



Building a tool for evaluating multi-stakeholder collaboration for ecological sustainability: an experimental study of the Sado Living Lab

Mitsuyo Toyoda

Niigata University, Sado Island Center for Ecological Sustainability

&

Keisuke Soga

Pacific Consultants Co., Ltd.

About Sado GIAHS



**Designated as GIAHS in 2011 for its
Agriculture in Harmony with
Endangered Japanese Crested Ibis**

Outcomes of Sado GIAHS

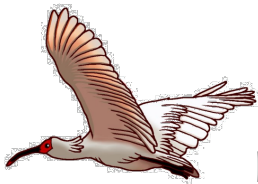
- The significant growth of the population of toki (532birds as of December 2023)
- 10% of rice farmers in Sado have adopted ecological farming methods for habitat conservation.
- Reducing agrochemicals and chemical fertilizers has become a standardized method of rice (koshihikari) farming in Sado.



GIAHS designated by FAO
Sado's Satoyama in Harmony
with Japanese Crested Ibis



Ecological rice farming



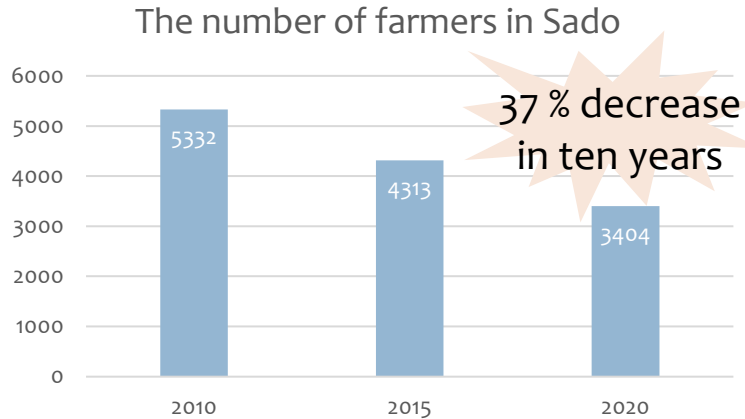
Re-introduction of toki
Conservation of biodiversity



The conservation of satoyama environments

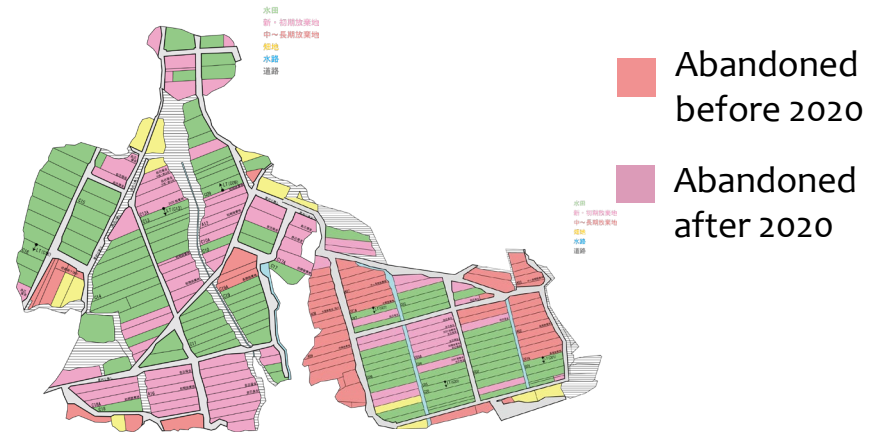
Challenges

The decline of the number of farmers



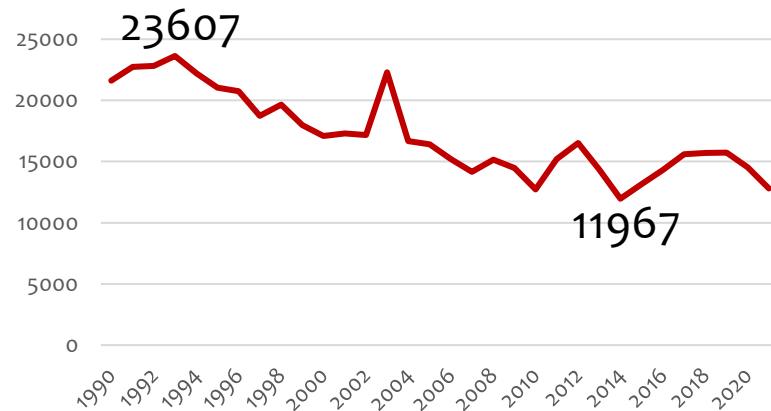
The rapid increase of abandoned farmlands

