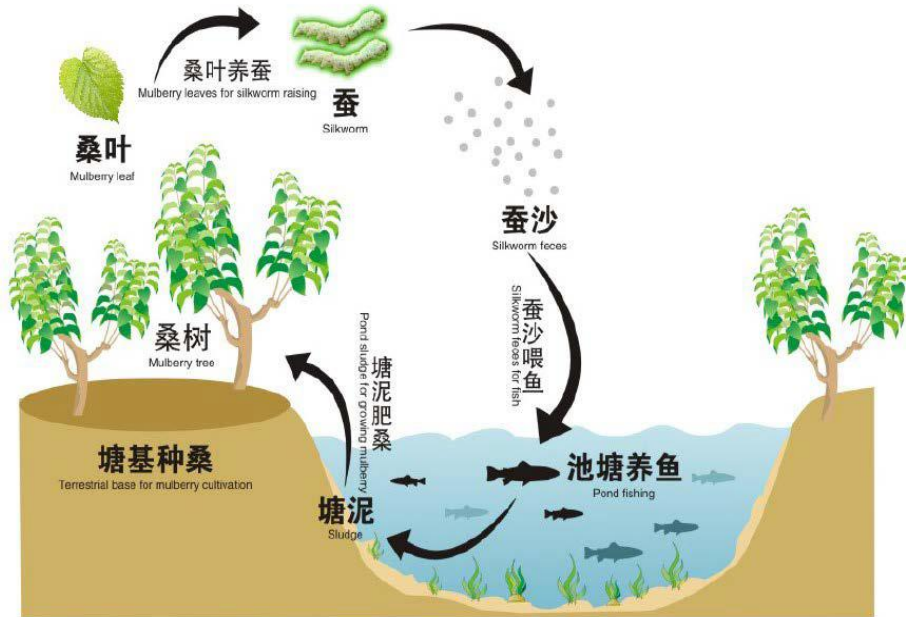
The summit of East Guanyin Mountain

Honghe River valley



Case 5: Agro-Ecological production System

Zhejiang Huzhou Mulberry-dyke & Fish-pond system

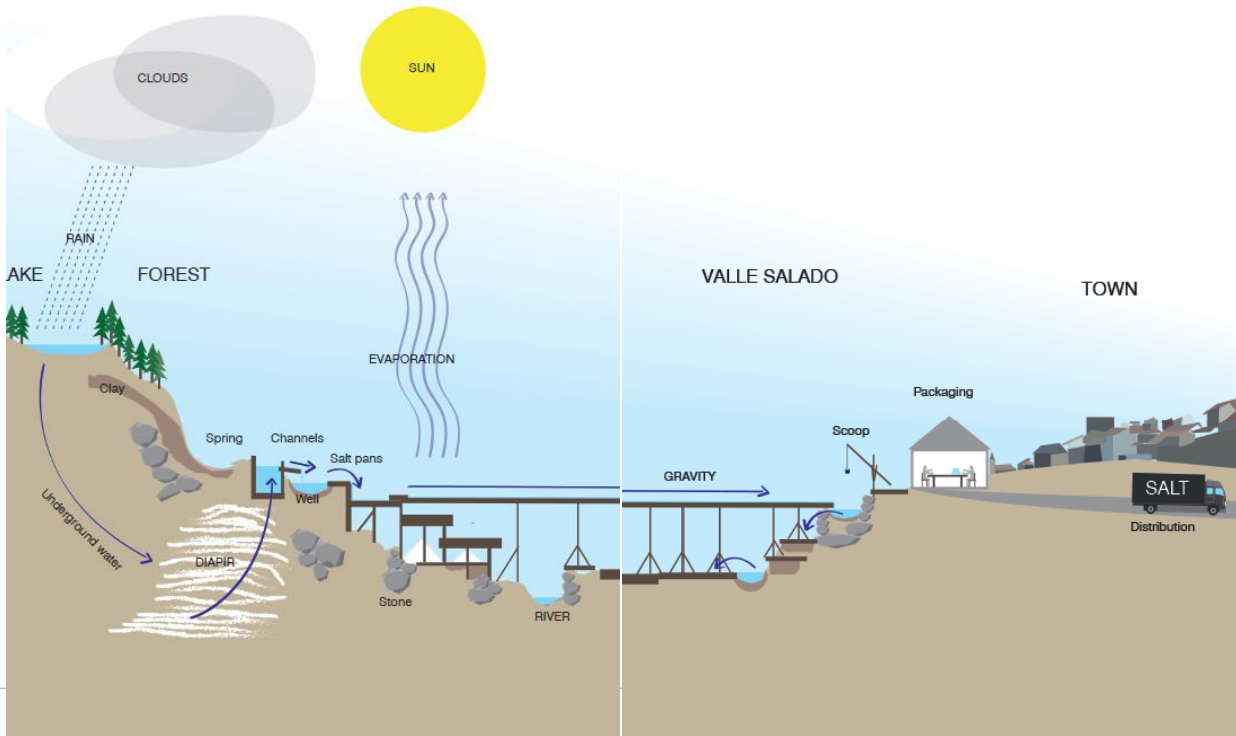


Case 6: Salt Production System of Añana, Basque Country, Spain

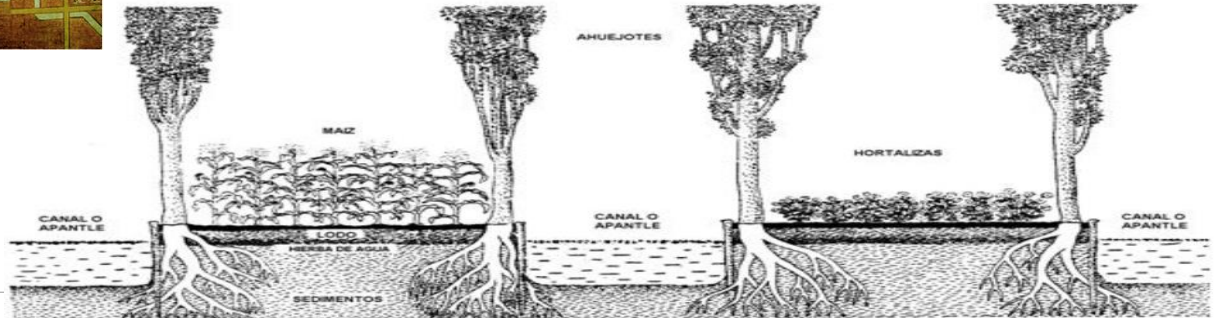
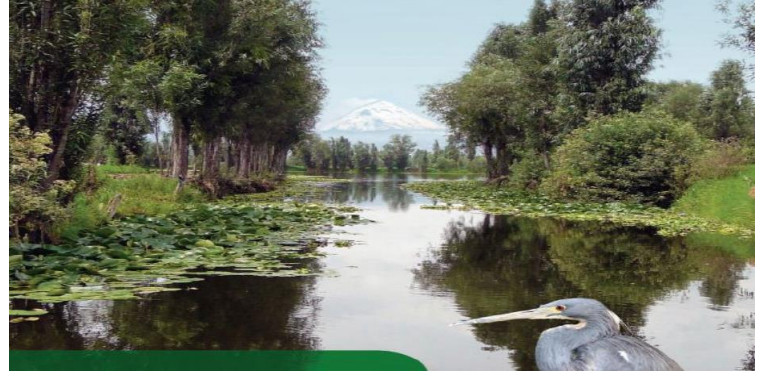




