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FROM GLOBAL TO LOCAL : SITE-BASED ANALYSIS OF GIAHS's MANAGEMENT
SYSTEM AND LOCAL IMPLEMENTATION AS A RURAL REVITALIZATION
MEASURE IN JAPAN – CASE STUDY IN SADO CITY

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ABSTRACT

Family agriculture and traditional agricultural systems have been threatened in both developing and developed countries because of the globalization of agriculture, declines in farming population, and industrialization. In response to global trends undermining family agriculture and traditional agricultural systems, in 2002 FAO launched the Globally Important Agriculture Heritage System (GIAHS) program. FAO defines GIAHS as “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 aims for the GIAHS initiative to identify and safeguard valuable agricultural heritage systems through catalyzing and establishing a long-term program to support such systems and enhance global, national, and local benefits derived from their dynamic conservation, sustainable management, and enhanced viability.

Japan in particular, has been at the forefront of the issue of an aging and declining farming population. Because of this issue, the sustainability of agricultural production and landscapes in Japan have been threatened. For several decades, Japan and its rural areas have been struggling with multiple efforts towards rural revitalization with varying degrees of success and failure. It is within this context that Sado city in Niigata Prefecture was designated as the first GIAHS site in Japan in 2011. At this time, according to the aims for GIAHS outlined by FAO, GIAHS was viewed as having the potential to contribute to the sustainability of traditional agricultural systems, fitting within the broader context of rural revitalization activities in Japan. However, nearly a decade after initial adoption, there is still a question of the realities of GIAHS implementation in Sado and Japan as a whole.

Existing literature on GIAHS related to Japan can be divided into three main themes: comparative analysis of GIAHS adaptation in individual countries (Yiu et al., 2016, Jiao &

Min, 2016, FAO, 2018), expected outcomes of GIAHS adaptation in Japan (Takeuchi, 2016, Hamamoto, 2016), and analysis of local government management of GIAHS implementation (Tanaka et al., 2019, Kohsaka et al., 2019). Among these studies, several focus on qualitative evaluation of the impacts of preserving traditional agriculture through GIAHS (Kohsaka and Uchiyama 2015, Zhang et al., 2012, Wang et al., 2013, Zheng et al., 2017). In contrast other, studies tend to be conceptual discussions about GIAHS and introductions of case studies in designated areas or countries (Takeuchi 2016, Hamamoto 2016, Jiao and Min 2017). Based on a review of the existing literature on GIAHS in Japan, it is clear that there is no analysis of local implementation grounded in site-based methodologies that include local stakeholders besides government officials, nor is there any study that considers GIAHS management system in Japan across different levels and includes contextualization of GIAHS in Japanese rural planning.

Responding to this identified research gap, this research aims to identify the characteristics of the GIAHS management system in Japan and how it has been interpreted as a rural planning strategy in a designated area by fulfilling these research objectives which are to :

- 1) Understand the structure of GIAHS management in Japan
- 2) Identify and analyze the backgrounds, aims, expected outcomes of GIAHS implementation in the national government level and local level
- 3) Identify and analyze the gaps and connections between each management level and how they affect GIAHS implementation at the ground level
- 4) Identify the perception of local stakeholders about GIAHS

In order to achieve these objectives, this study critically analyzes the institutions responsible for implementing GIAHS, namely, FAO, the Japanese the national government, and local municipalities, in order to highlight and contextualize the background of Japanese

GIAHS implementation. This is accomplished through analysis of policy papers and reports from FAO, MAFF, and local municipalities regarding GIAHS, as well as a key informant interview with a MAFF official. At the same time, taking Sado city in Niigata prefecture as a case site due to its status as the first GIAHS site in Japan, the study investigates the challenges and opportunities of GIAHS implementation in Sado since 2011 from the perspectives of the local municipality and local stakeholders. Site observation and key informant interviews are conducted to gather multi-perspective opinions in order to identify societal changes after GIAHS designation over time as well as the perception about GIAHS from the perspective of each layer of stakeholders.

This research identifies MAFF's current approach to the GIAHS program in Japan. First, the MAFF's priority is increasing the familiarity of GIAHS among Japanese people to maximize the individual activities in each designated area. Second, MAFF intends that preservation of GIAHS sites should be directed by the local level of management and avoid a top-down blanket approach from the national government because each designated area has a unique situation. In terms of the GIAHS program itself, it is seen as having value as an international certification scheme and demonstrating a philosophy of preservation of agricultural systems. However, in terms of its implementation, the impact of GIAHS varies across countries depending on their distinct social, economic, and political contexts. Furthermore, the impact of GIAHS for preserving agricultural systems is not guaranteed. Overall, the approach is very flexible because the specific challenges and potential outcomes of implementation depend on the particular characteristics of each country and designated area.

For the implementation of GIAHS in Sado, this research identifies that Sado GIAHS has been successful in terms of the self-established monitoring criteria, however, the impressions of local stakeholders that GIAHS has had positive impacts is limited. This study

suggests that familiarity and understanding about GIAHS among farmers and ordinary citizens have to be improved in order to further realize its potential.

Keywords : Agriculture, Heritage ,International certification, Rural planning

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It would have been impossible for me to come this far without the support of my mother, father, brother, beloved friends, and lastly my partner. You have always been inspiring, supportive, loving, and by my side.

DEDICATION

Towards

Rural landscapes and rural communities

People who are safeguarding agricultural landscapes on the ground

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LIST OF ABBREVIATIONS

FAO	Food and Agriculture Organization in UN
MAFF	Ministry of Agriculture, Fishery and Forestry Japan
CRCS	Community-Reactivating Cooperator Squad
MIC	Ministry of Internal Affairs and Communications
SAG	Scientific Advisory Group
MLIT	Ministry of Land, Infrastructure and Transport

1 INTRODUCTION

1.1 Background

1.1.1 The decline of small-scale farming and rural areas

Family agriculture and traditional agricultural systems have been threatened in both developing and developed countries due to the globalization of agriculture, declining farmer populations, and industrialization. It is clear that the world has been rapidly changing in a way that is unprecedented in human history, such that human impacts on the biosphere, the hydrosphere, and the atmosphere are so extraordinary that many scientists call the current era the ‘anthropocene’ (Crutzen 2016). The actions of populations living in the developed, urban and industrial parts of the world have especially had an impact far across the planet, and it has become extremely difficult for them to directly see and understand the ecological and social impact of their actions.

There are at least 570 million farms worldwide, more than 500 million of which can be considered family farms. Most of them are very small, with more than 475 million farms being less than 2 hectares in size (Lowder, Scoet and Singh 2014). Under the ‘anthropocene’, small scale farmers have been increasingly vulnerable, confronting major species extinctions and changes in range of species, greater climate variability and extreme events, water stress, rising energy costs and scarcity of energy resources leading to higher prices for food and other essentials, general economic instability, and decreases in welfare (Howard et al., 2008). They have to face these challenges simultaneously with demographic changes that have weakened their numbers as a group (Howard et al., 2008).

Urbanization has a severe impact on demographic changes in rural areas around the world. Over 54% of people across the globe were living in urban areas in 2014, and the current urban population of 3.9 billion is expected to grow to 6.4 billion by 2050 (IOM 2015). There are

many different factors influencing the mobility of populations in regard to urban population growth, but one of the biggest causes is rural to urban migration. In some countries like China, Thailand, Rwanda, Indonesia and Namibia, rural-to-urban migration and reclassification of areas from rural to urban together accounted for more than half of their recent urban population growth (IOM 2015). The process of urbanization or urban transition refers to a shift in a population from one that is dispersed across small rural settlements in which agriculture is the dominant economic activity towards one that is concentrated in larger and denser urban settlements characterized by the dominance of industrial and service activities (United Nations 2019). Another factor of demographic change among farming populations is aging, both in developing and developed countries. The average age of farmers in developed countries is 60 years old (ECOSOC 2014), but even in African countries the average age of farmers is also 60, despite the fact that 60% of African countries' population is under 24 years of age (ECOSOC 2014). This reality stems from the fact that rural youth are looking for a better livelihood in the cities due to the relatively low economic viability of agriculture (ECOSOC 2014).

1.1.2 Japanese agriculture and rural planning

Japan has been at the forefront of the issues of an aging and decreasing farmer population. Due to these issues, the sustainability of its agricultural landscapes and production have been threatened. Japan is the most aged country in the world and will continue to hold this lead by 2050 (United Nations 2019). Depopulation occurs faster in rural areas compare to urban areas (*Figure 1*), and this trend will continue for the next few decades (MAFF 2020c). The declining farmer population is significant. The average age of Japanese farmers is currently 66.8 years old and is increasing year by year, and the percentage of Japanese farmers over 65 years old is now over 70% (MAFF 2020j)(*Figure 2*). Regarding this aged proportion of the population, it is clear the number of farmers in Japan will continuously decrease and correspondingly many

farmlands will be abandoned due to disinterest in farming and desires for alternative land uses by the inheriting generation (MAFF 2020j).

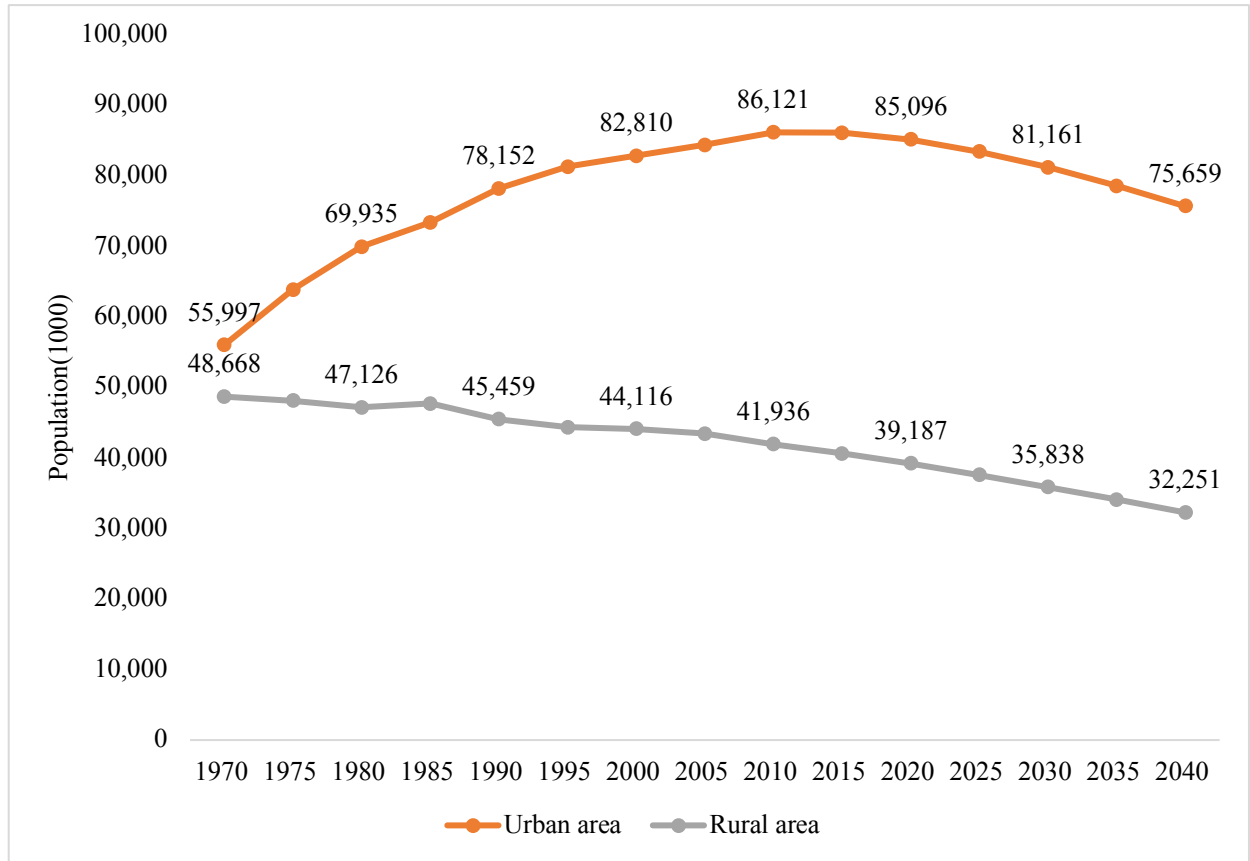


Figure 1 Urban and rural population change in Japan

(Source: MAFF 2020c)

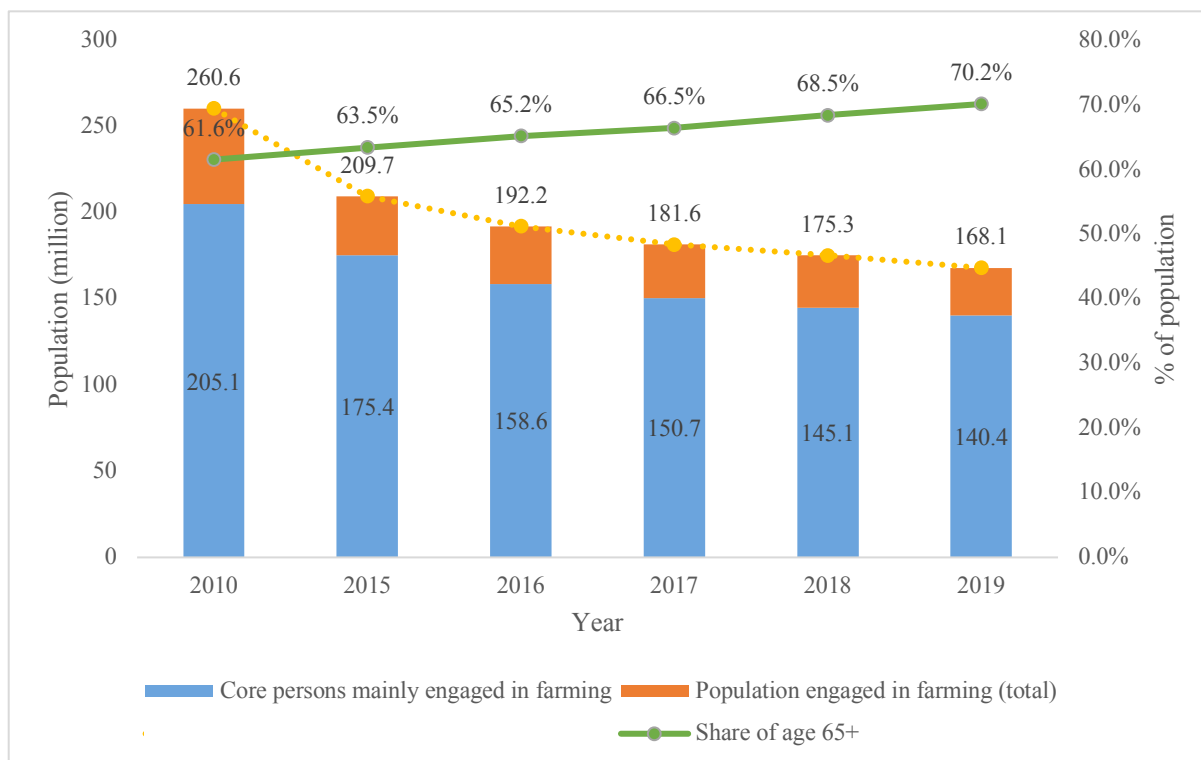


Figure 2 Population and aging rate of farmers in Japan

(Source: MAFF 2020j)

1.1.3 Overview of GIAHS

In response to global trends undermining family agriculture and traditional agricultural systems, in 2002 the Food and Agriculture Organization (FAO) launched the Globally Important Agriculture Heritage Systems (GIAHS) program. FAO defines GIAHS as “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 2018). GIAHS aims to “identify and safeguard valuable agricultural heritage systems through catalyzing and establishing a long-term program to support such systems and enhance global, national, and local benefits derived through their dynamic conservation, sustainable management, and enhanced viability” (FAO 2018).

The overall goal of the GIAHS program is “to identify and safeguard GIAHS and their associated landscape, agricultural biodiversity and knowledge systems through catalyzing and establishing a long-term program to support such systems and enhance global, national and local benefits derived through their dynamic conservation, sustainable management and enhance viability” (FAO 2020b).

For the determination of whether an agriculture heritage system is “Globally Important”, one main feature and five selection criteria are taken into account. The main feature consists of “historical and contemporary relevance” (FAO 2018).

The five selection criteria used when judging sustainability for GIAHS site designation are as follows (FAO 2018):

- 1) Agricultural systems that contribute to food and livelihood security.
- 2) Rich and unique agrobiodiversity.
- 3) Traditional knowledge and technologies.
- 4) Strong cultural values and collective forms of social organizations and value systems for resource management and knowledge transmission.
- 5) Remarkable landscapes and seascapes stemming from ingenious systems and technologies of land and water management.

Currently, 62 sites in 22 countries are designated as GIAHS sites. China currently has 15 sites, the largest number of any country.

Japan has the second largest number of designated sites. Since 2011, 11 sites have been designated as GIAHS all around Japan. In 2016, MAFF started an original certification program called “Japanese Nationally Important Agriculture Systems” (JNIAHS) in order for the Minister of MAFF to certify outstanding agriculture systems domestically, and currently

15 sites have been designated (MAFF 2020f). The detail of JNIAHS will be discussed in Section 3.1.3.

1.2 Review of related literature

1.2.1 Program analysis of GIAHS at global level

Koohafkan & Cruz (2011) describe GIAHS as an example of a “holistic management” approach. This approach is said to facilitate bottom-up and multi stakeholder processes “to understand and learn from multi-dimensional nature of given system in order to support positive patterns of change and help mitigate negative patterns, equitable distribution of resources and benefits and knowledge sharing”. This research explains the details of “holistic management” and shows how each action level (National, Meso-level, Local, Research and Market/Trade) should theoretically work for their tasks in the GIAHS conservation framework.

1.2.2 GIAHS program implementation in each country

Currently, East Asian countries (China, Japan and Korea) occupy the half of designated sites of GIAHS. Accordingly, there are many studies, especially in China, that discuss GIAHS implementation and national certification programs for agricultural heritage systems in each country. Because GIAHS in general does not have a long history of implementation, the details of these national program have constantly changed over years as countries make adjustments, meaning that the information found in these pieces of the literature have in some cases not yet been updated to match current situations.

Min and Jiao (2017) explain that China is the first country to identify and conserve agricultural heritage systems at the national level under a framework called “China-NIAHS”. Their research compares China-NIAHS to GIAHS and identifies that China-NIAHS designated sites have been facing challenges such as “lack of adequate mastery of potential agricultural

heritage systems”, “lack of local popularization of their concept and connotations”, and “lack of endogenous motives for their conservation and development”.

Yiu, Nagata & Takeuchi (2016) similarly compare national programs for agricultural heritage systems under the GIAHS program in China, Japan and Korea. This research identifies the differences and similarities in the background of development, designation criteria, application procedures and implementation of GIAHS and also of the respective domestic programs that reflect each country’s national circumstances. This paper introduces the details of the designation criteria, application procedure and implementation structure of the Japanese Nationally Important Agricultural System (JNIAHS) program, however, the current updates to the designation process and JNIAHS program had not yet occurred when this paper was published in 2016.

1.2.3 Overall discussion about GIAHS program in Japan

Takeuchi (2016) summarizes the history of GIAHS implementation in Japanese, and briefly introduced successful examples of and current trends in local activities in GIAHS sites. In this paper, Takeuchi expects that the significance of GIAHS designation in Japanese rural areas will be substantial, since although those areas have been continuously maintaining traditional small-scale farming systems, they still face the issues of a depopulating and aging society. In this context, GIAHS designation is presupposed to have positive outcomes over time.

Hamamoto (2016) introduces JNIAHS in comparison with GIAHS. He concluded that those certification programs for agricultural heritage systems are “very important in the perspective of rural promotion because they will bring pride and confidence to local people, encourage the participation of various stakeholders to activities in the sites and revitalize local industry”. In this context as well, there is an expectation or prediction of benefits gained by local people in rural areas based on GIAHS or JNIAHS designation.

1.2.4 Impact and challenges of GIAHS designated areas in Japan

Since the history of GIAHS implementation in Japan starts from 2011, literature that assesses the impacts of GIAHS in designated areas in Japan is limited, although some groups have tried to do so in certain areas. For example, some research focuses on how currently GIAHS-designated traditional agriculture systems have long had positive impacts on local agrobiodiversity (Inagaki & Kusumoto 2014, Nishikawa 2015). Other research focuses on the impacts and challenges of GIAHS in certain designated areas from a socioeconomic perspective (Kohsaka & Uchiyama 2016).

Tanaka, Kamioka and Hara (2018) and Kohsaka, Uchiyama & Rogel (2019) applied text mining method in order to structuralize the problems facing the local government officials who are in charge of GIAHS. Tanaka et al., (2018) identified the following challenges as forming the center of those problems in Aso GIAHS in Kumamoto:

- 1) Lack of successors in the agriculture sector
- 2) Difficulties in maintaining grass land
- 3) Difficulties in maintain communities
- 4) Difficulties in maintaining and promotion of the ranch association

Their research also identified that although the GIAHS centric problems like “lacking leadership of activities related to GIAHS” and “lack of familiarity [of GIAHS] among local citizens” exist as mid-level problems for the officials, they do not have a strong connection with the other issues. Thus, the research concluded that unless the development and maintenance of the agriculture heritage site are secured against these more major challenges, the impact of GIAHS recognition will be limited.

Kohsaka & Uchiyama (2016) describe the characteristics of GIAHS in Noto peninsula in Ishikawa prefecture as “having no center” (中心がない) and along with that metaphor, they analyzed the impacts and issues of GIAHS in the Noto peninsula. The research details that as Noto’s GIAHS was recognized as a GIAHS site as a combination of 9 different municipalities, there is an observed lack of cohesive cooperation between each municipality in terms of protection of agricultural heritage system related resources. The authors also pointed out the gap in expected outcomes between the ground level stakeholders and management sides of the GIAHS certification process. In Noto’s case, people on the ground level expected practical impacts from GIAHS in the form of increasing numbers of tourists and prices for the agricultural products. However, in Noto the price of agriculture products did not increase after GIAHS designation (Kohsaka & Uchiyama 2016). In comparison to the more pragmatic, livelihood-related aims of ground level stakeholders, the aim of international associations and researchers that promote GIAHS is mainly for preservation of traditional agriculture, landscapes, and agrobiodiversity.

1.3 Research gap

Based on the research briefly summarized above, it is clear that there are still areas and angles of GIAHS implementation in Japan that have yet to be explored.

First of all, little research has covered the updates of the program management in Japan, even though GIAHS officially became a part of Japanese agricultural policy in 2016 (MAFF 2020h). Moreover, GIAHS was recently mentioned in the main Japanese agriculture policy outline “Food and Agriculture Rural Basic Plan” in 2020 (MAFF 2020a). These details will be explained further in section 3.2.4

Secondly, much of the ground-level research about the impact and challenges of GIAHS in designated sites in Japan only focus on the perspectives of the local level of management. Even though the “holistic approach” including the three levels of management (Global, National, and Local) outlined by Koochafkan & Cruz (2011) should theoretically support GIAHS program implementation, there is little research which attempts holistically analyze the GIAHS program in Japan, including both its local impacts and an analysis of each of its management layer and their relationship to one another.

Lastly, although in the Japanese literature both research that focuses on the program of GIAHS itself and that which focuses on its tangible impacts mention that many rural areas in Japan (including GIAHS sites) have been facing common societal issues for rural planning, such as the lack of human resources in the agriculture sector (Tanaka et al., 2018) and depopulation and aging (Takeuchi 2016, Hamamoto 2016), no study has yet fully discussed how GIAHS has been implemented in local rural planning. Although GIAHS is a global certification framework, because each country adopts and implements GIAHS independently, understanding how it operates in each country within that country’s context is necessary. As such, there is a need to identify where GIAHS exists within the context of Japan’s approach to rural planning. To this end, country and locality specific analysis can offer insights into the whole system. By understanding the political, economic, cultural motivations for Japan join GIAHS, a clear view of how GIAHS has been utilized so far can be established, and from there so can insights into its future potential. This paper will attempt to address these gaps.

