

Monitoring Activities by Multi-stakeholders in GIAHS sites in Korea and Japan: Current Status and Perspectives

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01

| Introduction |

Research Background
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| Research Background |

- There has been increasing concern about the importance of monitoring activities for the conservation and management of agricultural heritage sites. In FAO as well as ERAHS, there is an active discussion that the monitoring system is necessary to ensure the designated sites are being managed properly.
- Nevertheless, there is limited research on monitoring activities in the designated sites.
- Thus, further study on current status, problem, and potential of monitoring activities is strongly required.

| Research Objective |

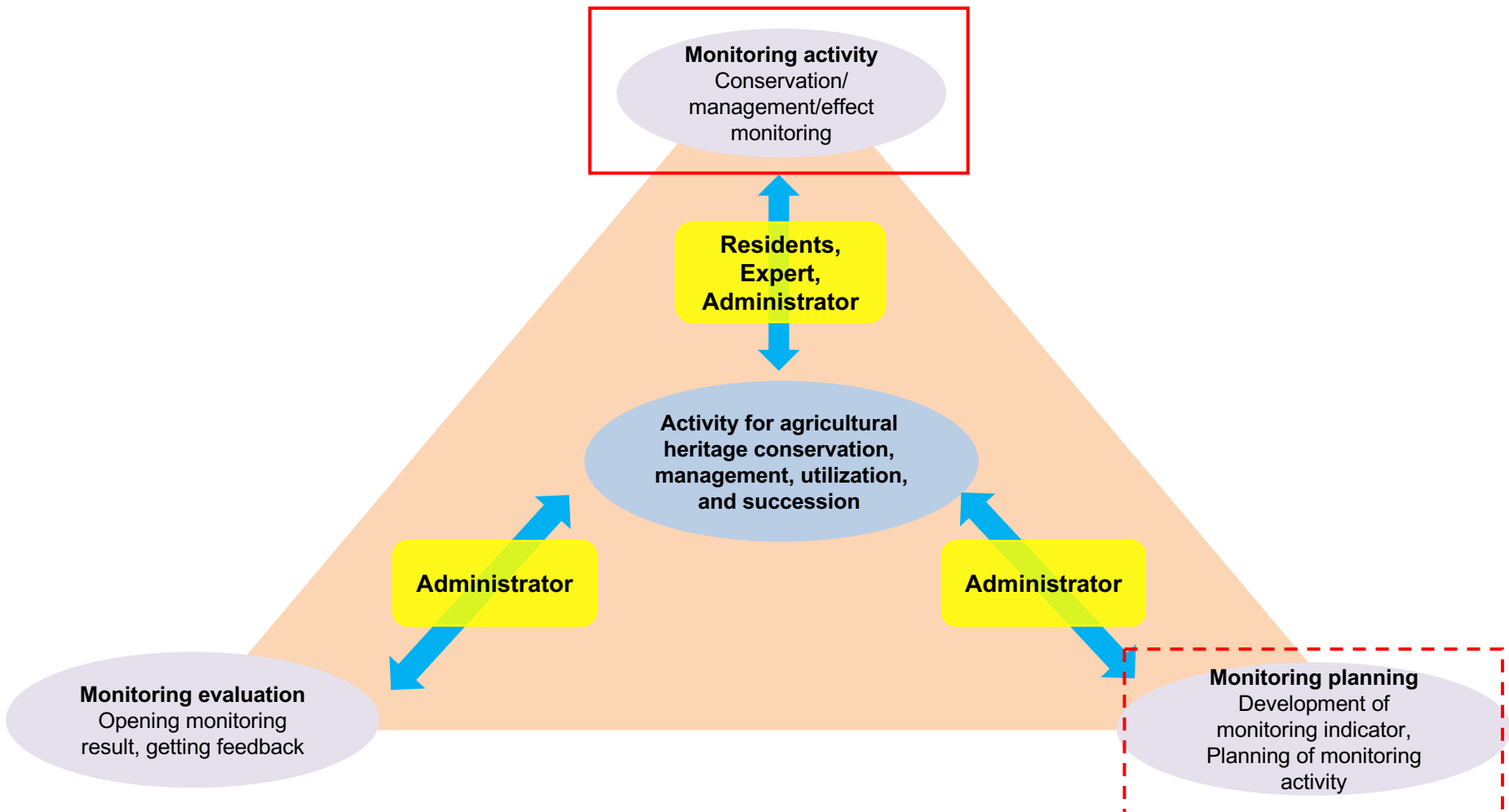
- This study aims to identify the current status of each stakeholder's monitoring activities and compare each site's characteristics in Korea and Japan.
- It finds out the limitation of monitoring activities and suggests how to improve the continuous and efficient monitoring activities in GIAHS sites.