The salt production cycle



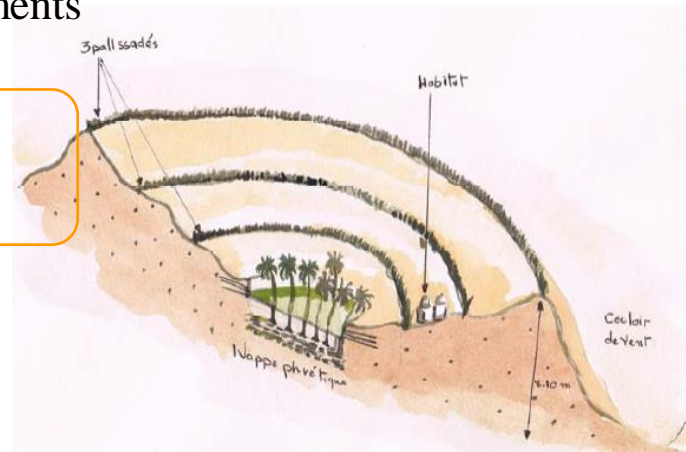
Case 7: Chinampas in Mexico



Case 8: Gout Oases systems in Algeria

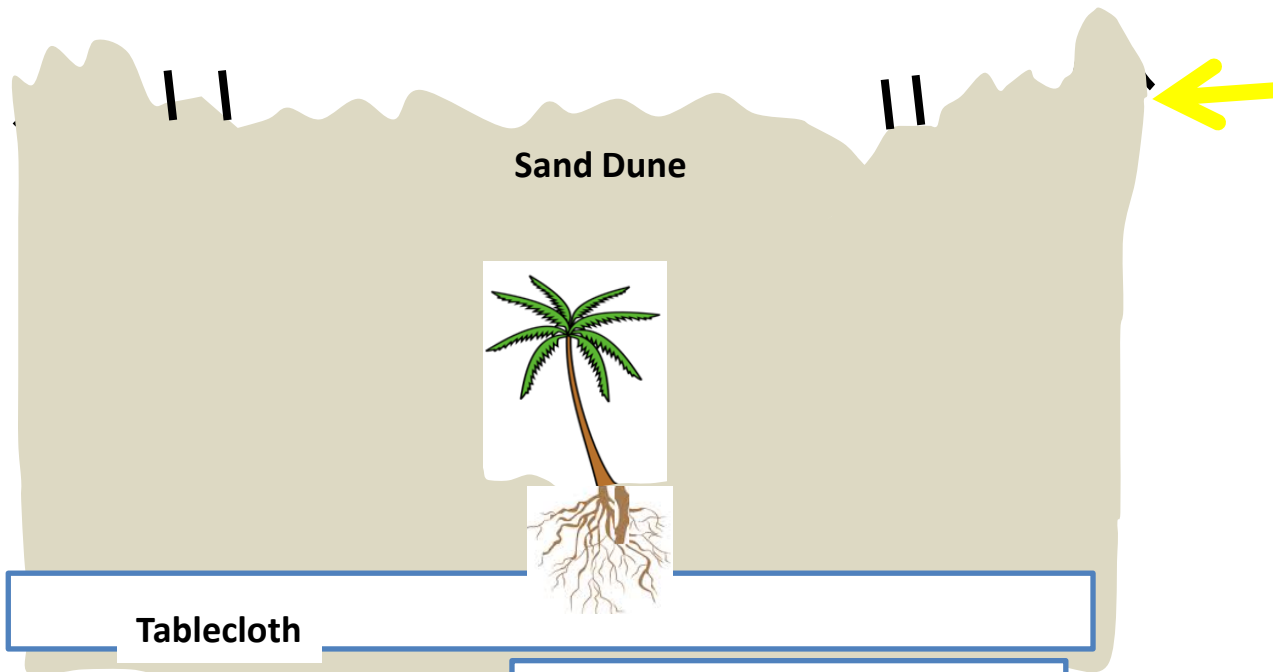
- No irrigation system in the desert
- No need to use machineries: Use of wind to create cavities
- Multi-cropped system complying all organic requirements
- Adapted way of life to the Saharian desert