1.4 Research objectives

Based on the research gaps identified above, this research aims to identify the characteristics of GIAHS management system in Japan and how it has been interpreted into as a rural planning strategy in designated area by fulfilling the following research objectives:

- 1) Understand the structure of GIAHS management in Japan.
- 2) Identify and analyze the backgrounds, aims , expected outcomes of GIAHS implementation in national government level and local level.
- 3) Identify and analyze the gaps and connections between each management level and how they affect GIAHS implementation at the ground level.
- 4) Identify the perception of local stakeholders about GIAHS

As a desired outcome, through detailed analysis, this paper seeks to clarify the lessons that can be learned generally about GIAHS's systematic organization, challenges, and potential when applied to Japanese localities and improving the GIAHS program in Japan itself. These lessons about the challenges and potential of GIAHS implementation are useful not only for guiding local GIAHS sites' future growth under GIAHS, but could also potentially benefit other current and future sites in Japan or other countries, especially those that are similarly facing a depopulating and aging society. Moreover, the lessons gained from Sado's experience have the potential to be a role model for future sustainable rural planning in Japan and elsewhere.

2 RESEARCH DESIGN

2.1 Field survey methods

This study critically investigates and analyzes the institutions responsible for implementing GIAHS in order to understand the background of GIAHS implementation. At the same time, taking Sado city in Niigata prefecture as a case, the study investigates from the perspective of the local municipality and its citizens how GIAHS supports the sustaining of agricultural heritage systems. Key informant interviews (Table 1) with MAFF and Sado city officials were conducted in order to capture their opinions and identify societal change after GIAHS designation over time from the perspective of each layer of stakeholders in Japan. For the interviews in conducted Sado, snowball sampling was applied for the informant selection. The key informant interviews were generally recorded, transcribed, and analyzed. In the case that audio recording the interview was not an option due to the setting or refusal by the informant, extensive notes were taken.

Policy papers and reports from FAO, MAFF and local municipalities were also collected in order to elaborate on the national and local strategies of GIAHS implementation. This methodology enables the identification of both the details of each layer of management in the implementation of GIAHS and the GIAHS certification system as a whole in Japan.

Table 1 Informant list

#	Informant		Affiliation	Date
1	H	MAFF officer	MAFF GIAHS division	2020 Feb.
2	A	Public Officer	Initial member of Sado GIAHS / Former manager of agriculture sector in city hall	2019 Nov.
3	B	Farmer	Farmer in hilled paddy area	

4	C	Farmer	Farmer in flat land area, Initial member of Toki certified rice
5	D	Public Officer Migrant	Former rural community- reactivating cooperator squad in Iwakubi community
6	E	Public Officer	City hall officer in charge of GIAHS
7	F	Private sector	Officer of Ikimonogatari- Kenkyūjo (general incorporate association)
8	G	Farmer	Former JA director

2.2 Site selection

2.2.1 *Impact and challenges of GIAHS designated areas in Japan*

As written previously, this research takes Sado city as a case study site in order to capture the perspective of local municipality and citizens towards GIAHS.

Sado Island is a large island in the Japan sea belonging to Niigata prefecture. In March 2004, ten separate municipalities that covered entire island (Aikawa, Ryotsu, Kanai, Sawada, Niibo, Hatano ,Ogi, Hamochi, Mano and Akadomari) merged into the single administrative entity of Sado city (Sado city 2007).

Sado city encompasses 855 square kilometers of land and had a population of 53,372 as of May 2020 (Sado city 2020e). Sado's population has continued to decrease since consolidation in 2004, and, on average, it decreases by over 1,000 people every year due to mortality and outmigration (Sado city 2015). Moreover, about 40% of population are people over 65 years, and the dominance of the elderly population is projected to continue until 2060 (Sado city 2015).

Even though primary industries, including agriculture, fishery and forestry, contribute to a relatively small share of the GDP in Sado (Sado city 2020d), Sado is still well known for its

successful agriculture, and so agriculture remains an important local industry. In Sado, 12.6% (10,800 ha) of the total land area is farmland, and of that 9,110 ha (84%) are paddy fields, while the remaining areas are mostly plowed fields, including fields for value-added fruits such as *Okesa* persimmons, *Le Lectier* pears, and land used for branded local beef called ‘*Sadogyū*’ (JA Sado 2020).

Sado city has over 1,700 years of agricultural history, especially in rice cultivation, which flourished in the Edo era along with the expansion of the island’s population due to the development of gold and silver mining (UNU 2018). This revolution shaped the unique characteristics of Sado’s landscape, including rice terraces and the island’s reservoirs, which number at over 1,000 (Sado city 2011). Due to its isolate nature as an island, Sado long has had to deal with water shortages and thus developed water resource management technology like reservoirs and wells to cope (Sado city 2019a). The further development of agriculture in Sado led to the significant development of rural culture that is now considered in terms of both tangible and intangible cultural heritage, such *Noh* plays and *On Daiko* (demon’s drums) (Sado city 2020b). Many of these expressions of culture are registered as national, prefectural and local designated cultural properties and have been passed down by citizens until now (Sado city 2018). The richness of the agriculture and surrounding ecosystem have created “safe haven and habitats” for aquatic organisms in particular, and the paddy fields serve as feeding grounds for the Japanese crested ibis (*toki* in Japanese), a species that has been facing the threat of extinction in recent years (UNU 2018).

2.2.2 *History of protection of Japanese crested ibis and “Toki to Kurasu Sato ”rice certification*

Sado city has a long history of protecting the Japanese crested ibis, dating back to the Meiji era (Sado city 2011). In the early 1900s, in order to obtain their meat and feathers, overhunting of the ibis occurred throughout Japan and the population of the species decreased until, in 1926,

the last two populations of the Japanese crested ibis were found in Sado island (Sado city 2011). Since then, various citizen efforts to protect the Japanese crested ibis have been taken, such as reducing the amount of pesticides applied to paddy fields, spreading loach fish among paddy fields for the birds to eat, and so on (Sado city 2011). However, in spite of these efforts by citizens, the ibis population did not recover enough, and so the last five wild crested ibis were eventually captured for protection and research (Sado city 2011). In 1999, the Toki Japanese Crested Ibis Protection Center, a research center installed by Ministry of Environment (MOE) and administrated by Niigata prefecture, succeeded in the artificial incubation of Japanese crested ibis (MOE 2019). Thanks to the continuous efforts of citizens to protect the environment for Japanese crested ibis, and the MOE and local government's scientific and political efforts, in 2008, 10 Japanese crested ibises were released into the wild. Most recently, MOE has identified that there are now over 400 wild Japanese crested ibis living in Sado (MOE 2019)

With the background of this long history of Japanese crested ibis protection, in 2010 Sado city collaborated with JA Sado and launched the "*Toki to Kurasu Sato*" ('villages coexisting with the crested ibis') rice certification initiative (UNU 2020). This certification aims to certify rice production that has met six set conditions that help to secure feeding grounds for the Japanese crested ibis, which prefer to eat small living creatures such as the fish, loaches, and worms that live in and around the rice paddy fields (UNU 2020). Based on traditional knowledge about the Japanese crested ibis, this certification adopted several traditional strategies to restore the agroecological environment for the Japanese crested ibis. (UNU 2020)

In addition to a desire to protect the Japanese crested ibis, the "*Toki to Kurasu Sato*" rice certification initiative also has its roots in the experience of a typhoon disaster that Sado faced in 2004, and the subsequent continuous difficulties of Sado-produced rice on the market (Mizuno 2013). In August 2004, the severe damage to rice cultivation from the typhoon

resulted in very low harvest from paddy fields in Sado that year (JA Sado 2014). The severe lack of stock of Sado rice in 2004 affected wholesaler's and retailer's decisions to choose Sado products for their shelves in subsequent years, and so the impact continued from 2005 to 2007, in which Sado rice struggled to be sold on the market (from the interview with G, a former JA Sado director).

Concerned about the situation of Sado rice, the Sado city hall agriculture sector and JA Sado stood up together to confront this crisis in order to solve both the ecological and economic problems around Sado rice, which ultimately resulted in the establishment of the “*Toki to Kurasu Sato*” rice certification (JA Sado 2014). Further details about the “*Toki to Kurasu Sato*” rice certification and its connection to GIAHS gained from the interviews will be discussed in section 3.4.4

2.2.3 *Reasons why Sado city was selected as study site*

As the previous sections explain, Sado has a long history of agriculture and related traditional cultures, as well as a successful experience of persistent efforts by its citizens to maintain their environment in order to recover habitat for the Japanese crested ibis, ultimately culminating in the “*Toki to Kurasu Sato*” rice certification which integrated the protection of agrobiodiversity and economic benefits for farmers (UNU 2020). Those activities were highly regarded by United Nations University (UNU), and they offered to support to Sado city to apply to be the first GIAHS site in Japan in 2010 (UNU 2018). Subsequently, in June of 2011, Sado was successfully designated as the first GIAHS site in Japan (UNU 2018).

Based on this background, Sado city was chosen as a study site for several reasons. While each GIAHS site is unique, Sado has the following particular characteristics that make it suitable for the present research:

- 1) As the first Japanese GIAHS site, Sado did not have any prior Japanese examples to learn from and had to pioneer their implementation strategy.
- 2) With the longest history of GIAHS designation among Japanese sites, outcomes can be identified more comprehensively and over a longer timescale.
- 3) Unlike the other sites, Sado did not get prefectural government support, and instead directly worked as a municipality with the Japanese national government to implement GIAHS. Currently, all of the GIAHS site in Japan besides Sado city are designated as combinations of at least two municipalities (*Table 2*), and most of them have a special committee and office that works on implementation within either their prefectural office or larger municipality.

Table 2 GIAHS site in Japan and municipality (data collected from each site's website)

	<i>Name of site</i>	<i>Prefecture</i>	<i>Year</i>	<i>recognized municipalities</i>	<i>municipality</i>
1	Noto's Satoyama and Satoumi	Ishikawa	2011	Nanao city, Wajima city, Suzu city, Hakui city, Siga town, Nakanoto town, Anamizu town, Noto town	8
2	Sado's Satoyama in Harmony with Japanese Crested Ibis	Niigata	2011	Sado city	1
3	Managing Aso Grasslands for Sustainable Agriculture	Kumamoto	2013	Aso city, Oguni town, Minami Oguni town, Ubuyama village, Takamori town, Minami-aso village, Nishihara village	7
4	Traditional Tea-grass Integrated System in Shizuoka	Shizuoka	2013	Kawanemoto town, Shimada city, Kakegawa city, Kikukawa city, Makinohara city	5
5	Kunisaki Peninsula Usa Integrated Forestry, Agriculture and Fisheries System	Ohita	2013	Bungo-Takada city, Kunisaki city, Kitsuki city, Himeshima village, Usa city, Hiji town	6
6	Ayu of the Nagara River System	Gifu	2015	Gifu city, Seki city, Mino city, Gujo city	4
7	Minabe-Tanabe Ume System	Wakayama	2015	Minabe town, Tanabe city	2
8	Takachihogo-Shiibayama	Miyazaki	2015	Takachiho town, Hinokage town, Gokase town,	5

	Mountainous Agriculture and Forestry System			Morotsuka village, Shiiba village	
9	Osaki Kodo's Traditional Water Management System for Sustainable Paddy Agriculture	Miyagi	2017	Osaki city, Shikama town, Kami town, Wakuya town, Misato town	5
10	Nishi-Awa Steep Slope Land Agriculture System	Tokushima	2018	Miyoshi city, Mima city, Higashi miyoshi town, Tsurugi town	4
11	Traditional WASABI Cultivation in Shizuoka	Shizuoka	2018	Sizuoka city, Izu city, Shimoda city, Izu town, Kawazu town, Matsuzaki town, Nishiizu town	7

(Source: MAFF 2020f)

3 RESULT FROM DOCUMENT REVIEW AND INTERVIEW

3.1 Original aim of GIAHS in FAO

3.1.1 Aim and goals of FAO

The Food and Agriculture Organization (FAO) is an international organization that started in 1945 as a specialized agency of the United Nations. Leading international efforts to defeat hunger, FAO's overall aim is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives. With over 194 member states, FAO works in over 130 countries worldwide (FAO 2020a). From 2010 to 2019, FAO has been working towards five main objectives: 1) help eliminate hunger, food insecurity and malnutrition, 2) make agriculture, forestry, and fisheries more productive and sustainable, 3) reduce rural poverty, 4) enable inclusive and efficient agricultural and food systems, and 5) increase the resilience of livelihoods to threats and crises (FAO 2019).

3.1.2 Aims and goals of GIAHS in FAO

In 2002 the Food and Agriculture Organization (FAO) launched the Globally Important Agriculture Heritage Systems (GIAHS) program. FAO defines GIAHS as "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 2018). GIAHS aims to “identify and safeguard valuable agricultural heritage systems through catalyzing and establishing a long-term program to support such systems and enhance global, national, and local benefits derived through their dynamic conservation, sustainable management, and enhanced viability” (FAO 2018).

The overall goal of the GIAHS program is “to identify and safeguard GIAHS and their associated landscape, agricultural biodiversity and knowledge systems through catalyzing and establishing a long-term program to support such systems and enhance global, national and local benefits derived through their dynamic conservation, sustainable management and enhance viability” (FAO 2020b). In order to achieve this goal, FAO has set three main objectives for implementing GIAHS:

The first is “to leverage global and national recognition of the importance of agricultural heritage systems and institutional support for their safeguard” (FAO 2020b). This objective aims for increasing recognition and awareness of agricultural heritage systems and their global importance through an improved understanding of the threats that such systems face and of the benefits that they provide at all levels of management. The second objective is, “Capacity building of local farming communities and local and national institutions to conserve and manage GIAHS, generate income and add economic value to goods and services of such systems in a sustainable fashion” (FAO 2020b). This objective includes fostering ways for local farming communities to mitigate risks of loss of biodiversity and traditional knowledge, as well as debasement due to threats brought by the globalization process and imbalanced policies and incentives. In addition, it aims to contribute to food security and poverty alleviation through strengthening conservation and the sustainable use of biodiversity and natural resources, reducing vulnerability to climate change, and “enhancing sustainable agriculture and rural development”. The third objective is, “to promote enabling regulatory

policies and incentive environments to support the conservation, evolutionary adaptation and viability of GIAHS” (FAO 2020b). This objective “includes an assessment of existing policies and incentive mechanisms in addition to the identification of modalities to provide support for sustainable agricultural practices and promotion of national and international processes leading to improved policies and incentive mechanisms” (FAO 2020b).

For the determination of whether an agriculture heritage system is “Globally Important”, one main feature and five selection criteria are taken into account. The main feature consists of “historical and contemporary relevance” (FAO 2018).

“Historical relevance” demonstrates how the site has adapted to the surrounding environment over time and how farmers have developed specific knowledge and skills to form the current landscapes and systems (FAO 2018). The “contemporary relevance” of a site should be established by its present and future capacity to provide food and livelihood security, to contribute to human well-being and quality of life, and to generate other local, national and global economic and environmental goods and services to its community and wider society (FAO 2018).

The five selection criteria used when judging suitability for GIAHS site designation are as follows (FAO 2018):

- 1) Agricultural systems that contribute to food and livelihood security.
- 2) Rich and unique agrobiodiversity.
- 3) Traditional knowledge and technologies.
- 4) Strong cultural values and collective forms of social organizations and value systems for resource management and knowledge transmission.

5) Remarkable landscapes and seascapes stemming from ingenious systems and technologies of land and water management.

3.1.3 Relationship with Japan

Japan joined FAO in 1951 and is now one of its foremost members. Currently, the Japanese government is the third biggest financial contributor to FAO, next to the United States and China. The Japanese government donated about five billion yen to FAO in 2020, and particularly in regard to the GIAHS project, Japan is the biggest donor in the world (MOFA 2020).

Japan has the second largest number of GIAHS designated sites. Since 2011, 11 sites have been designated as GIAHS all around Japan. As in several other countries (Chile, China, Ecuador, and South Korea), Japan also has established a national agricultural heritage system recognition framework to support GIAHS activities (FAO 2018).

3.2 Document review about GIAHS in Japan

3.2.1 Aim and goals of MAFF as an organization

The Ministry of Agriculture, Forestry and Fisheries (MAFF) is one of the ministries of Japanese government. It serves as the administrator and central controlling body of government intervention in the agricultural sector (MAFF 2020g). Their mission is to “Secure the stable supply of food, development of agriculture, forestry and fisheries, promotion of farmers’ and fishermen’s welfare, revitalization of rural areas and mountainous areas, demonstration of the multifunctionality of agriculture, perseverance and cultivation of forests, promotion of productivity of forests, and proper protection and administration of aquatic resources” (MAFF establishment law chapter 1, section 2 2019).

The budget of MAFF reached its peak in 1982 with 3.701 trillion yen, and has since decreased overall, falling to 2.310 trillion yen in 2019 (Iwamoto 2019, Kanazawa 2020). Based

on the *Food, Agriculture and Rural Areas Basic Act* (MAFF 2008), MAFF sets and implements policies through the framework of the *Basic Plan for Food, Agriculture and Rural Areas* (食料・農業・農村基本計画), which is updated every five years. In the most recent version, MAFF defines their basic policy as to “promote ‘industrial policy’ and ‘rural policy’ like two wheels on an axel, stably secure the food supply essential for the lives of the citizens from now into the future, and increase the food self-sufficiency rate and establish food security”(MAFF 2020a).

3.2.2 History of GIAHS in Japan

Although the GIAHS initiative was originally primarily focused on application in developing countries, by 2009 UNU (United Nations University, based in Tokyo) started to consider possibility of adopting the GIAHS program in Japan (UNU 2018). In the early stages of GIAHS adoption in Japan, UNU provided technical support for sites applying to GIAHS, and also was in charge of evaluating the applications in Japan (UNU 2018). However, in order to secure fairness of judgement and avoid conflicts of interest, MAFF eventually established a “council of experts¹” (専門家会議) in 2014 to take over the evaluation process (UNU 2018). The first (2011) and second (2013) selections of GIAHS sites in Japan were organized by UNU, while MAFF only provided support to the applicant site when they submitted their applications to FAO. Beginning from the selection in 2015, MAFF organized the selection process and the “Council of Experts” to select the sites for recommendation to FAO. (From the interview with H).

¹ This translation is different from the translation found in the cited document (UNU, 2016), and was changed for the purpose of clarity.

3.2.3 JNIAHS certification under MAFF

In 2016, MAFF started an original national certification program called “Japanese Nationally Important Agriculture Heritage System” (JNIAHS), in which the Minister of MAFF recognizes outstanding agriculture systems in Japan (MAFF 2020f). Currently there are 15 JNIAHS sites in Japan, including three GIAHS sites (*Table 3*). The JNIAHS program intends to identify these outstanding Japanese agriculture systems in part because FAO’s selection criteria for GIAHS do not cover particular values expressed in Japanese agriculture heritage systems (MAFF 2020f). As such, JNIAHS adds three original designation criteria concerning Japan’s characteristic background conditions, such as frequent natural disasters and a shrinking and aging society (MAFF 2020f). The three original criteria are as follows (translation quoted from Yiu et al., 2016):

- 1) Environmental aspects concerning “resilience against changes”.
- 2) Social aspects concerning “participation of multiple stakeholders”.
- 3) Economic aspects of “new business models” (or sometimes referred to in Japan as “Sixth Industrialization”²).

Such establishment of national recognition frameworks for agricultural heritage systems has occurred not only in Japan, but also in several other countries (Chile, China, Ecuador, and South Korea), with each national framework reflecting their particular country’s background conditions (FAO 2018).

Table 3 GIAHS sites in Japan

GIAHS Sites	year	JNIAHS
Sado City in Niigata Prefecture	2011	
Noto Peninsula in Ishikawa	2011	

² “Sixth Industrialization” is the promotion of primary producers’ diversification into processing and distribution (Nakano 2014)

Takegawa and surrounding region in Shizuoka	2013	
Kunisaki Peninsula Usa area in Oita	2013	
Aso region in Kumamoto	2013	
The upper and middle basin of the Nagara River in Gifu	2015	
Minabe-Tanabe region in Wakayama	2015	
Takachihogo-Shiibayama region in Miyazaki	2015	
Osaki region in Miyagi	2017	●
Shizuoka Wasabi Cultivating Region in Shizuoka	2018	●
Nisi-Awa Area in Tokushima	2018	●

(Source: MAFF 2020f)

3.2.4 Given role of GIAHS and JNIAHS in MAFF

In the current *Basic Plan for Food, Agriculture and Rural Areas* (MAFF 2020a, pp. 63), in regards to GIAHS, MAFF states, “in order to aim towards the encouragement of citizen appreciation of the multifunctionality of agriculture, we are working towards a rise in the level of citizen familiarity of GIAHS, JNIAHS, and World Heritage Irrigation Structures, in addition to implementing initiatives to promote interaction between urban and rural areas, as well as tourism.” (「農業の多面的機能に関する国民の理解の促進を図るため、世界農業遺産・日本農業遺産及び世界かんがい施設遺産について、国民の認知度向上に取り組むほか、都市と農村の交流、観光の促進等に向けた取組を推進する。」).

In the operation guide for GIAHS and JNIAHS application and authorization (世界農業遺産への認定申請に係る承認及び日本農業遺産の認定に関する実施要領) (MAFF 2020h, pp. 1), MAFF states that these programs, “by not only supporting the succession of traditional agriculture, forestry, and fisheries, but also fostering the local people's confidence and pride in each designated area, encourage deeper understanding about such areas

nationwide, the participation of diverse stakeholders in local activities, and the activation of local industries. Thus, these systems contribute to tackling the diverse challenges faced in rural promotion efforts.”（「伝統的な農林水産業の継承に止まらず、地域の自信と誇りを醸成し、国民の理解を深めることで、当該地域の活動への多様な主体の参画を促すとともに、地域産業を活性化させ、農村振興における様々な課題に貢献しうるものである」）

3.2.5 *Designation and monitoring process of GIAHS in Japan*

FAO requires in each country that “A proposal document is expected to be submitted from an appropriate national government ministry or institute or a national GIAHS Committee” (FAO 2016). This is because any given country’s national agricultural policy naturally takes a main role in preservation activities for agricultural heritage systems, including those designated as GIAHS. In accordance with this FAO requirement, in Japan MAFF is in charge of organizing applications to GIAHS (FAO 2016).

In the operation guide for GIAHS and JNIAHS application and authorization (世界農業遺産への認定申請に係る承認及び日本農業遺産の認定に関する実施要領) (MAFF 2020h pp. 2), MAFF sets the following requirements for applicants:

1) Targeted agricultural systems

The targeted agricultural systems under the present system are those with a uniqueness passed down through multiple generations developed through adapting to the surrounding society and environment, as well as the related closely developed culture, landscape or seascape, in a region practicing a traditional agriculture system that has mutually formed together with agrobiodiversity as a whole, and possessing historical and contemporary importance on a national and global level.

本制度の対象となる農林水産業システムは、社会や環境に適応しながら何世代にもわたり継承されてきた独自性のある農林水産業並びにそれに密接に関わって育まれた文化、ランドスケープ及びシースケープ、農業生物多様性等が相互に関連して一体となった伝統的な農林水産業を営む地域であり、世界及び日本における重要性並びに歴史的及び現代的な重要性を有するものとする。

2) Targeted areas

Targeted areas are extended regions, including formerly distinct³ cities, towns, and villages, with shared traditional agricultural systems that are at least roughly 100 years old and are currently being continued.

共通の伝統的な農林水産業システムを有する旧市町村以上の広がりのある地域とし、農林水産業システムはおおむね 100 年以上の歴史を有し、かつ現在も営まれているものとする。

3) Targeted applicants

Targeted applicants to the present system are organizations that represent the targeted area, possess the appropriate administration and management structure, and satisfy the conditions written below. Furthermore, areas whose application for designation as GIAHS has already been approved but have not yet been designated as JNIAHS that apply for designation as JNIAHS, or areas that have already been designated as JNIAHS but have not received approval for their application for GIAHS designation

³ This is in reference to cities, towns, and villages that previously separate before the national government-mandated combination of small administrative areas from 1999 to 2006 (Hirota & Yunoue 2013).

that reapply for approval of their application for GIAHS designation, such applications will not be denied.

(1) Possession of (or, for organizations that do not have these provisions, items that correspond to) articles of incorporation, official organizational rules, register of names of constituent members and accounting regulations.

(2) Inclusion of a municipal government or organization comprising of members related to agriculture, forestry, or fishing industries within the targeted area.

