



HELGA WITH WORKSHOP PARTICIPANTS IN BOLIVIA

Guidelines for assessing resilience with the social-ecological indicators

Resilience indicators

Resilience of social-ecological systems can be described as their capacity to **recover** after stress (e.g. recover after drought, flood or hurricane); to continually **change, adapt and transform** in response to external drivers, internal processes; and to have the opportunity for novelty and innovation (Folke et al. 2010).

The social-ecological resilience indicators “measure” the interrelated features of a landscape that confer resilience. The results of resilience assessment are used to identify ways to enhance resilience through landscape restoration, farm diversification and conservation of agrobiodiversity.

The indicators are a list of 20 questions that need to be answered and discussed by community members in a **workshop**. The indicators are grouped in five areas:

- Landscape/seascape diversity and ecosystem protection
- Biodiversity (including agricultural biodiversity)
- Knowledge and innovation
- Governance and social equity
- Livelihoods and well-being

Please see Table 3. If the indicators are not clear or need to be adjusted to local circumstances - please write to Dunja.

Resilience assessment consist of 3 stages:

1. Preparation

The preparation stage consists of planning and organising a community-based resilience assessment workshop. This includes practical matters such as translating the indicators into the local language.

2. Workshop (1 day or 2 days)

The assessment itself takes place in a workshop that consist of: introduction; scoring; and summary during which you can define next steps or action plan.

3. Follow up

The follow-up stage can vary but it is generally intended develop plans for strengthening resilience based on the results of resilience assessment.

1. PREPARATION for the resilience assessment

1.1. Participants

Resilience assessment is conducted in a **workshop** with 10 community members of mixed age and gender. Participants of the workshop need to be chosen 1 or 2 weeks in advance. This means you need to go to the community before the assessment to choose 10 participants of mixed age and gender, and agree with them when and where to meet for the workshop. Please consider how participants are going to get to the venue of the assessment, and whether transportation should be provided.

It is important to work with a mixed group (e.g. gender, age, socio-economic status in the community, interest, etc.). If appropriate to the social norms and culture of the communities - separate meetings with men and women should be organised. You can chose to work with 10 women and 10 men in separate workshops. It is important that they are able to hear each-other's views.

1.2 Material to prepare in advance:

- A translated list of indicators (see Table 3)
- 5 poster-sized papers
- Colour pens for mapping, stickers, tape, and what event material you think will be helpful in the mapping and assessment, etc.

1.3 Food and refreshments

Prepare suitable refreshments (water, tea, cookies) and organise meals for participants. Refreshments and lunch for the entire group need to be organised in advance, for example with local women. Money for the food and other workshop costs (e.g. transport to the venue) comes out of the fieldwork budget.



LUNCH DURING A WORKSHOP IN FIJI

2. WORKSHOP

The workshop consists of 1) introduction and 2) scoring of 20 questions (indicators) and summary. It involves **10 participants, facilitator, note-taker** and, if needed, a **translator**. Introduction may last up to 2 hours; while scoring of all 20 questions will take 6-8 hours. It is good to start in the morning, have lunch together, and continue after lunch.

Facilitator

The facilitator has an essential role in running the workshop and making sure that all 20 questions are answered. S/he is responsible for communicating the purpose of the assessment and making sure all steps (e.g. introduction) are taken in the right order. S/he needs to ensure that all participants are equally included in the workshop; and encourage active and meaningful engagement of the participants. The facilitator must direct the discussion without being a part of it. The facilitator must be able to create a relaxed, informal atmosphere where people feel free to express their opinions. The facilitator should never express his or her own opinions or make judgments on the opinions of the participants. According to the social and cultural context the facilitator may use different facilitation methods to encourage participation and energisers. (E.g. <http://www.pyeglobal.org/wp-content/uploads/2011/11/CreativeFacilitationManual.pdf>)

Note-taker

Taking notes is very important because the trends and scores (described later) do not capture the most important information (reasons, problems, possible solutions). So, the **facilitator** needs to ask participants to explain their answers. For example, if a participant gives a rating of 3, facilitator can ask “*Why did you give to this question a rating of 3?*”. Or, for each question, a facilitator can ask the participants to say:

- i) What would need to change for you to give it a higher rating?
- ii) Or what would need to change for you to give it a lower rating?