- **High adaption to arid areas with water and sand management**
- **Combatting desertification**





The mechanism is the next



Tablecloth

Source: Mr. Achour Abdellatif, Argelia

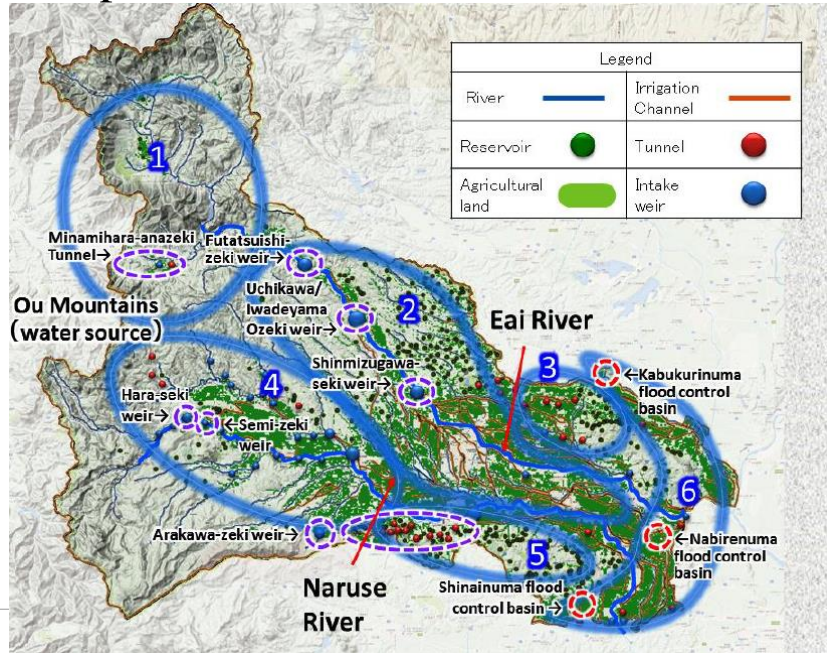
Case 9: Agro-biodiversity in Chiloe Island (Chile) and Andean Agriculture (Cusco-Puno Corridor, Peru)



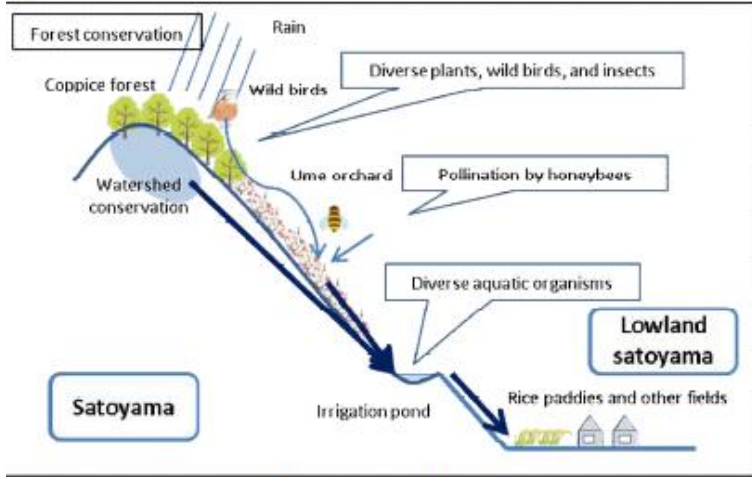
- Many endemic varieties of potatoes, garlic and sheep
 - Unique Andean crops maintained with traditional technologies
- ➔
- Famers' long term efforts for risk reduction against fluctuation of climate conditions
 - Contribution to food security and biodiversity conservation



Case 10: Osaki Kodo in Japan: Excellent water management system for irrigation, floods and low temperature



Case 11: Ume (Japanese apricot) Production System, Wakayama, Japan



III. Making GIAHS Proposal



GIAHS Proposal Documents → PLS See the Proposal Template

1. Explanation on the Significance of the Proposed GIAHS Site

- Explain the global importance;
- The Historical Background and Contemporary Relevance of the site;
- Summarize the Features and Characteristics of the system

2. Explanation on the Characteristics of the Proposed Site



Explanation on the
5 Criteria

3. Action Plan for the Proposed GIAHS Site

GIAHS Proposal Documents

1. Significance of the Proposed GIAHS Site

- Explain the global importance of the Proposed GIAHS Site.
- The overall value of the agricultural system should be described including historical background and contemporary relevance of the site.
- Summarize the features and characteristics of the system in terms of their agricultural and other cultural heritage values, their relevance to global concerns addressing sustainable development, biocultural diversity, including agro-biodiversity and ecosystems management.
- Explain the totality of the functionalities, goods and services provided by the system.

