Monitoring and evaluation method for biodiversity conservation and sustainable use through multi-stakeholders governance
Biodiversity and Agriculture

- 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
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.
Members: Evonne Yiu, Kaoru Ichikawa, William Dumbar et.al
WHY THE NEED FOR MONITORING & EVALUATION (M&E)?

- 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

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.
MULTI-NESTED GOVERNANCE FOR M&E

- 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 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

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

Global, Regional, National
- Multi-level Nested Governance
- Government Driven (Top-Down)
- Proposed New Multi-Stakeholders Approach [Multi-Nested Governance]

Local
- Community-based Cooperation (Bottom-Up)
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.
SATOYAMA INITIATIVE: INDICATORS OF RESILIENCE IN SEPLS

- 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

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Hiki area, Suzu City, Ishikawa Pref.</th>
<th>Kiyokawa area, Minabe town, Wakayama Pref.</th>
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</thead>
<tbody>
<tr>
<td>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.</td>
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<table>
<thead>
<tr>
<th>Pre-Questionnaire</th>
<th>Jan 2016, directly distributed, response via mail or collection. 100 copies distributed (77 responses)</th>
<th>Jan 2016, directly distributed, response via mail or collection. 100 copies distributed (97 responses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop</td>
<td>Feb 2016, 15 residents who responded to the questionnaire respondent participated</td>
<td>Feb 2016, 19 residents who responded to the questionnaire respondent participated</td>
</tr>
</tbody>
</table>
Interpretation of Results of the SELPS Resilience Indicator Toolkit Exercises

- **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.

**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.”

- **Innovation of new products using indigenous species of vegetables**
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

<table>
<thead>
<tr>
<th>Expected Result</th>
<th>Indicator</th>
<th>Baseline</th>
<th>Target</th>
<th>Method</th>
<th>Assumption &amp; Risk</th>
<th>Stakeholder Entity</th>
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<tbody>
<tr>
<td>Impact</td>
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<td>Outcome</td>
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<td>Output</td>
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<td>Action 1</td>
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<td>Action 2</td>
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<td>Action 4</td>
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   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:

<table>
<thead>
<tr>
<th>Action</th>
<th>Action</th>
<th>Action</th>
<th>...</th>
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<tbody>
<tr>
<td>Ecological</td>
<td>Impact</td>
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<tr>
<th>Evaluation</th>
<th>Impact</th>
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<td>Outcome</td>
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<td>Output</td>
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<td>Target</td>
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<th>Monitoring</th>
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<td>Outcome</td>
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<td>Output</td>
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<td>Target</td>
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<td>Baseline</td>
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<td>Methodology</td>
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<tr>
<th>Role of Entity</th>
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<tr>
<td>Entity 1</td>
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<td>Entity 2</td>
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<td>Entity 3</td>
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<th>Assumption &amp; Risk</th>
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<tr>
<th>Challenge</th>
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3. **Revisions / Improvements**
   1. Review of policy actions based on evaluation results
   2. Proposed concrete actions for improvement
RECOMMENDATIONS

- Need for **Results Oriented Approach** in Implementing Actions

- Cyclical process of **Planning → Monitoring → Evaluation → Revision → Planning** (and so on…)

- Regular Monitoring (every 1-2 year) & 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
THANK YOU

For enquiries: yiu@unu.edu