本制度に係る申請者は、対象地域を代表し、適切な運営・管理体制を有する団体であって、以下の要件を満たすこととする。なお、世界農業遺産への認定申請に係る承認を既に受けた地域であって日本農業遺産の認定を受けていない地域が日本農業遺産への認定を申請すること又は日本農業遺産の認定を既に受けている地域であって世界農業遺産への認定申請に係る承認を受けていない地域が世界農業遺産への認定申請に係る承認を申請することは妨げない。

(1) 定款、組織規程、構成員名簿及び会計規程（これらの定めのない団体にあっては、これに準ずるもの）を備えていること。

(2) 対象地域内の市町村及び農林漁業者の組織する団体が含まれていること。

A) Council of Experts(専門家委員会)

MAFF set the “Council of Experts” in 2014 in order to ;

“Secure the smooth process of approval of GIAHS application based on the FAO’s guidelines and recognition of JNIAHS, and give advice from the perspective of

professionals for those areas recognized as GIAHS and JNIAHS in order to support the areas' implementation of activities based on the preservation plan”

(「国連食糧農業機関 (F A O) が定める世界農業遺産申請・認定手順書に沿った世界農業遺産への認定申請に係る承認及び日本農業遺産の認定に関する手続の円滑な推進を図るとともに、世界農業遺産及び日本農業遺産認定地域において保全計画に沿った活動が適切に実施されるよう、専門的視点から助言することを目的として設置する」) (MAFF 2020e pp.1)

Members of the Council of Experts are appointed by MAFF, the term as a member is two years, and members can be reselected. While there is no set size for the Council, currently it consists of seven members, including researchers related GIAHS, an agricultural journalist, NPO members, and so on (MAFF 2020h). H said the following regarding the Council:

H: Since the national government officials have to change their positions every two years, we have to rely on the experts to accumulate knowledge.

「公務員なので二年に一回移動があるので、そういった知見の蓄積は専門家会議の先生たちに頼らざるを得ない。」

B) Designation

MAFF calls for application to GIAHS from interested areas every two years and the Council of Expert conducts the selection process (MAFF 2020b). This process is applied simultaneously for both GIAHS and JNIAHS, and applicants can choose whether they will apply only for GIAHS or both GIAHS and JNIAHS (MAFF 2020i). According to the application requirements for GIAHS and JNIAHS (MAFF 2020i, pp.3), the selection process follows these steps:

- 1) First screening (document screening)

Applicants submit the application form (application document and 5-year preservation plan) to MAFF through their regional branch of MAFF and the Council of Experts screen the documents.

2) Site observation

After the document screening, members of Council of Experts visits the sites that have the possibility of approval as GIAHS or JNIAHS.

3) Second screening (presentation)

Each site gives a presentation for the Council of Experts, who evaluate the sites considering both the results from the first screening and site observation.

4) Authorization of GIAHS and recognition of JNIAHS by Minister of MAFF

For GIAHS application specifically, once the site has been authorized for GIAHS application, the GIAHS candidate sites receive advice and guidance by Council of Experts, and based on that, the sites make application documents in English for submitting to FAO. The documents have to be checked by a native speaker and bilingual professional.

5) Submission to FAO

The translated and approved application is sent through MAFF to FAO.

C) Monitoring

After they are recognized as GIAHS, designated sites have to conduct self-evaluation and report the results to their regional branch MAFF office at some point in the last two years of their 5-year preservation plan (MAFF 2020h, pp.3). This process is officially called “Report and Evaluation of the Activity Stats”(活動状況等の報告および評価) in the government’s operation guide (MAFF 2020h), but during the interviews with both MAFF and Sado officials, this process was referred to simply as “Monitoring (モニタリング)”. The process of “Monitoring” is done following these steps (MAFF 2020h pp.3):

- 1) The Council of Experts holds a meeting to evaluate the results from the self-evaluation of each site. If it is necessary, members of the Council visit the sites.
- 2) After the evaluation, the Council makes a statement of advice for the sites in the official form of “Suggestions for Further Preservation and Utilization” (更なる保全・活用に向けた助言) .

D) Follow up by FAO

In the Guidelines on the Designation and Certification of GIAHS (FAO 2020c pp.2), the monitoring process from the FAO’s perspective is described as follows (direct quotes):

- 1) Member countries which have designated GIAHS sites should monitor and evaluate the state and progress of implementation of the action plans for dynamic conservation of the GIAHS sites.
- 2) They should make a periodic report on the outcomes of the monitoring and evaluation to the GIAHS Secretariat.
- 3) The guidelines for monitoring and evaluation should be made by the SAG taking into account the capacity and feasibility in developing countries.

Although FAO requires monitoring and evaluation in each country, they have not specified any details of about the process, time scale or criteria of monitoring and evaluation. Responding to the requirement for “a periodic report on the outcomes of the monitoring and evaluation to the GIAHS Secretariat” (FAO 2020c pp.2), MAFF submits the English translation of “Suggestions for Further Preservation and Utilization” made by the Council of Experts to the FAO. Normally, there is no feedback or follow up by FAO following submission (From the interview with H).

The summary of the designation and monitoring process is illustrated in Figure 3.

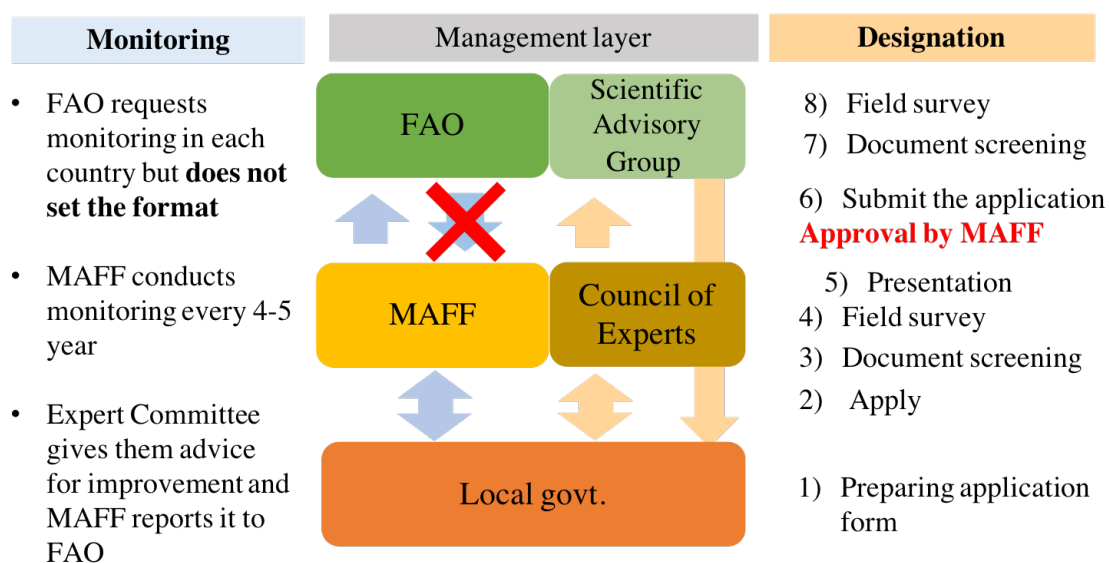


Figure 3 Summary of designation and monitoring process of GIAHS in Japan

3.2.6 Budget of GIAHS program under MAFF

Within MAFF, the team in charge of GIAHS belongs to the Rural Environment Conservation Office Rural Development Bureau(農村振興局鳥獣対策・農村環境課農村環境対策室農業遺産班). According to the interview with one of the main members of this team, H, in 2019 the GIAHS team secured two budget sources: “Grants-in-aid for Promotion of Agricultural Mountain and Fishery Villages”(農山漁村振興交付金) and “Sustainable Family Farming International Activities Support Project”(持続可能な家族農業国際活動支援事業). Using the budget provided by the first source, in order to promote GIAHS and JNIAHS, MAFF holds events in order to increase the general familiarity (認知度) of GIAHS and JNIAHS among the general population and to introduce successful cases under GIAHS and JIAHS as a model for other areas (MAFF 2020d). Because it is centered on international activities, the budget from the second source is limited to GIAHS. It is used to invite people from areas internationally which are considering applying to GIAHS and hold training sessions

in current GIAHS sites in Japan. Additionally, the funds for research and analysis of family farming and an international symposium about family farming are also included within this budget (MAFF 2020d). Currently, MAFF does not provide any direct subsidies for GIAHS designated sites.

3.3 Key informant interview with MAFF

The purpose of the key informant interview with a MAFF official in charge of the GIAHS program was to identify MAFF's aims beyond their official documents and grasp the stance of the national government towards the GIAHS program in Japan. As mentioned above, key informant H is a MAFF official in the GIAHS unit who has been belonged to the unit for almost one year.

3.3.1 Expectation towards GIAHS

As I identified in section 3.2.4, in the operation guide for GIAHS and JNIAHS application and authorization (MAFF 2020h), MAFF expects that GIAHS will not only support the succession of the agriculture heritage systems but also foster the local people's confidence and pride in each designated area. H explained:

H: We recognized GIAHS as part of the “local resources of rural areas” (農山漁村の地域資源). Due to depopulation and aging in rural areas, we have been working on several different projects for revitalizing rural areas (農村地域の活性化) by utilizing these “local resources,” and GIAHS as a certification system is also a part of that. We publish a booklet called “Discover” which exhibits these local resources as a treasure and introduces cases as success stories. The aim of this project is that, in showing those cases, we want other areas to refer to them to their own activities. Although the philosophy behind the booklet is similar, GIAHS's aim is more focused on fostering

the local people's confidence and pride in each designated area through the recognition of the value of the area from an outside source, FAO.

As explained previously, MAFF conducts monitoring in every four to five years for GIAHS designated areas, and there are no specific requirements for the timescale and criteria that were set by FAO, especially for designated areas in developed countries. Therefore, MAFF understands this requirement in the following way as explained by H:

H: Since we only have this information for the requirement of monitoring from FAO, each country decides the way to apply this by themselves. As MAFF, we interpreted them and decided that we would conduct monitoring every four to five years and guarantee the quality of monitoring. We ask each municipality to make sure to evaluate their results in a quantitative manner as much as possible. We set the criteria for monitoring based on the five criteria of GIAHS recognition. As for the format of the monitoring, each area conducts self-evaluation using an A to C scale, and we send the self-evaluation documents to the Council of Experts beforehand. The final evaluation will be delivered by the results from self-evaluation and the presentation given at the designated area. I have experienced only 4 cases so far, but I think that the areas which experience monitoring for the first time, they are still powerful and are continuously tackling the actions for GIAHS since the person in charge of GIAHS locally stays in their position since the time of application. On the other hand, for the second monitoring, in most cases the person in charge locally has shifted positions and advice from the Council of Experts is more critical.

3.3.2 *GIAHS is not designed as “financial support”*

As I identified in 3.2.6, although the GIAHS unit in MAFF secures budget only for the advertisement of GIAHS for increasing familiarity and international cooperation for GIAHS in

developing countries, they do not provide direct subsidies to GIAHS designated areas to assist in their GIAHS implementation activities. In response to the question, “Do you think the applicant areas of GIAHS expect the economic benefits from GIAHS designation?”, H answered:

H: I do not think that is necessarily the case. MAFF provides a varied menu for economic benefits in rural areas, such as the project for Geographical Identification (GI) certification and the promotion of those certified products. Since people know that our GIAHS unit does not have money, we assume that if an applicant area needs money, they would choose another support program within MAFF.

When we said that “We are expecting that we want to promote the branding of agriculture products and tourism in designated areas through GIAHS”, one person from Noto GIAHS told us that “Even though we expect that kind of benefit, we cannot achieve it without the “evidence” (実事) that GIAHS actually has the power to achieve them. We need that “evidence” when we ask for cooperation from various people such as farmers.” I understand that point, but on the other hand, if we only pursue outcomes with “evidence”, MAFF has many different other options besides GIAHS to ensure that “evidence”.

Most of the designated areas utilize the other options from MAFF, such as “direct payment for multifunctionality” and “direct payment for hilly and mountain areas”, for the maintenance of farmland facilities and to secure human resources. Also, I often hear that some areas utilize the subsidy from the Cabinet Office for rural revitalization.

From the perspective of local government, Sado city has been utilizing the subsidy of “isolated island revitalization” from the Ministry of Land, Infrastructure and Transport (MLIT),

which is a subsidy for promoting rural revitalization and increasing migration to isolated islands (MLIT 2020). The Sado city official in charge of GIAHS, E, said:

E: When we apply for subsidies, we do not feel any advantage as a GIAHS designated site. I heard that we would have an advantage if we wrote about GIAHS in the subsidy application, but I do not feel any benefit in terms of application for subsidies.

3.3.3 “Familiarity” is the most important indicator

As identified in 3.2.4, as part of the activities related to GIAHS in Japanese agricultural policy as outlined in the current *Basic Plan for Food, Agriculture and Rural Areas* (MAFF 2020a, pp. 63), MAFF is “working towards a rise in the level of citizen familiarity of GIAHS, JNIAHS [...]”. H also emphasized that increasing the general public’s “familiarity” (認知度) about GIAHS is the main role of MAFF in the GIAHS program in Japan. H mentioned:

H: Because the familiarity of GIAHS in Japan is currently only 5%, we have to work to increase that. Conversely, the only assessable indicator of GIAHS is familiarity. When we requested budget for GIAHS programs, we proposed that our project would contribute to increasing the familiarity of GIAHS. However, even if familiarity of GIAHS increases, it is hard to say that it is directly connected to the actual effects of GIAHS.

Although there are many individual cases of designated areas promoting that “this rice is from a GIAHS” or “Please come for sightseeing to our area because we are a GIAHS” , the impact of those activities is limited by the general familiarity of the GIAHS program itself. Therefore, MAFF is focusing on increasing the familiarity of GIAHS in capital area (Tokyo). Our mission is to steadily work to increase the general familiarity of GIAHS as a certification system and create a system that local people want to use. I think, if we say something like “you should do this” to the local side

from the national level, they will feel offended and something will go wrong. So , I think the direction that local people will take should be decided by themselves. I am always conscious about differentiating what the national government should do and what the local level should do.

3.3.4 Future vision

GIAHS designation in Japan started in 2011 and 11 areas have since been designated. In accordance with social changes over this time period, maturation of the GIAHS program has been required according to H:

H: I heard that FAO's judgements about GIAHS designation are getting stricter. For example, if Sado were to apply for GIAHS now, FAO would not let them apply as a whole island because they are requiring a focus on only a specific agriculture system area.

Currently, we have 11 designated areas, but we will continue to accept new applications every two years. Personally, I wonder whether we can expect that more and more areas will become GIAHS designated from Japan, or whether we have already recognized all of the areas in Japan that deserve to be GIAHS. For example, in foreign countries, the scale of rice terraces is enormous compared to Japanese rice terraces, so I think we have to compete with them with something unique to Japan.

During the monitoring, I observed that many designated areas are struggling with changing from their situation when they were first designated. At that time, they had enough support in terms of budget and human resources, but in many cases the head of the local municipality has changed and the activeness of GIAHS has been gradually fading. So, how they are going to cope with that? I think this is the biggest challenge for all the designated areas, how they are coping with this situation with lacking

human resources. Noto was also like this, and the priority of their local policy is shifting to more and more new ones.

We have been doing designation and monitoring at the same time, but many of the applicant areas seem like they are thinking that designation is the ultimate goal and do not think about the difficulties after designation.

3.4 Document review about GIAHS in Sado city

For details on the background and history of Sado city, see section 2.2. The information in this section is derived primarily from key informant interviews, site observation, as well as relevant document review. Sado island as a whole was designated as GIAHS in June 2011 with the title of “Sado’s Satoyama in Harmony with the Japanese Crested Ibis” (UNU 2018). FAO evaluated its ecosystem complexity with satoyama and satoumi landscapes which foster the rich agricultural biodiversity and also the history of protection of Japanese crested ibis (FAO 2020d). Sado is recognized as one of the successful cases of utilizing traditional knowledge associated with satoyama and that knowledge is being combined with applications of modern technology and governmental policy to restore the local mosaic of ecosystems (FAO 2020d).

3.4.1 Aim and objective of Sado city

In the definition of the Ministry of Internal Affairs and Communications, local governments in Japan are seen as “the association that supports the lives of citizens in the area and creates and implements the plans for supporting citizens. They provide the services to support the life base of the citizens, such as education, welfare, public health, and industry reinforcement.” (MIC 2014)

The current highest policy plan in Sado city is called “Sado Future Vision” (佐渡将来ビジョン) (Sado city 2017), and the four big pillars of this plan are 1) financial planning, 2) administrative reform, 3) basic concept of government office maintenance, and 4) sustainable

circulation economic development. As parts of the sustainable circulation economic development, GIAHS was mentioned in seven sections: circulation economic development, GIAHS was mentioned in seven sections:

To promote tourism, we utilize the local resources such as the world-class “Three Assets” (3 資産): GIAHS, Sado Geopark, and Sado gold and silver mining, which is aiming to be registered under the UNESCO World Heritage framework for tourism resources and promote tourism development. In order to achieve this, we work on constructing the Sado DMO (Destination Management Organization) together with creating a strategy for target tourists based on data, and promote tourism with long stays and interaction in collaboration with primary industries and each community (pp.35).

世界農業遺産と世界遺産等の登録を目指す佐渡金銀山、佐渡ジオパークの世界的3資産をはじめとした、佐渡の地域資源を観光資源として活かした観光地域づくりを進める。このため、佐渡版DMOの構築を進める中で、各種データに基づくターゲット別の戦略を構築し、1次産業や地域などと連携した滞在交流型観光を推進する。

In the agriculture, forestry and fishery sector, we have been evaluated from inside and outside of the country because of activities such as the “Toki to Kurasu Sato” rice certification and our recognition as GIAHS, however, we have been facing low productivity and declining farmer populations, and moreover, most of our products are small scale and high variety. Therefore, only a conventional circulation market based on large scale production and large quantity logistics will not allow us to cope with this situation in Sado. Utilizing Sado’s strong points such as its rich nature, environment, and natural energy, the “Sado Rice Future Project Quality Improvement

90” that improves the quality of rice with proper cultivation methods that match each region’s conditions, we heighten the branding power of the entire island and promote value-added products. We promote a marketing strategy coexisting with nature and biodiversity by using those strategies listed above as a weapon (pp.37).

農林水産業の振興 農林水産業は、朱鷺と暮らす郷づくり認証米や世界農業遺産認定などにより国内外で評価を得ているものの、生産性が低く担い手が減少していることや、小規模多品目生産が主体であることから、大規模生産、大量物流を基本とした従来の市場流通だけでは対応は困難である。佐渡の強みである豊かな自然と環境など自然エネルギーの利用を進めながら、佐渡米未来プロジェクト品質向上90の取組で、その地域条件にあった適切な栽培管理の実践により高品質化を図り、島内全域でブランド力を高め、高付加価値化を進めるとともにブランド力を武器とした生産と販売を両輪に自然共生型生物多様性販売戦略を進める。

Due to the recognition of GIAHS, our brand as a town working in coexistence with nature and biodiversity has been evaluated inside and outside of Japan. In addition to that, we also focus on an environment-friendly agriculture model utilizing natural energy. We will promote stable management by utilizing these methods to secure a sales network which allows us to sell value-added products (pp.37).

また、世界農業遺産の認定により、国内外から評価された自然共生と生物多様性のブランドに加え、自然エネルギーを利用した環境型農業モデルを販売戦略の中心とし、高付加価値販売が可能な販売網を確保し、経営安定を進める。

The strategy of marketing and industrial promotion based on coexistence with nature is necessary to consider the both production side and the sales side as an engine. It is important to strengthen the sales power in combination with strengthening production power using methods such as mixed farming, enlarging agricultural corporations, sixth industrialization, and business entry into the agriculture sector. To do so, in addition, the traditional crested ibis, GIAHS, and rice terraces branding, we will promote the expansion of sales channels through targeted sales strategies and local production for local consumption by taking advantage of the high quality of local products despite their origin small-scale farming by making the most of natural energy, branding utilizing nature and the environment and the "Sado Rice Future Project Quality Improvement 90" (pp.38).

自然共生を基本とした販売戦略/産業振興は、生産面と販売面を両輪として捉えていくことが必要であるため、園芸作物の強化による複合経営や法人の大規模化及び6次産業化、農商工連携による企業参入など、担い手の確保等の生産力強化とあわせ、出口の販売力強化が重要である。そのためには、これまでのトキや世界農業遺産認定、棚田ブランド等に加え、自然エネルギーを最大限に活かしながら、自然・環境を活用したブランディングと佐渡米未来プロジェクト品質向上90などの取組による小規模ながら高品質である特徴を活かし、ターゲットを絞った販売戦略や地産地消による販路拡大を推進する。

Promotion of Sado biodiversity strategy: The biodiversity that human beings are alive in the blessings brought about by the connection of various living things is attracting attention in the world. Sado City aims to improve the image of a recycling-oriented society as "Eco-Island Sado" through the development of satoyama and

Satomi, and the efforts toward the environment for the return of the crested ibis to the wild, such as the "Zero Shopping Bag Campaign". Therefore, in order to connect various efforts to create an environment in which creatures such as Japanese crested ibis coexist, to improve the sales brand power, we have established an international value that has been proved by GIAHS and academic cooperation in collaboration with universities. We will promote the creation of a system that will lead to the sale of agricultural, forestry and marine products in Sado, using proof as an added value(pp.39).

生物多様性佐渡戦略の推進：多様な生きもののつながりがもたらす恵みの中で、人間は生きているという生物多様性が世界でも注目されており、本市は、里山、里海の整備やレジ袋ゼロ運動等、トキの野生復帰に向けた環境への取組が、「エコアイランド佐渡」として、循環型社会のイメージ向上につながっている。そこで、トキをはじめとする生きものが共生する環境づくりに向けた様々な取組を販売ブランド力の向上につなげるため、世界農業遺産認定により証明された国際的な価値や大学等と連携した学術的な証明を付加価値として、佐渡の農林水産物等の販売につながる仕組みづくりを進める。

An important part of the sales strategy is to firmly sell outside the island for “foreign currency acquisition”. Therefore, in addition to formulating a targeted sales strategy through careful marketing by utilizing a regional economic analysis system, branding that takes advantage of Sado's rich nature and environment, such as past Japanese crested ibis protection activities and GIAHS certification, rice terraces, etc. Produce consistently from branding to production, processing, and sales by constructing an

environmentally-friendly agricultural model that makes the most of natural energy, and promote research to develop a regional trading company that utilizes the vitality of the people who sell in and out of the region(pp.39).

外貨獲得のための島外販売と島内循環の強化：販売戦略にとって重要なことは、「外貨獲得」のための島外への販売をしっかりと行うことである。そのため、地域経済分析システムの活用による綿密なマーケティングによるターゲットを絞った販売戦略の策定、これまでのトキや世界農業遺産認定、棚田等、佐渡の豊かな自然・環境を活用したブランド化に加え、自然エネルギーを最大限に活用した環境型農業モデルの構築によるブランディングと生産・加工・販売までを一貫してプロデュースし、地域内外に販売する民の活力を活かした地域商社の育成への研究を進める。

Creating the marketing mechanism for outside of island aiming the acquisition of external currencies: With the GIAHS certification, we will utilize the brands of natural symbiosis and biodiversity that have been evaluated domestically and internationally, increase the added value of products by processing Sado products on the island, and use the regional economic analysis system to target ourselves through careful marketing. Sales strategy to strengthen foreign sales for foreign currency acquisition(pp.40).

外貨獲得のための島外販売の仕組みづくり：世界農業遺産の認定により、国内外から評価された自然共生と生物多様性のブランドの活用及び佐渡産品の島内加工による商品の高付加価値化と地域経済分析システムの活用による綿密なマーケティングによるターゲットを絞った販売戦略により、外貨獲得のための島外販売を強化する。

In this future vision, GIAHS was mentioned in the context of economic revitalization and, Sado city expects to the function of GIAHS as a worldwide recognized branding tool for marketing of local products and also the tourism destination in conjunction with other environmental activities.

3.4.2 Process of application to GIAHS in Sado

As shown in section 2.2, Sado has been well known as the preservation activities for Japanese crested ibis and on top of that, the activity of “Toki to Kurasu Sato” rice certification made their name well known as “coexisting with Toki”. According to the Sado city (Sado city 2011), the application movement started from September 2010, UNU inform to Sado city that Sado has the ability to become a candidate of GIAHS application and they explained to MAFF Hokuriku branch and Sado city. UNU, MAFF, and Sado city worked on to write the application together and in December 2010, they submit the application to FAO. Sado city spends January to May in 2011 to promote the GIAHS. The mayor of Sado city at that time made a presentation for the evaluation in Beijing, finally, Sado was recognized as GIAHS in June 2010(Sado city 2019a).

According to the interview with A who was the former director of the agriculture department in Sado city. A was in charge of the GIAHS application and he reflected the process of application such as :

A: Just before the COP10 in 2010. Dr.Takeuchi from UNU came to Sado and observe the activities in “Toki to Kurasu Sato” rice certification and evaluated us as this is the first “Biodiversity rice certification” in Japan. (Unlike to other towns which are doing similar certification program) we are focusing on not only Japanese crested ibis but also the living creatures support the habitat.