2 Characteristics of the Proposed GIAHS Site against Criteria

i. Food and Livelihood Security

ii. Agro-biodiversity

iii. Local and Traditional Knowledge Systems

iv. Cultures, Value Systems and Social Organisations

v. Landscapes and Seascapes Feature

Five Criteria for GIAHS Designation

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5. Landscapes and Seascapes Features

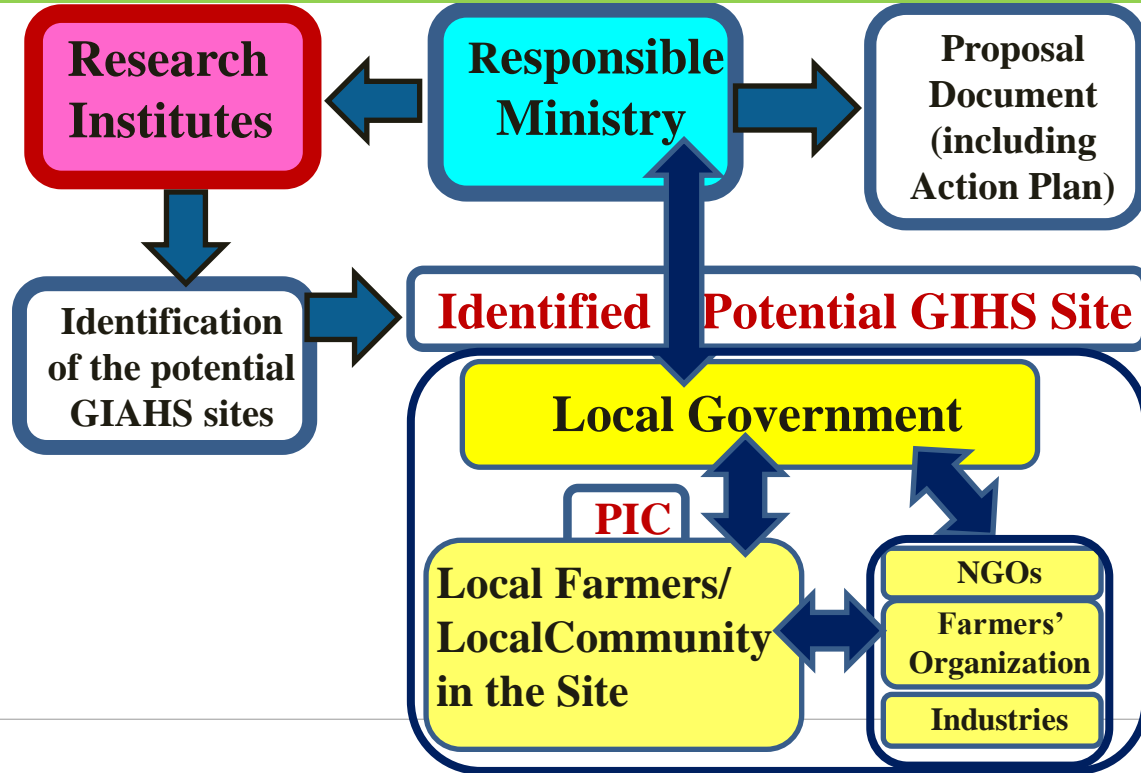
GIAHS sites represent landscapes or seascapes that have been developed over time through the interaction between humans and the environment, and appear to have stabilized or to evolve very slowly

1. Analysis of threats and challenges

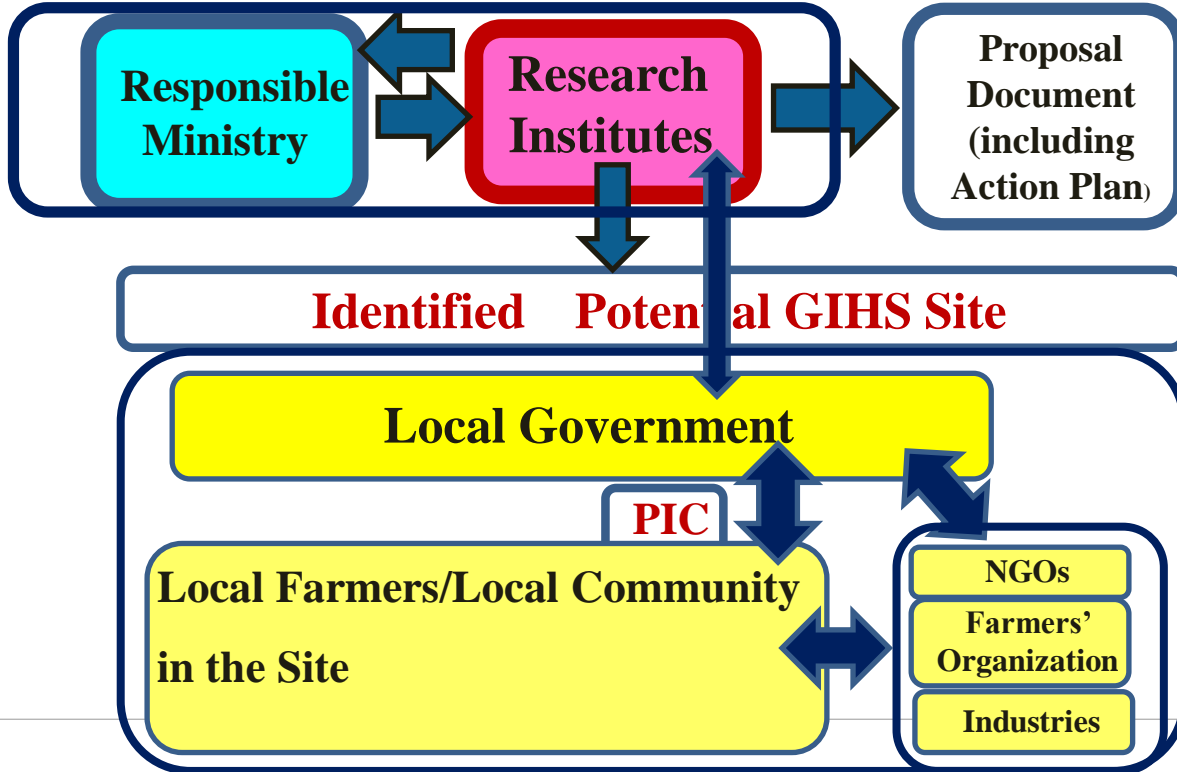
2. Detailed descriptions of the policies, strategies, actions to promote dynamic conservation with following information:

