INDICATORS FOR RESILIENCE IN SOCIO-ECOLOGICAL PRODUCTION LANDSCAPES

Presented by
Suneetha M.Subramanian
Research Fellow
United Nations University-Institute of Advanced Studies,
Yokohama

SATOYAMA INITIATIVE

UNITED NATIONS UNIVERSITY
UNU-IAS
Institute of Advanced Studies

Bioversity International

orking Group 1 on Capturing and Promoting Resilience in SEPLs including Disaster Risk Management – IPSI Global nference-2 on Strategy for realizing societies in harmony with nature, held at ICRAF, Nairobi 13-14 March, 2012

Context and Background

- What are SEPLs?

Are those which have been formed and maintained through long-term interaction between humans and nature and include various landscape elements/components such as villages, farmland and adjacent woods, grasslands and coasts

* Not merely idyllic sites, but areas that influence and are influenced by economic, and socio-cultural events and decisions

Context and Background contd..

Current status and drivers

Landscapes are subject to various threats- natural, economic or political.

Need for coping strategies --> Resilience

Defining characteristics of resilience

- The amount of change the system can undergo and still retain the same controls on function and structure (depends on magnitude of disturbance and vulnerability of inherent systems)
- The degree to which the system is capable of self-organization (dependent on natural (biodiversity, well-functioning ecosystems) and social factors (inclusive, flexible institutions and governance systems)
- The ability to build and increase the capacity for learning and adaptation

- How can we assess and monitor?
  - Involves both quantitative and qualitative parameters – Development and use of appropriate Indicators

Characteristics desired from indicators

- Outcome oriented, measurable (either through quantitative or qualitative means), interconnected
- Capture changes to biophysical and human resources – lands, waters, biotic and abiotic resources, knowledge, capabilities, equity
- Indicative of vulnerabilities, challenges and potential strategies

UNU-IAS/IPSI-Bioversity indicators

By working with communities following such SEPLs, aim to

- Understand community well-being beyond income and economic commercial use of natural resources

Paying specific attention to

- Resource sovereignty resulting from the community management of the SEPL
- Capacity to maintain productivity and build resilience in the landscape to cope with shocks, adapt to change and continue to manage the SEPL to meet a range of community needs

Tools we seek to use

- Elicit specific information through a participatory process
- While a set of indicators and parameters are provided, the process is inherently flexible to allow communities to determine what aspects they'd like to include in the parameters (e.g., the type of foods determining food security)

Preliminary indicators- community resilience

- Resource governance

Account for: Community based institutions for resource mgt; diversity of resources and how they are conserved

- Knowledge management

Account for: institutions for knowledge generation and acquisition

- Transfer of knowledge-gender

Account for: Age gradient of knowledge

- Use of indigenous/local languages

Account for: no. and use of languages

- Access to biodiv & knowledge

Account for: Institutions facilitating exchange of resources

- Innovation in agri biodiv mgt

Account for: No. of existing and new practices of mgt

- Autonomy to land and resource mgt

Account for: extent of control over land and resources

Preliminary indicators- community resilience

- Food sovereignty

Account for: local sources of food; diversity of crops

- Demographics

Account for: No. of generations interacting with landscape

- Cultural self-identity

Account for: sense of identity

- Gender

Account for: Access to resources by women, and access to leadership positions

- Social Infrastructure

Account for: degree of existence of social infrastructure

- Health care

Account for: Access to health care

Preliminary indicators-ecosystem resilience

- Sustaining flow of ecosystem services

Account for: different ecosystem services and their quality at landscape level

- Areas protected for cultural & ecological importance

Account for: Landscapes under different kinds of protection

- Linkages between different landscape patches

Account for: Different patches and functional linkages

- Heterogeneity in landscape

Account for: No. of landscape components

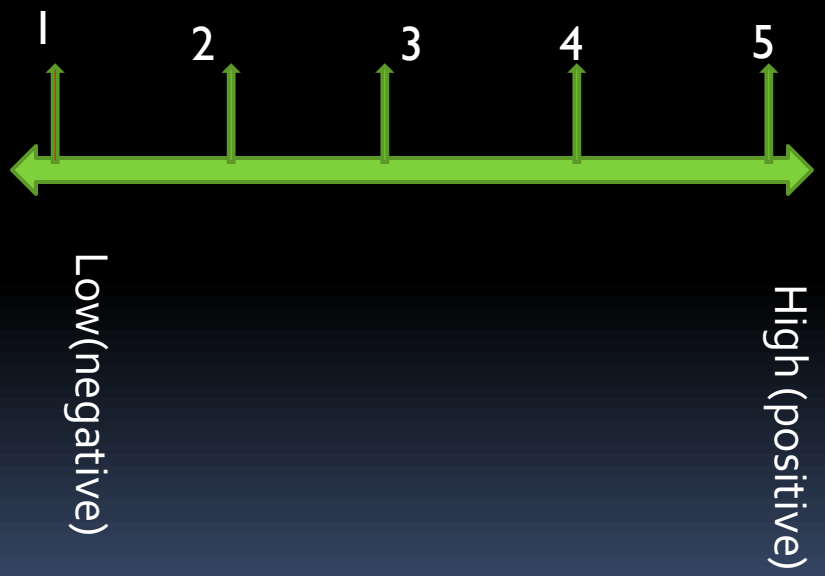
- Environmental security and safety

Account for: vulnerabilities to natural shocks and disasters, and degree to cope

Measuring changes

Develop indicators and measure changes on parameters

Scores



trends

↑ steep upward trend

↗ slow/some increase

→ No change

↘ slow/some decrease

↓steep downward

What do the indicators do?

- Measure the community capacity to manage, innovate, adapt and inter-generational sustainability of practices

- Measure the capacity and impact of biocultural community management practices and institutions on the ecology and ecosystem services of SEPLs. By
  - Identifying drivers of change
  - Identify patterns of change that continue to maintain community well-being

- Tools for the community to understand their resilience and strategize

Status of indicators

- Being field tested-
  - With Bioversity International in Cuba and other locations
  - With UNDP (& SCBD, and MOEJ)- more than 10 countries through establishment of COMDEKS (Community Development and Knowledge Management for the Satoyama Initiative)

Thank you for your attention