We agreed that we will try to get the first designated area of GIAHS in developed countries and also in Japan. So, we worked together with the MAFF Hokuriku branch. Since it was the first initiative in Japan, it was the project as the whole country.

自分たちはトキだけじゃなくて、それを支える生き物にも焦点を当てた。そこで、先進国初、日本初の認定地域なろうということで、北陸農政局と一緒に世界農業遺産の取得に向けて、ぜひやりましょう！ということで動いた。

当時は（日本初のとりくみだったので）日本をあげてのプロジェクトだった。

When we were applying to GIAHS, the center of the project members were UNU, the University of Tokyo, and the National government (MAFF). Niigata Prefectural government was not interested in this project at all and also, when we were applying to GIAHS, the program system itself was not established well yet.国連、東大、国（農水省 北陸農政局）が中心となってやった。県は全く興味を持たなかった。それに、佐渡採択当時はジアスのシステム自体もしっかりしていなかった。

Takeuchi (2016) describes the situation when UNU recommended Sado city for the GIAHS application from the UNU side. UNU started considering to recognize GIAHS in Japan in 2010 since they had been supporting the Asian countries which aiming GIAHS through academic support from the research about agrobiodiversity (Takeuchi 2016). Moreover, COP10 was held in Nagoya in 2010, agreement for the promotion of "Satoyama Initiative" was made (MOE 2010) which is "aiming both preservation and biodiversity and human well-being, with consideration of local characteristics, achieving the "nature coexisting society" which possess the human and natures' sustainable relationship achieved by international commitment"(UNU 2020). This initiative was advocated by MOE and UNU (MOE 2010).

This “Satoyama initiative” shares the idea of GIAHS that reconstructing the relationship between humans and nature by merging the traditional knowledge and new technology and social system (Takeuchi 2016) and it includes that the consideration for declining the human and nature relationship through the traditional agriculture in Japanese Satoyama • Satoumi. (Takeuchi 2016).

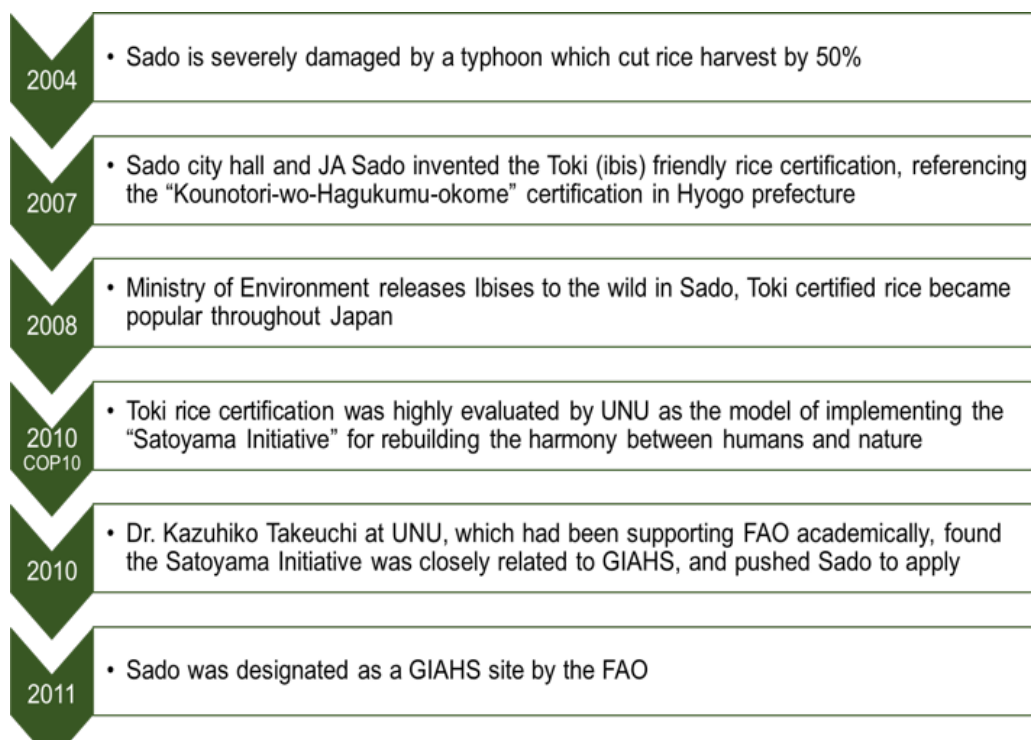


Figure 4 Chronology of GIAHS designation in Sado

(Source: Takeuchi 2016, Interview with A & E)

In summary, the situation that Sado was put in when they apply for the GIAHS were(Sado city 2029a); 1) Sado was recognized as a successful case of preservation of biodiversity and coexisting with human and nature through their activities for recovery of habitation of endangered species, Japanese crested ibis and agrobiodiversity friendly rice certification. 2) UNU and Ministry of Environment urged to advocate the “Satoyama initiative” international level at that time which was made in Japan and GIAHS is deeply connected in concept level.

Thus, it can be a case that they thought that recognition of GIAHS in Japan will boost the attention from outside and inside of Japan. 3) The recommendation of GIAHS applicant for Sado from UNU was in September 2010 and the recognition was June 2011, means the application process was rushed and most of the process was done by UNU, MAFF and Sado city hall and involvement of citizens and farmers were started after they submitted the application to FAO. This explains that the application process was done by external pressure and internal consensus and motivation was not built up when they apply to GIAHS. The chronology of Sado's GIAHS application is illustrated in Figure 4.

3.4.3 GIAHS management in Sado city

The daily based activities around GIAHS has been done by Satoyama unit in agriculture policy sector(農業政策課 里山振興係) in Sado city hall which has currently two officials working for “Toki to Kurasu Sato” rice certification and activities for rice terrace farmers community as well. (Interview with E).

Important decision making of GIAHS such as authorization the action plans and documents for monitoring are done by “Sado city GIAHS promotion meeting” (佐渡市世界農業遺産推進会議) (*Table 4*) consist of the members including public sector and private sector including farmers and NPOs. This meeting was established in 2016 following the advice from the Council of Experts in the first monitoring in 2016 (Sado city 2016)

Table 4 The members of Sado city GIAHS promotion meeting

Association/duties

Sado city mayor
Sado GIAHS advisor
Chairman of Sado rice terrace council
Managing director of Sado Agricultural Co-operatives (Sado JA)
Manager of rice and grain sales section in Sado JA
Manager of farming section in farming Hamochi JA
Chairman of Land improvement association
Managing director of Sado Tourism Association
Managing director of Ikimono-gatari-Laboratory
NPO
Niigata University Associate professor
Ministry of Environment Sado Nature protection office
Niigata prefectural government Sado area promotion office vice-manager of Agriculture, forestry and aquaculture department
Chairman of Agriculture association in Sado city, Agriculture policy department
Secretariat
Sado city Agriculture section

(Source: Sado city 2019b)

3.4.4 “*Toki to Kurasu Sato*” rice certification

As it was mentioned in 2.2.2, Sado has a long history of protecting the Japanese crested ibis since Meiji era (Sado city 2011) With the background of the history of Japanese crested ibis protection and agriculture crisis from typhoon disaster in 2004, Sado city collaborated with JA Sado and launched “*Toki to Kurasu Sato*” (villages coexisting with the crested ibis) rice certification initiative (UNU 2020) in 2010. The experience of a typhoon disaster that Sado faced in 2004, and the subsequent continuous difficulties of Sado-produced rice on the market (Mizuno 2013). In 2004, the severe damage to rice cultivation from the typhoon resulted in an almost very low harvest from paddy fields in Sado that year (JA Sado 2020). The rice-crop index was 51% and the percentage of the best quality rice was only 17% (Sado city 2019c).

The severe lack of stock of Sado rice in 2004 affected wholesaler and retailer’s decisions to choose Sado products for their shelves in subsequent years, and so the impact continued in 2005 to 2007, in which Sado rice struggled to be sold on the market (from the interview with G, a former JA Sado director).

This certification aims to certify rice production that has met six set conditions that help to secure feeding grounds for the Japanese crested ibis, which prefer to eat small living creatures such as the fish, loaches, and worms that live in and around the rice paddy fields (UNU 2020). Based on traditional knowledge about the Japanese crested ibis, this certification adopted several traditional strategies to restore the agroecological environment for the Japanese crested ibis(UNU 2020).

A) Requirements of certification

The six requirements to obtain the “*Toki to Kurasu Sato*” certification for rice are as follows (Sado city 2018) (UNU 2020) ;

- 1) The rice is grown in Sado city

- 2) Apply more than one of the “*Ikimono wo Hagukumu Nouhou*” (farming methods for nurturing living creatures) ;
 - Create swales (or “*e*” in Japanese) of 20-30 cm to be dug around the paddy fields to provide safe havens for aquatic organisms when the fields are drained for a week in the summer to improve rice quality (a traditional rice farming technique known as “*nakaboshi*”), and to serve as feeding grounds for the Japanese crested ibis
 - Create fish ways that connect paddy fields with drainage ditches to facilitate migration of fish and other aquatic organisms
 - Create biotopes of water ponds around the paddy fields to provide habitats for aquatic organisms all year round
 - Irrigate paddy fields in winter to create habitats for aquatic creatures to survive and secure feeding grounds for the Japanese crested ibis through winter
 - Farming with no pesticides and no chemical fertilizers [added in 2017]
- 3) Reduce chemical pesticides and fertilizer use (by at least 50% compared to the standard practice for the region)⁴
- 4) Conduct surveys of living creatures in the paddy fields twice a year (in June and August)
- 5) Chemical weeding on the ridges of paddy fields is not allowed
- 6) Obtain the “eco-farming certification” certified by Niigata prefecture

According to the interview with E (Sado city official), requirement number 6) is now under discussion among farmers to be deleted from the requirement list due to social change and the growth of the “*Toki to Kurasu Sato*” certification itself over time. E explains;

⁴ This is a direct translation of “”. From information gathered through key informant interviews, this “standard practice” likely refers to the amount of chemical fertilizer and pesticides recommended by the local Sado JA.

E: When Sado city made “ Toki to Kurasu Sato” rice certification , it was from nowhere so that, as a brand, there was no trust by wholesale people and consumers. That’s why at the beginning we borrowed the trust to the “eco-farming certification” to guarantee the reliability of farmers who are certified in “Toki to Kurasu Sato” rice certification. However, right now the quality of the “Toki to Kurasu Sato” rice certification exceeded the standard of “eco-farming certification”. In addition to that, “ eco-farming certification requires update every five years and the applicant have to add something higher level of activity at the update. For the elderly farmers maintaining the status quo is already too much work. Because of this requirement many farmers quit “Toki to Kurasu Sato” rice farming so we thought it is such a wasteful if we lost many passionate farmers just because of this “eco-farming certification”. We decided that the “eco-farming certification” will be removed from next year’s harvest.

The number of the certified farmers are gradually decreasing after 2012 with the entire number of the farmers (*Figure 5*).

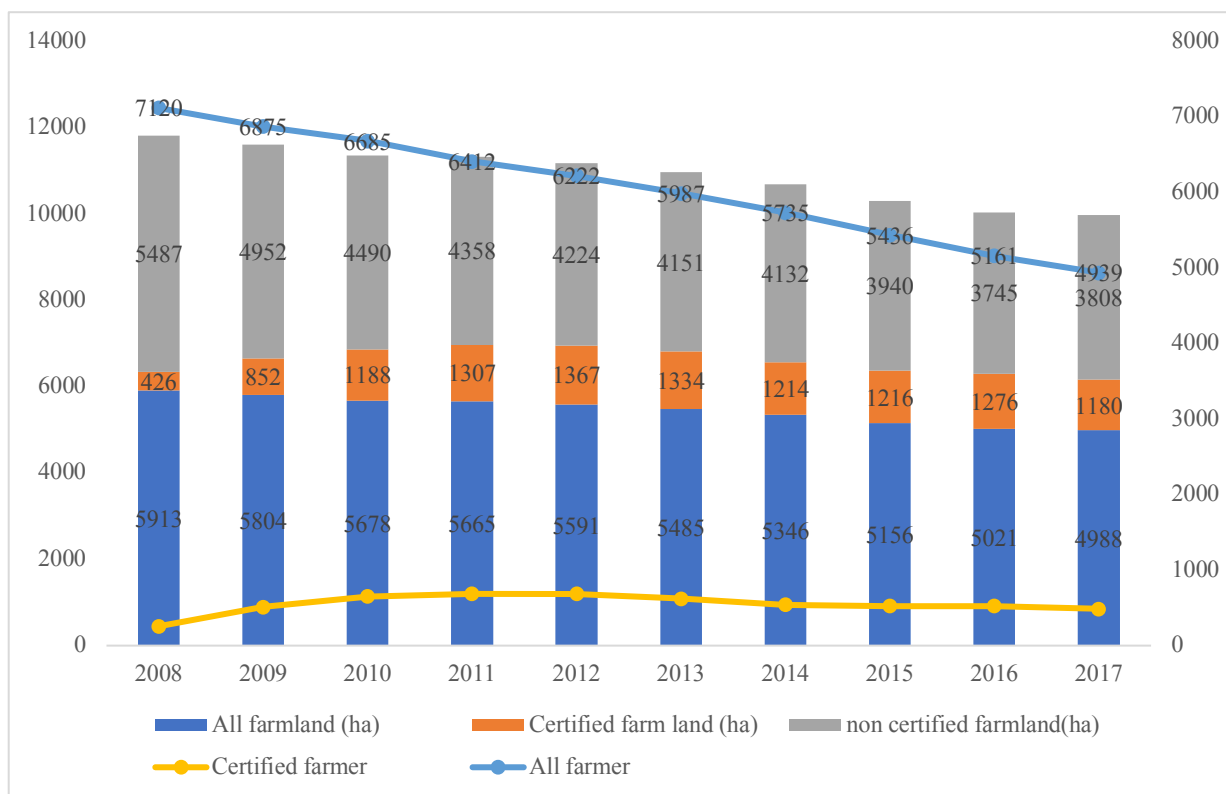


Figure 5 Certified farmers & areas of farmland of Toki to Kurasu Sato rice certification

(Source: Sado city 2019c)

B) Financial support for farmers

In order to encourage the farmers to participate the “Toki to Kurasu Sato” rice certification, Sado city provide subsidy for the farmers with following price on the Table 5 (Sado city 2019c).

Table 5 Subsidy for certified farmers

	FARMING METHOD	JPY /10 a
1	Irrigate paddy fiels in winter	500
2	Create swales (or “e” in Japanese)	3,500
3	Create fish ways	4000/ per facility
4	apply more than two method	2000

(Source: Sado city 2019c)

C) Living creatures survey in paddy field

One of the most important requirements of the certification is mandatory “Survey of living creatures(Ikimono chōsa)” in the paddy field two times in one year in June and August. Not only farmers but also the citizens and kids participate in this survey. (Sado city 2018). Farmers can choose the level of the server from “Basic” (基本編)or “Challenging” (チャレンジ編) . The “ Basic” survey will record only basic species and “Challenging” ones requires to count the number of creatures.

General incorporated association “Ikimono Gatari Kenkyūjo” established in 2011 aiming to provide the education program about biodiversity to the farmers and kids in Sado. One of the main activities of “Ikimono Gatari Kenkyūjo ” is giving the guidance for farmers who are certified or trying to certified since “survey of living creatures”, farmers have to know the identify the creatures in the paddy field and count them but these require the knowledge and skills. The number of the participants of the lecture had decreased over time and in 2016 they stopped the lecture due to the lack of participants (Figure 6)

At the interview with F who is the director of “Ikimono Gatari Kenkyūjo ” mentioned about the impression she got when she was a lecturer ;

F: When the “Toki to Kurasu Sato” rice certification started, farmers joined the lecture because they were excited to start something new and they were feeling the sense of

mission that they have to do it. Participants were a mixture of the people who were really interested in agrobiodiversity or people who just wanted to get the subsidy from the city hall. The half constantly joined the seminar since they wanted to remember everything and wanted to know more details about the living creatures. The latter half seemed feeling the sense of duty that they have to join at the beginning but later they did not come back.

トキ米が始まった当時の参加者は、新しいこと、全然知らないことをやり始めるワクワク感と、あとは絶対やらなきゃいけないという使命感という、やらなきゃいけないというので、結構人は集まっていた。興味を持ってやっている人と、やると補助金をもらえるからっていう人で分けられていて、興味をもつ人はやっぱり連続で来てくれたりしていた。連続で参加してくれたり。覚えきれないとか、もっと詳しいことが知りたいとか。

F: This lecture is not mandatory for joining the certification program. In the “Toki to Kurasu Sato” rice certification, “Survey of living creatures(Ikimono chōsa)” has to be conducted twice in a year so that, farmers have to know what kind of insects are on the list of the survey. In 2017, we stopped the lecture for the certified farmers but we are asked sometimes by JA to hold a lecture.

義務感でやっている方は最初でなきゃいけないのかなという形で最初来て、その後来なくなった。トキ米をやるから必須でこの講習を受けなきゃいけないというわけではない。認証米は生き物調査を必ず2回やらないといけないので、それは必ず記録しなければいけない。ただ、それを書いてある虫たちが一体なんのかわからないから、そこはやっぱり勉強しに来てくれている。

2017 年ごろに認定農家向けの講習は開催をやめたが、たまに JA から依頼があつて、講習をしたりすることもある。

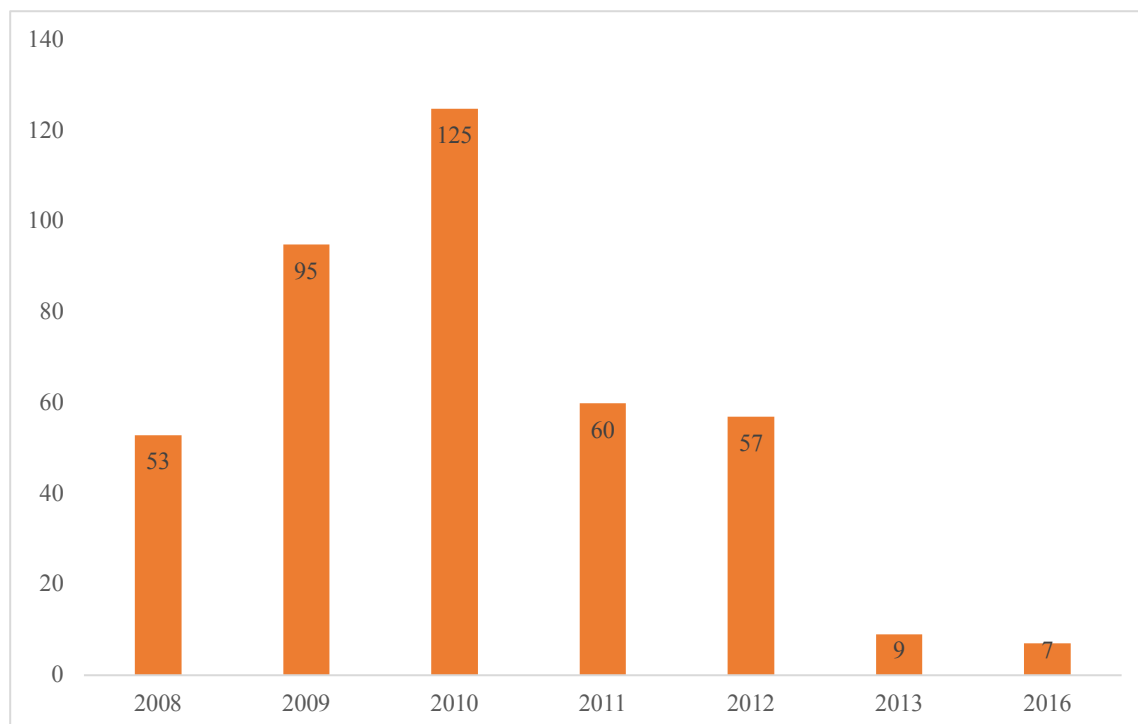


Figure 6 The number of participants of the lecture for certified farmers

(Source: Data provided by interview with F)

D) Support from private company

“Toki to Kurasu Sato” rice certification has gain support from private company.

CO-OP is one of the important customers for “Toki to Kurasu Sato” rice certification. The relationship with CO-OP started in 1994 when CO-OP Tokyo started to retail the rice from Sado.(Sado city 2020a).Currently yearly sales volume of Sado rice retailed by CO-OP group is 3,280 t which is 23% of the total production of rice in Sado..(Sado city 2020a). In April 2010, Sado city, CO-OP Niigata and CO-OP made a contract for “ Protection activities for Japanese crested ibis” (Sado city 2020c). After this contract the membership of CO-OP have often visited from Kanto Shinetsu region came to visit Sado and experience the rice farming and living

creature survey. (CO-OP). From 2010, CO-OP has constantly donated a proportion of the proceeds of rice products from Sado. (CO-OP deli 2020) (Figure 7)

In keeping with the successful result from the effort for Japanese crested ibis returning to wild, they renew the contract included additional member JA Sado and another association from COOP. (Sado city 2020c)

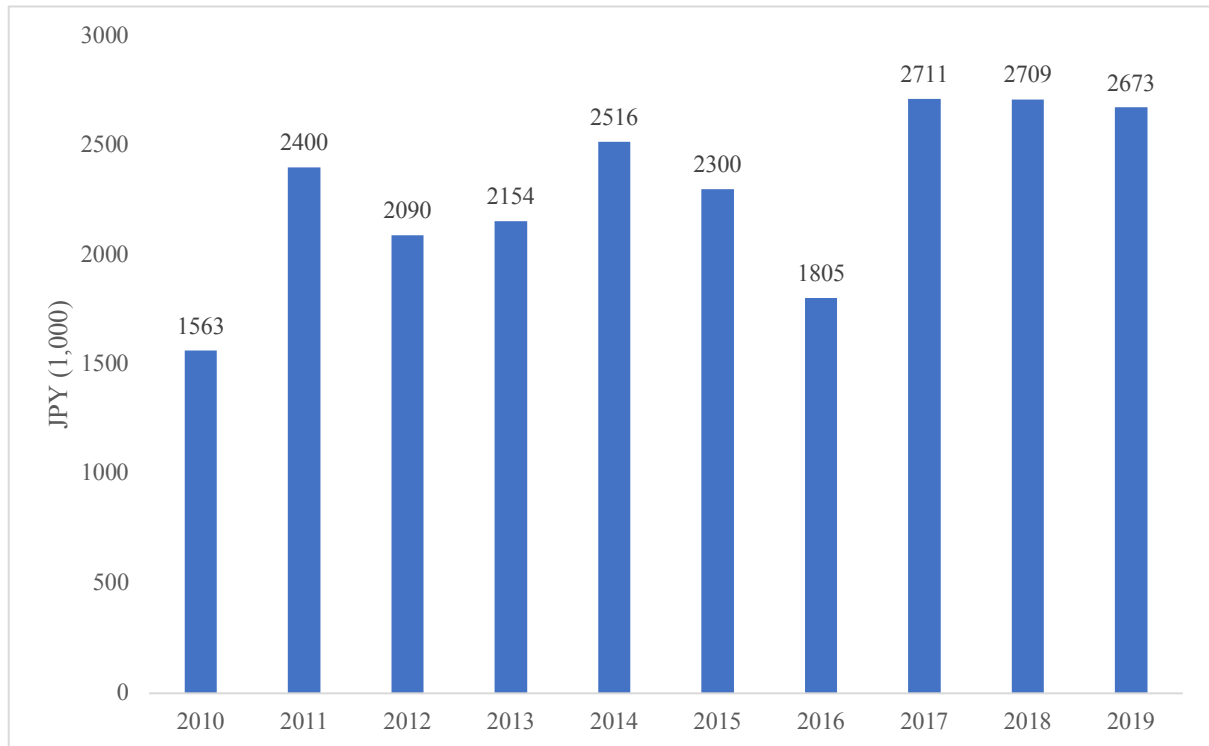


Figure 7 Donation from CO-OP to Sado city

(Source: Sado city 2020a)

E) Perception and motivation of farmers about “Toki to Kurasu Sato rice certification”

As identified in 3.4.2, the “Toki to Kurasu Sato” rice certification is one of the core activities for GIAHS in Sado. I conducted interviews with farmers in different positions or areas and asked about the perception of “Toki to Kurasu Sato” rice certification in order to capture the perception about the certification as an extension of GIAHS implementation on the ground level.