- How proposed policies, strategies and actions will respond to the threats as described;
 - How these policies, strategies and actions will contribute to the dynamic conservation of the proposed GIAHS sites;
 - How multi-stakeholders are involved;
 - How policies, strategies and actions can be used to leverage funding and/or mobilize resources
 - How monitoring and evaluation of implementation and the effect of the Action Plan will be undertaken.
-

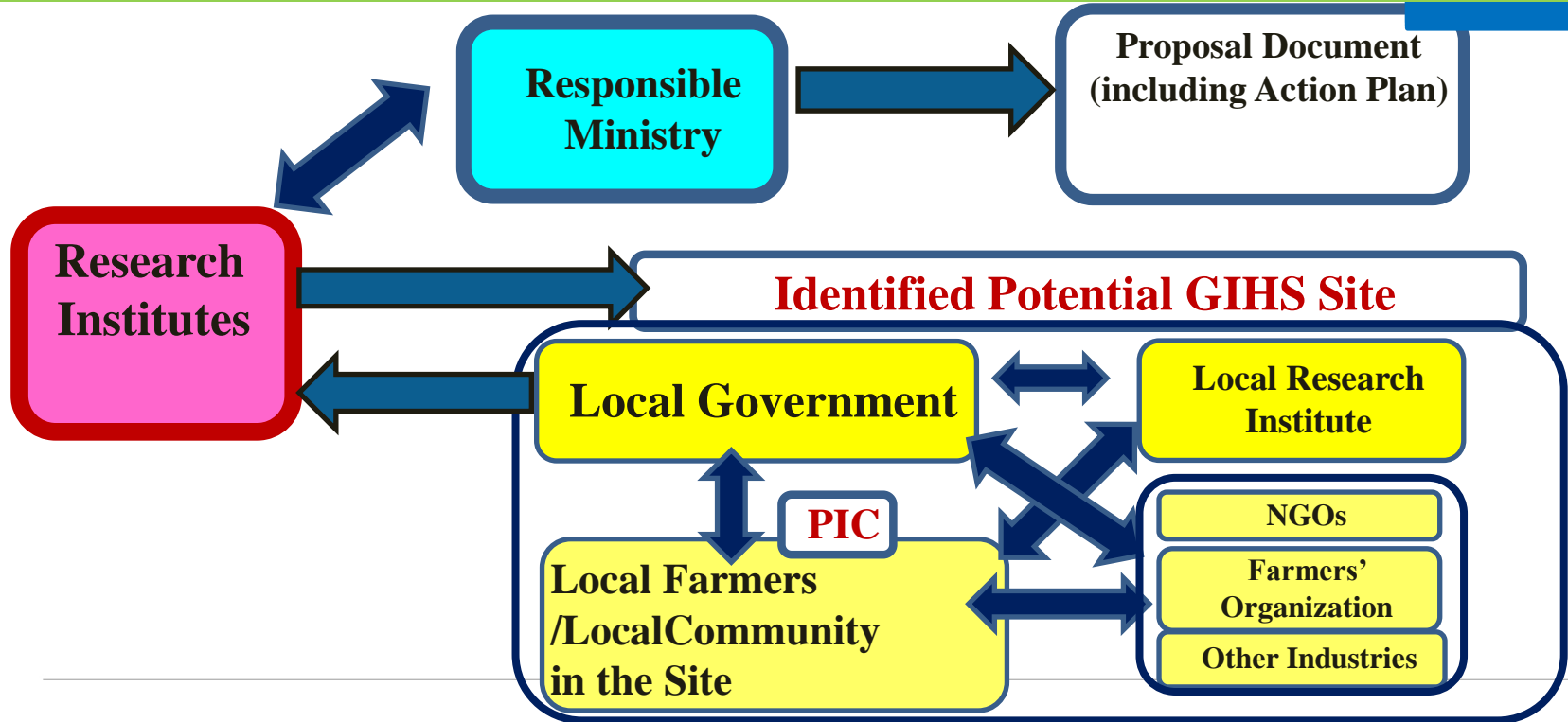
Proposal Making Process(National Government led)



Proposal Making Process (Research Institute led)



GIAHS Proposal Making (Local Government /Community led)



IV. Measures of Action Plan for Dynamic Conservation



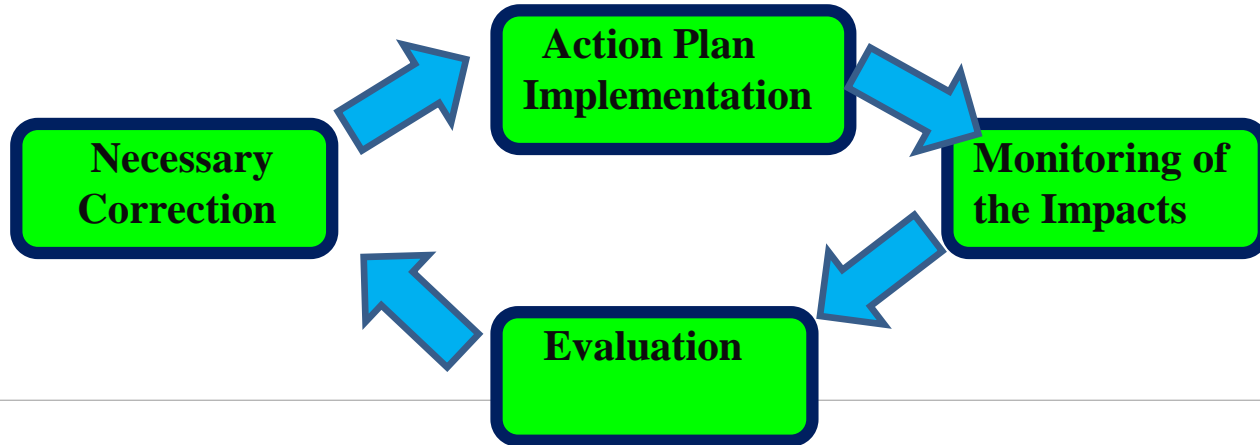
Basic Consideration of Measures for Dynamic Conservation

