



**MONITORING AND EVALUATION METHOD  
FOR BIODIVERSITY CONSERVATION  
AND SUSTAINABLE USE THROUGH  
MULTI-STAKEHOLDERS GOVERNANCE**

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# BIODIVERSITY AND AGRICULTURE

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- ❑ **Biodiversity is the basis for Agriculture** (CBD, 2008)

- ❑ **Agriculture impacts Biodiversity;** (CBD, 2008)

Agriculture contributes to conservation and sustainable use of biodiversity

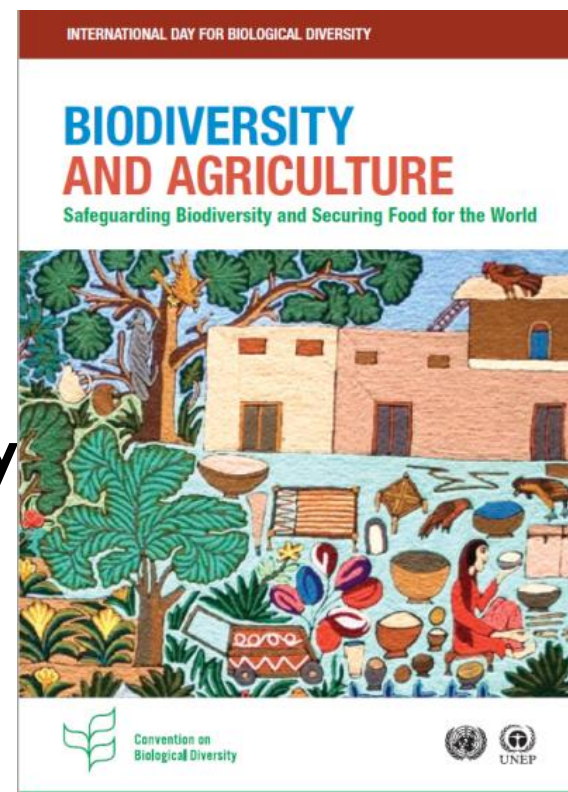
but also a major driver of biodiversity loss

- ❑ **Agricultural Biodiversity make farming systems more robust and sustainable, and maintain stability of species diversity**

(Thrupp, L.A. 1997)

- ❑ Eco-friendly farming contributing to agrobiodiversity conservation becoming more prevalent

- ❑ Yet impact of these efforts may not be apparent without regular assessment



CBD Booklet: Biodiversity and Agriculture,  
International Day for Biological Diversity, 2008

# MONITOR & EVALUATION OF BIODIVERSITY CONSERVATION THROUGH MULTI-STAKEHOLDER GOVERNANCE

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- From August 2015, UNU-IAS is conducting a 3-year Japan Ministry of Agriculture, Forestry and Fisheries (MAFF) funded research project “**Monitoring and Evaluation Method for Biodiversity Conservation and Sustainable Use through Multi-stakeholders Governance” (BME). Research objectives include:
  - Holistically **monitor and evaluate the activities** taken to promote biodiversity conservation through sustainable use of natural capital for agricultural activities.
  - **Incorporate international standards and norms** on M&E process, while including perspectives important to Japan’s current situation
  - Develop new approach for **multi-stakeholders governance****
- Team Leader: Prof. K. Takeuchi.



Annual grass cutting by volunteers to make firebreaks to prepare for the traditional practice of controlled burning of Aso Grasslands in Kumamoto Prefecture, Japan

