CBD COP 13 Side Event,
" Strategic Action for Mainstreaming Biodiversity: Contributions of the IPSI to Biodiversity and Human Well-Being"
6 December, 2016 (Cancun, Mexico)

The Satoyama Initiative: Contributions to Mainstreaming Biodiversity

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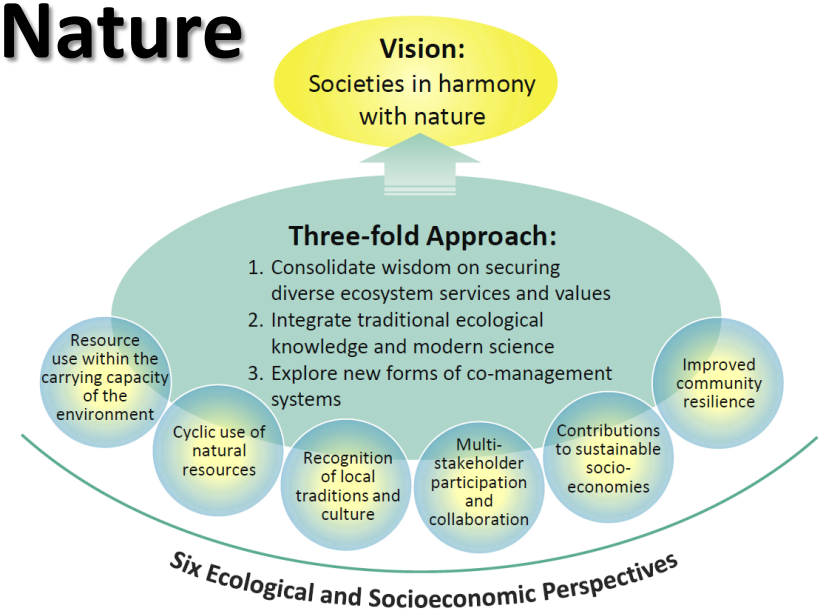
The Satoyama Initiative for Realizing Societies in Harmony with Nature

- A global effort to realize **"societies in harmony with nature"**.
- Embodies the second objective of the CBD, "**Sustainable use of biodiversity**"
- Aims to conserve and restore **socio-ecological production landscapes and seascapes (SEPLS):**

1. Dynamic mosaics of habitats and land-uses shaped through harmonious interactions between people and nature.
2. Provide natural capital and ecosystem services that contribute to human well-being while maintaining biodiversity.
3. Faced with decrease and degradation due to various reasons in many regions.




Agroforestry
(Brazil nut and cacao forest)


Paddy-dominated landscape in Bali


Abandoned paddy fields in Japanese *satoyama* (© S. Okubo)


Homegarden in Kerala (© BM Kumar)

SATOYAMA INITIATIVE

International Partnership for the Satoyama Initiative (IPSI)

- The International Partnership for the Satoyama Initiative (IPSI) was launched during **CBD COP 10** in Nagoya.
- A **multi-stakeholder platform** for **fostering synergies** and **sharing knowledge** on the conservation and restoration of socio-ecological production landscapes and seascapes (SEPLS).
- Grown to **202 member** organizations from 51 founding members.
  - National / local governments
  - NGOs
  - Indigenous/local community organizations
  - Industry/private sector organizations
  - Academic/educational institutions
  - UN or other inter-governmental organizations
- Various activities
  - Collection and dissemination of knowledge
  - Research
  - On-the-ground activities
  - Capacity-building, etc

IPSI Launching Ceremony (Oct 2010, Nagoya-Aichi, Japan)

IPSI-5 (Oct 2014, Pyeongchang, Republic of Korea)

Regional Workshop in Peru (Jun 2016, Cusco and Pisac)

IPSI-6 (Jan 2016, Siem Reap, Cambodia)

Mainstreaming Biodiversity in Agriculture: Andean Region in Peru

Landscape approach

- Integrated landscape management of mosaic of different land uses
- Different land uses with elevation change (Maize → Barley→ Potato → Grassland)

Agro-biodiversity conservation (potato, corn, etc.)