The case of Utamida rice terrace



Difficulty with improving rice farmers' income

The average rice price has dropped by almost half.



The Sado Living Lab for Sustainability

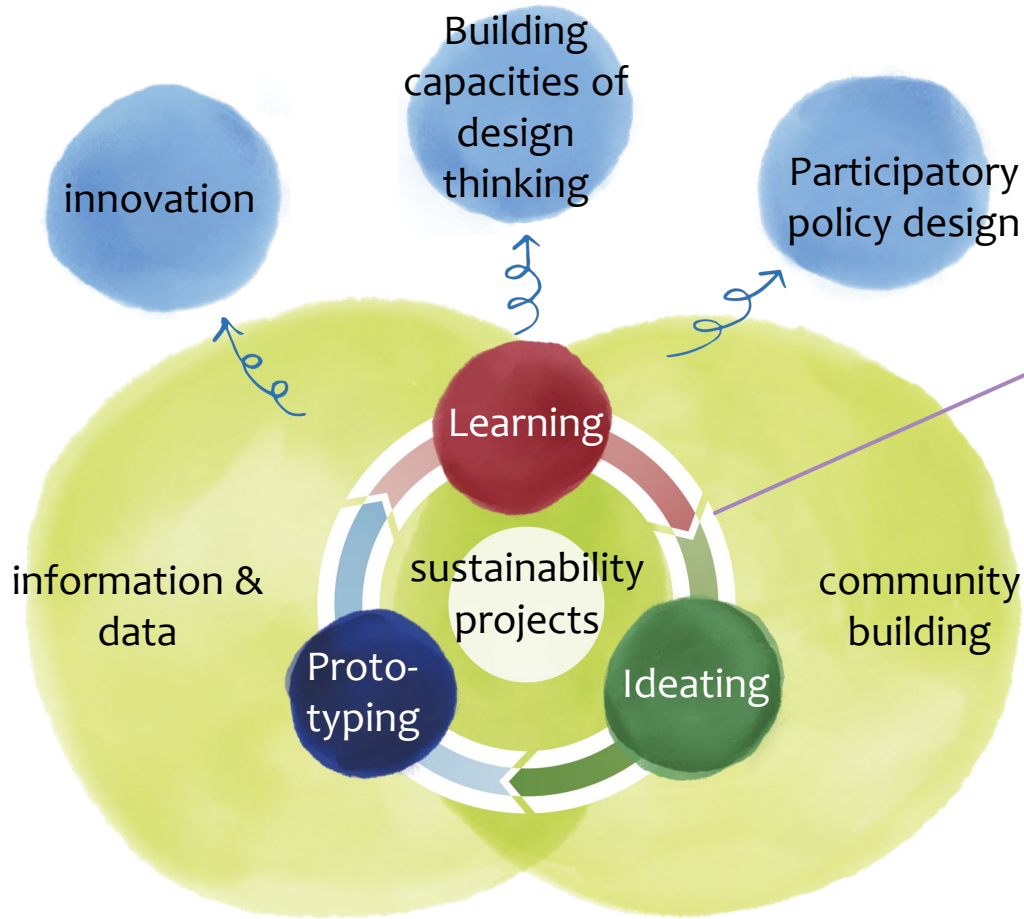


The Sado Living Lab for Sustainability was launched to strengthen the primary industry in Sado and conserve the socio-ecological systems of Sado GIAHS that nurture habitats for toki.

It started as a joint project of Sado City, Niigata University, and NTT Data in 2022.

Living Lab is a system for generating innovations through the multi-stakeholder process of co-creation.