Members: Evonne Yiu, Kaoru Ichikawa, William Dumbar et.al

# WHY THE NEED FOR MONITORING & EVALUATION (M&E)?

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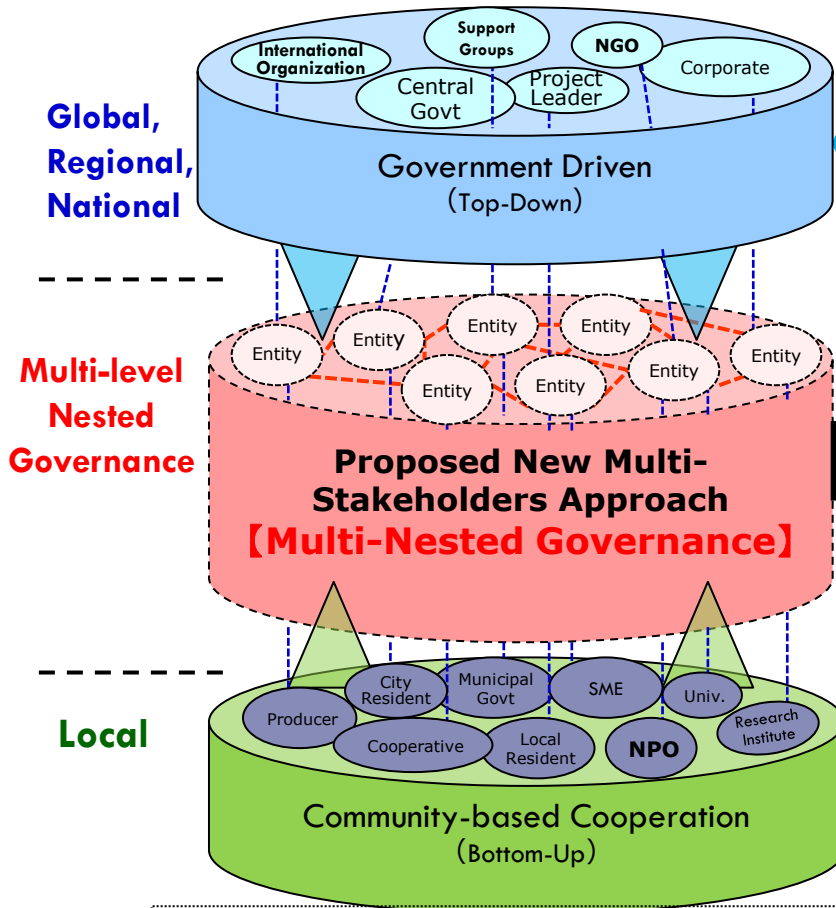


Mulching of tea fields with grass cut from surrounding semi-natural grasslands to improve tea quality and at the same time, maintain biodiversity of the semi-natural grasslands in Shizuoka Prefecture.

- **Ensure effectiveness** of measures/activities taken
- **Enhance motivation** through visible feedbacks of efforts
- Keep track of changes and threats for **timely solutions**
- **Stock take** of conservation activities and its results
- **Streamline processes** to avoid duplication of effort
- For providing supporting data to governments so as to **assist their policy making decisions**
- For **feedback to communities** to sustain interest and encourage commitment
- For **reporting to taxpayers/donors** and share lessons with other similar projects/sites

# MULTI-NESTED GOVERNANCE FOR M&E

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**Structure of Co-Management of Natural Capital Through Multi-Nested Cooperation by Various Stakeholders**

- UNDP Evaluation Model etc
- Evaluation focused on macro level socio-economic aspects encompassing broad perspectives
- Emphasize on third party assessment
- Top down approach

**Monitoring and Evaluation Method taking into account of the needs and current state of rural communities in Japan, and thereby also propose a new approach of co-management (multi-nested governance)**

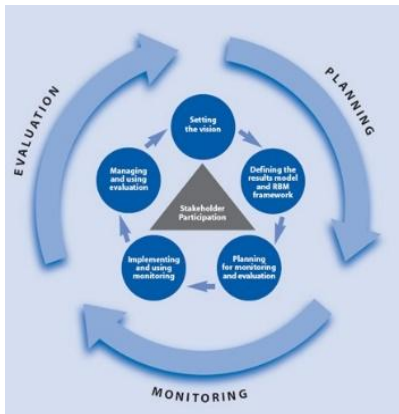
- SATOYAMA Initiative Resilience Indicators etc
- Evaluation focused on micro-level community-based, ecological resilience approach
- Emphasize on self-Assessment
- Bottom-up approach through community-based cooperation

# FORMULATING M&E FORMAT

Formulate M&E format based on international evaluation models such as UNDP and UNU's Satoyama Initiative etc while also including perspectives important and relevant to the Japanese context

## Setting of Actions

### UNDP Results-Based Management (RBM) Approach



### Monitoring & Evaluation Aspects

- Impact
- Outcome
- Output
- Indicator
- Baseline
- Target
- Methodology
- Role of each stakeholder etc

### Factors for M&E (Draft)

Monitoring & Evaluation Aspects	Actions to Be Taken for Conservation		
	Ecological (Biodiversity survey, conservation of indigenous species etc)	Social (Traditional Knowledge, Culture Inheritance, Urban-Rural Exchange etc)	Economic (Certification System, Branding, New Business Models/Ventures etc)
Impact	EVALUATION		
Outcome			
Output	MONITORING		
Indicator			
Baseline			
Target			
Methodology			
Role of each stakeholder	MULTI-STAKEHOLDER INVOLVMENT		

### SEPLS RESILIENCE INDICATOR

Ecological

- Landscape/Seascape biodiversity & ecosystem protection
- Biodiversity (incl. agrobiodiversity)