1. Many types of measures and implementing bodies

- **Policy measures by national/local government:**
- **Private initiatives by local famers, NGOs, local communities;**
- **Joint actions by public sector and private sector:**
- **Research activity by university or research institute**
- **Establishment of GIAHS Management/Operation Committee**

Dynamic Characteristic of Action Plan Implementation

2. The action plan should be a cyclic action to last for a long time based on monitoring/evaluation of impacts of measures and necessary correction of the measures.



Possible Measures of Action Plan

1. Awareness Enhancement and Information Dissemination of the GIAHS and the GIAHS site

Background: Enhancement of public knowledge and recognition of GIAHS should be promoted.

Workshops, Seminars on GIAHS for General Public

Development of Materials (Brochures, Prints, Video) for Public Relations

Arrangement of School Student Visit

Possible Measures of Action Plan

2. Strengthening the Systems and Framework to Implement Action Plan

Background: Implementation of Action Plan to achieve good outcomes needs well trained people who can implement it effectively.

Capacity Building (workshops, seminars, training) for the people who implement Action Plan, such as researchers, government officers, farmers.

Establishment of a organization such as Committee for action plan implementation

Arrangement of legal, financial and administrative infrastructure for AP

Possible Measures of Action Plan

3. Improved Management of Agricultural Resources and Infrastructures

Background: Good management of resource and infrastructure are the key factors for sustainable agriculture

Restoration of the agricultural resources such as soil, terraces, irrigation, grassland and ridges, etc.

Revitalization of traditional knowledge and practices for good resource management

Development of monitoring systems and measurement methodologies for resource conditions

Possible Measures of Action Plan

4. Conservation and Sustainable use of Agrobiodiversity

Background: Conservation and sustainable use of agrobiodiversity in GIAHS sites are important, in particular, those sites with valuable genetic resources.

Promotion of in-situ conservation and on farm conservation by farmers

Capacity development for farmers for their conservation activities_

Promotion ex-situ conservation/and establishment of community seed banks

Niche market development for endemic species/varieties

GIAHS and Agrobiodiversity: Basic Observations

Point 1: The Nature of GIAHS sites

Many GIAHS sites have valuable local varieties and species. Such GIAHS sites have specific cultures, practices and traditional knowledge to promote conservation of local species.

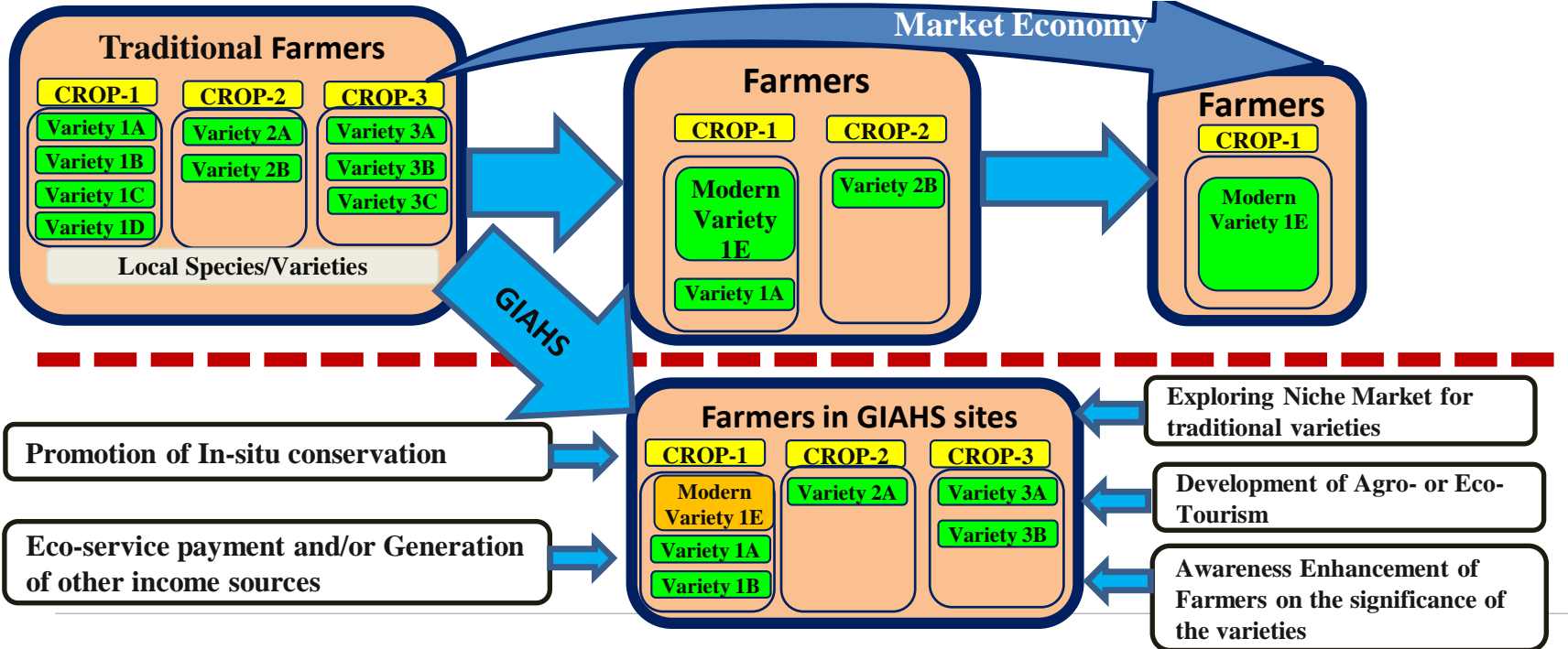
Point 2: The effects of combination of measures

The combination of several actions that are taken for dynamic conservation of the GIAHS site (after such a site is designated as GIAHS) can contribute to conservation of agrobiodiversity.