| Methodology |

- Study sites:
 - ✓ 1) Jeju Batdam Agriculture System, Korea
 - ✓ 2) Osaki Kodo's Traditional Water Management System, Japan
 - Data collection period: January ~ July 2018
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- This study was conducted in four steps:
 - ✓ 1) literature review including GIAHS proposal and administrative documents of monitoring system
 - ✓ 2) field survey to investigate current status of monitoring, conservation, and utilization activities in the site
 - ✓ 3) interview with government officials and residents in the site
 - ✓ 4) getting professional advice

| Methodology |

- Scope of investigation: The monitoring system of agricultural heritage consists of planning, activity, and evaluation. This study focuses largely on monitoring activity and partly on monitoring planning.



| Methodology |

- Criteria of analysis

Criterion		Example
Basic structure of monitoring activity	Relevant stakeholders	Government office/official, local community organization
	Institutional framework	Legislation, ordinance, regulation
	Financial support	Budget
	Research on monitoring system	Research activity, monitoring indicator
Conservation/Management activity	Traditional agriculture system	Succession activity of traditional agriculture system, building relevant database
	Biodiversity	Ecological survey, building relevant database
	Landscape	Survey on landscape, restoration activity of damaged agricultural landscape area
	Traditional culture	Traditional culture related to agricultural heritage
Utilization activity	Economic utilization	Development of product, tourism program
	Social utilization	Public relations activity, educational activity
	Environmental utilization	Establishment of environmental improvement facility after designation

02

| Current Status of Monitoring Activities in GIAHS sites in Korea and Japan |

Jeju Batdam Agriculture System, Korea

Osaki Kodo's Traditional Water Management System, Japan

| Jeju Batdam Agricultural System |

■ Summary

- ✓ Site location: Jeju Island, Republic of Korea
- ✓ Designated in 2014
- ✓ Batdam (Black stone fences) is the result of the ingenuity of Jeju inhabitants to survive in a windy volcanic island. Utilizing the stones in various structures, it is 22,000 km of fences which have been built since 1000 years.

■ Characteristics

- ✓ It protects crops from strong wind and livestock
- ✓ It prevents soil erosion, helps reducing evaporation, and secures seeds sprouting.
- ✓ A mosaic of Batdam spreads out across the island, have created more refined and unique cultural landscape of Jeju.



| Jeju Batdam Agricultural System |

■ Overview of Monitoring Activity

Basic Structure of Monitoring Activities		Status
Relevant Stakeholders	Government official	O
	Local community organization	X
	Intermediate organization	O
	Other relevant organizations	O
Institutional Framework	Legislation	X
	Ordinance	O
	Regulation	X
Financial Support	Budget from central government	O
	Budget from local government	O
	Budget from central + local government	O
Research on Monitoring System	Research activities	X
	Development of monitoring indicator	X ¹

¹ It is supposed to develop in 2018

| Jeju Batdam Agricultural System |

■ Overview of Monitoring Activity

Conservation/Management Activity	Status	Monitoring
Traditional Agriculture System	O	△ (discontinued)
Biodiversity	X	△ (partly implementing)
Landscape	X	X
Traditional Culture	X	X

Utilization Activity	Status	Monitoring
Economic	O	△ (partly implementing)
Social	O	X
Environmental	O	X