Sado Living Lab Projects



Sustainability projects

- Revitalizing seaweed culture
- Utilization of bamboo
- Ethical food production and consumption
- Collaborative design of local biodiversity policies
- Promotion of eco-volunteer tourism

The projects are growing but it is critical to examine whether the lab is functioning adequately as a mechanism to advance co-creation?

Research framework

How can we evaluate the co-creation processes of our living lab so that we can strengthen its co-creation dynamics?

Aim

To design a scheme for evaluating co-creation processes of living labs in order to strengthen their multi-stakeholder processes.

Process

1. Analyzing the concept of co-creation and identifying its key aspects.
2. Creating a worksheet to evaluate the activities of living lab from the different aspects of co-creation.
3. Piloting the designed worksheet through a workshop and improving it.

Analyzing the concept of co-creation

Reviewed articles and documents, and extracted key aspects that define the concept of co-creation.



Eight key aspects of co-creation

1. Participation of various stakeholders
2. Equality among participants
3. Integration of different disciplines
4. Dialogical processes
5. Engagement and incentives
6. Sharing visions
7. Flexible organizational governance
8. Building better relationships

Questions for self evaluation

8 key aspects of “co-creation”

1. Involvement of various stakeholders
2. Equality among participants
3. Integration of different disciplines
4. Dialogical and learning processes
5. Engagement and incentives
6. Sharing visions
7. Flexible organizational governance
8. Building better relationships

11 evaluation questions examining 8 key aspects

- ① Did you try to include people from diverse backgrounds in your project?
- ② Could participants from different backgrounds discuss equally in decision processes?
- ③ Was decision-making based on discussions?
- ④ Did you try to include various viewpoints from different disciplines?
- ⑤ Did you have opportunities to learn a variety of knowledge and information?
- ⑥ Did you try to improve communication with other participants?
- ⑦ Did you make any effort to improve participants' motivations and incentives?
- ⑧ Were visions and goals shared with other participants?
- ⑨ Did you take any measures to strengthen the organization?
- ⑩ Did you evaluate and reflect on the activities of the lab with other participants?
- ⑪ Did you try to build good partnerships?

Piloting the evaluation process

Target: five members of the management team of Sado Living Lab

The piloting workshop was conducted In October 2023.

Step 1
Individual review



Answer the questions with three options: yes, no or don't know.

Step 2
Group dialogue



Share the results and discuss the gaps.

Step 3
Reflection



Consider how to improve co-creation processes

Improvement of the evaluation scheme through these three steps.

Results

The results of individual review



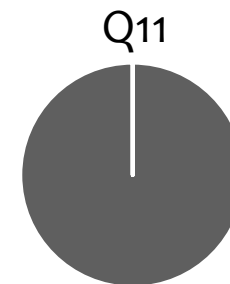
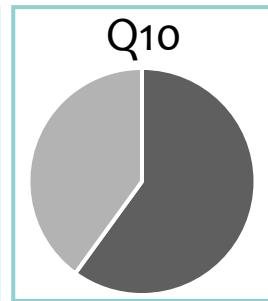
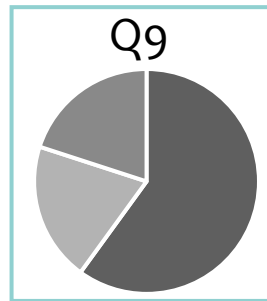
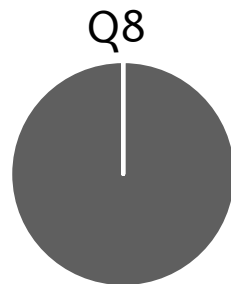
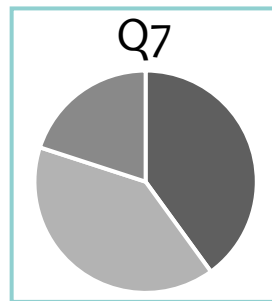
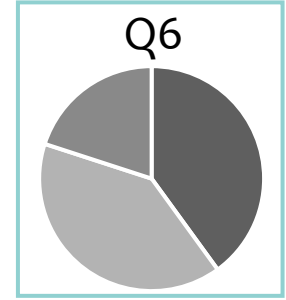
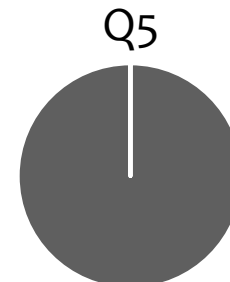
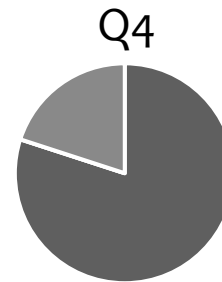
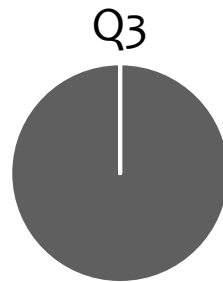
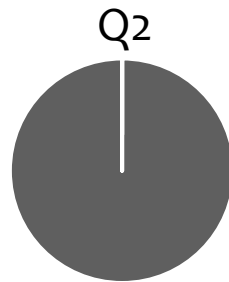
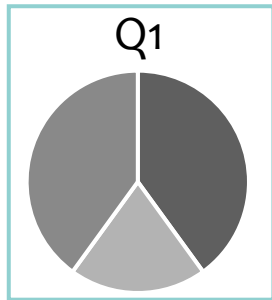
Yes



