

The 8th Conference of East Asia Research Association for
Agricultural Heritage Systems

Strategies to Enhance Operational Management of
KIAHS through Comparative Analysis with the
Biosphere Reserve System

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I. Introduction

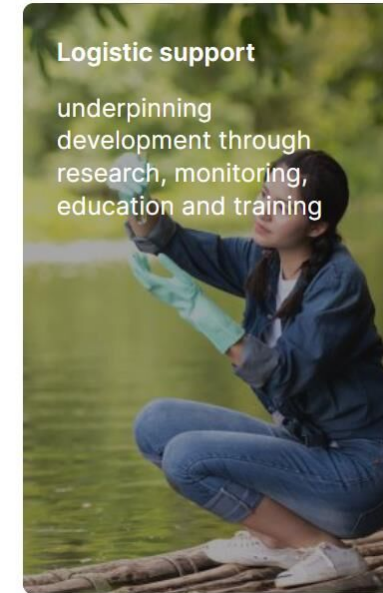
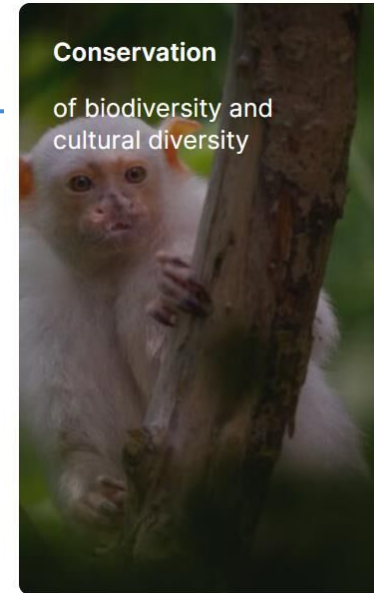
Introduction

- GIAHS(Globally Important Agricultural Heritage Systems) was established by the FAO in 2002
 - The objective is to identify and conserve Globally Important Agricultural Heritage Systems (including their agricultural landscapes, biodiversity, culture, and knowledge systems).
- KIAHS(Korea's Important Agricultural Heritage System) was introduced in 2012 to align with the globally prevalent practices
 - Since the introduction of the KIAHS system, 18 Korea's Important Agricultural Heritage sites and 13 Korea's Important Fisheries Heritage sites have been designated.
 - In August 2015, a revised law called the "Special Act on Improving the Quality of Life of Farmers and Fishers and Promoting Development of Rural and Fishery Areas" was put into effect. This law established the legal foundation for recognizing nationally important agricultural heritage.
- However, **there still are challenges in KIAHS management**
 - Difficulties in assessing the current state of agricultural heritage management
 - Challenges in applying consistent spatial standards for agricultural heritage sites
- To effectively manage and operate KIAHS, it is important to learn from similar systems, especially those related to protected areas

Introduction

■ Biosphere Reserves

- “A UNESCO-designated terrestrial, coastal or marine ecosystem targeting outstanding ecosystems from around the world to explore ways to harmonize sustainable use with conservation of biological diversity.”
- The idea of biosphere reserves was created to support the Man and the Biosphere (MAB) program, which started in 1971.



the three functions of biosphere reserves
(Reference: <https://www.unesco.org/en/mab/wnbr/about>)

KIAHS

: aims to conserve agricultural heritage

comparison



UNESCO Biosphere Reserve system

: aims to conserve biodiversity

Develop strategies to improve the management of KIAHS

II. Research Method

Research Method

■ Review the registration and management system of KIAHS

- Current laws and regulations related to KIAHS
 - 「Special Act on Improving the Quality of Life of Farmers and Fishers and Promoting Development of Rural Areas」 and Lower Regulations
 - 「Management Standards for Designation of Agricultural Heritage」, 「Management Standards for Designation of Fisheries Heritage」
 - Ordinances related to KIAHS of each local government
- Gather information about the registration and management of the Globally Important Agricultural Heritage System (GIAHS)
- Check how properly KIAHS is being monitored