B is the farmer in the hilly and mountainous area. B is ahead of the rice terrace association in Sado city and also conducted many different kinds of events by using the network and resources for revitalizing the community in hilly and mountain areas. He mentioned “Toki to Kurasu Sato” rice certification from the perspective of a farmer in a hilly and mountainous area. For the farmers in the rice terrace area, it is hard for adopting the requirements (explained in 3.4.4) due to the land limitation in the rice terrace field.

B: “Toki to Kurasu Sato” rice certification is designed for the flat land paddy field because one of the requirements is to create the “E” around the paddy field but it makes the areas for harvesting smaller so it is not suitable for the rice terrace paddy fields. At the beginning we were talking about let’s create some kind of certification for rice terrace grown rice by utilizing GIAHS but did not happen anything.

トキ米はそもそも平場用に作ったもの。「江」を田んぼの周りに作らなきゃいけないから、面積が小さくなってしまう。棚田の田んぼにとっては無理がある。最初の頃は、棚田米にも何かGIAHSを使って何か認定みたいなものを作ろうと言ってたけど、結局何もない。

C is a full-time farmer for over 20 years and after he retired from JA Sado. He was assigned as a core member of implementing the “Toki to Kurasu Sato” rice certification as a technical assist as a farmer when Sado city and JA were creating the certification system. He mentions about the farmer’s concern about certified rice and reflects the motivation that farmers had at the beginning of the certification initiative from the perspective of the farmer in flat land and main area of Japanese crested ibis habitat;

C: Currently, certified rice’s price is 500 yen expensive per kg compares to normal Sado rice but he wishes it has around 1,500 yen difference. In the certified rice,

farmers have to make “e” around the paddy field so that, the farm areas narrowed. I can understand that farmers prioritize normal rice due to the low price and productivity.

認証米は今500円高くらいで売っている。本当は1500円差くらいになればいいと思う。トキ米は「江」を作らなければいけないから、農地の面積が狭くなってしまふ。値段は上がらない、収量も上がらないということであれば、農家としては普通の米の方がいいという判断をするのはわかる。

When the rice certification started, every time Toki fries in the sky, farmers' motivation was changed. I felt like everyone's vector was pointing in the same direction.” Everyone has a burning passion that we are doing something great and we were united as one with Toki.

トキ米が始まった当時は、トキが飛ぶだけで、農家の人の気持ちが変わっていった。みんなのベクトルが一緒になっていく感覚があった。佐渡は素晴らしいことをしている！という熱い気持ちがあって、トキによってみんなが一つにまとまっていった。

G was a former official of JA Sado and currently, he is leading some agricultural associations and environment protection group in Sado. When “Toki to Kurasu Sato” rice certification was starting, he was in charge of the group. He describes the process of how farmers were convinced to start the certification.

G: Because of the typhoon disaster in August 2004, Sado rice lost the place to sell. JA also recognized this issue as a crisis and thought that we need to do push Sado's identity more among Niigata rice. Then, we started the environment-friendly rice agriculture. In the beginning, we set the criteria that reducing pesticide to 30% off

from the normally farmers' use because most of the farmers were actually reducing them at the level at that time and we thought if that is the criteria everyone can try.

平成 16 年の 8 月の台風の影響で佐渡米の居場所がなくなった。農協の方でもこりゃいかんということで、佐渡らしい佐渡アイデンティティを出さないと、新潟コシヒカリの中にいるだけだとだめだなあということで、環境に優しい米作りを始めた。3 割減というのは、実態がそういうことになっていて、みんなができるからよしそれでやろうということになった。

G: It was not guaranteed that we can sell the rice in a better price because we apply the rice certification but, it is better than the situation we were facing that we had to sell them at very cheap price even before they would be leftover. So, we said let's do this because it is going to be a benefit and better than doing nothing. Even though there are many arguments about the certification at the beginning but Sado farmers were facing the crisis so eventually farmers were convinced and become cooperative.

それをやったからといって、米が高く売れるわけじゃないけれど、売れ残る前に安くせざるを得ない状況からすれば、絶対プラスになるんだからやろうよという話になった。いろんな議論があったが、佐渡米が売れないというそういう危機的な状況があって、農家はしょうがないかということで、農家は協力をしてくれた。

G: At the beginning, some members from Sado city hall and JA went to Toyooka, Aichi to observe some activities of “Kōnotori wo hagukumu sato” rice certification which was started two to three years earlier than us. That inspired us to start “Toki to Kurasu Sato” rice certification.

当時、佐渡市と JA から何人かが、愛知の豊岡に「コウノトリを育むお米」というちょうど2、3年くらい我々の先を走っていた活動の視察に言った。そこから、まあとにかく佐渡もやろうということになった。

G: As JA side, we were worried about how to sell the certified rice. We did not know even though it is a certified rice, how expensive we can price them? If we want to sell them at a high price will limit sales and cannot sell amount. We felt uneasy but we decided to do it.

農協はちょっと販売面がどうなるのかということで色々と懸念があった。認証米だからと言って、どれだけ高く売れるのか。高く売ろうとすると販路が限られる。そうなるとう量がはけないということで、悩ましいけどまあ、やるしかないよねという感じだった。

G: Municipality side can simply say let's do this! but JA side we cannot sell only specific products since we have a responsibility for all. In Sado, almost all the farmers were membership of JA. On top of fulfilling the responsibility of selling Sado rice as a whole, it was difficult to think about how to make the position of certified rice and prioritize in marketing.

行政はそれいけドンドンでやれるんだけど、特に農協は特定のものだけを高く売って逃げればいいのかということにはいかない。やはり全体に対する責任がある。ほとんどみんな組合員で、組合員のための組織ではあるんだけど。ある程度佐渡米全体に対してきちんと売る責任がある上で、認証米をどう立ち上げてどう販売上位置付けていくかというのは、非常に難しかった。

G: Basically, Niigata Koshihikari rice is in the expensive category and rice from Sado is even 100 or 200 yen more expensive. It was quite difficult to put the higher price on top of the price already relatively high.

元々が新潟コシヒカリで高いところにおいて、佐渡はそれよりまた 100 円 200 円高いということで、末端で我々の方が安いということはないと思う。

高い上にまたさらに高くというのはなかなか難しかった。

G: When we started the certification initiative anyway, a certain number of farmers participated up to 400 to 500 but currently the number has been decreased. It was lucky that we could collaborate with the municipality. Moreover, since the requirements for certification were different from organic farming rice which had been done by only specific people. It was easy to start for farmers and the initiative itself become widespread.

認証米制度というものがともかくもできて、それなりに農家が参加をしてくれた。今は 400 から 500 件程度になって今停滞して来た。

行政とコラボでやれたのは非常にプラスだったし、農家にとってもあまり無理のない、ハードルが高くない、特定の人がやる有機栽培米みたいなこととはちょっとちがう、もっと裾野の広い取り組みになったということはよかったと思う。

G: From the beginning, gathering farmers who start certification farming was not so hard. We assumed that farmers had the mentality that, “if JA and municipality get together and say do this, then why not?”. I do not think farmers would not have felt

comfortable joining this project if it was only JA or either municipality. There was an opinion that "It is too challenging" "How are you going to do if the harvest will be reduced because of reducing of fertilizer and pesticide to 50 %" but overall, most of the farmers were okay with it.

農協と行政が一緒になってやろうよというんだから、まあやろうかというようなメンタリティはもともとあるだろうというのは、僕たちは思っていた。農協だけでもダメ出し、行政だけでもだめだし、それがいっしょにやっているから農家も安心してついてこられた。冒険だという意見もあったんだけど、5割減というと収量が減ったらどうするんだ！というような意見を言う人もいたんだけど、でも全体的にいうと、まあいいかというような感じだった。

G: 50 % reduction of chemical fertilizer was relatively strict; however, this number is based on the standard amount set by technical center so most of the farmers seemed reduced to a suitable amount. Most of them had used chemical fertilizer so they had to change them but in terms of pesticide, they thought they could handle it because, although in the past spreading them pesticide was done individually, recently it had been done with farmers group.

Some professional farmers who had confidence in the knowledge of adjusting the fertilizer precisely seemed confused at the beginning but they were also positive toward trying it. Eventually, this certification became for all the farmers who are growing rice not only specific farmers.

50%減農薬は比較的厳しかった。これもちょっといわゆる慣行の部分が、技術センターが技術的にこれだけはやるべきだみたいなことを標準として決め

ていたけれど、農家は適当に抜いていたみたいな感じもあるにはあった。肥料はみんな化学肥料でやっていたから、そこは変えなきゃいけなかったけど、防除はちょっと減らすくらいだからまあ我慢すればいいかというのはあったし、そもそも昔は防除はそれぞれでやって来たけれど、だんだん共同防除になってきて、そうすればそれ以上に何回もじぶんでやるというのはなかなか大変になるからまあいいかというふうなところだったと思う。

肥料の関係が化学肥料でずっとなれて調節しながらやるというのになれているものだから、技術に自信のある人からしてみると、これはやりにくいというのはあるけれど、いわゆるそういうプロ農家のみなさんも、そんならやってやろうかというような感じもあって、特定の人ではなくて、米作りをやっているみんなの取り組みにはなった。

3.4.5 Activities around GIAHS in Sado

Many activities directly related to GIAHS especially for education are implemented in Sado city. Due to the cancelation of fieldwork, this research is not able to cover all the activities that have been done in Sado city but this section will introduce some major examples.

A) Sado Kids Ikimono Chōsa Tai (Sado kids living creature survey team)

This education program for kids in Sado held by Ikimono Gatari Kenkyūjo since 2012. They call for participants third grade to sixth grade of the elementary school in April from all around Sado. This program is from April to next March. Kids learn rice farming and through the process, they study about living creatures. As a part of the program, they hold an exchange program with other GIAHS areas such as Noto and Ōsaki. Since especially the connection with Noto is strong because Sado and Noto designated together, almost every year Sado sends

kids to Noto and kids in Noto visit Sado. The travel fee for the kids is subsidized by the Sado city government for Sado kids and the Ishikawa prefecture government supports Noto kids. (Interview with F). F explained the contents of the exchange program as:

F: We do not teach about GIAHS officially but when kids from Noto visit Sado, we create the program mainly about Japanese crested ibis so we include the topics about GIAHS, because Sado was designated as GIAHS because of the “Toki to Kurasu Sato” rice certification but it is just one part of the GIAHS. I believe that Sado has not just the rice certification but also the more and greater “element of GIAHS”. I do not tell the kids “what is GIAHS” on purpose because I do not just brand it. I also think everything is GIAHS. So, at the exchange program with Noto kids, first of all, we make them learn about Japanese crested ibis and history, then we go to see Japanese crested ibis on the field that people are living normally around Japanese crested ibis. In addition, we make kids experience “Ondaiko” (鬼太鼓) and teach them this is for celebrating agriculture and make them understand this kind of traditional performance is very close to our life. People know about “Ondaiko” as an “Ondaiko” and agriculture as agriculture but it is hard to see the thing connect them so I wish I can supplement it. I think everything is GIAHS. This is just daily life for islanders but daily life is amazing. It is hard to let people understand that.

(プログラム内では)あまりかしこまってはGIAHSについて言っていない。ただ、能の登子たちが佐渡に来るときは、結構トキをメインにしたプログラムを作っていて、その中でちょっとずつ織り交ぜるようにしている。というのはやはり、佐渡が登録されたのはトキとの共生する農業というのが登録内容なんだけど、それって登録された本当に一切れの一面でしかなくて、でも佐渡ってもっと「ジアス的な要素」をものすごくたくさん持っているから、

これがジラスというふうに決め付けたくないの、あえて言わないようにしている。全てがジラスじゃないのかな？と思うし。なので能登との交流会を佐渡でやっている時には、トキをまず勉強する、歴史を勉強する、そのあと、実際の野外に放たれているトキを見に行つて、でもその周りに普通に人が生活して作業しているというのを見てもらう。あとは、鬼太鼓を体験してもらう。それは農業があつて、それを祝うものとして身近にあるものなんだよということを知ってもらう。鬼太鼓は鬼太鼓として知つていて、農業は農業として知つていても、それをつなぐものつていうのはなかなか見えていなかったりしているのでそれを補えたらいいなと。なんでもジラスですよ。島の人のとつたら日常なんだけど、その日常がすごいですよということ。そういうことがなかなか難しい。

B) Sado Meguri Juku (Sado exploring cram school)

Sado Sado Meguri Juku is one day event that started in 2015 is GIAHS advocating event for Sado citizen which is also arranged by Ikimono Gatari Kenkyūjo and it is supported by members of CRCS. The objective of this event is to experience programs for citizens in Sado to learn about nature and GIAHS which are ingrained in lifestyle in Sado island (Sado CRCS blog 2019). According to the interview with F who is in charge of organizing this event since they started This event is held once or twice every year and the budget is subsidized by Sado city hall Satoyama promotion unit besides 1,000 yen from participants for lunch. This event caters to both adults and children and participants required to join with a pair of adults and kids (Sado CRCS blog 2019). The theme of the event is diversified such as agriculture, fishery, traditional performance, and traditional handcrafts the organizers design the event with local community members (Sado CRCS blog 2019). F explained the motivation for starting this event that;

F: I and one of CRCS came up with this idea and ask for some help from other members of CRCS from each community. Ikimono Gatari Kenkyūjo and CRCS created this program. Maybe people from GIAHS authority organization will be upset like “What are you doing ?” when they see our activities (laugh), but we thought if we keep doing activities only about Japanese crested ibis under the GIAHS, some people might feel antipathy towards GIAHS and there is no meaning to do GIAHS. There is no meaning Sado became one city. So, we wanted to leave the uniqueness of each area but wanted to share with all Sado. We make everything as GIAHS. That’s why it might cause confusion for people’s understanding of GIAHS (laugh) but we started from something close to us. We want people in Sado to wear the "GIAHS grasses".

基本二人で考えて、あとは各地域の地域おこし協力隊の人の話を聞いて、それ面白いねとか、それでやろうとか、生き物研と地域おこしで作ったプログラム。認定している団体からしたら、「なに勝手にやってんだ？」というふうに言われてしまうかもしれないけど（笑）、やっぱりトキだけでやっていると反感も起きるので、全然意味ないし、佐渡を一市にまとめた意味もなくなるので、各地の魅力はそのまま残しつつも、佐渡全体で共有できたらなど。なんでもジアスにしちゃっている。だから余計わからなくなってしまうかもしれないんだけど（笑）でも身近なものからまず。ジアスのメガネをかけてほしい。

F: By all means when people hear “Agricultural heritage” they will imagine it is only about agriculture, but ordinal citizens and people surrounding are actually supporting

agriculture. So, I did not want to make GIAHS limit only someone's benefit. Moreover, I wanted kids in Sado to proud of many things in Sado and go away from Sado. I wish they will come back to Sado one day.

どうしても世界遺産となると、農業だけだろうってなりがちなんだけど、でも、それを支えているのは市民だったり周りの人だったりするので、誰かだけお得にはしたくないというか、あとは子供たちが島外に出た時に、自慢のネタをいっぱい持って出てほしいなと思っている。いつか帰って来てねと。

C) GIAHS project in Sado general high school (Sado Sōgō Kōkou)

This educational program in Sado general high school is started from 2013 which is the project for high school students learn about GIAHS through the process of leaning the skills of interview and conveying the information (Sado general high school 2014). In this project, students experience various kind of things such as interview with local farmers and participate the exchange program with Noto to learn about GIAHS and so on (Sado general high school 2014).

D) GIAHS tour guide in Iwakubi community

Iwakubi community is one of the significant landscapes of rice terrace and ocean view in Sado (Sado city 2019). In Iwabuki community, some local residents provide tour for tourists for 2300 yen per person and the title of the a tour is “Knowing about GIAHS : Iwakubi rice terrace Satoyama walk” (「世界農業遺産 (GIAHS)」を知る 岩首棚田里山散策 (Niigata tourism Navi 2020).

3.4.6 Action plan of GIAHS in Sado

As it is identified in 3.2.5, GIAHS program in Japan requires to crate action plan (hozen keikaku) every five years with assessable indicator for each main vision. Sado created the

Action Plan I (Sado city 2011) and Action Plan II (Sado city 2016) and each action plan has main visions for implementation of GIAHS. Main visions were set in each action plan. Action Plan I pp.7 visions and indicator are ;

- 1) Establishment of sustainable preservation of biodiversity (持続可能な生物多様性保全システムの構築)
- 2) Promotion of Sado agriculture with environment protection and fostering biodiversity(環境を守り生物多様性を育む佐渡農業の振興)
- 3) Preservation of traditional culture which are fostered by rich agriculture and rural community and beautiful natural environment and landscape (豊かな農業と農村コミュニティから育まれた伝統文化や美しい自然環境・景観の保全)
- 4) Expansion of interaction by utilizing Sado's local resources(佐渡地域資源を活かした交流拡大)

Action Plan II pp.11 visions and indicator are ;

- 1) Establishment of sustainable agriculture and rural community (持続可能な農業農村の構築)
- 2) Designing community focusing on preserving biodiversity(生物多様性保全を核とした地域づくり)
- 3) Succession of traditional culture and landscape of rice terrace(伝統文化、棚田景観の継承)
- 4) Sharing the value of agricultural heritage in inside and outside of Japan(世界・国内における農業遺産の価値共有)

- 5) Development of method of participatory monitoring(参加型モニタリング手法の開発)

3.4.7 *Monitoring in Sado*

As identified in the 3.2.5 GIAHS site has to take monitoring by MAFF and Experts of Council based on self-reflection, presentation, and site observation by Experts of Council. (MAFF 2020 h). Sado has done with the monitoring twice and received the feedback from the council of experts. At the first monitoring in February 2016, Sado got six feedback and six pieces of advice, and the second monitoring in November 2019, they got five recommendations. (MAFF 2019). At the first monitoring, most of the feedback is based on five main criteria of GIAHS certification and most of the advice is not specific. On the other hand, even though at the self-monitoring most of the indicator scored A or B (Table 7), at the second monitoring the advice is more focusing on their problem and shows the specific examples of solutions such as (2) “Creating the assessment method to identify the impact of GIAHS” and (3) “Renewing the rules of “Toki to Kurasu Sato” rice certification.

As a result of the monitoring, the designated area receives the paper of feedback and advice from the Council of Experts. Designated area supposed to take the advice into the next action plan. Feedback and advice that Sado got from Council of Experts at monitoring first monitoring in 2016 are ;

A) Feedback

- 1) With regard to the “Toki to Kurasu Sato” rice certification that Sado City is continuing to work on, the certified farmers are steadily increasing even after the GIAHS designation. Furthermore, in order to improve sales power and brand power, efforts are being made by various parties to improve quality, and the remarkable effects are shown by the improvement of the first-class rice ratio and the expansion of

sales channels. In addition, new rice brands such as satoyama region rice and rice terraced rice are being started, which is helping to increase farmer income in disadvantaged areas.

2) With the establishment of the "Toki to Kurasu Sato" rice certification system, efforts have been made to consider the ecosystem and many surveys and analysis of living creatures have been conducted by farmers and universities. Furthermore, there is a high interest in the biodiversity of the entire region without converting the results into a GIS display system. In addition, in collaboration with university and graduate students all over the country, the return of ibis to the wild, evaluation of biodiversity, and analysis of the ecosystem are conducted.

3) With regard to the installation of "e" in the entire area for the purpose of creating a feeding ground for the crested ibis, the installation area has been expanded and its effects have been verified. In addition, the activity that conveys the value of GIAHS by high school students, who are the future leaders of the region, is expected to have a high ripple effect by communicating to the elementary and junior high school students and citizens what they have learned through their own experiences. On the other hand, the traditional "Akishiro Fuyu Mitsu Tanbo" is an important measure in coexistence with the crested ibis, but on the other hand, it also has the side effect of reducing the yield of paddy rice, which reduces the area of introduction. Therefore, it is necessary to work together with research institutions and make improvements. In addition, although conservation activities in the region can be evaluated, depopulation and aging are progressing, and the number of players is decreasing, so it is necessary to take action for them.

4) Even today, there are cultural events that are closely related to rice farming, such as "Taasobi" and "Kuruma Taue" which has been handed down. As for Noh, the

Noh stage has been passed down and passed down in 36 districts on the island, and the culture related to agriculture remains strong. However, there is only one inheritor of "Kuruma Taue", and there is concern that it will continue to exist in the future.

5) As a measure to protect the terraced rice fields in the disadvantaged areas, the "Rice terraced rice owner system", "Ogura Senmaida" and "Tanada walk tour" in Iwakubi village are useful measures. There is no clear statement in the application form, but since it was difficult to secure water for Sado since ancient times, rice drilling by using a unique water resource that digs a side hole on the hillside and draws water from the water source in the mountains Well, it is still inherited.

6) Environmental conservation efforts in cooperation with CO-OP have greatly contributed to the conservation of habitats for ibis and regional revitalization using GIAHS. With regard to the creation of a village walking tour, since GIAHS certification, the local residents have become a guide to the resources owned by the community, and by disseminating information, it has contributed to rural development and regional revitalization. Regarding the review of the conservation plan prepared by the region, it is important to consider the results of this time and set the action items, numerical targets, and the ideal monitoring method.

B) Advices from Council of Experts

1) Regarding the relationship between the local agricultural system and the habitat of Japanese crested ibis, it is necessary to clarify the issues and tackle conservation not only for farming the paddy fields where the crested ibis feeds, but also for the management of the Satoyama consisting of the broad-leaved trees and bamboo grove.

- 2) It is better to disseminate the effects of "E" to the world through the compilation of academic papers by utilizing GIS data such as research on living creatures while obtaining cooperation from universities.
- 3) Consider building a platform based on GIAHS. Under the platform, various activities should be positioned and organized.
- 4) It is commendable that the GIAHS international conference is being held in Sado and international activities such as interaction with the China regarding to crested ibis are being conducted. In the future, it is good to make use of that experience and focus on the world to improve the efforts.

As a result, it will lead to evaluation of the area, increased interest, and promotion of the area including tourism.

- 5) Improve the subsidy project by Sado City to a form suitable for GIAHS. Alternatively, efforts should be made to encourage the entry of companies, and efforts should be made to secure stable financial resources for the conservation of GIAHS.
- 6) The establishment of a council of GIAHS as a platform was included in the original plan but not yet implemented. When it comes to changing plans, it is necessary to sort out the reasons in terms of new directions and future effects.

Feedback and advices that Sado got from Council of Experts at monitoring 2nd monitoring in 2019 are ;

- 1) Individual efforts are good, but their connections are weak. In the future, the activities should be carried out after organizing the whole story and systematic

connections. In addition, future targets such as improvement of certification system should be considered.

2) It is commendable that the number of Japanese crested ibis has definitely increased. However, since the number of certified farmers in the “Toki to Kurasu Sato” rice certification has decreased, it is possible that the establishment of the certification system has not been successful. Not just simply evaluate the number of Japanese crested ibis as an indicator, but it is necessary to sort out the causal relationship with GIAHS-related activities and evaluate the effects of those efforts.

3) Japanese crested ibis were initially expected to settle in the Yatsuda(surrounding paddy field at valley bottom) , but in fact, they were settled more in the flat land paddy field. Since the current "Toki to Kurasu Sato" rice certification system has been established on the assumption that it will be established around Yachida, large-scale farmland in the flat land cannot meet the requirements such as mowing ridges and winter paddy fields and it is avoiding them to get certification.

4) In the future, in order to continue coexisting with Japanese crested ibis in the flat land, considering the requirements for obtaining the certification of large-scale farms in the flat land, and the system will be improved based on actual circumstances. It should be noted that the flat land and Yachida need different ways of approaching, such as efforts to coexist with the ibis in the plains, and efforts to utilize the terraced rice fields with beautiful scenery for tourism in the surrounding areas.

5) In order to coexist with the ibis that has settled in the plains, it is important to improve the paddy environment in the flat land. Due to the reduction of farmland associated with the construction of farms, Germany has been developing a space for living creatures such as biotopes. In this way, it is possible to make a biotope, etc.

together with the large lot field maintenance, which is a good example of coexistence between the large lot field maintenance and environmental protection. Please consider the new direction of the agricultural infrastructure development for the entire island, including the points mentioned above.

6) Through the GIAHS certification, it is important for local residents to take pride in Sado City and to consider ways for children to continue living on the island in the future. It is important to work systematically on human resource development in cooperation with various stakeholder. Since GIAHS will be celebrating its 10th anniversary in 2021, we would like to take advantage of this opportunity to further strengthen cooperation and hold discussions among stakeholders.

The official of Sado city in charge of GIAHS monitoring E mentioned about the impression of the monitoring and the advices from Council of Experts in 2019 as ;

Me: How did you think about the result from the second monitoring ?