No



Don't know



Q1: Did you try to include people from diverse backgrounds in your project?

Q6: Did you try to improve communication with other participants?

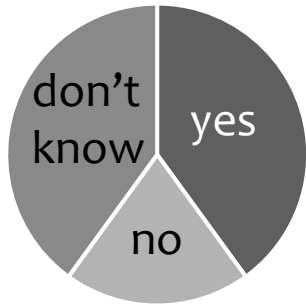
Q7: Did you make any effort to improve participants' motivations and incentives?

Q9: Did you take any measures to strengthen the organization?

Q10: Did you evaluate and reflect on the activities of the lab with other participants?

Results

Q1: Did you try to include people from diverse backgrounds in your project?



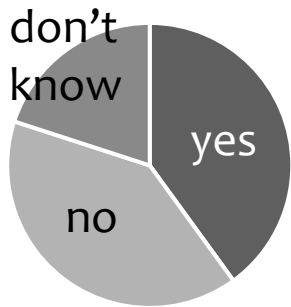
Dialogue

- I chose “yes” because both residents and outsiders with diverse backgrounds began to participate in the projects of the Lab.
- I chose “no” because participants are limited to those with a high interest in sustainability. We have not been successful in involving people who are not interested in the theme.
- I chose “don’t know” because active participants were always the same even though they represented diverse positions.
- I chose “yes” because we were trying to grow partnerships among various stakeholders. However, it is still difficult to facilitate collaboration among various departments of the municipality.

The participants recognized that the interpretation of “various backgrounds” differed among them. This dialogue provided a good opportunity to consider how to involve people with low interests and how to facilitate cross-sectional cooperation in the municipality.

Results

Q6: Did you try to improve communication with other participants?