Jeju Batdam Agricultural System |

■ Basic Structure of Monitoring Activity

Category	Title/Organization	Contents
Relevant stakeholders	Jeju Special Self-Governing Province Agriculture business division	Established in 2013/ 2 officials Administrative support for conservation, management, and utilization of Batdam (budget compilation, administration of projects)
	Jeju City Eco-friendly Agriculture division	Established in 2014/ 2 officials Administrative support for conservation, management, and utilization of Batdam
	Seogwipo City Eco-friendly Citrus Agriculture division	Established in 2014/ 2 officials Administrative support for conservation, management, and utilization of Batdam
	Jeju Research Institute (Batdam Sixth Industrialization Project)	Established in 2016/ 4 researchers Task force from 2016 to 2018 Planning and management team to conserve, manage, and utilize Batdam *Key organization at present
	Jeju Batdam Agricultural Heritage Committee	Established in 2014/ 20 members (consisting of provincial assembly, farmers, and experts) Consultation in relevant project
Institutional framework	Jeju Special Self-Governing Province Ordinance of Agriculture and Fisheries Heritage Conservation and Management	Enacted at 2013 after designation

| Jeju Batdam Agricultural System |

■ Basic Structure of Monitoring Activity

Category	Title/Organization	Contents
Financial support	Multi-utilization Project of Agriculture and Fisheries heritage (included in Ministry of Agriculture, Food and Rural Affairs)	Project period: 2013 ~ 2015 Budget: 1.5 billion won
	GIAHS Jeju Batdam Conservation/Management Project	Budget: 200 million won in 2018
	GIAHS Jeju Batdam Monitoring Project	Budget: 40 million won in 2018
	Jeju Batdam Festival	Project period: every year Budget: 200 million won per year
	Batdam Sixth Industrialization Project	Project period: 2016 ~ 2018 Budget: 2.3 billion won
Research on monitoring system	Research related to monitoring system	None
	Development of monitoring indicator	None (It is supposed to develop in 2018)

Jeju Batdam Agricultural System |

■ Conservation/Management Activity

Category	Title/Organization	Contents	Section
Traditional agriculture system	Dolbitna Art School	Education of Batdam construction focusing on practical training	Conservation/management activity (C/M)
		Managing education program of Batdam construction focusing on both theoretical education and practical training	C/M
	Jeju Research Institute (Batdam Sixth Industrialization Project)	Fostering artisan in traditional agriculture Building database of artisan (Implemented in 2015, discontinued at present)	Monitoring for C/M
		Finding relevant information, database Raising awareness about value of Batdam PR activity	C/M
Biodiversity		Implementing monitoring activity on biodiversity in UNESCO Natural World Heritage Site There is no monitoring activity on Batdam agricultural system	Monitoring for C/M
Landscape		None	None
Traditional culture	Dolbitna Art School	Education of Batdam construction focusing on practical training	C/M

Jeju Batdam Agricultural System |

■ Utilization Activity

Category	Title/Organization	Contents	Section
Economic	Jeju Research Institute (Batdam Sixth Industrialization Project)	Planning development of Batdam Theme Park Managing a regional event to build black stone fence Sale on souvenir of Batdam Product development using crops cultivated in Batdam Planning to build Batdam Shop	Utilization activity
		Restoration and improvement project of Batdam Road	Utilization activity & Monitoring for utilization
	Jeju Tourism Organization	Monitoring on the number of tourists visiting Jeju	Monitoring for utilization
Social	Jeju Research Institute (Batdam Sixth Industrialization Project)	PR activity for agricultural heritage Developing website Managing program called Jeju Batdam Value-up academy Fostering Batdam heritage commentator	Utilization activity
	Jeju Special Self-Governing Province Office of Education, Regional broadcasting company	Making and distributing educational videos	Utilization activity
Environmental	Jeju Research Institute (Batdam Sixth Industrialization Project)	Building photo zone in the observatory, creating a tour course, holding the photo exhibition of Batdam	Utilization activity