■ Identify the registration and management system of Biosphere Reserves

- International treaties related to biosphere reserves
 - < The Statutory Framework of the World Network of Biosphere Reserves >, < Lima Action Plan for UNESCO's Man and the Biosphere (MAB) Programme and its World Network of Biosphere Reserves (2016-2025) >, etc.
- < Republic of Korea MAB Strategy and Action Plan 2016-2025 >
- 「Natural Environment Conservation Act 」 and Ordinances related to biosphere reserves of each local government

➤ Develop better ways to operate and manage KIAHS
by comparing and analyzing the two systems

III. Results

1. National and Global Value of Agricultural Heritage Systems

■ Registration and Management of KIAHS

- To register a KIAHS, a local government submits an application to the Ministry of Agriculture, Food and Rural Affairs (MAFRA) or the Ministry of Oceans and Fisheries (MOF). The National Agricultural Heritage Review Committee then reviews the application, and the ministry designates the site.
- Once designated, conservation activities follow MAFRA or MOF regulations. If needed, the local government can create and enforce additional ordinances

「Management Standards for Designation of Agricultural Heritage」 [Effective as of March 30, 2023]

Article 13 Management entity of Korea's Important Agricultural Heritage (KIAHS)

- ① Korea's Important Agricultural Heritage System (KIAHS) shall, in principle, be managed by the mayors or county heads. Residents or resident councils shall actively cooperate in the management of KIAHS. However, the mayor or county head may entrust the management of KIAHS to resident councils.
- ② When a resident council manages KIAHS, the mayor or county head shall enter into a voluntary management agreement with the resident council for the conservation and management of KIAHS.

「Management Standards for Designation of Fisheries Heritage」 [MOF Notice No. 2023-131]

Article 13 Management entity of Korea's Important Fisheries Heritage (KIFHS)

- ① Korea's Important Fisheries Heritage System (KIFHS) shall, in principle, be managed by a resident council that includes the owners. However, if there is a request from the resident council due to the difficulty of autonomous management due to the characteristics of the heritage, the mayor, county head, or district office head may delegate or entrust the management to relevant academic societies, institutions, organizations, or other specialized agencies.
- ② When a resident council manages KIFHS, the mayor or county head shall enter into a voluntary management agreement with the resident council for the conservation and management of KIFHS.

Gosung-gun Agricultural Heritage Ordinance to Support the Conservation and Management of Ponds

Gyeongsangnam-do, Gosung-gun, 2023.10.04 Agricultural Technology Center, Rural Policy Division

Damyang-gun Agricultural Heritage Conservation and Management Ordinance

Damyang-gun, Jeollanam-do 2022.09.21 Agricultural Technology Center Future Agriculture Research Group

Gangjin-gun Agricultural Heritage Conservation and Management Ordinance

Gangjin-gun, Jeollanam-do 2022.12.22 Agricultural Administration Office

Wanju-gun Agricultural Heritage Conservation and Management Support Ordinance

Jeonbuk Special Self-Governing Province Wanju-gun 2024.03.21 Economic and Industrial Bureau Economic and Food Division

Geumsan-gun Agricultural Heritage Geumsan Traditional Ginseng Farming Conservation and Management Ordinance

Geumsan-gun, Chungcheongnam-do 2022.12.29 Ginseng Herbal Medicine Department

Changwon City National Importance Agricultural Heritage Ordinance to Support the Conservation and Management of Dokmoe Persimmon Farming

Gyeongsangnam-do Changwon-si 2022.04.29 Agricultural Technology Center Agricultural Products Distribution Division

Examples of ordinances containing agricultural heritage or related contents

1. National and Global Value of Agricultural Heritage Systems

■ Registration and Management of KIAHS

- Under Korean law, the criteria for designating KIAHS are based on FAO's Globally Important Agricultural Heritage System (GIAHS) categories.
- However, KIAHS and GIAHS registrations are separate processes.

「Management Standards for Designation of Agricultural Heritage」 [Effective as of March 30, 2023, MAFRA]

Article 20 (Application Subject) Among the KIAHS, those deemed to have global conservation and management value may apply for registration as Globally Important Agricultural Heritage Systems (GIAHS) by the Food and Agriculture Organization (FAO).