Dialogue

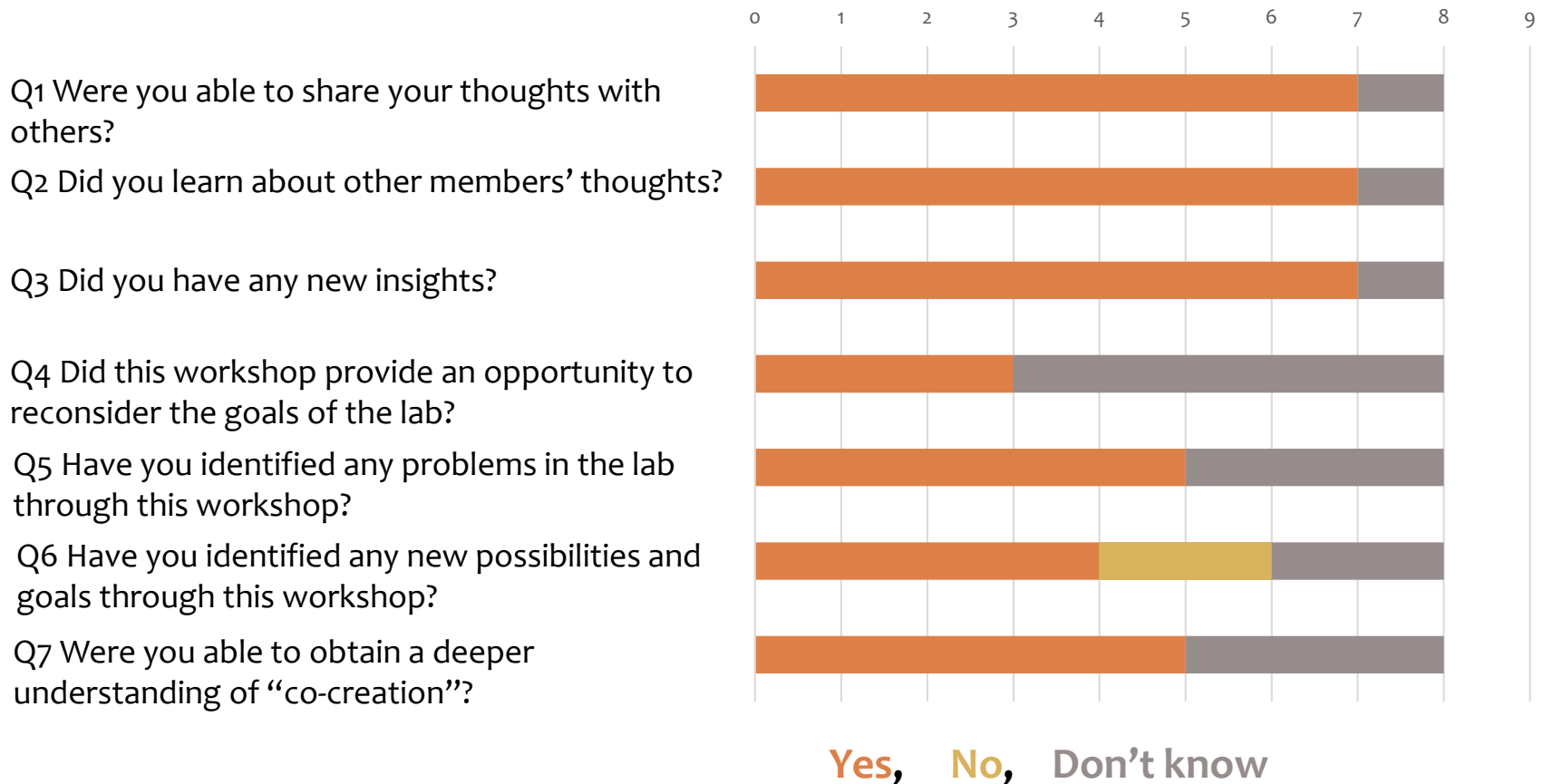
- I chose “yes” because we employed collaboration tools such as Teams and tried to activate communication among participants.
- I chose “yes” although I have not been able to contribute to this aspect.
- I chose “no” because I have not been able to communicate with all the participants. It is also difficult to understand the details of the project's progress only via remote meetings.
- I chose “no” because I have not been able to contribute to building better communication.
- I chose “don't know” because I am still a newcomer and not sure what role I can play in this matter.

The participants evaluated their performances both as an individual and as an organization. Although effective communication is at the base of co-creation, these participants' understanding of good communication was not the same.

Results

Review of the evaluation process (n=8)

After piloting the evaluation process, we conducted a survey to examine whether this evaluation process was meaningful for the participants.



Reflection

- The evaluation process designed in this research was successful in activating communication among the members of the management team of the lab.
- It also provided an opportunity for the team to cultivate a deeper understanding of "co-creation" and reconsider the structure and activities of the lab.
- However, we also recognized the necessity of improving the process to make it more effective in resetting goals.
- We will make further improvements of the process to develop a co-creation evaluation framework which can be applied in various multistakeholder processes.