Social

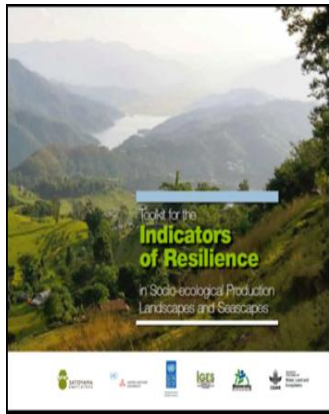
- Knowledge & innovation
- Governance & social equity

Economic

- Livelihoods & wellbeing

# SATOYAMA INITIATIVE: INDICATORS OF RESILIENCE IN SEPLS

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- **IPSI Collaborative Activity (developed by UNU, IGES, Biodiversity International, UNDP)**
- **A tool in engaging local communities to promote adaptive management and strengthen the resilience** of the landscapes and seascapes in which they live.
- Self assessment of resilience of SEPLS using **20 indicators** in five categories (on 1-5 scale) designed to capture multiple aspects – **ecological, agricultural, cultural and socio-economic.**
- Communities can increase their capacity to **respond to social, economic, and environmental pressures and shocks**, thus increasing resilience to such changes
- Both **qualitative and quantifiable** indicators, but **measurement is based on the observations, tallies, perceptions and experiences** of the local communities.
- SEPLS Resilience Indicator assessment exercises conducted under COMDEKS project in about 30 developing countries

# CASE STUDY: USING THE SEPLS RESILIENCE INDICATOR IN JAPAN

- To extract the challenges and relevant factors in the developed countries context, i.e. in Japan.
- A **preliminary self “health check”** of the SEPLS, by first bringing together the **community to form common understanding** of current status and challenges, so as to **sort out what needs to be dealt with**

## Methodology

### 1. Pre-Questionnaires:

- Each indicator response on 1-5 scale
- Description/Multiple choice questions

### 2. Resident Workshop:

- Discussion on results of each indicator to extract the relevant factors



	Hiki area, Suzu City, Ishikawa Pref.	Kiyokawa area, Minabe town, Wakayama Pref.
<b>Characteristics</b>	Multiple livelihoods of farming, fishing and service sector. Aging, decreasing population but also have new residents and so still rather active community	Plum cultivation and charcoal producing are main livelihood source where most of its young people remaining in area to work in these industries. Also few new residents time to time.
<b>Pre-Questionnaire</b>	Jan 2016, directly distributed, response via mail or collection. 100 copies distributed (77 responses)	Jan 2016, directly distributed, response via mail or collection. 100 copies distributed (97 responses)
<b>Work Shop</b>	Feb 2016, 15 residents who responded to the questionnaire respondent participated	Feb 2016, 19 residents who responded to the questionnaire respondent participated





# Interpretation of Results of the SELPS Resilience Indicator Toolkit Exercises

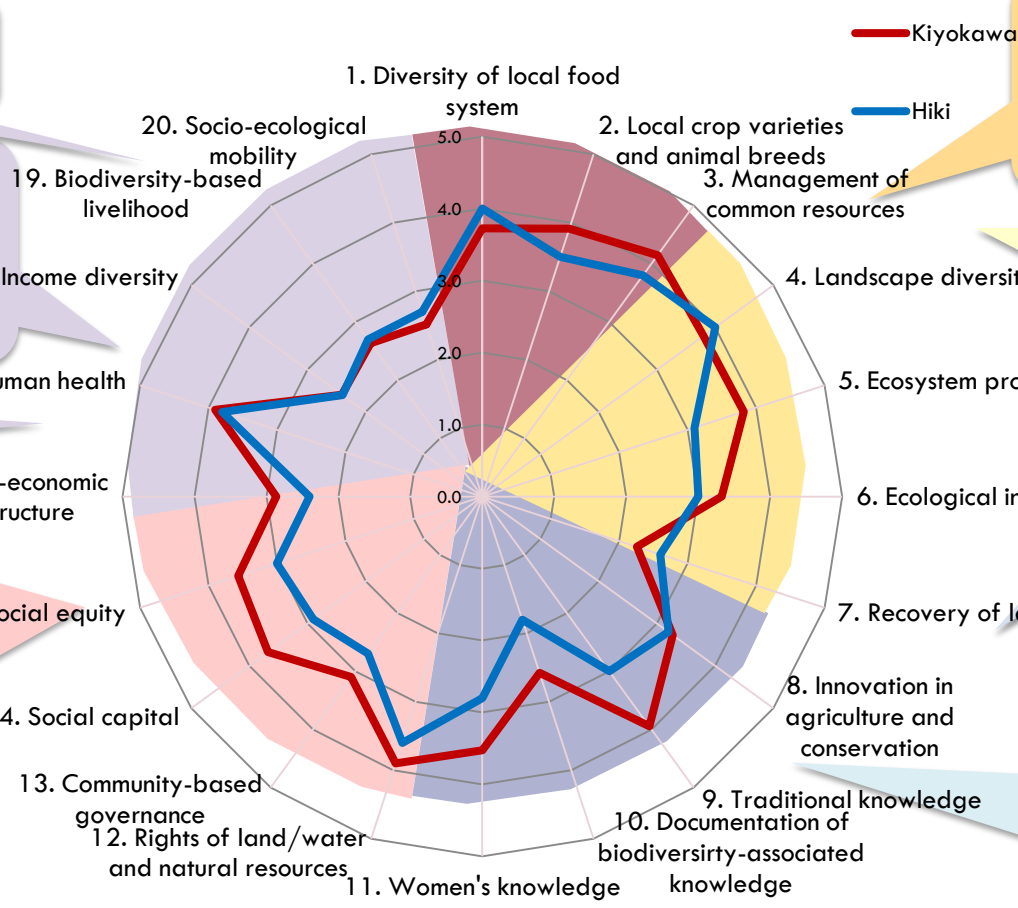
Innovation of new products using indigenous species of vegetables