- Different uses depending on variety
- Contributes to climate change adaptation by maintaining genetic diversity
- *In situ* conservation

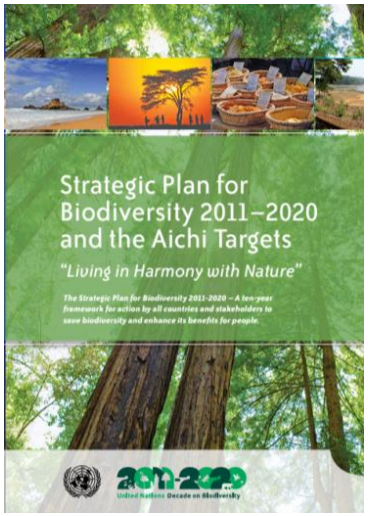
Use of modern technology

- Production of disease-free seed potatoes through modern technology
- Collaboration with International Potato Center (CIP)

Boosting livelihoods by promoting tourism

The Satoyama Initiative and the Aichi Biodiversity Targets

- At CBD COP 10 in Aichi, Japan, the Strategic Plan for Biodiversity 2011-2020 and Aichi Biodiversity Targets were adopted with the vision of "**Living in harmony with nature**".
- The Satoyama Initiative shares the **same vision**.
- Actions in socio-ecological production landscapes and seascapes (SEPLS) can contribute to achieving many of the **Aichi Biodiversity Targets**:



1. People's awareness;
2. Integration of biodiversity values;
3. Incentives harmful to biodiversity;
4. Sustainable consumption and production;
5. Habitat loss;
6. Marine living resources management;
7. Sustainable agriculture, aquaculture and forestry;
11. Protected areas;
12. Species extinction;
13. Genetic diversity;
14. Ecosystems and essential services;
15. Ecosystems restoration and resilience;
17. NBSAPs;
18. Traditional knowledge;
19. Knowledge, science and technologies

SDM projects' contribution to Aichi Biodiversity Targets (self-evaluation by grants recipients)

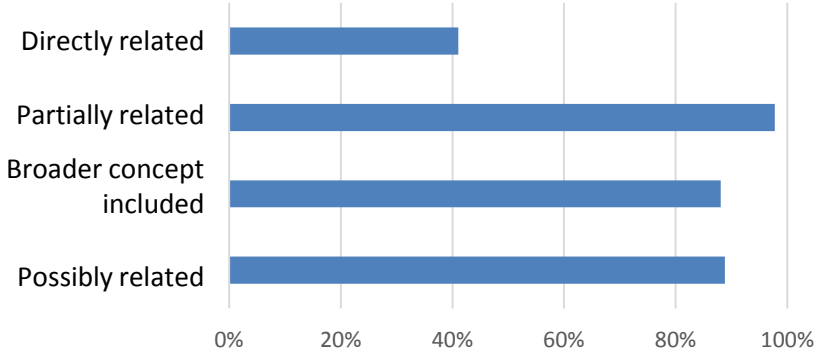
Tangible outcome
Relevant

Project type	Recipient	Aichi Biodiversity Targets																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Community/ field-based implementation	IKAP		■					■				■		■	■				■		
	KAFCOL	■	■												■			■	■	■	
	AERF	■			■	■		■					■		■						
	A Rocha Ghana	■				■		■							■	■			■		
	National Dong-Hwa University	■	■					■				■			■				■		
Research	Nature and Livelihoods			■				■						■							
	SWAN International	■		■	■			■	■												
	APAIC, Peru	■	■					■							■	■					
Capacity building/ Outreach	Center Zapovedniks	■										■							■		

Policy Incorporation:
NBSAP Analysis from the Perspective of the Satoyama Initiative

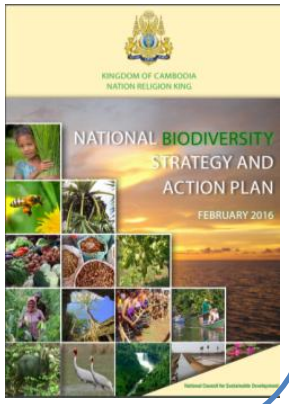
- Research question: **"Are concepts and measures related to integrated approaches in production landscapes incorporated in NBSAPs effectively?"**
- **Text mining analysis of 134 NBSAPs**
  (NBSAPs which were available in English as of 31 July 2016)