02

| Current Status of Monitoring Activities in GIAHS sites in Korea and Japan |

Jeju Batdam Agriculture System, Korea

Osaki Kodo's Traditional Water Management System, Japan

| Osaki Kodo's Traditional Water Management System |

■ Summary

- ✓ Title: Osaki Kōdo's Traditional Water Management System for Sustainable Paddy Agriculture
- ✓ Site location: Osaki City, Shikama Town, Kami Town, Wakuya Town, Misato Town (one city & four towns in Miyagi Pref.)
- ✓ Designated in December 2017
- ✓ Farmers' adaption and ingenuity to face natural disadvantages from the environment for securing food and maintaining their livelihood

■ Characteristics

- ✓ Accumulation of knowledge in water use and flood prevention despite the natural disadvantages
- ✓ Unique landscape that support farmers lives as well as rich ecosystem
- ✓ Traditional culture and value system
- ✓ Biodiversity of the local paddy field ecosystem in a symbiotic way



Osaki Kodo's Traditional Water Management System

Overview of Monitoring Activity

Basic Structure of Monitoring Activities		Status
Relevant Stakeholders	Government office and official	O
	Local community organization	O
	Contracting-out to specialized agency	O
	Other relevant organizations	O
Institutional Framework	Legislation	△
	Ordinance	X
	Regulation	O
Financial Support	Budget from central government	△
	Budget from local government	O
	Other budget or fund	O
Research on Monitoring System	Research activities	O
	Monitoring indicator	O

| Osaki Kodo's Traditional Water Management System |

■ Overview of Monitoring Activity

Conservation/Management Activity	Status	Monitoring
Traditional Agriculture System	O	O
Biodiversity	O	O
Landscape	O	X
Traditional Culture	O	O

Utilization Activity	Status	Monitoring
Economic	O	X
Social	O	X
Environmental	O	O

Osaki Kodo's Traditional Water Management System

Basic Structure of Monitoring Activity

Category	Title/Organization	Contents
Relevant stakeholders	Osaki City GIAHS Promotion Division	Established in April 2018 Implementing various projects related to the agricultural heritage in designated site consisting of one city and four towns
	Local Community Organization	Participating in action plan promotion meeting
	Other relevant organization	Local residents' monitoring program to investigate biodiversity in rice paddy Contracting-out to specialized agencies or local NPOs Participation by universities on water management and local community
Institutional framework	Central government	The government tracks the progress of action plan
	Local government	There is no ordinance of local government
	Monitoring planning	It is included in GIAHS action plan
Financial support	The government's budget	There is no budget from the central government but they support the program to dispatch expert or advisor regarding the agricultural heritage Osaki City has their own budget for GIAHS promotion activities (\$ 54,000 per year) Osaki City has subsidy program for local residents' activities to raise awareness of GIAHS

Osaki Kodo's Traditional Water Management System

■ Basic Structure of Monitoring Activity

Category	Title/Organization	Contents
Financial support	Other funds	Osaki City is developing the donation system for monitoring activity of agricultural heritage based on the “Hometown tax payment” under the Ministry of Internal Affairs and Communications
Research on monitoring system	Development of monitoring indicator	It is included in GIAHS action plan
	Education of public officials for PR	City government officials share relevant information within the division Education related to agricultural heritage for the heads of each town and agricultural committee members

Osaki Kodo's Traditional Water Management System

■ Conservation/Management Activity

Category	Title/Organization	Contents	Section
Traditional agriculture system	Municipalities ¹ , Miyagi Prefecture	Administrative support and development for organization conserving water management Annual investigation on coverage rate of agricultural land where the water management is being implementing	Conservation/management activity (C/M), Monitoring for C/M
	Committee ² , Municipalities	Survey of 'Keiyakuko' ⁵	
	JA ³ , NPOs, Municipalities, Miyagi Pref.	Securing and training of new agricultural workers Investigation of accumulative number of workers	
Biodiversity	Committee, JA, NPOs, Municipalities, Miyagi Pref.	Dissemination of agriculture with environment in symbiotic way Annual investigation on rice cultivation area in conservation area	CM, Monitoring for C/M
	Committee, JA, NPOs, Municipalities, Miyagi Pref.	Dissemination of the monitoring activity of living creatures Monitoring participation by farm	
	Committee, NPOs, Municipalities	Expansion of programs to develop the next generation	
	NPOs, Municipalities, Miyagi Pref.	Conservation of rare species in reservoirs, etc.	
	Committee, JA, Co-op ⁴ , Local companies, Municipalities, Miyagi Pref.	Conservation of genetic resources and diversification of sales channels	