The note-taker will capture these explanation for each question. However, it is important to take notes during the entire workshop including introduction. The notes are the material for the narrative of the report that you will need to write.

Translator

If the facilitator and note-taker don't speak the local language, you need a translator. The translator will translate the list of indicators into local language and translate the questions, answers and discussion during the assessment.

FACILITATOR



NOTETAKER



TRANSLATOR



2.1 INTRODUCTION (2 hours)

Before you start with the introduction, please collect information about the workshop participants (name, age, gender, village name). During the introduction you will need to make sure that all participants have understood the landscape, agrobiodiversity and resilience.

2.1.1 How to explain **LANDSCAPE**?

- 1. Participatory landscape mapping:** let the participants make a map of their landscape with forest patches, rivers, water sources, lakes, fields, houses, roads, etc. TIP: sometimes the participants focus on infrastructure (roads, shops, etc.) so you may need to guide the mapping to include the natural resources and biodiversity. If a ***participatory map*** of the landscape already exists, you can bring it and use it in this exercise.
- 2. Ask for local words for landscape:** ask the participants to tell you the local words for the landscape, note them down on the big sheet of paper. For example, in Japan traditional landscapes are called *satoyama*, which means forest-field. *Satoyama* expresses the links between the cultivated (field) and uncultivated (forest) parts of the landscape.

COMMUNITY MAP IN BOLIVIA



LANDSCAPE MAPPING IN FIJI



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- **Score:** answering the questions on a 5-point scale. You will need to explain what each number would mean (in a general way).
- **Trend:** giving a trend (change) for each question by using the following categories:
 - ↑ steep upward trend (e.g. getting better)
 - → No change
 - ↓ steep downward (e.g. deteriorating)

For each question, ask the participants to give 1-5 value (score) and an arrow for trend. But also **ask them to briefly explain why they gave that particular score or trend.** The explanations given by the participants and the main points of the discussion need to be captured by the note-taker.

Consensus (group score and trend) - For each question, after all participants have given their score and trend, ask for a consensus answer. This is important as it provides a space for discussion and reaching a common agreement. It is good to give time to the participants to discuss and explain their answers to each other while reaching an agreement on the consensus score and trend. Reaching consensus might generate discussion, during which participants will share their ideas, views and problems. This helps reaching a common understanding of the landscape, threats and solutions. When you have a consensus answer - move on to the next question.

Names of the workshop participants

①	Dominic	Mona	Marga	Julius	Bette	Diana	Overall
1	4 →	4 ↓	3 ↓	5 ↓	3 ↓	5 ↓	3 ↓
2	3 ↓	3 →	2 ↓	3 ↓	2 ↓	4 ↓	2 ↓
3	3 ↓	3 ↓	4 →	4 →	2 ↓	3 →	3 →
4	3 →	3 →	3 →	3 →	3 →	3 →	3 →
5	3 →	3 →	3 →	4 →	3 →	3 →	4 →
6	2 →	3 →	2 →	2 →	2 →	2 →	3 →
7	2 →	2 →	2 →	2 →	2 →	2 →	3 →
8	2 →	2 →	2 →	2 →	2 →	2 →	2 →
9	2 →	2 →	3 →	2 →	3 →	3 →	1 →
10	3 ↓	3 ↓	4 ↓	3 ↓	3 ↓	2 ↓	4 ↓
11	4 ↓	5 ↓	4 ↓	4 ↓	5 ↓	3 ↓	4 ↓
12	2 →	1 →	1 →	1 →	2 →	1 →	2 →