Lower scores for livelihood indicators.

*"There is not much job here that will provide enough income, so need to have multiple income sources".*

High score for the indicator on health.

*"Fishing ground is being managed by the cooperatives."  
"Communication opportunities among residents decreased because of the closedown of the elementary school".*



Very high scores for indicators on food and agriculture.  
*"We try to consume food produced here as much as possible"*

*"Landscape is diverse but more lands are becoming abandoned"*

*"Bee pollinators of plum used are mostly foreign species, while only few farmers keep indigenous species for hobby"*

Lower scores for indicators on knowledge.  
*"We transmit traditional directly, but opportunity is being lost recently."*

- ❖ **Community-based assessment:** Deepened comprehensive understanding by local people on issues and potentials of the landscape, instill sense of ownership and raise awareness.
- ❖ **Additional factors:** Status of resources use, demographic changes, land ownership, spiritual/cultural attachment to biodiversity etc
- ❖ **Mutual complement :** Should be used in combination with objective assessment by third party expert body



# PROPOSED FRAMEWORK FOR MONITORING & EVALUATION OF ACTIVITIES TAKEN FOR BIODIVERSITY CONSERVATION AND SUSTAINABLE USE THROUGH MULTI-STAKEHOLDERS GOVERNANCE (DRAFT)

## ① FORMULATE ACTION PLAN

1. Current state of site
2. Biodiversity conservation & its challenges
3. Potential for biodiversity conservation & utilization
4. Impact, Outcome, Output, Action Framework
5. Indicator, Baseline, Targets, Methodology, Assumptions & Risks
6. Role & responsibility of each stakeholder

Expected Result	Indicator	Baseline	Target	Method	Assumption & Risk	Stakeholder Entity
Impact						
Outcome						
Output						
Action①						
Action②						
Action③						
Action④						

7. Implementation Structure
8. Mapping of Actions

## ② MONITORING & EVALUATION

1. Conduct of Monitoring & Evaluation
2. Expected Achievements of Targets & Potential for Utilization  
(1) Ecological (2) Social (3) Economic
3. Future challenges
4. Overall Evaluation

Create below matrix (draft) for M&E :

		Action ①	Action ②	Action ③	...
Action [Ecological]					
Evaluation	Impact				
Monitoring	Outcome				
	Output				
	Target				
	Baseline				
	Target				
Role of Entity	Methodology				
	Entity①				
	Entity②				
	Entity③				
	Assumption & Risk				
	Challenge				

## ③ Revisions / Improvements

1. Review of policy actions based on evaluation results
2. Proposed concrete actions for improvement

# RECOMMENDATIONS

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- Need for **Results Oriented Approach** in Implementing Actions
- Cyclical process of **Planning → Monitoring → Evaluation → Revision → Planning** (and so on...)
- Regular Monitoring (every 1-2year) & Evaluation (every 3-5 year) is necessary to make improvements and set new directions
- Such regular, visible feedback helpful to **maintain motivation and sense of involvement**
- Crucial to involve all relevant stakeholders and **gain consensus through several rigorous but necessary dialogues to build common understanding**
- Actions, indicators and targets should be form **based on needs and agreement** amongst stakeholders and to be implemented within their capacity





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# THANK YOU

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