Example of Point 1 : Specific Practices for maintaining agrobiodiversity in Chiloe Islands in Chile (GIAHS site in Chile)

- Farmers have maintained many local varieties of potatoes for a long time;
 - Farmers have many opportunities to exchange seeds of potatoes, together with knowledge such as how to grow them, their specific characteristics;
 - Farmers have small home gardens to test new seeds they obtained and make decision to select some varieties for planting in their fields based on this test.
 - The criteria for selection of varieties to be planted in the field are not single but multiple, ranging from resilience to diseases/drought, to productivity/quality.
 - Female farmers are decision makers as to which types of potatoes should be planted.
 - The diversity of potato varieties in the fields itself have been of dynamic nature and ever changing.
-

Conceptual Framework of Obs. 2: Combination of the measures for Dynamic Conservation have potentials to assist conservation of agrobiodiversity



Example of Point 2: Effective Combination of Measures for Agrobiodiversity Conservation (This is the case of non-GIAHS site.)

Yamagata Province (Shonai district) where many unique local varieties of vegetables have been produced. The following measures promotes conservation of such varieties.

1. A special voluntary group to conserve local varieties was established which organizes many event and research activities.
2. A travel company organizes a study tour on a commercial basis to visit the production site of unique local vegetable to see specific production method (slash and burn) and to enjoy local cuisine using this vegetable.



The Pictures and Information provided by Humming-Tour Corp(Niigata JPN).

3. There is also **educational plans** to let children learn about production of these local vegetables including opportunities to grow and harvest.

4. There is also a **local restaurant** (Italian) where the shef creates unique menu using local varieties of vegetables.

The similar activities can be seen in Chloe islands in Chile and Peru using local varieties of potatoes and Andean cereals such as Quínua.



Al-ché-cciano
奥田政行の庄内イタリアン

雪菜



外内島きゅうり



藤島きもと



Possible Measures of Action Plan

5. Sales Promotion of the Agricultural Products

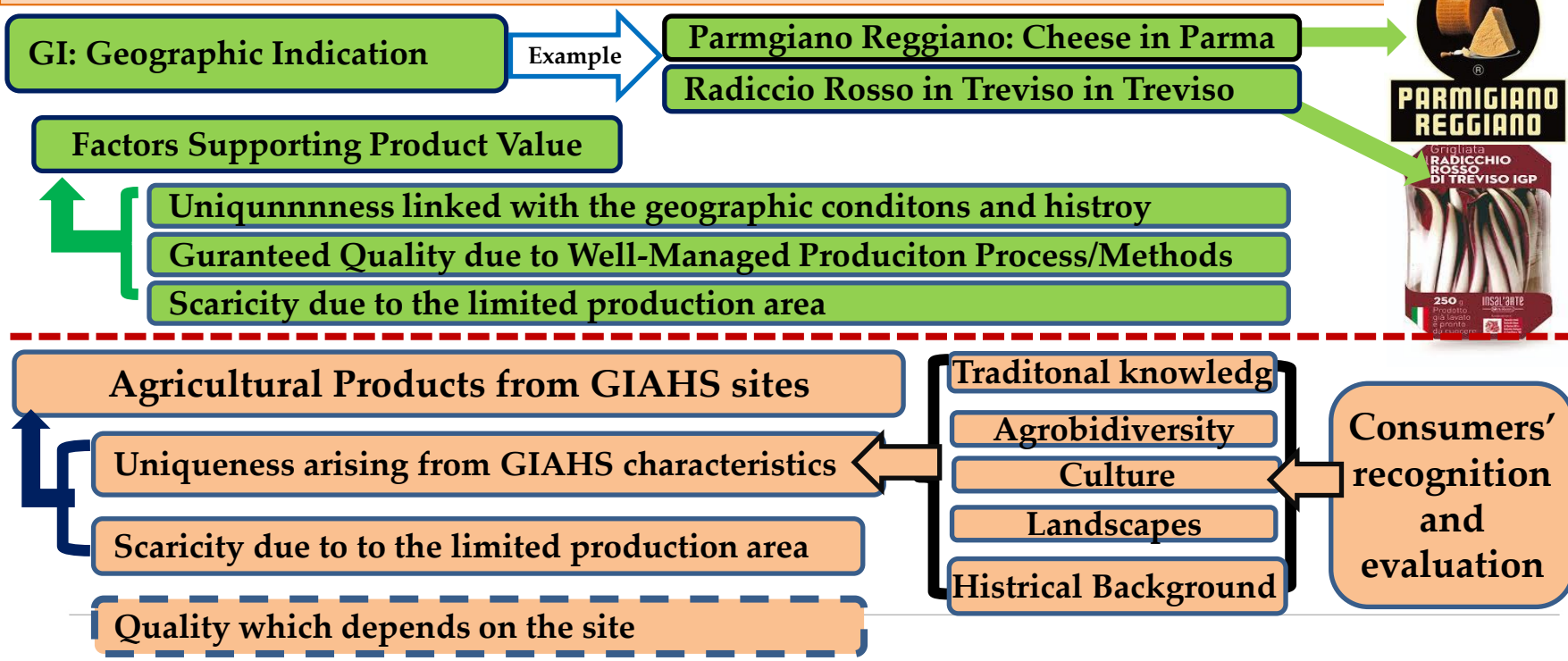
Marketing Strategy: Branding, Labelling, Quality improvement