¹ Municipalities: Osaki City, Shikama Town, Kami Town, Wakuya Town, Misato Town (one city, four towns)

² Committee: Osaki Region Committee for the Promotion of GIAHS

³ JA: Japan Agricultural Cooperatives

⁴ Co-op: Japanese Consumers' Cooperative Union

⁵ Keiyakuko: association of members who cooperate in agriculture, water management, and various activities with contract

Osaki Kodo's Traditional Water Management System

■ Conservation/Management Activity

Category	Title/Organization	Contents	Section
Landscape	Committee, Universities, JA, NPOs, Municipalities, Miyagi Pref.	Planning and implementation of 'Osaki Field Museum' ¹	C/M
	Committee, NPOs, Municipalities, Miyagi Pref.	Planning and implementation of GIAHS tourism	
	Committee, NPOs, Forestry Cooperatives, Municipalities, Miyagi Pref.	Promotion of diverse activities by multi-stakeholders on conservation of 'Igune' ²	
Traditional culture	Committee, NPOs, Research Institutes, Universities, Municipalities	Carrying out of a comprehensive survey and utilization of education	C/M, Monitoring for C/M
	Committee, JA, Municipalities	Holding of research seminar on fermentation and food culture	
	Committee, Municipalities	Survey and utilization of functions of 'Keiyakuko'	

¹ Osaki Field Museum: Conservation as well as utilization activity through the traditional culture, landscape, tourism, and education

² Igune: Tree outside forests. Homestead woodlands commonly seen in Osaki Kodo. It has been planted to protect farmer's house from floods and northwesterly winds during the winter

Osaki Kodo's Traditional Water Management System

Utilization Activity

Category	Title/Organization	Contents	Section
Economic	JA, Municipalities, Miyagi Pref.	Securing and training of new agricultural workers	Utilization activity
		Support for the establishment of farming community	
	Committee, JA, Universities, Municipalities	Promotion of CSA ¹	
	Committee, JA, Municipalities, Miyagi Pref.	Establishment of certification system	
	Local companies, Municipalities, Miyagi Pref.	Support for Sixth Industrialization ²	
Social	Committee, NPOs, JA, Universities, Municipalities, Miyagi Pref.	Creating opportunity to share information and technology (international conference, etc.)	Utilization activity
		Dissemination of agricultural system	
Environmental	Committee, JA, Farms, Universities, NPOs, Municipalities, Miyagi Pref.	Conservation of 'Igune' Preservation of reservoirs and waterways Promotion of agriculture with environment in a symbiotic way	Utilization Activity, Monitoring on utilization

¹ CSA: Community-Supported Agriculture (e.g. agriculture supported by the consumers)

² Sixth Industrialization: It is the projects and activities that creating job opportunities especially for elder people and women to increase agricultural income by combining secondary industry and tertiary industry with primary industry (Imamura, 1998; Nakano, 2014)

03

| Characteristics of Monitoring Activities in GIAHS sites in Korea and Japan |

| Characteristic of Monitoring Activities in Jeju, Korea |

- Intermediate organization to support conservation, management, and utilization activity for agricultural heritage
 - ✓ Act as a bridge between the government and local residents
 - ✓ Play a key role in conservation, management, utilization of Jeju Batdam
- Connected cooperation project with other organizations
 - ✓ To enhance the efficiency of the conservation, management, utilization activity, Jeju Tourism Organization and other relevant agencies are cooperating with each other
- Focusing on utilization activity rather than conservation and management activity
 - ✓ It stimulates the local economy by utilizing the value of agricultural heritage and contributes to improving income for local farms
- Continuous budget support
 - ✓ Local and central government consistently and actively provide financial support for conservation, management, and utilization activity