Number of countries referring to terms related to integrated approaches in production landscapes

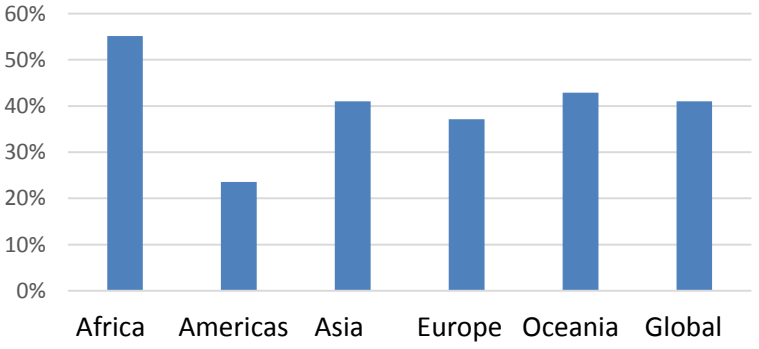


Directly related:
"It is important to note that there may be a link between forestry, agriculture, aquaculture and animal production, as in socio-ecological production landscape"
(Explanation of Cambodia Biodiversity Target 5)

Partially related:
"Number of capacity building workshops and of people informed and/or trained in sustainable management practices and monitoring"
(One indicator for Cambodia Biodiversity Target 5)



Percentage of countries using terms directly related to integrated approaches in production landscapes



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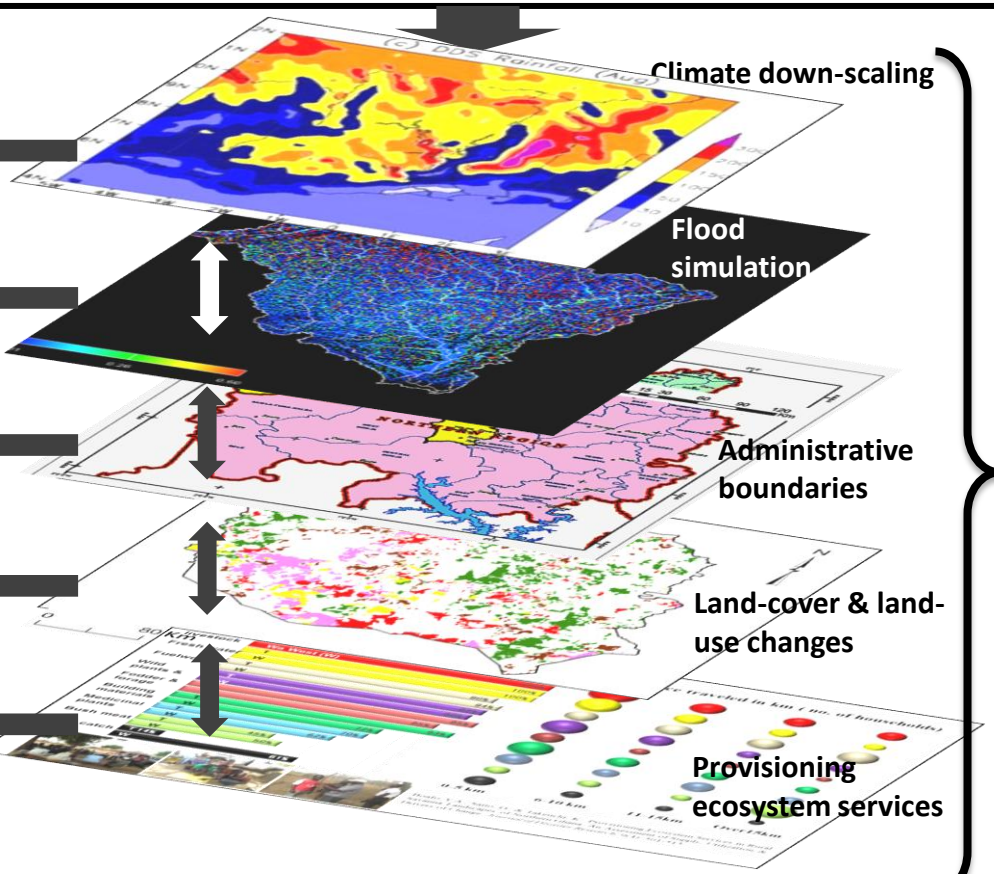
Convention on Biological Diversity