E: I think there are some misunderstandings from Experts in the advice but we will work on to the next step considering the feedback. They pointed out that because of the criteria, flatland large scale farmers are getting harder to get certification but actually the number of certified farmers itself is decreasing. The reason why flat land and relatively larger scale farmers are getting harder to get certification is that, because of the aging farmer's population, many of them ask some younger farmers to do rice agriculture for them. I wrote in the monitoring report that, in this kind of case, because of the many farmers have to take care of multiple paddy field which is not belonging to them, it is getting harder to get the certification but the Experts might have been misunderstood my point.

報告書での指摘の中で委員の方々に理解いただけていなかったところがあると思うが、いただいた指摘を加えながら進めようとしている。平地の農家の認証取得が難しくなっているというふうな指摘があったが、認定農家数自体が微減している。平野部の比較的大規模の農家が認証を取れなくなっているというのは、高齢化等で田んぼができなくなった人から任されているという農家が増えてきている。今後そういった農家が認証を取ることが難しくなるだろうという風に記載したが、審査の段階で誤解が生じてしまったかもしれない。

E: The action plan which was made five years ago, there are some points that too far from current situations and also indicator is too precise. They have tackled broader issues but the focus point is blurry. Our action plan right now is originally created by ourselves but other areas that currently designated are using the specific format and the designated areas also very specific so that, it is very clear where to focus.

五年前のアクションプランでは、現状と外れているものもあり、全体的に細かいすぎるものが多かった。手広くやっているけれど、フォーカスしているところが全体として見えにくい。現状のフォーマットは佐渡が独自に作ったものだが、新しく認定された地域は決められたフォーマットがあって、エリアも絞られているので、はっきりしていると思う。

E: When I was in the process of monitoring I felt that the stance of the experts and MAFF is different. For the self-monitoring, MAFF check our self-monitoring paper and gave us advice beforehand. On the sheet, we score our activities from A to C, and

MAFF official told us we should score from C to B because we have done many activities. However, at the actual judgment from experts, they told us our scoring it too optimistic and we thought like “I see...” (laugh). I got the impression that most of the experts did not see the self-monitoring that much. They give us advice not from the consensus of the Council of Experts but their individual’s research and expertise so I am not sure whether we should take all the advice or not.

その専門家の方と農水省で立ち位置が違っているような気がする。

自己評価表でも農水省が提出前に点検してくれてここをこうしたほうがいいですよとかみてくれるが、割とやっていることが多いから、ABC ランクをつけているところでは、農水省は C を B にしていいんじゃないんですか？
というんだけど、実際の審査では「ちょっと甘いよ」と言われてしまって、
ああそっかーとなった（笑）

自己評価はあんまり専門家の先生は見ない。各々それぞれの研究や活動されている中から審査するというかたちでやっているの、一概に助言を全部受けるかどうかについてはわからない。

3.5 Local people’s perspective and perception towards GIAHS

I conducted key informant interviews with local farmers, government officials, and citizens in order to capture the perception towards GIAHS. Except for E, key informants were collected through snowball sampling from informant A who was the initial member of Sado GIAHS application and former manager of the Agriculture sector in Sado city hall. A introduced me to B,C,D,F and B introduced me to G. I met E at the GIAHS promotion event in Kanto area when I visited there for information gathering. Selected key informants are not just observers of

GIAHS but they directly manage the activities for preserving the agriculture system or managing the GIAHS program in Sado. Therefore, these key informant interviews were able to capture the perspective and perception of the people who managing GIAHS at the local citizen level but do not represent the general citizens' impression towards GIAHS.

Informant A was the director of the agriculture department in Sado city when Sado was applying to GIAHS. He was one of the members of the creating the “Toki to Kurasu Sato” rice certification so that, he has knowledge of the Sado city hall’s initial motivation and situations of GIAHS application. Informant B is a rice farmer in the hilly and mountain area community. B is the head of the rice terrace association in Sado city and also conducted many different kinds of events by using the network and resources for revitalizing the community in hilly and mountain areas. C is a full-time farmer for over 20 years and after he retired from JA Sado. He was assigned as a core member of implementing the “Toki to Kurasu Sato” rice certification as a technical assist as a farmer when Sado city and JA were creating the certification system. Informant D moved to Sado from Kanto area as a member of “community-reactivating cooperator squad”(CRCS)(地域おこし協力隊 Translation by Ministry of Internal Affairs and Communications) from 2012 and was in charge of a community in hilly and mountain area. In the activity, as squad D was working for GIAHS promotion and also after D retired from the CRCS has kept living in Sado and observe the change after the designation. D was fascinated by the long history of Sado’s rural culture and local performances. D is a currently resident of hilly and mountain areas with her family. Informant E is a Sado city official in the agriculture department Satoyama promotion unit since 2018. F is the manager of the general incorporated association “Ikimono Gatari Kenkyūjo ” which is providing the lecture and educational events for advocating the agrobiodiversity and GIAHS in Sado city. ”Ikimono Gatari Kenkyūjo ” is established in 2011 and they are entrusted with Sado city’s projects related to preserving agrobiodiversity and GIAHS. F moved into Sado and started to work in the association since

when F was researching Japanese crested ibis in a university as a student, F came to Sado often as a part of the research project. Informant G was a former official of JA Sado and currently, he is leading some agricultural association and environment protection group in Sado. When “Toki to Kurasu Sato” rice certification was starting, he was in charge of the group. Currently, he owns several associations for the promotion of agriculture and biodiversity.

Almost all the interviewees (B,C,D,E,F,G) observe the lack of familiarity and depth of understanding towards GIAHS among farmers and citizens such as ;

B: The familiarity of GIAHS among Sado people is quite low. I think awareness program about GIAHS for the local people is necessary.

佐渡の人たちの GIAHS に対する認知度は本当に低いと思うよ。だから住民向けに啓蒙活動が必要だと思う。

C: When Sado was designated as GIAHS, most of the farmers did not understand what is GIAHS. Even now I do not think they understand that. Moreover, farmers who have been practicing “Toki to Kurasu Sato” rice certification, they do it simply because they can get money.

認定当時は、農家にとって GIAHS はよくわからなかったし、今もよくわかっていないと思う。トキ米認証の生き物を増やすという取り組みは言葉だけで、認証米はお金がもらえるからやっている農家も多いと思う。

C: I think GIASH in Sado is declining. After 10 years I feel like “familiarity(認知度)” is even decreasing. After the designation, guidance about agrobiodiversity for farmers was held twice a year but I do not think it is still held now. I think GIAHS

activities have to be done slowly but continuously but now the activities have been
“mannerism (マンネリ化)”

ジアスは落ち込んでいるような気がする。十年経って、認知度が余計下がっているような気がする。

ジアスをとってからは年に二回くらい農家向けの生き物研修なんかをやっていたが、いまはあまりやっていないんじゃないかな。

この取り組みはじっくりでもいいから続けたいといけない。今はマンネリ化してしまっている。

D: I do not think most of the people in Sado do not understand about GIAHS at all. It will be nice people can go to learn more deeply about GIAHS but, not so many people can do that among ordinal people. People in Sado see that many different customers have come to Sado after the designation of GIAHS but they don't understand why.

ジアス自体の認知については、みんな全然わかっていないと思う。いろんなところに出て行ってジアスについて理解を深めていけばいいけれど、一般の人はそういうことができる人ばかりじゃない。ジアスの認定の後に色んなお客さんが来ているのはわかるけれど、それが何なのかということはみんなわかっていないと思う。

F: "Ondaiko" has been done in each village, but I don't think the residents understand how it relates to GIAHS. For example, it is like the residents feel that GIAHS is on the ceiling and their lives are below. Originally, they are all in the same place, but it is difficult for residents to understand that they are connected. Residents would say "I have heard people are saying GIAHS,GIAHS, but what is that?" I think it is our job to connect them. It is a small step but I have no choice but to do it.

あとは、農業者じゃなければ、鳥に関心がなければあまり身近なものではないし。鬼太鼓は各集落でやっているけど、それがどうジラスと関わっているかわからないし。ジラスというのが天井のてっぺんにあって、自分たちの暮らしはもっと下にあると言うふうになっている。ほんとは全部一緒なんだけどそこが繋がらないという。ジラスジラス言うけどなんなんさ？というような感じ。それをつなげて行くのがうちの仕事でもあるのかなと思っている。少しずつ。

3.5.1 Lacking common understanding of GIAHS

Entire Sado city was registered as GIAHS however with the title of “Sado’s Satoyama in Harmony with the Japanese Crested Ibis”. As I identified in 3.4.2, when Sado was designated as GIAHS, Sado was focusing on returning the Japanese crested ibis to wild and also the “Toki to Kurasu Sato” rice certification. In addition to that, at that time Japanese crested ibis was released in on the east side of Sado(MOE 2019). That background affects the image of GIAHS from the local level as such C believes that GIAHS cannot exist without rice certification but at the same time confusing how to understand GIAHS as a whole Sado island so as D.

C: I understand that GIAHS in Sado is because we have “Toki to Kurasu Sato “ rice certification since the title of GIAHS in Sado is “Sado’s Satoyama in Harmony with Japanese Crested Ibis”. It is very difficult how to understand GIAHS in Sado as a whole because Japanese crested ibis only inhabits in Niibo community but GIAHS recognizes entire Sado island. There was the “Biodiversity promotion room (生物多样性推進室)” in Sado city hall when Sado city hall was starting “Toki to Kurasu Sato”

rice certification and the team applied to GIAHS. That is why I think GIAHS is based on “Toki to Kurasu Sato rice certification”.

コンセプトが、「トキと共生する里山」だから、そもそもジアスは認証米があつてこそ。そもそもトキは新穂の近辺にしかいなかったものだから、佐渡全体を認定していくジアスをどう理解していくかということが難しい。元々トキ米をはじめたときに、生物多様性推進室を作った。そこがジアスをとりにいった。そういうこともあつて、佐渡ジアスはトキ米があつてのもの。

D: Sado has too many resources so that we don't know what to emphasize the most. We don't have something “ We only have this !”. Regarding agriculture, we have not only paddy fields but also many different kinds of fruits. Also, each area on Sado island has something special.

佐渡は資源がありすぎて、推すものがわからない。これしかない！というものが無い。農業に関しても田んぼだけじゃなくて、いろんな果樹もたくさんあるし、それぞれの地域でこれがいいというものがある。

D: I think if only one specific thing was recognized as a GIAHS it would be easy to understand what is GIAHS, but, for example, if the rice terrace in our community was recognized as GIAHS in Sado I would not agree with that. I think this terrace view cannot be representative of Sado's symbolic view.

一つのもので登録されればわかりやすいけど、棚田でこれがジアスです！というのでは違うのではないかな？と思う。この景観がジアスというのであれば、佐渡象徴的景観です、というのは難しいと思う。

F: I think the residents can't quite imagine GIAHS. I think we haven't wiped out the image that "Toki will belong to a certain area after all" even though it is said that it coexists with Toki. Compared to 10 years ago, I think that fewer people are saying "I don't care to me because Japanese crested ibis belongs to the Niibo area anyway." The number of ibises is increasing and they are flying in various places on the island. なかなかイメージできないんだろうなと思う。ときとの共生って言われたって、トキは結局一部地域のものだろうというような認識はまだ拭えないような気がするし、10年前よりかはトキは新穂のもんだからうちは関係ないというようなことを言う人も減ってはいるのかなと思う。トキがあちこちいってくれているので。

3.5.2 *Lacking image of inclusiveness of GIAHS*

Related to the point 3.5.1 and 3.5.3, local people have been feeling exclusiveness from GIAHS. B and C reflected when Sado was designated, they both mentioned that most of the citizens did not know about Sado city was applying to GIAHS and they were very surprised at the designation.

B: When Sado was applying to GIAHS main actors were only researchers and city hall so islanders did not know about anything about it. People were saying "we know the UNESCO world heritage but what is the GIAHS?".

GIAHSに申請しているときは、主導は研究所と役場だけだったから、決まったときには島民は全く知らなかった。世界遺産はわかるけど世界農業遺産ってなんだよって感じだった。

C: For Sado, GIAHS was from out of the blue. I heard that at the beginning Noto was the initial plan to apply only by themselves and Sado was just an additional. Noto and Sado have some connection around Japanese crested ibis's habitat. Also, Sado was succeeded in "Toki to Kurasu Sato " rice certification so that both Noto and Sado apply to GIAHS in the same year as the first GIAHS in Japan. For Sado folks, it was a complete surprise. We did not know how to use them or even we did not know the value of GIAHS at that time. Even though the city hall held some guidance about GIAHS for the people at the beginning, only a few residents joined.

佐渡にとっては、GIAHS は急に降って来た話で、本当は能登がとりたかったところに、佐渡が付け足しでとったという感じだと認識している。能登は千枚田があったけど、当時は他にあまりなかった。そこで佐渡はトキ米なんかのとりくみもやっていたから、トキで接点のあった、能登と佐渡がセットでとったという感じ。だから、当時佐渡の人は寝耳に水だったよね。どう使っているかというか、そもそもジアスの価値そのもののわからない状況だった。認定された当時は、地元向けに各地域への説明会なんかもあったけど、来る人は1、2名くらいしかいなかった。

F: I think the residents can't quite imagine GIAHS. I think we haven't wiped out the image that "Toki will belong to a certain area after all" even though it is said that it coexists with Toki. Compared to 10 years ago, I think that fewer people are saying "I don't care to me because Japanese crested ibis belongs to the Niibo area anyway." The number of ibises is increasing and they are flying in various places on the island. Also, if you are not a farmer and you are not interested in birds, you are not very familiar with GIAHS. "Ondaiko" is done in each village, but I don't think the residents

understand how it relates to GIAHS. For example, it is like the residents feel that GIAHS is on the ceiling and their lives are below. Originally, they are all in the same place, but it is difficult for residents to understand that they are connected. It is like the residents say "I have heard people are saying GIAHS, GIAHS, but what is that?" I think it's our job to connect them. It's a small step but I have no choice but to do it.

なかなかイメージできないんだろうなと思う。ときとの共生って言われたって、トキは結局一部地域のものだろうというような認識はまだ拭えないような気がするし。まあ 10 年前よりかはトキは新穂のもんだからうちは関係ないというようなことを言う人も減ってはいるのかなと思う。トキがあちこちいってくれているので。

3.5.3 Lacking the feeling of positive impact of GIAHS

B,D,F feels lacking the impact of GIAHS and D even felt a negative impact from the change from GIAHS such as increasing the tourists. On the other hand, only G mentioned about long-term positive impact of GIAHS after 10 years such as heightened the motivation towards biodiversity and increasing the number of visitors to Sado.

B: Japanese government basically does not give any financial support. Instead, they are saying we will give you the “name-value” as GIAHS and it all depends on us to utilize them. Then eventually GIAHS does not contribute to any revitalization for Sado.

日本政府は資金的な補助はしませんよ、だけど、世界農業遺産としてのネームバリューは差し上げるので活用してくださいねというだけ。結局、佐渡の振興に全くなっていない。

D: I think “Toki to Kurasu Sato” rice certification is spreading at some level, so that the idea of co-inhabit with Toki (Japanese crested ibis) has been spread to people in Sado. On the other hand the familiarity of “Rice terrace rice”(棚田米) is not spread that much. We don’t know what is the sales point of them. Even though we put the logo mark of GIAHS on the package but the people who actually selling do not understand the meaning of it.

トキ米の取り組みは一定に広がっているので、トキとひとが共生するというのは根付いてきていると思う。一方で、棚田米はそこまで認知度は広がっていないと思う。どこを売りにしているのかが明確じゃない。ジアスのマークをつけて売ってはいるものの、売っている本人たちはよく分かっていないような気がする。

D: After Sado was recognized as GIAHS I think the number of tourists increases to this community. In the morning to the night because many people want to see the view of the rice terrace. Especially in the summer people go up to the hill by car since they want to see the stars reflected on the water in the paddy field. To be honest, I feel terrified. Especially, when I see the cars I’m not familiar with.

ジアスに登録されてから、観光客が多くなった。朝も夜もすごい。夜は夏星が棚田に映るから、車が夜上の方に上がって行く。怖いなど思うこともある。特に遅い時間に見たことのない車が走っているのは怖い。

D: Especially, in summer and golden week, many people visit here. I wish they use a guide instead of coming here by themselves. Residents in this community have had some trouble with the trash that tourists throw away in the community and tourists

slipped into the paddy field with their car. There are also many foreign tourists so that, when those things happen we face the difficulties in language barrier. That's why I want the guide to actively advertise their service more. I guess this kind of landscape is fascinating for foreigners as a typical Japanese landscape.

夏とゴールデンウィークの田植えの時期は特に多い。個人でくるのではなくて、ガイドを使って欲しい。ゴミの問題や、車が田んぼに落ちてしまうことがあって、外国人も多いので英語が通じない。ガイドの PR を積極的にやってほしい。外国人にとったら日本らしい景観なのかもしれない。

F: I don't feel the impact of GIAHS is not so good and not so bad. It has not changed anything. Since the word "GIAHS" was very publicized in Sado City, I think that the recognition among the residents of Sado is higher than that of the whole country. However, "What is GIAHS" is not understood by residents, and I don't think there is anything that they gained or lost. It feels like it's still flowing. So, Sado City is eager to boost GIAHS, but I feel confused every time, "What should I boost?"

よくも悪くもないような気がする。そのまま変わらない。ジアスという言葉はすごく PR していたので、佐渡中での認知度は全国と比べると高いと思う。だけど、ジアスがなんなのか、それがあって何か得したとか損したとかというのは何もない気がする。そのまま流れているような感じ。

なので、もり立てようと躍起になるけど何を盛り上げればいいんかね？という事で、毎回ぐるぐるしている気がする。

Me: After the designation of GIAHS , did association or groups that working for biodiversity come together and talk about anything?

F: No, many people were working toward biodiversity and GIAHS kind thing even before rice certification or GIAHS.

Me : ジアスが始まったからそれぞれの団体が集まって、何か新たにやろうと言うような機運になったか？

F: そういうのはない。ジアスうんぬんより、認証米うんぬんより、もっと前に活動していた人たちが多いので。

G: When we were young like you, we were only thinking about going out from the rural areas and going into the city. With Toki returning to the wild, many people have come to visit Sado. Some of them settled down, and there have been many opportunities to interact with various kinds of people.

As a result, the whole Sado hasn't changed that much, but I think that it gradually changed little by little, starting from the end to the end and starting from the point of contact with different people.

僕たちがあなたたちのような若者のときには、都会に行く都会に行くというようにそれしかなかった。トキが野生復帰することになって、いろいろな人が佐渡に来るようになった。定住する人もいたりして、いろいろな人との交流が生まれて来た。そのことによって、佐渡全体はなかなか変わらないけど、少しずつ端っこから端っこから、異なる人との接点から始まって、じわじわと少しずつ変わって来たと思う。

G: I think that small changes have already happened in these 10 years. Especially the shift of the interest from "conservation of Japanese crested ibis" to "biodiversity" has occurred among citizens while living creature survey has become popular. However, when I consider the next steps of GIAHS in Sado from this point, it is difficult. For instance, when I think about the use of green tourism for the promotion of agriculture in Sado, it will be very difficult for Sado farmers to actually do it. Probably they will not be interested in that kind of business. Or, even they will feel it is troublesome. I personally think if we can accept diverse people from those intercultural activities, there is a chance that people will move to Sado to do agriculture, but Sado is not able to do that easily.

トキから生物多様性へという関心の高まりというのは、生き物調査をひとつのテコにしながら、多少はあったと思う。それがその次のステップというか、例えばそのグリーンツーリズムを考えた時に、農家がそれに取り組むかという、佐渡の農家は自分のうちに人を泊めるというのはなかなか難しい。おそらく、それだけの商売っ気がない。めんどくさい、いやだという感じ。そういう交流でいろんな人達を受け入れたりしながら、農業をやろうということに移住したい人も増えるかもしれないけれど、そう言ったことをなかなか佐渡でできない。

G: There is a limit to what JA and municipality can think hard. They can just propose the ideas. So, only the local people can say let's do it and do it.

農協が一所懸命考える、行政が一所懸命考えるって言ったって、限度があるので、どうですかというだけの話で、よしやるぞといって実際にやるのは地域の人がやるしかない。

3.5.4 *Lacking human resources and activeness towards GIAHS*

B,C,D,F mentioned about the lacking human resources in Sado city hall compare to the section specialized for UNESCO world heritage and Geopark. People feel that Sado city put less effort into GIAHS after the designation has been getting less and less while the other programs have been more active.

B: Even though Sado got the title of GIAHS but Sado city hall only focusing on something that has not got yet such as World Heritage or Geopark. Both of them have a specific team for the promotion but GIAHS does not have a special team. On the other hand, Sado city put the burden of communities preserving GIAHS. I think it's something wrong that city hall put the burden on the community.

佐渡市は GIAHS という称号をもらっているのに、それより、まだ認定されていない世界遺産や世界ジオパークの方にばかり力を入れている。世界遺産の推進課はあるし、ジオパーク推進室もあるけど GIAHS の推進室はない。

その代わり、地域に全部に押し付けるようなのはおかしくないか？

C: Sado city hall is now trying to get new designations such as UNESCO world heritage and Geopark but they do not put effort into GIAHS which have already designated. Moreover, those activities are done by specialized department in Sado city hall, however, GIAHS is just a part of Satoyama promotion department in agriculture sector in Sado city hall.

佐渡市は新しいものを取りたがっているけど、すでに世界認証が取れている
ジマスにはあまり力を入れていない。世界遺産やジオパークは専門の課があ
るのに、ジマスは里山振興係だけ。

C: Sado does not have appealing power. He thinks they do not put effort to appealing
about GIAHS. It is hard to do everything by just a “kakari” (unit). I feel that Sado
folks also lost their pride of “the first Japanese GIAHS”. We have to lead other
designated areas as the oldest GIAHS in Japan. We need someone who has the passion
that “Sado is going to create the Japanese style GIAHS”.

佐渡は発信力が低いと思う。ジマスについても全く発信力がないし、力が入
っていない。いち係だけではできないと思う。佐渡人も、日本初世界農業遺
産というような、プライドがなくなってしまうように感じる。日本初
の認定地として、他の地域を引っ張っていかなきゃいけないんじゃないか。

「うちが一番古いんだ！」というような感じで、日本のジマスを佐渡が作っ
ていくというような心意気のあるひとが担当して行って欲しいと思う。

D: Even though Sado city hall tries to appeal GIAHS connects to traditional culture
such as “Noh”, but I don’t think Sado is putting effort to promote GIAHS. I guess
Sado gold and silver mining is prioritized.

能とかの伝統芸能と GIAHS を結びつけて PR しているが、佐渡はそこまで
GIAHS を PR してはいないような気がする。金山がやっぱり上位のような気
がする。

F: I feel a sense of crisis that Sado City has not escaped the situation where nothing has changed. Although Sado City is working hard with a lot of budget and staff aiming to be recognized as a "UNESCO World Heritage Site", the GIAHS that has already been registered has been neglected. With GIAHS, I think that it is dangerous that Sado City does not take into consideration the current situation, although it should always be changed and cherished by continuing efforts.

Basically, I think GIAHS is involved in everything, whether it's increasing the number of tourists or increasing the exchange population. I think it's dangerous that Sado City can't use GIAHS well. I understand that the difficulty of expressing what GIAHS is an obstacle, but it is hard for us to set clear goals.

Some people have such a sense of crisis, but the Satoyama Promotion unit in Sado City lacks manpower. Currently, two people are doing the work that originally needed about four people, so they are not at all able to do what they need to do.

First of all, I want the staff of the city to feel a sense of crisis, and it cannot be done by the private sector alone.

なにも変わらないと言う状況を脱却できていないと言うことに危機感を覚えている。今世界遺産をねらってすごい予算つけて、人もつけてがんばっているけれども、もう登録したそのジアスはかなりおぎなりになっていて、続けることで常に変化させて大事にしていくべきものなのに、何も省みていないと言うところがやばいなと思っている。本当は観光にしてもなんにしても何にでもジアスって関わってくると思う。観光客を増やすにしても、交流人口を増やすにしても。そこをなんか上手に使いきれていないと言うところがな

んとも危険だと思う。表現しにくさというのがどうしてもそこに引っかかってくるんだと思うんだけど、どうしても明確な目標を立てづらい。

結構そういう危機感をもっているひとはいるんだけど、佐渡市の里山振興係が人手不足で、本来は四人くらいいるべきところを今二人でやっているから、全然回らなくて、やるべきところできていない状況で、そこをまず市の職員が危機感をもってもらわないと、民間だけでは回せないというところがある。

3.5.5 Change in 10 years and future vision and expectations

B feels anxiety for the decline of farmers. C has a more positive attitude towards GIAHS since he expects the long-term benefit from GIAHS.