Article 21 (Submission of Application Documents) ① A mayor or county head who wishes to register KIAHS as GIAHS shall submit an application in the form prescribed in Annex 2, accompanied by the following documents, to the Minister of Agriculture, Food and Rural Affairs:

- Evidence of Globally Important Agricultural Heritage
- Plan for Application for GIAHS Registration

「Management Standards for Designation of Fisheries Heritage」 [MOF Notice No. 2023-131]

→ According to Articles 20 and 21, the process is same, and application documents are submitted to the MOF.

✓ Level of Heritage : Global > National > Local

- First, a site is designated as a national-level KIAHS.
If it is then considered globally significant, the process to secure GIAHS designation begins.

1. National and Global Value of Agricultural Heritage Systems

■ Registration and Management of Biosphere Reserves

- UNESCO's procedure for designating biosphere reserves is more similar to GIAHS than KIAHS.
 - a. Local governments submit nominations with supporting documents to the secretariat after review by the Korea MAB Committees
 - b. The Board of Directors decides whether to register the site as a biosphere reserve
 - c. The Advisory Committee for Biosphere Reserves reviews nominations and makes recommendations to the ICC
 - d. The ICC of the MAB program makes the final decision on designations
- Biosphere reserves are nominated by national governments and remain under the jurisdiction of the states where they are located.
 - For 'core areas', long-term protection is required, so it is recommended to designate them based on areas protected by national laws.
- Biosphere reserves are included in the Network by the ICC of the MAB program, and their status is internationally recognized as being at a global level.

➤ Biosphere reserves are recognized as global level

1. National and Global Value of Agricultural Heritage Systems

	KIAHS	GIAHS	Biosphere Reserves
Level	National	Global	Global
Submit Application	<ul style="list-style-type: none"> Mayor, County Governor 	<ul style="list-style-type: none"> (Agric.) The Minister of MAFRA (Fishery) The Minister of MOF 	MAB National Committee of the Republic of Korea
Nomination	<ul style="list-style-type: none"> (Agric.) The Minister of MAFRA (Fishery) The Minister of MOF 	FAO GIAHS Scientific Advisory Group(SAG)	UNESCO MAB International Co-ordinating Council (MAB-ICC)
Management Entity	<ul style="list-style-type: none"> (Agric.) Mayor, County Governor 「Management Standards for Designation of Agricultural Heritage」 (Fishery) Residents' council that includes the owner 「Management Standards for Designation of Fisheries Heritage」 	Not specified in the law, but managed practically equivalent to KIAHS	<ul style="list-style-type: none"> (Overall) head of a local government (Protected area) Ministry of Environment, Korea Forest Service, Korea Heritage Service, Ministry of Oceans and Fisheries, etc.

- Under current law, national and global agricultural heritage sites are managed at the same level after registration
- For the effective protection and management of agricultural heritage:
 - The criteria for KIAHS registration should be specified or relaxed to discover and promote the conservation of agricultural heritage of national importance.
 - For agricultural heritage of global importance, it is essential to consider establishing support systems or legal frameworks that enable management participation by local communities, local governments, and national agencies.

2. Regular Monitoring System

■ Monitoring System for KIAHS

- For Korea's Important Agricultural Heritage System, the obligation to conduct monitoring at least once a year is specified in accordance with the 「Standards for Designation and Management of Agricultural Heritage」
- The Special act mandates annual monitoring and surveys by the local government head (also applies to fishery heritage)

Standards for Designation and Management of Agricultural Heritage [Effective March 30, 2023]

Article 16 (Monitoring of Korea's Important Agricultural Heritage System)

- ① The Minister of Agriculture, Food, and Rural Affairs shall conduct monitoring of KIAHS at least once a year to assess the current state and develop utilization plans.
- ② The monitoring described in paragraph 1 may be entrusted to relevant specialized institutions.