Enhancing Resilience against Climate and Ecosystem Changes in Sub-Saharan Region: "Development and Application of Ghana Model"

CECAR AFRICA
Climate and Ecosystem Change Adaptation and Resilience Research

Major Drivers in Sub-Saharan Africa: Climate, Ecosystem, and Socio-economic Changes

Information platform
(GIS-based data, maps, resources inventory, socio-economic status, etc.)
& Resilience indicator systems



Participatory approach

Knowledge sharing

Stakeholders
- International organizations
- National government
- Local government
- Urban residents /migrants
- NGOs
- GMet
- Business / Markets
- Universities / schools
- **Rural communities**

Co-designing "Ghana Model" as an integrated resilience-enhancement strategy based on full-scale resilience assessment

Participation

Social implementation

Application to sub-Saharan Africa

Full scale application and customization of "Ghana Model"

Fast-track and simplified application of "Ghana Model"

Disseminating Research Findings through Community Theatre

- To avoid the **typical top-down flow** of knowledge and information from research activities, **community-based environmental theatre** was piloted in five communities
- **Disseminating** and **validating** major scientific **research findings** and **intervention strategies** on climate and ecosystem changes.
  - Scientific findings and project intervention strategies are being translated into **drama, dance and music** pieces to reflect the most plausible past, present and future scenarios
  - An opportunity to **encourage, stimulate and empower** local communities to understand research findings promote **self-action** beyond immediate project interventions.

SOME KEY MESSAGES IN THEATRE

PAST

- More predictable weather patterns
- Less population (moderate family sizes)
- Less out-migration of youthful population
- Available fertile land for farming.

PRESENT

- High unpredictability in weather patterns
- More floods and drought conditions
- Shortage of farmlands and infertile soils
- Increased water scarcity (dams dry up)

FUTURE

- Unpredictable and extreme weather
- Engage in multiple livelihood sources
- Agroforestry
- Collective management of resources
- Integrating knowledge systems
- Climate-smart agriculture
- Water harvesting technology

http://ias.unu.edu/en/news/news/disseminating-research-findings-through-community-theatre-in-ghana.html

Development of Monitoring and Evaluation Method for Biodiversity Conservation and Sustainable Use Activities (BME)

In Aug 2015, the 3-year **BME** research project funded by the Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF) was started to develop a comprehensive monitoring and evaluation method for assessing conservation and utilization activities of biodiversity through multi-stakeholder cooperation in the co-management of natural capital.

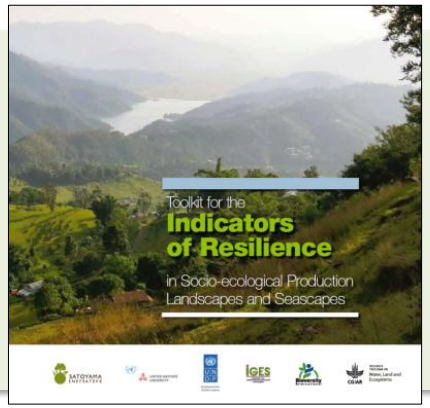
- Not only ecologically-related activities, but also, to capture the socio-economic impacts, regular monitoring of biodiversity conservation and sustainable use activities is introduced with an emphasis on a results-oriented approach and quantitative and qualitative evaluation, also considering the interactions with various stakeholders
- Research findings to be compiled into guidelines/manual for monitoring and evaluation, and policy recommendations on mainstreaming biodiversity conservation for sustainable development of agriculture and rural revitalization
- Also contributes to FAO-GIAHS programme by proposing monitoring and evaluation methods, and reporting to CBD: Article 10(c) - customary use of biological resources

Field surveys with farmers in Japan

Stakeholders' meeting in Kumamoto, Japan (Oct 2015)