| Characteristic of Monitoring Activities in Osaki, Japan |

- Participation of various stakeholders
 - ✓ A variety of people such as farmer, local residents, researcher, university, local company, JA, and NPO participating in conservation, management, and utilization activity in the region, closely collaborating with each other
 - ✓ Importance of Keiyakuko
- Active planning and implementing of monitoring activities
 - ✓ Sound basis of structure for conservation and management activity
 - ✓ Especially, development of monitoring indicator and education of public officials
 - ✓ Diverse approach to utilization of agricultural heritage
- Focusing on ecological value of agricultural heritage
 - ✓ Value of water management lasting over 400 years using the lowland swamps and wetlands
 - ✓ GIAHS tourism and Osaki Field Museum

04

| Conclusion |

Limitation
Task ahead
Conclusion

| Limitation of Monitoring Activities in Jeju, Korea |

- Low participation of local residents
 - ✓ Local residents have a high awareness of agricultural heritage but are passive in actual participation of activity
- No monitoring whether GIAHS action plan is implemented or not
 - ✓ The action plan isn't enough in content
 - ✓ No progress of its monitoring has been made since the designation
- No monitoring system for agricultural heritage
 - ✓ There is no comprehensive system for monitoring, such as monitoring indicator, method, and timing
 - ✓ Partial monitoring is being carried out in a few area, but there is nothing on biodiversity and landscape monitoring
- Decreasing administration's interests in agricultural heritage since GIAHS designation
 - ✓ It is difficult to carry out continuous and systematic monitoring activities because there are no administrative division

| Limitation of Monitoring Activities in Osaki, Japan |

- The aging population in rural area
 - ✓ The succession system for monitoring activity as well as traditional technology may be weakened
 - ✓ In particular, water management system, technology to prevent damage by cold weather
- Lots of stakeholders participating in the activity
 - ✓ Too many stakeholders' participation can reduce the overall effectiveness of planning and implementation of monitoring activity
- Risk in conservation functions by decreased value of landscape
- Logging of Igune due to changes in residential environment

| Task ahead of Monitoring Activities in Jeju, Korea |

- Necessary to establish an efficient and organized monitoring system for managing agricultural heritage
 - ✓ In particular, it is urgent to develop monitoring indicator, monitoring method, and feedback system of monitoring results
- Continuous support for intermediate organization
 - ✓ It is required to consistently support intermediate body which shows diverse activities with positive outcomes
- Strengthening of conservation and management activity
 - ✓ Currently, utilization activity is enough, but effort and strategy for conservation and management activity seem to be insufficient
- Necessary to establish administrative division of agricultural heritage in Jeju Province office
 - ✓ Currently, there are local government officials in charge of agricultural heritage, but responsible division is needed for continuous administrative support through reorganization

| Task ahead of Monitoring Activities in Osaki, Japan |

- Continuous interest of stakeholders and efficient progress are important
 - ✓ It is been only a few months since its designation, continuous interest and progress of action plan are necessary
- Necessary to take measures in population aging of the region
 - ✓ For the succession and improvement of the agricultural heritage, it is critical to secure and train new agricultural workers for the next generation
- Conservation of Igune and securing value of landscape are required
 - ✓ To prevent further decline in agricultural landscape's value and logging of Igune, diverse approach to measures is important

| Conclusion |

- Two study sites have basic structure of monitoring activity. However it is required to improve more detailed and continuous monitoring system such as monitoring indicator and monitoring method.
- For the systematic and continuous monitoring activity, it is important to clarify a role of each stakeholder such as government, expert, local residents, etc.
 - ✓ Local residents: to understand the importance of monitoring system and actively participate in its activity
 - ✓ Government (central/local): to develop monitoring indicator, ensure financial support or budget, make effort to raise awareness of its importance
 - ✓ Expert or research institute: to conduct monitoring activity, evaluate and share the result of monitoring
 - ✓ ERAHS: to share information related to monitoring system and activity with the transboundary cooperation especially in East Asia where the most GIAHS sites are located in

| Thank you for your attention |