B: In reality, the price of rice is very cheap and it is hard to keep doing agriculture in this rice terrace. Farmer have to earn money otherwise Sado will lose the sightseeing resources.

米の値段がとにかく安いし、棚田で農業を続けていくことは大変だ。百姓が食っていけるようにしないと、佐渡から観光資源がなくなるだろう。

C: In the first place, I heard that GIAHS will not bring economic benefit beforehand. I remember that a researcher who came to Sado told us that GIAHS will not turn to money. Since he was in the project related to GIAHS in Laos and he knows that GIAHS was designed by FAO for supporting developing countries.

そもそも、ジアスを取るときに、世界農業遺産はお金にはならないよということは何前に聞いていた。佐渡に来ていた研究者の人がそう説明してくれた。

元々その人は、ラオスで GIAHS に関わっていて、そもそも GIAHS は FAO が途上国を救おうということで始まったものだという経緯をその人は知っていたから、お金にはならないということ言っていた。

C: I hope, activities about GIAHS preservation will be admitted in ten years or few decades then eventually tourists and immigrants will increase.

今後、この取り組みが十年、数十年後に認められたら始めて、観光客や移住者が増えることに繋がっていくんだと思う。

C: I think it is important to understand GIAHS as “Assets”, not a “Heritage”. And it is important that how future generation will use this “Assets” and most importantly, it is important to let Sado people understand that. I think it shares the idea with SDGs. We have to learn about SDGs too.

ジマスは「遺産」ではなくて、「資産」だということが大事。これから生きていく人が、どうやってその「資産」を使うかということが重要なんだということも理解してもらえるようにしていくことが重要。そこは SDGs とも共通していると思う。これからは SDGs も勉強していかなくちゃいけない。

C: I think that current farmers tend to think “Only now” “Money is everything” “Only me”. People only think about the economy. The number of farmers who think “how Sado is going to do” and Toki is decreasing. Especially younger generations, they are doing farming with the value point outside of “Toki” but he thinks that the base of Sado agriculture is “Toki”.

今の農家は、今だけ、金だけ、自分だけというふうになってしまっている。結局経済だけになってしまっていて、「佐渡をどうするか」ということや、トキのことも考えている農家が減って来てしまっている。若い農家はトキ以外の価値観でやっている人もいが、やっぱりベースにはトキがいると思う。

C: I'm worried that farmers tend to think only about themselves. Biodiversity should be protected by the community as a whole. If farmers doing their agriculture only in their values, I think it is not a "GIAHS like agriculture(GIAHS 的農業ではない)". Maybe it is a generational difference though.

農家が自分だけの取り組みになってしまっている。「生物多様性は地域全体で守る」ということ。自分だけの価値観でやっている農業は「ジアスの農業ではない」という意識を持ってほしいと思う。世代によっても違うのかもしれないけどね。

C: Currently the number of Japanese crested ibis in Sado counted to 430, breeding seems succeeded, but some farmers say that because of Japanese crested ibis stamp on the rice sprout, they cannot grow rice. I think that we live on the island that co-habitat with Toki, it is important that we will be patient towards that kind of thing. If the number of Toki increasing 500 or 1,000, it might become true damage and at the timing, maybe the financial subsidy will be required to those cases. I think that consumers who buy certified rice is paying also for that effort so that farmers should not complain about that.

トキと暮らす里ということなんだから、多少我慢するということも大切なんだろうと思う。これが、500羽～1000羽になっていったときに本当に被害がわれ

ば、経済的保障なんかが必要になって来るのかもしれないけどね。そもそも害鳥だったものが絶滅危惧種になって、結局害鳥に戻ってしまうことがないようにしないとイケない。そういう努力も含めて、消費者は買ってくれているわけだから、トキが増えたから保障してくれというのは違うんじゃないかと思う。

C: We have been doing GIAHS for almost 10 years, everyone is focusing on “money” but the most important thing is focusing on “living creatures”. With those looks towards and interest, we have to keep creating this landscape. Agriculture also have to share the ideas.

ジアスも 10 年やってきて、お金の方にみんな意識が向いているけれど、生き物に目を向けていく、眼差しと関心を持ちながら、この風景をつくっていかなくちゃいけないと思う。そういう農業をつくっていくことが大事

C: Recently, Niigata prefecture government and National government put effort for branding of local agricultural products utilizing the certification such as GI(Geographical Indication). I think they can be utilized with GIAHS recognition.

今 GI 認証など、地域特殊品種制度とかそういうものを使ったブランド化ということに国や県も力を入れている。佐渡もジアスと絡めて使うことができるんじゃないか。

C: I think the GIAHS program should be stricter like Japanese Geopark certification since they have a complete program. I wish the GIAHS monitoring should give

feedback. The Strict judge will be better. It is the problem that that information is not open to local residents.

そもそも、ジアスの認定基準はもっと厳しくてもいいんじゃないかと思う。更新プログラムを厳しくしていくことが必要な気がする。日本ジオパークなんかは完全にプログラムができています。ジアスの審査プログラムもフィードバックしてくれるといい。厳しい方がいい。それがオープンになっていないこと自体に課題があると思う。

C: We are island that's why we have to tackle with this challenge as one island

島だからこそ、島の全体で取り組んでいかないといけない。

C: “Ikimono Gatari Kenkyūjo“ has been conducting the GIAHS educational program but most of the parents do not have an interest. I think schools in Sado also should take action. Since last year, in Sado General High School had the GIAHS program but the leading teacher move to another school then they stop the activities. Those school activities can be connected to SDGs. I think we should foster the pride of islanders as the first GIAHS site in Japan.

佐渡総合高校はジアスプログラムをやっていたが、去年先生が変わったという事で、区切りをつけたということだった。今後はそういう教育面でもSDGsと絡めていくことができるんじゃないか。

第一の認定地域としてのプライドを育ていくことが大事だと思う。

C: I think, world heritage is the place that people will be satisfied with only one visit, however, GIAHS is the place for visiting multiple times because through the

agriculture product, we can provide tasty food every year and people will think “I want eat that again “”I want to visit there again “”I want to see the person again”.

世界遺産というのは一度行けばいい場所だと思う。世界農業遺産はその農産物を通じて、毎年行くと美味しいものが食べられて、また行きたいというリピーターにつながっていく。またあれが食べたい、またあの人にあいたい、またいこう！というような感じで。

C: GIAHS will not become money that soon, but there is a meaning to keep doing this. I think that the collaboration between GIAHS, UNESCO world heritage and geopark is not going well. This collaboration is important.

お金にはすぐにならないけれど、やっていく意義があると思う。ジオパーク、世界遺産、ジアスの3つが連携できていない。この3つがコラボしていくことが重要。

D: After I got kids, I start to wish I can tell them what kind of environment they are grown in. I think it is important to create the education in this landscape. We can learn about environment from maintaining the channel in the community. We don't go to the forest that often but we can enjoy them. Through that kind of experience, we eventually can let our kids understand about GIAHS.

景観のなかでそういった教育を作っていくことが重要だと思う。水路整備から知って行くこともできる。山に行くことはなかなか少ないけれど、楽しむことはできるし、環境を提供してあげることができれば、最終的にジアスのようなものになっていくのではないか。

D: The main change since I came here in this community is the number of people who quit farming on the paddy field. In my family also rent some paddy field from someone who retired because of their age. I think it's not only in this community. Even in a flat land area, the paddy field which are not used is increasing. On the other hand, there are some new passionate farmers.

協力隊で佐渡に来てからこの集落で起きている一番の変化といえば、田んぼをやめる人が増えていると思う。うちも今年から高齢になって田んぼを辞めた人の田んぼを3枚借りている。全体でも耕作放棄が増えて来ている。国仲の平野の方でも、作っていない田んぼが増えて来ている。一方で、若い人も農業をがんばっている人が多くなって来ている。

G: There is a limit to what JA and municipality can think hard. They can just propose the ideas. So, only the local people can say let's do it and do it.

農協が一所懸命考える、行政が一所懸命考えるって言ったって、限度があるので、どうですかというだけの話で、よしやるぞと行って実際にやるのは地域の人がやるしかない。

3.6 Summary of the results

In Japan, originally the GIAHS program began from UNU advocacy of the program in line with the “Satoyama Initiative” around COP 10 in 2010. From the time of the first designation of GIAHS sites in Japan (Noto and Sado) in 2011 up until 2014, MAFF acted in support of UNU to fulfill the requirement of FAO that when it comes to GIAHS applications, “authorization” from the national governments is necessary since FAO expects national governments’ commitment to the success of preservation of GIAHS (FAO 2020b). In 2014,

MAFF established the Council of Expert for the GIAHS selection process in Japan in order to make the selection process independent and fair (UNU 2018), and beginning from the GIAHS selection round in 2015, the entire process was organized by MAFF. From 2016, MAFF launched the Japanese national certification system for agricultural heritage systems called JNIAHS that includes additional criteria considering the challenges Japanese society currently faces, such as aging and depopulation, declining rural economies and frequent natural disasters (MAFF 2020f). In February 2020, GIAHS and JNIAHS were mentioned in the national agricultural and rural policy document, the *Basic Plan for Food, Agriculture and Rural Areas* (食料・農業・農村基本計画), for the first time, and in it MAFF defined the role of GIAHS and JNIAHS by stating the following in the section “on Policies Regarding the Promotion of Rural Areas (3) Creating New Movements and Activities to Support Rural Areas (3) Encouraging Citizen Appreciation of Multifunctionality”:

“in order to aim towards the encouragement of citizen appreciation of the multifunctionality of agriculture, we are **working towards a rise in the level of citizen familiarity** of GIAHS, JNIAHS, and World Heritage Irrigation Structures, in addition to implementing initiatives to promote interaction between urban and rural areas, as well as tourism.” (「農業の多面的機能に関する国民の理解の促進を図るため、世界農業遺産・日本農業遺産及び世界かんがい施設遺産について、国民の認知度向上に取り組むほか、都市と農村の交流、観光の促進等に向けた取組を推進する。」 (MAFF 2020a, pp. 63)

Although GIAHS and JNIAHS have become an official part of Japanese agricultural policy for the promotion of rural areas, in the current framework, the intervention of national government for the implementation of GIAHS preservation in designated areas has been limited. From the interview with a MAFF official who is in charge of the GIAHS program

(informant H), it was identified that MAFF's current approach to GIAHS programs in Japan can be defined as follows:

1) The priority of MAFF in the GIAHS program is increasing the familiarity of GIAHS among Japanese people to maximize the broader effectiveness of individual activities in each designated area.

2) Preservation of GIAHS should be directed by local level management figures but not through a top-down approach from the national government because each area has a unique context which must be considered. Regarding these two points, MAFF's budget for GIAHS in 2020 is reserved only for promotion events for increasing the general familiarity of GIAHS and activities international cooperation, while at the same time there is no direct financial support for designated areas, such that designated areas have to apply for other sources of budget for GIAHS implementation activities, such as subsidies from the national or prefectural government (Interview with E). Thus, GIAHS program in Japan is designed to encourage a bottom-up approach for preserving agricultural systems and promotion of the rural area by putting the majority of responsibility for GIAHS implementation onto local areas, however without a lack of significant financial or other support from above.

After site designation, MAFF and the Council of Experts conduct monitoring ever four to five years in the designated area and report the translated feedback and advice from the Council of Experts to FAO as a result of the monitoring process. This monitoring system was originally created by MAFF, because although FAO requires each partner country to conduct monitoring, they do not give specific guidance about the details of the monitoring process, such as the desired time scale and methods. Additionally, FAO normally does not give any feedback or comments on the results of the monitoring (interview with H). So, even though GIAHS is an international certification scheme, after the initial designation process, there is little

intervention from the international organization FAO. Thus, GIAHS has some value as an international certification and demonstrates the philosophy of preservation of agricultural heritage systems, but in terms of its implementation, the impact depends on each country's interpretation of the program in reference to their own domestic social, political, economic, and cultural contexts. Furthermore, the impact of GIAHS for preserving agricultural systems is not guaranteed by any of the organizations involved, but at the same time the approach is very flexible because it is nearly completely dependent on the actions of each country and designated area.

This assumption, however, is applicable only in developed countries because among developing countries adopting GIAHS there are cases where FAO has been working closely with countries in support their national governments when it comes to the implementation (FAO 2016).

3.6.1 GIAHS in Sado city and perception of local stakeholders

The entirety of Sado city was designated as a GIAHS site in 2011. FAO evaluated its ecosystem complexity together with its satoyama and satoumi landscapes which fostered the area's rich agricultural biodiversity, as well as Sado's history of protection of the Japanese crested ibis (FAO 2020d). Sado's application to GIAHS was supported by UNU and MAFF in line with UNU's movement of advocacy of GIAHS and the "Satoyama Initiative" in Japan as discussed above in the previous section. Even though the application process was externally motivated, the actions of Sado city hall to prepare their application was very quick and their driving force is to commended, as since UNU recommended Sado to apply in September 2010 and by June 2011 Sado was designated as a GIAHS site, Sado city hall had the capacity to prepare their application in a very short time period (Sado city 2019a). However, it is clear from the key informant interviews that, the rushing application process caused a relative lack of opportunity to build consensus about GIAHS among Sado citizens (3.5.3).

The “Toki to Kurasu Sato” rice certification was started in 2007. After the typhoon disaster in August of 2004 heavily affected Sado’s rice harvest for several years, Sado city hall and JA Sado started the agrobiodiversity friendly rice certification program to support both the recovery of rice farmers and the Japanese crested ibis by instituting activities to provide better feeding grounds (Sado city 2018). This certification got attention from inside and outside of the country and led Sado to GIAHS application (UNU 2018). Because of this history behind the GIAHS designation, there has been an image among Sado citizens since designation that “GIAHS is all about Japanese crested ibis” (3.5.). Meanwhile, there are some internal promotion activities about GIAHS, such as “Sado Meguri Juku”, “Sado kids Ikimono Chōsatai”, “GIAHS project in Sado general high school” and so on. All of these programs have been working to try to change the mindset of Sado citizens and create opportunities to foster understanding about GIAHS. Despite the efforts of these activities, almost all the informants mentioned about the issue of Sado citizens “lacking familiarity and understanding about GIAHS”.

Considering the constant effort for the activities of promoting GIAHS among citizens and the result from monitoring, Sado seems to have been succeeded in GIAHS implementation and preserving their agricultural heritage system. In the latest monitoring in 2019, Sado GIAHS scored A or B for almost all the indicators which were set in their GIAHS action plan. However, many of the local stakeholders do not feel positive benefits from GIAHS designation (3.5.4). Furthermore, most of the stakeholders feel that Sado city hall has put less effort towards GIAHS implementation compared to other certification activities, such as those for UNESCO World Heritage and Sado Geopark. Overall, Sado GIAHS has been successful in terms of the monitoring criteria, but, the impressions of positive impacts of GIAHS among local stakeholders are limited, and overall familiarity and understanding about GIAHS among farmers and ordinary citizens has to be improved.

4 DISCUSSION

This research aims to achieve the following four objectives: 1) understand the structure of GIAHS management in Japan, 2) identify and analyze the backgrounds, aims, and expected outcomes of GIAHS implementation at the national government level and local level, 3) identify and analyze the gaps and connections between each management level and how they affect GIAHS implementation at the ground level, and 4) identify the perception of local stakeholders about GIAHS. This chapter discusses objectives 1) and 2) in section 4.1, GIAHS management in Japan, and the latter two objectives in section 4.2. In addition, this chapter contextualizes GIAHS as a rural revitalization strategy in Japan in section 4.3.

4.1 GIAHS management system in Japan

4.1.1 GIAHS management system in Japan and gap between each management layer

As shown in sections 3.2 and 3.3, in the GIAHS management system in Japan, although MAFF is in charge of the designation process and monitoring, they do not provide financial support to local governments for preserving GIAHS, and furthermore MAFF's main focus is in increasing the general familiarity of GIAHS among Japanese people. Additionally, it was explained that in the process of GIAHS designation in Japan, SAG under FAO directly visits potential areas for site observation. However, after designation, FAO does not clearly state any guidelines for the methods, criteria, and time scale for monitoring. In the case of Japan, FAO just receives the results of monitoring conducted by local governments and submitted through MAFF. Therefore, even though GIAHS is the international certification, FAO's direct interventions are very limited in the GIAHS management system in Japan, and are almost nonexistent after the point of designation. Thus, in a practical sense, the GIAHS management scheme in Japan is putting a huge burden on the local government side in terms of actual preservation activities. This phenomenon can be analyzed in the context of three types of gaps

between the layers of the organization of GIAHS management in Japan (FAO, MAFF and local government).

The first gap can be termed an “interest gap”, which describes a difference in understanding of the use or role of GIAHS among the different layers of management according to their different interests as organizations. As FAO is an agency of the United Nations that leads international efforts to defeat hunger, FAO’s ultimate aim is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives (FAO 2019), and the GIAHS initiative is also in association with these goals (FAO 2018), which is mostly target developing countries. As the top administrative body responsible for agriculture, forestry, and fisheries in Japan, MAFF’s mission statement is to “Secure the stable supply of food, development of agriculture, forestry and fisheries, promotion of farmers’ and fishermen’s welfare, revitalization of rural areas and mountainous areas, demonstration of the multifunctionality of agriculture, perseverance, and cultivation of forests, promotion of the productivity of forests, and proper protection and administration of aquatic resources” (MAFF establishment law chapter 1, section 2 2019). MAFF also focuses on the stable supply of food at the domestic level but is additionally invested in protecting the producers and production area at the first place on the national level. Rural promotion and demonstration of the multifunctionality of these areas, which is the stated main role of GIAHS in MAFF’s framework (see section 3.2.4), are more incidental compared to these main focuses. On the other hand, local governments have to directly tackle the individual challenges surrounding the agricultural system in each area since they are facing inevitable social changes such as aging and depopulation, and try to do so in part by utilizing the GIAHS certification system. Thus, although originally GIAHS was designed for the protection of the agricultural systems in developing countries, MAFF has tried to localize it and promote it as a tool for rural

revitalization, which is indirectly supporting MAFF's main goals overall. However, both FAO and MAFF's ideologies are far from nuanced and stark reality of these local areas.

Secondly, there is an "accountability gap", which describes the differences in the responsibilities to implement GIAHS among each layer. Although FAO is responsible for recognizing GIAHS sites, it does not take a practical role in implementing GIAHS in Japan, although it does give implementation assistance to developing countries. This means that after designation, FAO has little responsibility for the success of GIAHS sites. MAFF, representing the Japanese national government, has some responsibility for the general success of all Japanese GIAHS sites, but they argue that because each designated area is unique, indicators and practices for maintaining GIAHS should be set by local governments. Therefore, the local government is left responsible for making the concrete plan and putting in the actual effort to maintain the agricultural heritage system, although this is difficult due to the need for financial support and aging and depopulating society. Thus, in this system, if the preservation of GIAHS fails, it appears as primarily the local government's responsibility, while if it succeeds, all parties appear positively. In other words, FAO and MAFF puts a huge burden of maintaining GIAHS sites on the local governments that preside over them. While these local governments faced pressures to preserve or revitalize their areas of administration anyway, the framework of GIAHS and attention given to agriculture heritage systems under it represents an additional pressure on local governments to behave in certain ways that prioritize the agricultural heritage system. FAO and MAFF may have the power to recognize GIAHS and manage the overall certification system, but only local governments are actually directly working on preserving the agricultural heritage systems involved.

Lastly, there is a "structural gap", which describes the difference in size, resources, organizational structure, and purpose of each layer. FAO is an international organization that is mostly focused on ending hunger and poverty in developing countries, and while Japan is

one of their largest donors, it is not necessarily a prioritized target of their activities. MAFF is a national governing organization that seeks nationwide development, and as such it desires to support Japan as a whole, but at the same time cannot (fairly) prioritize any certain area. In this context, only the local governments have the responsibility to focus on their own problems at the ground level to protect their agriculture systems.

In terms of resources, FAO and MAFF have a high number of financial and human resources and operate at a large scale. In fact, MAFF is one of the biggest donors to the GIAHS initiative in FAO, even as they complain about not having much budget to implement GIAHS activities domestically (MOFA 2020). On the other hand, local governments struggle with much fewer financial and human resources, and their scope of activities is limited. Because of this difference in resources, FAO and MAFF have the stability to aim for international or national recognition of GIAHS that can be achieved over a long-term time scale, but local areas are dealing with urgent threats, so their focus in using GIAHS is more on how to survive the rapid changes facing them. Local governments need change in the short term as well as long term, particularly considering the aging and declining farmer population. These structural differences create a huge gap in the key interests of each group in terms of aims and practical sense of action, tying in with the previously mentioned interest gap and accountability gap.

4.2 Analysis of GIAHS implementation at the ground level in Sado city

4.2.1 Gap between administrative side and local stakeholders' perception of "Success"

As was identified in section 3.6.1, there are two different kinds of perceptions of the success of GIAHS in Sado. One is from the city government's side, measured by self-set monitoring indicators, that ultimately gets passed on to MAFF and made public, and the other side is the perceptions of the local people, which are not expressed quantitatively and do not get public

exposure or a national audience. Through the process of analyzing this phenomenon, this section explores how the success of GIAHS should be measured.

At the most recent monitoring in Sado, most of the activities on the list in the action plan were positively evaluated, however, most of the informants interviewed mentioned in some form that they found there to be little positive change after GIAHS designation. Why this discrepancy? There are several possible reasons. Firstly, the monitoring indicators that Sado city has set in their action plan are a mixture of the GIAHS-specific activities and other activities that support but are not directly connected to GIAHS and are furthermore conducted by different departments and organizations. Examples of GIAHS-specific activities are the “GIAHS brand mark” and GIAHS education program for students in Sado, both of which are explicitly stated to be activities for the promotion of GIAHS. Activities and indicators indirectly related to GIAHS are, for instance, “increasing the percentage of the best quality rice”, which is monitored by the local JA, and “increasing the settlement rate of CRCS after the term of mission”, monitored by regional promotion department in Sado city hall. These indicators are related to the agriculture system and their success supports GIAHS preservation eventually, but the associations that conduct these activities are not mainly aiming to preserve GIAHS by doing these activities. Thus, even if these types of indicators are set in the Sado GIAHS action plan and achieved, these positive results will not necessarily be perceived as the success of GIAHS action plan, but instead as achievement of the individual activities and organizations themselves. Secondly, the activities intended to promote local understanding of GIAHS, such as “Sado Meguri Juku” and “Sado Kids Ikimono Chōsatai”, as well as many biodiversity conservation activities, do not express in their titles that they are activities related to GIAHS. As mentioned previously, this may be due to the generally low familiarity of GIAHS among Sado residents and the exclusive image that “GIAHS is all about Japanese crested ibis”. Finally, it is reasonable to connect the lack of overall knowledge about GIAHS and related lack

of positive local perception about GIAHS activities with the limitations of the local government to effectively conduct promotion activities, in part driven by the lack of human resources for GIAHS in Sado city hall that many informants pointed out.

There are several possible methods to bridge this gap between the image of success shown by the indicators and the perception of the local people are. Firstly, it is important for Sado to further collaborate with various stakeholders in setting monitoring indicators in order to foster broader comprehension of GIAHS. For example, when borrowing the results of other measures made by separate organizations and departments as a GIAHS monitoring indicator, it is important for the local GIAHS management officials and those other groups to mutually understand the impacts of the given monitor on GIAHS at the source. It is important for other associations to understand how individual activities are related to and contribute to GIAHS. Secondly, it is important to actively expand the interpretation of GIAHS, dispel the exclusive image of “GIAHS is all about Japanese crested ibis” and change the image of residents towards GIAHS to be more inclusive of a variety of forms and functions. While the Japanese crested ibis as a symbol of biodiversity conservation continues to be emphasized as an extremely important presence for Sado, efforts to convey that all the local resources of Sado are also an important part of GIAHS has to be emphasized. In fact, due to the increase in the number of ibises in recent years, the habitat of ibises has also expanded to all around Sado island (interview E).

4.2.2 GIAHS's complexity and characteristic of local municipalities

When Sado was designated as GIAHS, there was no official action plan format in Japan, therefore the two action plans created so far by Sado city were designed originally by the city government. Even without national government support, Sado city still had guidelines for the action plan according to the five major criteria of GIAHS: 1) food and livelihood security, 2)

agrobiodiversity, 3) local and traditional knowledge systems, 4) cultures and value systems and social organizations, 5) landscapes and seascapes features.