1st Asian Conference on Biocultural Diversity (Oct 2016)

Resilience Assessment by Local Communities



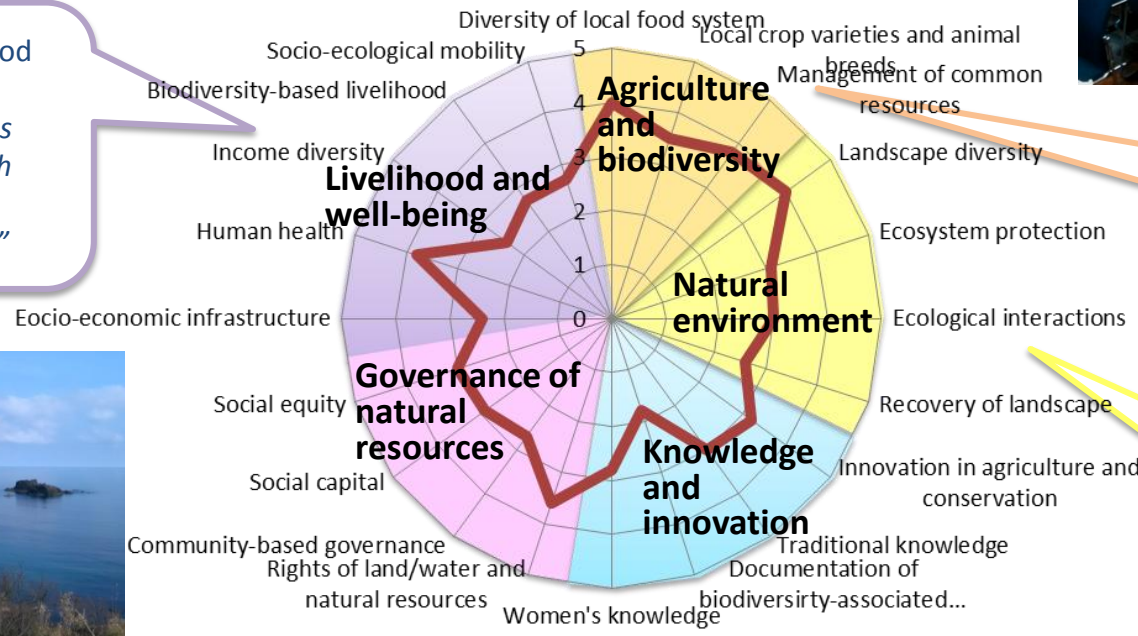
Indicators of resilience in SEPLS

- **IPSI Collaborative Activity (developed by UNU, IGES, Bioversity International, UNDP)**
- Assessing multiple aspects of SEPLS using **20 indicators** in five categories
- **Promote local communities to consider and act toward strengthening resilience through participating in assessments**

Workshop in Suzu City, Ishikawa Pref. (Feb 2016)

15 residents of different ages and background in Hiki area exchanged reasons for the assessment results and thoughts on issues facing the area.

Lower scores for livelihood indicators:
"There are not many jobs here that provide enough income, so need to have multiple income sources"



Very high scores:
"We try to consume food produced here as much as possible"

"The landscape is diverse but more land is becoming abandoned"

Predicting and Assessing Natural Capital and Ecosystem Services through the Integrated Model of Socio-Ecological Systems

PREDICTING & ASSESSING NATURAL CAPITAL & ECOSYSTEM SERVICES

[Theme1]

Future scenarios

JSSA(2012)

Intermediate parameters

Key driving forces

Economic science,

Technology,

Social institutions,

Food demand,

International trade,

etc.