Article 17 (Survey of Korea's Important Agricultural Heritage System)

- ① The mayors and governors overseeing KIAHS shall conduct a survey of the heritage sites at least once a year and may conduct additional surveys if necessary.
- ② The survey conducted pursuant to paragraph 1 shall cover the following items:
 - Structural integrity and damage status of the KIAHS
 - Changes in surrounding conditions and environments that may affect the KIAHS
 - Condition of various protective and promotional facilities, such as information and warning signs
 - Other general matters related to the management and operation of the heritage sites

- Local Development Evaluation & Supporting Office of Korea Rural Community Corporation has been conducting annual monitoring since 2018

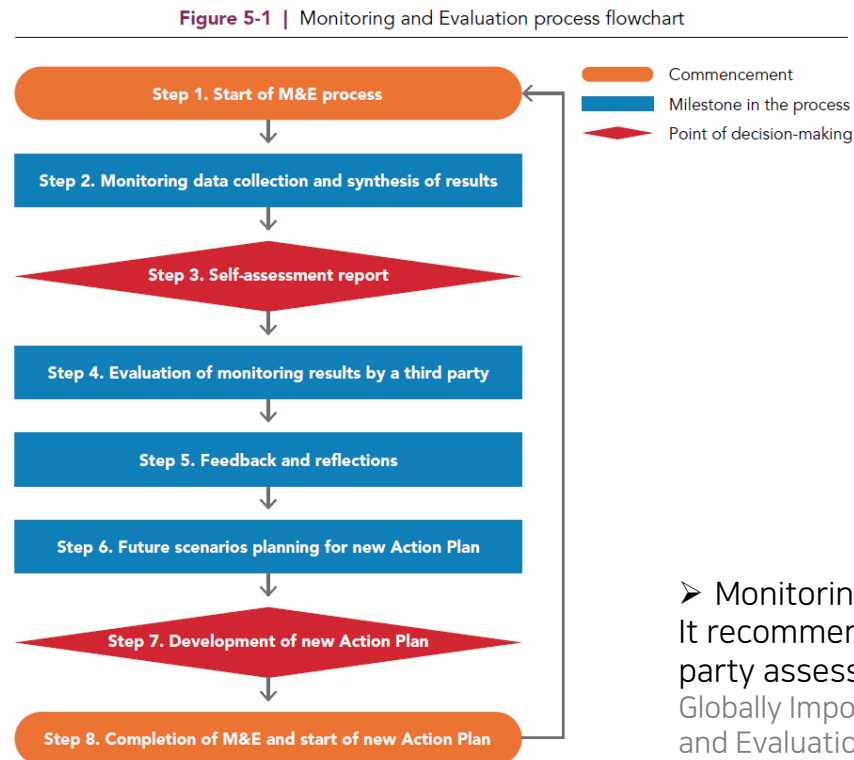


Cover pages of KIAHS Monitoring Report

2. Regular Monitoring System

■ Monitoring System for KIAHS

- Yet, these reports are currently not publicly available
 - Following the characteristics of GIAHS, management plans are updated through self-assessment by the responsible entity
 - There is no obligation to disclose the report or submit the results of the survey to higher authorities



➤ Monitoring and Evaluation process flowchart for GIAHS. It recommends submitting a self-assessment report to a third-party assessment panel. Globally Important Agricultural Heritage Systems (GIAHS) Monitoring and Evaluation Manual: A Technical Reference (UNU-IAS, 2022)

2. Regular Monitoring System

■ Monitoring System for Biosphere Reserves

- Biosphere Reserves (BRs) undergo regular monitoring outlined in the <Statutory Framework of the World Network of Biosphere Reserves> and <Republic of Korea MAB Strategy and Action Plan, albeit **not legally mandated**
- **BRs should submit periodic reviews to UNESCO every 10 years**

<The Statutory Framework of the World Network of Biosphere Reserves>(1996)

Article 9 - Periodic review

1. The status of each biosphere reserve **should be subject to a periodic review every ten years, based on a report prepared by the concerned authority**, on the basis of the criteria of Article 4(Criteria), and forwarded to the secretariat by the State concerned.
 - If ICC considers that the status or management of the BR is satisfactory, this will be formally recognized by ICC
 - If ICC considers that the BR no longer satisfies the criteria, it may recommend that the State concerned take measures to ensure conformity with the provisions of criteria.
IF the BR in question still does not satisfy the criteria, the area will no longer be referred to as a biosphere reserve which is part of the Network.
- **Each BR updates its Biosphere Reserve Management Plan** when it submits its periodic report to UNESCO **every 10 years, with Interim Supplements every 5 years if possible.**
 - Each BR submits an **Annual Biosphere Reserve Report to the MAB National Committee of Korea** to assess the status of the biosphere reserve and improve its management.
 - Through ordinance, the results of the survey are reported to the MAB National Committee every five years