Since designation, GIAHS implementation in Sado has been overseen by an office in the agricultural department, and agricultural indicators make up the majority of the monitoring indicators. However, since five criteria outlined by GIAHS are intricately intertwined and involved more than just the agriculture itself, they are likely not able to be achieved by just promoting the agriculture sector alone. Greater adherence to this requirement for interconnectivity and a broader scope will help support the internal and external cooperation of local governments among their own departments and with outside stakeholders, beyond the traditional barriers of “vertical administration” in Japanese local government. At the same time, in order to achieve this goal, it is necessary to have the appropriate human resources, staff capacity, motivation and strong leadership for GIAHS that can lead to comprehensive and multi-layered collaboration.

4.3 GIAHS implementation in the context of “Rural revitalization” in Japan

4.3.1 GIAHS’s aim and objective under MAFF’s management of GIAHS

Agricultural and rural areas are facing critical situations due to urbanization, agricultural globalization, and a decrease in the number of farmers. The global liberalization of trade and the rise of neoliberalism has forced rural communities in developed countries such as Japan to undergo major restructuring (Ichikawa 2017). Especially in Japan, there are various problems such as a lack of agricultural workers, an aging society, the reduction of agricultural production, and an increase of abandoned farmland (Yamamoto 2019).

In response to those social situations around agriculture, rural revitalization has been discussed for over 30 years in agricultural policy in Japan. Akitsu (1996) identified the transition in governmental recognition of rural areas by analyzing MAFF’s white papers on agriculture. Akitsu found that ‘rural revitalization’ (地域活性化) as a term began to be

discussed in 1985, which coincides with acceleration of the globalization of agriculture in Japan. Furthermore, it was around that time when the issues of depopulation in rural areas and centralization to urban areas began to be revealed (Akitsu 1996). At that time, ‘rural revitalization’ was originally proposed as an idea for balancing the overconcentration of population and industry in big cities (Akitsu 1996).

Analyzing the current policy documents which that explain the role of GIAHS (see 3.2.4) such as the current *Basic Plan for Food, Agriculture and Rural Areas* (MAFF 2020a, pp. 63) and the operation guide for GIAHS and JNIAHS application and authorization (世界農業遺産への認定申請に係る承認及び日本農業遺産の認定に関する実施要領) (MAFF 2020h, pp.1), there are several key goals attached to GIAHS implementation found in the documents (*Table 6*). These documents clearly state the intention of GIAHS to contribute to “rural promotion” (農村振興), which is clearly connected to the idea of growth and development within the rural revitalization discourse and can be understood as a proxy term for “rural revitalization”.

Table 6 Keywords in policy paper about GIAHS

<p>Basic Plan for Food, Agriculture and Rural Areas(pp.63)</p>	<p>operation guide for GIAHS and JNIAHS application and authorization(pp.1)</p>
<p>Key words</p>	
<ul style="list-style-type: none"> • encouragement of citizen appreciation of the multifunctionality • to promote interaction between urban and rural areas • (to promote) the tourism 	<ul style="list-style-type: none"> • supporting the succession of traditional agriculture, forestry, and fisheries • fostering the local people's confidence and pride

	<ul style="list-style-type: none"> • (encourage the)participation of diverse stakeholders in local activities • activation of local industries • tackling the diverse challenges faced in rural promotion efforts
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(Source: MAFF 2020a, pp. 63, MAFF 2020h, pp.1)

Although government expectations of GIAHS as a tool for rural revitalization are understood in policy from the perspective of short-term visible changes (i.e. increasing tourism and activation of local industry), the real impacts of preservation of GIAHS should be understood in a long-term perspective as a constant effort that may not lead to much visible change. Since one of the important features of GIAHS designation is that designated areas should have over 100 years of historical relevance that can demonstrate how the designated area “has adapted to the surrounding environment over time and how farmers have developed specific knowledge and techniques to form the current landscapes and systems”(FAO 2018,pp.10), designated areas are expected to continue their history of adaptation and development in sustainable fashion. Therefore, the philosophy of GIAHS’s significance designed by FAO is meant to be achieved in the long-term, however, the expectations of GIAHS’s role as set by MAFF and promoted to local areas have clear short-term aspects. These different timescales for expected impacts can cause a disconnect between the intended outcomes of GIAHS between the different organizations responsible for its implementation.

In Japanese society, the trend of aging and depopulation is inevitable, especially in rural areas (MAFF 2020c), thus, the ideal of continuous growth is not realistic for local governments in designated areas, even though MAFF expects that GIAHS will contribute to ‘rural revitalization’, which is historically strongly connected to the idea of growth.

FAO’s original idea of GIAHS can represent different pathways for rural viability which are not expecting continuous growth, but rather seek to sustain and maintain their agricultural system by adopting adaptive responses to social change, including economic, cultural, and demographic factors. This potential is seen in Sado already, as demonstrated in the relative stability of the percentage of Toki to Kurasu Sato rice certified farmers and farmland under GIAHS over time (*Figure 7*). Although the total number of certified farmer and farmland has been decreasing, the proportion has been maintained at certain level, a relative success amidst the inevitability of population decline.

Due to the staunchly traditional bureaucracy and budgeting system in Japan, shifting the mindset of ‘rural revitalization’ from a growth-centric ideology to one that is maintenance or sustainability-centric will be not easy. Hopefully, however, GIAHS in combination with other rural promotion activities and preservation efforts can contribute to long term stability.

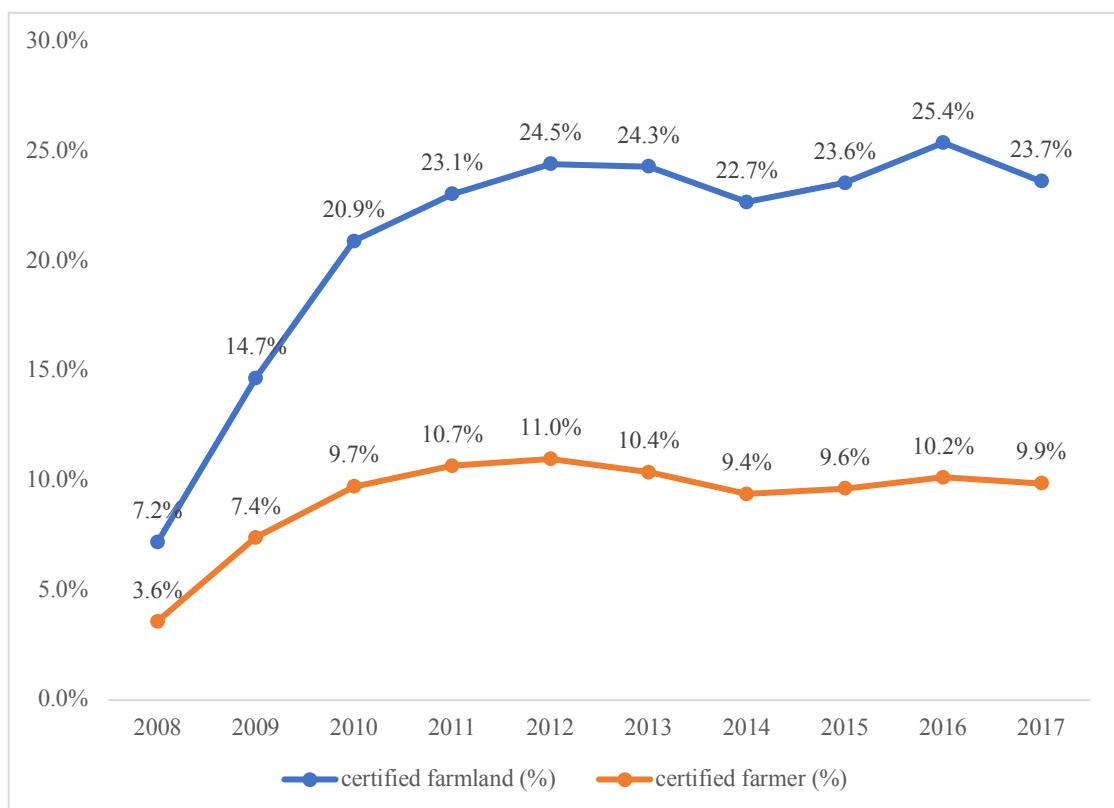


Figure 7 Percentage of Toki to Kurasu Sato rice certified farmer and farmland

(Source: Sado city 2019c)

4.3.2 GIAHS's role in Sado's rural revitalization strategy

In the broader context of Japan's efforts towards rural revitalization, it is apparent through these results that although GIAHS is presented as an option available to Sado to further its rural revitalization, it has not yet been totally successful, largely due to the several gaps identified between the key groups responsible for the various aspects of implementation. Rather than providing a framework for sustainability of agricultural heritage systems in Sado, GIAHS designation was initially added on top of Sado's pre-existing rural revitalization activities, such as Toki-certified rice. Although this has not been perceived to benefit Sado by the local people, for Japan as a nation GIAHS as whole may be useful in trying to attract international attention and raise its stature as a country rich in cultural heritage. The broader implications of this study indicate that the GIAHS framework in Japan could perhaps be limited by its lack of general administrative support from the national government towards rural areas. Furthermore, although some areas have been designated as GIAHS in Japan, GIAHS does little to help Japan address its rural revitalization problems in its many other struggling areas, as GIAHS is a highly limited framework that draws attention and resources only to designated areas like Sado. Even in a designated place like Sado, the overwhelming demographic changes are still a threat to local agricultural and community sustainability that GIAHS cannot tackle alone, meaning that alternative solutions that address the core socio-economic factors behind these broad changes need to be further sought.

5 CONCLUSION

Once again, it is important to state that family agriculture and traditional agricultural systems have been threatened in both developing and developed countries because of the globalization of agriculture, declines in farmer populations, and industrialization. In response to these global trends undermining family agriculture and traditional agricultural systems, in

2002 FAO launched the Globally Important Agriculture Heritage System (GIAHS) program. Subsequently, Japan, facing particularly severe demographic issues in terms of its aging and declining population as well as an overall decline in agricultural productivity, joined the GIAHS program in 2011 and has attempted to utilize the GIAHS certification scheme as one of several methods to increase the vitality of its struggling areas. This research has endeavored to understand the details of GIAHS management system in as form of rural revitalization within the broader context of agricultural policy in Japan and the nuances and impacts GIAHS implementation in designated rural areas. Taking Sado city in Niigata Prefecture as a case study, this research focuses largely perspective of local stakeholders who has been working on preservation of GIAHS in ground level while also analyzing the structure of the GIAHS management system from the local to the international level.

As discussed in the first chapter, existing research has discussed international comparisons of the GIAHS management system in Japan (Jiao & Min 2016, Yiu et al., 2016) with other countries, however, there is currently no literature that analyzes and clarifies the details of Japanese GIAHS management system itself. Additionally, in terms of local implementation of GIAHS there is some research about local government management of GIAHS implementation in Japan(Tanaka et al., 2018,Kohsaka et al., 2019), but this research is limited only to local government officials and does not include the voices of local stakeholders.

Responding to these identified research gaps, this research aims to identify the characteristics of the GIAHS management the system in Japan and how it has been interpreted as a rural planning strategy in a designated area by fulfilling the following research objectives:

- 1) Understand the structure of GIAHS management in Japan.
- 2) Identify and analyze the backgrounds, aims, expected outcomes of GIAHS implementation in the national government level and local level.

3) Identify and analyze the gaps and connections between each management level and how they affect GIAHS implementation at the ground level.

4) Identify the perception of local stakeholders about GIAHS

As described in chapter 2, in order to achieve these objectives, this study critically investigates and analyzes the institutions responsible for implementing GIAHS, namely, (FAO, the Japanese the national government, and local municipalities,) in order to highlight and contextualize the background of Japanese GIAHS implementation. This is accomplished through an analysis of policy papers and reports from FAO, MAFF, and the municipality of Sado regarding GIAHS in order to clarify the overall structure of the GIAHS system in Japan, supplemented with a key informant interview with a MAFF official responsible for GIAHS implementation. In addition, in order to capture ground level perspectives and insight on GIAHS implementation in Sado, seven key informant interviews were conducted with a variety of local municipality officials and local stakeholders.

In chapter 3, the GIAHS management system was described by each level of management (FAO, MAFF, Sado city), including each of these groups' aims and objectives toward GIAHS. Section 3.2 described MAFF's approach to GIAHS management through a combination of document analysis and analysis of the data from the interview with H. In summary, MAFF's current approach to the GIAHS program in Japan are as follows: 1) the priority of MAFF in the GIAHS program is increasing the familiarity of GIAHS among Japanese people to maximize the individual activities in each designated area, and 2) preservation of GIAHS should be directed by the local level, but not through a top-down approach from national government, because each area has unique situation. Regarding these two points, MAFF's budget for GIAHS in 2020 is reserved only for promotion events for increasing familiarity of GIAHS and events promoting international cooperation, but there is no budget allocated for

direct financial support for designated areas. As such, GIAHS program in Japan as promoted by MAFF is currently designed for encouraging a bottom-up approach for preserving agricultural system and promotion of the rural area by placing the most agency and responsibility for GIAHS implementation on local authorities. Furthermore, this section shows that even though GIAHS is an international certification, after the designation, there is little intervention from the governing international organization, FAO. Thus, although GIAHS has promotional value as an international certification scheme and demonstrates the philosophy of preservation of agricultural system, in terms of its implementation, the actual impacts depend on each individual country's interpretations of the program referring to their own domestic situations.

In section 3.4, taking Sado city as a case study, the paper identified characteristics of GIAHS management at the local government level. Sado city was designated as GIAHS in 2011 based on the evaluation of its ecosystem complexity together with satoyama and satoumi landscapes which foster rich agricultural biodiversity, Sado's history of protection of Japanese crested ibis and also the success of its "Toki to Kurasu Sato" rice certification (FAO 2020). Sado's application to GIAHS was supported by UNU and MAFF in line with the general Japanese and UN movement for advocacy for GIAHS and the "Satoyama initiative". Even though the application process was externally motivated, the actions of Sado city hall for the application were very quick and their driving force in pioneering GIAHS in Japan is to be admired. However, the rushed application process leads to a relative lack opportunity to slowly and more thoroughly build consensus and understanding about GIAHS among Sado citizens.

These local stakeholders' perception of GIAHS in Sado were explored in section 3.5. From the key informant interviews, it was determined that because of the history behind the GIAHS designation being so closely tied with Sado's efforts for protecting the Japanese crested ibis, there is still an image among Sado citizens that "GIAHS is all about Japanese crested ibis".

Although there are some activities intended to change the mindset of Sado citizens and create opportunities to increase understanding about GIAHS, almost all of the informant mentioned that many Sado citizens were “lacking familiarity and understanding about GIAHS”. Furthermore, although the results from latest monitoring in 2019 indicated that Sado GIAHS scored A or B for almost all of the indicators which were set in their action plan, many of the local stakeholders do not feel positive benefit from GIAHS designations (see 3.5.4). It was determined that overall, Sado GIAHS has indeed been successful in terms of their self-set monitoring criteria, however, the impression of the positive impacts of GIAHS among local stakeholders is limited, and familiarity and understanding about GIAHS among farmers and ordinal citizens has to be improved in order to bridge this gap.

As discussed in chapter 4, in the process of localization of GIAHS in Japan has made its role more focused on short-term and growth-oriented impacts, in line with the general situation of urgently declining agriculture and rural areas in Japanese society, exemplified in the necessity of rural revitalization due to rapid aging and depopulation in rural areas. Since GIAHS is an international certification applied at the national government level and the practical implementation is mainly done by at local government level, there are several gaps which were identified due to the fundamental differences in the size, organization, power, and purpose of each organizations each management layer (FAO,MAFF and local government) (“interest gap”, “accountability gap” and “structural gap”, see 4.1).

In addition to these gaps, it was identified that although the philosophy of GIAHS as designed by FAO is meant to be achieved in the long-term, the expectations of GIAHS’s role as set by MAFF and promoted to local areas have clear short-term aspects, which create another form of disconnect between the layers of organization and makes the ultimate role of GIAHS in Japan less clear. These different timescales for expected impacts also result in a rift between the intended outcomes of GIAHS among the different organizations responsible for its

implementation, with the local governments ultimately bearing the biggest burden for both responses to immediate threats to existence as well as the groundwork necessary for long term success. In Japanese society, it is clear that the current trend of aging and depopulation is will continue for some time, especially in rural areas (MAFF 2020a), thus, seeking continuous growth or even a return to the previously levels of population and economic output based on primary industries is not realistic for local governments in designated areas, even though MAFF expects that GIAHS will contribute to ‘rural revitalization’, which is historically strongly connected to the idea of growth. FAO’s original idea of GIAHS, centered on the ideal of adaptive preservation, can represent different pathways for rural viability which do not expect continuous growth, but rather seek to sustain and maintain their agricultural system by adopting creative and diverse responses to social change, including economic, cultural, and demographic factors.

It is noted with regret that due to the spread of COVID-19 in Japan, a planned second fieldwork intended to be conducted in March 2020 in Sado city was canceled. This field work planned for further snowball sampling to cover more voices from local stakeholders, including several elderly residents, and also site observation in Sado city over the course of two weeks. After a discussion with an official in Sado city hall, the field work was cancelled out of respect and concern for the local residents’ feelings and health risk, as well as the risk to the author taken upon traveling to the field. In order to support the data, an interview was conducted via phone with a Sado city official and supplemental documents were sent to the author via email. Even though this research covers several voices from among core stakeholders who were/are supporting GIAHS management activities in Sado, once the risk of COVID-19 has dramatically decreased, further research has the potential to capture more voices from different groups, such as new farmers, school teachers, fishermen and Sado city officials working in other

departments with similarities to GIAHS, such as the Sado Geopark and UNESCO Cultural Heritage projects.

Future comparative research about GIAHS management in Japan is necessary to continuously determine and evaluate the impacts of GIAHS implementation in rural area from a long-term perspective. This research chose Sado as the case study due to it having the longest history as a GIAHS site among Japanese sites, but the necessity to do longitudinal research in emerging designated area in Japan both immediately after designation and once a certain number of years have passed is recognized. Since each designated area's agriculture system has very diverse characteristics in terms of topography, types of crops and management system, further research is necessary to compare each case and comprehensively analyze the GIAHS management system in Japan with more data about the various case sites. Since Japan is the first developed country to join GIAHS designation and is at the forefront of demographic challenges that are beginning to appear in other countries around the world, the lessons from Japan's experiences can be utilized for improved GIAHS implementation in other developed and developing countries which are facing the increasingly common challenges of an aging and shrinking society and declining rural areas and agriculture.

APPENDIX

Table 7 Result from self-monitoring in 2019

Vision	Indicator	Lank
(1) Utilization of GIAHS in School education and promotion of experiencing GIAHS	①Activities in Sado general high school ② Fostering the understanding of GIAHS among citizen through the experience of " Sado meguri Juku" • Total participant: 20 (2015) → 356(2018) • Total number of times: 2 (2015) → 20 (2018) • Total number of participants of "Sado kids Ikimono Chōsa tai": 241 (2015) →329 (2018) ③Utilization of GIAHS in obligatory education • Number of school apply GIAHS to their class: 0 (2015) → 5 (2018) • Guidance for school teachers: 0 → 3 (2018)	A
(2) Preservation and promotion of GIAHS	Construct the structure of evaluation and Visualization of GIAHS preservation activities at citizen level	B
(3) Heighten the philosophy of GIAHS through food education and local produce and local consumption	①All the school in Sado use local rice for the school meal ②Invite farmers and local rice store to school for the lecture	A
(1) Secure supply of irrigation water	Progress of construction project: 48.4 % (2015) → 83.8 %(2018)	A
(2) Secure the farmers and reduce abundant land	Improvement of agricultural production base: 0 (2015) → 28.0 ha (2018)	B
(3) Promote the environment of agriculture land fostering Japanese crested ibis	Started monitoring the habitats of loach	A
(1) Formulation of Sado agriculture vision	Formulated the Sado agriculture vision	A
(2) Promote the "Sado foster parents (Satooya)" system and Large scale and stable farming project	Collaborated with activities for inviting immigrants, promote the matching of potential farmers and mentor	A
(3) Smooth introduction of new farmers and support for establishment agriculture cooperation	• Number of agriculture corporation: 51 (2015) → 57 (2018) • Total number of New farmers: 99 (2015) → 142 (2018)	B

(4) Technical support for returned farmers who retired from other jobs	Number of participants : 10 (2015) → 70 (2018)	B
(1) promote CRCS to stay in Sado and implement the internship system	<ul style="list-style-type: none"> • Total number of CRCS stays after the mission : 19 (2015) → 28 (2018) • Percentage of CRCS stays after the mission : 75.0 % (2015) → 76.0 % (2018) 	A
(2) Niigata University Human resource creation project and Built the association for conveying Biodiversity friendly agriculture	Establish the association for supporting guide : 0 → 1 (2019)	A
(3) Collaboration with the University of Tokyo IR3S for the research for the realization of human nature coexisting society	The university of Tokyo Held 3 workshop about future vision of Sado	A
(1) Set the focus of Sado biodiversity strategy	<ul style="list-style-type: none"> • Familiarity of biodiversity: 79.6 % (2013) → 78.4 % (2016) • Rate of the people who knows Sado was designated as GIAHS among people in Niigata prefecture: 77% (2013) → 74 % (2016) • Number of Japanese crested ibis in the wild: 38 (2012) → 268 (2018) 	B
(2) Promote "Connect and support forest, village, river and ocean " Project	Participated in the project	A
(1) Transmission of information about Japanese crested ibis returning to the wild	<ul style="list-style-type: none"> • Number of Observatory: 0 → 1 (2019) • Membership of Toki fan club: 7,100 (2015) → 8,189 (2018) • Number of Japanese crested ibis observation spot: 0 → 1 (2018) 	A
(2) Further strengthening of preservation of biodiversity and Community for watching over Japanese crested ibis	Number of communities participating in the monitoring: 0 → 2 (2018)	B
(1) Promotion the activity of Toki to Kurasu Sato promotion association	<ul style="list-style-type: none"> • The number of certified farmers of "Toki to Kurasu Sato" rice certification: 524(2015) → 436 (2018) • Area of certified rice: 1215 ha (2015) → 1,086 ha (2018) • Participants of paddy field art event: 0 → 200 (2018) 	B

(2) Promotion of Sado rice quality improvement project	Ratio of highest quality rice: 88.6 %(2015) → 89.2% (2018)	A
(3) Promotion of marketing leveraging the strength of Sado rice such as biodiversity friendly farming	The shop sells certified rice: 328 (2015) → 322 (2018)	A
(1) Strengthening of marketing and Expand the stable sales channel for Sado rice terrace rice	Invented smaller package of certified rice for souvenir Expanded the sales channel	B
(2) Increase the membership of rice terrace association and create the sustainable management system	Membership of rice terrace association: 59 (2015) → 75 (2017)	C
(3) Create the system of providing the agriculture experience	The number of Rice terrace supporter: 9 people and 1 association (2015) → 17 people and 1 association (2018)	C
(1) Invent the interactive tour for conveying about GIAHS	Participants of tour: 126 (2015) → 203 (2018)	B
(2) Collaboration with University for rural revitalization assessment and activities for preserving traditional culture	Collaborated with over 70 universities, among the all the project conducted with them over 40 % are related to GIAHS	B
(3) Establishment of Sado culture foundation and promotion of traditional culture promotion project	Establishment of Sado culture foundation: Established (2018) The number of Noh stage: 35 (2015) → 35 (2018) The number of Ondaiko: 120 (2015) → 120 (2018)	A
(1) Promotion project for increasing familiarity of GIAHS with GIAHS broad area meeting	Participants of PR event: 0 (2015) → 776 (2018)	A
(2) Promotion of international cooperation for Ifgao rice terrace	Participated the meeting of "Committee of supporting Ifgao GIAHS" Participated the GIAHS related conference	B
(3) Advocacy for municipal officials for Promoting of J-GIAHS network activity	Communicated with the member of the network	A
(1) Invent the GIAHS promotion tool	Registration for GIAHS brand mark: 0 (2017) → 41 (2018)	B
(2) Organize the basement for promoting GIAHS	Visitor to "Toki no Mori Park" : 169,321 (2015) → 132,048 (2018)	B
(3) Utilize GIAHS and convey the Sado rice strategy	Donation for Environment arrangement for Japanese crested ibis: ¥5,074,000(2015) → ¥5,954,000(2018)	A

(Source: Sado city result from self-monitoring 2019)

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