Development of Niche-market

Establishment of value-chain to involve farmers (e.g., farmers market)

Characteristics of Market Values Formed Through Logos/Trademarks/Branding of Agricultural Products from GIAHS sites – Comparison with GI



Possible Measures of Action Plan

6. Promotion of tourism/cultural activities/local cuisine

Background: Effective utilization of the values arising from GIAHS designation to generate income sources for continuation of the agriculture in the site

Promotion of Tourism/Agro-tourism/Eco-tourism

Suggestion: Development of specific type of tourism for GIAHS

- ➔ Many types of tours; sightseeing, relaxation, adventure, study tour, ecotour, etc.
- ➔ Study tour may be one of the suitable styles of tour for GIAHS.

Caution: Promotion of Tourism should not be the purpose.

- ➔ Tourism should not damage agriculture in GIAHS sites

Promotion of cultural events/traditional cuisine/activities in the sites

Case in Japan; Study Tour for Seeing Production and Tasting the Local Vegetable Variety

A travel company organizes a study tour on a commercial basis to visit the production site of unique local vegetable to see specific production method (slash and burn) and to offer local cuisine.



The Pictures are provided from Humming-Tour Corp.

Possible Measures of Action Plan

7. Enhanced participation of rural residents in decision making process

8. Empowerment of women in the rural community

V. Impacts of Action Plan Implementation



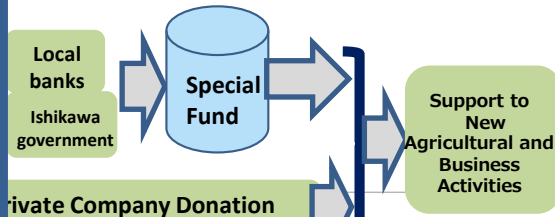
Actual Measure taken for Dynamic Conservation -The Cases in Ishikawa (GIAHS sites in Noto)-

Establishment of the Executive Organization --“Noto Regional GIAHS Executive Committee”

Collaboration with Private Sector

Establishment of Satoyama Fund

Ishikawa Provincial Government and local banks established a special fund for GIAHS promotion. With the operational profit from the fund and voluntary donation from private companies are jointly used to support business activities.



Branding agricultural products

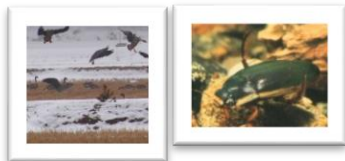
- Specific local brand was established to certify that the agricultural products are produced in the site in a way to contribute



Sales Promotion in large cities



Activities for Biodiversity Promotion



Workshop, Seminars and Conference



Human Resource Development

In collaboration with local universities, education on agriculture and ecology, Sasayama are carried out to nurture those who will support the local agriculture in the GIAHS site.



Promotion of Exchanges with Urban residents and local agro-tourism

Promotion of Agro-Tourisms/ Participatory agricultural tour/Educational tour



Local Cuisine Promotion



Rice Field Ownershi

The Impacts of GIAHS Designation (Cases in Noto)

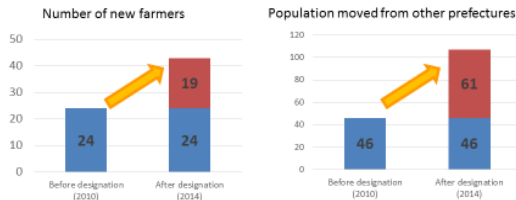
1. Increased Farmers and Population

Attracting to rural areas

Noto Region (Ishikawa Prefecture)

After GIAHS designation:

- Number of new farmers increased by 71%
- Number of people moved from other prefectures increased by 133%



Source : Japanese MAFF

3. Increased Tourists for Agro-Tourism

The No. of Farm Hotels: 1997: 1 ⇒ 2110: 30 ⇒ 2015: 47 hotels

The No. of tourists for farm hotels 1988: 0 ⇒ 2010: 4,800 ⇒ 2015: 12,000

Source : Ishikawa prefecture

2. New Entry of the Farming Corporation

事例5: 能登地域への主な農業参入状況



Source : Ishikawa prefecture

VI. National Systems to Promote GIAHS

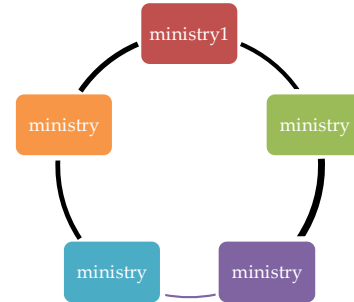


Nationally Important Agricultural Heritage Systems (NIAHS)

- **Several countries established NIAHS (China, Japan, Korea, Ecuador);**
- **Some countries are planning to introduce it;**
- **NIAHS is useful to draw national attention of sustainable agriculture, traditional knowledge, agroecology and agrobiodiversity.**

GIAHS National Committee

- Several countries have established **GIAHS National Committee** as a **management body of GIAHS activities**, consisting of such bodies as;
 - Relevant ministries
 - Research institutes
 - Representatives of farmers



- Several countries have established **GIAHS Expert Committee** to nominate a **proposed GIAHS site**
-

Thank you!