2. Regular Monitoring System

- **Submission of reports** can form the basis for the systematic management of protected areas and the establishment of integrated data systems
 - KIAHS, with its clear monitoring and survey obligations, can actively promote the submission of reports for systematic management and data integration
- For effective data collection, **the meanings of 'monitoring' and 'survey' need to be clearly defined**
 - Under current law, **monitoring and surveys are conducted annually, but different entities are responsible for each**
 - If there is no need to separate monitoring and surveys, a single implementing agency can be designated
 - It is necessary to secure a budget to ensure that monitoring, currently conducted by the Korea Rural Community Corporation, continues consistently
 - **Local governments**, required by law to develop and implement an agricultural heritage master plan every five years, **need a foundation for the integrated management of survey and monitoring results**

3. Zonation

■ Zonation for KIAHS

List of KIAHS (Agriculture)

Designation Number	Name	Designated Area
No. 1 (*13)	Gudeuljang Paddy in Cheongsan-do *	Entire Cheongsan-myeon, Wando-gun (4,147ha)
No. 2 (*13)	Batdam Agricultural System in Jeju-do *	Entire Jeju Island (56,355ha)
No. 3 (*14)	Asiatic Cornelian Cherry Agriculture in Gurye-gun	Entire Sandong-myeon, Gurye-gun (10,133ha)
No. 4 (*14)	Bamboo Agriculture in Damyang-gun	Entire Damyang-gun (2,599ha)
No. 5 (*15)	Ginseng Agriculture in Gumsan-gun *	Entire Geumsan-gun (57,570ha)
No. 6 (*15)	Traditional Tea Agriculture in Hadong-gun *	Hwagae-myeon, Hadong-gun (597.8ha)
No. 7 (*16)	Geumgang-Pine Agriculture in Uljin-gun	Geumgangsong-myeon and Buk-myeon, Uljin-gun (14,188ha)
No. 8 (*17)	Silkworm Traditional Agriculture in Buan-gun	Yuyudong, Mapo-ri, Byeonsan-myeon, Buan-gun (58.9ha)
No. 9 (*17)	Volcanic Field Agriculture in Ulleung-do	Entire Ulleung-gun (7,286ha)
No. 10 (*18)	Water Storage Management System in Uiseong-gun	Geumseong-myeon, Ga-eum-myeon, Chunsan-myeon, and Sagok-myeon, Uiseong-gun (25,665ha)
No. 11 (*18)	Traditional Tea Agriculture in Boseong-gun	Entire Boseong-gun (222.8ha)
No. 12 (*18)	Cheongtaejeon Fermented Tea Technology in Jangheung-gun	Entire Jangheung-gun (93.1ha)
No. 13 (*19)	Ginger Traditional Agricultural System in Wanju	Entire Wanju-gun (2,252ha)
No. 14 (*19)	Dumbeong Irrigation System in Goseong Coastal Area	Entire Goseong-gun (10,996ha)
No. 15 (*19)	Traditional Dried Persimmon Farming in Sangju	Entire Sangju-si (125,478ha)
No. 16 (*21)	Yeombangjuk Lotus Ecological Circulation Waterway Agricultural System in Gangjin	Jacteon-myeon and Byeongyeong-myeon, Gangjin-gun (5,508ha)
No. 17 (*22)	Dokmoe Persimmon Agriculture in Changwon	Dong-eup, Buk-myeon, and Daesan-myeon, Changwon-si (794ha)
No. 18 (*22)	Hansan Ramie Traditional Agriculture in Seocheon	Hansan-myeon, Biin-myeon, Hwayang-myeon, Masan-myeon, Munsan-myeon, and Pangyo-myeon, Seocheon-gun (18,260ha)

* KIAHS (Globally Important Agricultural Heritage System)

- The total area of each KIAHS does not have exact boundaries. (ex : entire island, whole place, etc.)
- In KIAHS, a portion of the total area is designated as a **core conservation area**.
- However, the criteria for these areas vary, depending on factors like
 - distribution density of relevant agricultural heritage
 - location of the motivated council within the administrative unit

➤ 'lack of precise definition for core conservation areas'