Basic framework

Demographic-industrial structure sub-model

Concentrated or distributed

Labor population by sector

Land use sub-model

Urban, green space, farmland, grassland, woodland, waterbody, coastal ports

Natural capital sub-model

Forest stock, fishery stock

[Theme2-4]

Linking models for assessing ecosystem functions, services, and well-being

Terrestrial ecosystem

Tree traits

Crop variety

Adaptation – distribution capacity

Sensitivity to climate changes

Climate changes, ocean acidification

Adaptation – distribution capacity

Sensitivity to climate changes

Marine ecosystem

Primary, secondary production capacity

Terrestrial ecosystem services

Potential capacity, actual human use

River-basin interactions

Nutrients, sediments, creatures

Potential capacity, actual human use

Marine ecosystem services

Natural values

Local food culture, Ocean Health Index

Socio-economic values

Shadow value, Natural capital accounting

Inclusive well-being

Localized Inclusive wealth index

Policy options/Multi-level governance (governance indicators, innovative funding mechanism)

Study Sites & Science-Policy-Society Interface

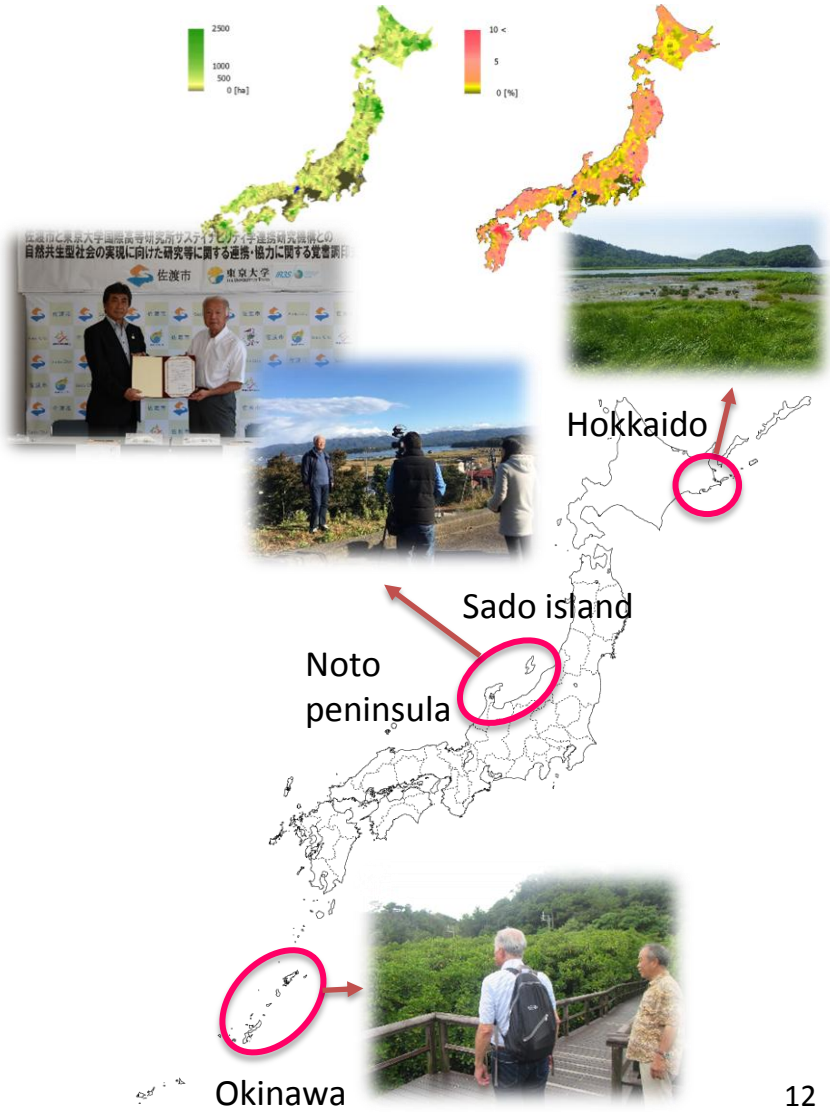
Science-Policy-Society Interface:

- Participatory scenario co-design with multi-stakeholders
- Collaboration with local governments, policy makers and practitioners including private sectors
- Promote multi-level governance of natural capital through connecting international initiatives and local actions

Outputs

- Inputs to CBD, IPBES global and regional assessments, Ecologically or Biologically Significant Marine Areas (EBSAs) , and ecosystem-based climate change adaptation (IPCC)
- Contributions to national and local biodiversity strategy action plans in Japan and elsewhere

Japan-wide assessment of natural capitals and ecosystem services



Thank you for your attention