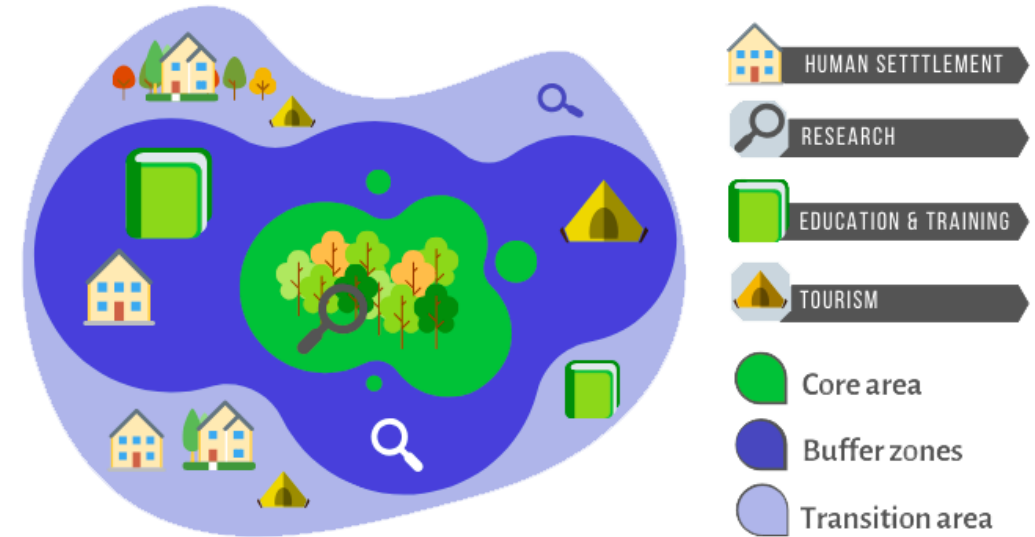
- Consequently, projects and management strategies differ, ex) sometimes extending across the entire area and sometimes focusing solely on core conservation areas
- In some areas, there is a risk that agricultural heritage outside the core conservation zones may be neglected in terms of management and status assessment

3. Zonation

■ Zonation for Biosphere Reserve

- The zoning system for biosphere reserves classifies areas based on their designation, spatial system, regional status and functions

Core areas	They comprise a strictly protected zone that contributes to the conservation of landscapes, ecosystems, species and genetic variation
Buffer zones	They surround or adjoin the core area(s), and are used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education
Transition area	The transition area is where communities foster socio-culturally and ecologically sustainable economic and human activities



Three Zones of a Biosphere Reserve
(Reference : UNESCO MAB)

3. Zonation

■ Introduction of Zoning System in the KIAHS

- Use the 'dynamic conservation' feature of the agricultural heritage system.
- Introduce zones like buffer areas to support agricultural heritage.
 - Ecotourism, recreation, education
 - Harmonious regional development plan

■ Clarifying the Purpose of Agricultural Heritage Conservation

- To clarify why we protect agricultural heritage, focus on keeping traditional farming alive in core (or key) areas.
 - This should involve residents and advisory groups voluntarily (utilizing self-governance regulations, if possible).
- If needed, support regulations with compensation or payment systems to ensure heritage preservation.

■ Ensuring Benefits for Local Protectors

- Make sure residents and councils protecting agricultural heritage receive fair benefits directly.

IV. Conclusion

Conclusion

- Need for Effective Monitoring and Surveying in KIAHS
 - **Develop Strategies** : Create plans to ensure effective monitoring and surveying of KIAHS
 - **Establish a Database** : Build a database for agricultural heritage management plans, master plans, research, and promotion
 - **Institutional Support** : Implement support measures for stable and continuous status assessments
- Classification and Functional Enhancement of KIAHS Zones
 - **Strengthen Functions** : Enhance income generation through agricultural product branding, education, and ecotourism to sustain agricultural activities in heritage areas
 - **Clarify Purpose** : Define the goal of conserving agricultural heritage while ensuring sustainable economic activities that support community livelihoods and development
- It is imperative to draw upon various protected area management systems developed in the past and apply them to KIAHS management
 - Establishing a rational and systematic approach to agricultural heritage management

THANK YOU