Consensus

Questions

Table 2. Check list - Before, during and after the workshop

Before the workshop	
Translate the indicators into the local language.	
Practice how to ask each question (this is for the facilitator).	
Identify 10 participants of mixed age and gender.	
Find the venue for the workshop.	
Arrange refreshment in advance (lunch, tea, coffee and cookies). You can pay the people in the community to prepare refreshments and lunch.	
Prepare material (Participant list, big sheets of paper, markers/colours, sticky tape).	
Identify facilitator, note-taker and translator.	
Workshop	
Introduction	
Explain the purpose of the exercise.	
Make a participant list: Collect information about the participants (name, age, gender, village name).	
Explain landscape through participatory mapping (or use an existing map to explain landscape).	
Explain agrobiodiversity - make a list of landscape parts, crops, trees, wild plants and animals.	
Explain resilience with a <u>timeline</u> .	
Answering the questions (20 indicators)	
Ask the questions, one by one. For each question, ask each participant to give SCORE and TREND; then, ask them to give a consensus answer. After they reach consensus, move on to the next question.	
Take notes of answers and discussion!!	
Follow up	
The scores and trends need to be transcribed into an excel sheet; while the notes provide material for the narrative report.	
The results of the resilience assessment will provide an insight into the views of the community members and can provide a basis for future activities (e.g. restoration).	

Table 3. Social-ecological resilience indicators

Indicator description	Questions for scoring	Scores
Landscape/seascape diversity and ecosystem protection		
(1) Landscape/seascape diversity		
The landscape or seascape is composed of a diversity/mosaic of natural ecosystems (terrestrial and aquatic) and land use types	Is the landscape/seascape composed of diverse natural ecosystems (terrestrial and aquatic) and land uses?	(5) Very high (There is a large number of natural ecosystems and land uses) (4) High (3) Medium (2) Low (1) Very low (There is only one or a very small number of natural ecosystems and land uses)
(2) Ecosystem protection		
Areas within the landscape or seascape are protected for their ecological and/or cultural importance	Are there areas in the landscape or seascape where ecosystems are protected under formal or informal forms of protection?	(5) Very high (Key resources are under some form of protection) (4) High (3) Medium (2) Low (1) Very low (There are no areas under protection)
(3) Ecological interactions between different components of the landscape/seascape		
Ecological interactions between different components of landscape or seascape are taken into consideration in natural resource management	Are ecological interactions between different components of the landscape or seascape considered while managing natural resources?	(5) Very high (Ecological interactions are considered while managing natural resources Management decisions consider (4) High (3) Medium (2) Low (1) Very low (Ecological interactions are not considered while managing natural resources)
(4) Recovery and regeneration of the landscape/seascape		
The landscape or seascape has the ability to recover and regenerate from environmental shocks and stresses	Does the landscape or seascape have the ability to recover and regenerate after extreme environmental shocks?	(5) Very high (Very high ability to recover and regenerate) (4) High (3) Medium (2) Low (1) Very low (Very low ability to recover and regenerate)
Biodiversity (including agricultural biodiversity)		
(5) Diversity of local food system		

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Foods consumed in the landscape or seascape include food locally grown, gathered from local forests and/or fished from local waters	Does the community consume a diversity of locally-produced food?	(5) Very high (Diversity of locally-sourced foods is very high and these foods are widely consumed) (4) High (3) Medium (2) Low (1) Very low (There are very few or no locally-sourced foods)
(6) Maintenance and use of local crop varieties and animal breeds		
Households and/or community groups maintain a diversity of local crop varieties and animal breeds Examples: Seed guardians, animal breeders or breeding group, community seedbank	Are different local crops, varieties and animal breeds conserved and used in the community?	(5) Very high (Local crop varieties and animal breeds widely conserved and used) (4) High (3) Medium (2) Low (1) Very low (Very few or no local crop varieties and animal breeds)
(7) Sustainable management of common resources		
Common resources are managed sustainably in order to avoid overexploitation and depletion	Are common resources managed sustainably?	(5) Very high (Common resources are sustainably managed) (4) High (3) Medium (2) Low (1) Very low (Common resources are overexploited or depleted)
Knowledge and innovation		
(8) Innovation in agriculture and conservation practices		
New sustainable practices in agriculture, fisheries and forestry are developed, adopted and improved; and/or traditional practices are revitalized	Does the community develop, improve and adopt new agricultural, fisheries, forestry, and conservation practices and/or revitalize traditional ones to adapt to changing conditions, including climate change?	(5) Very high (Community is receptive to change and adjusts its practices) (4) High (3) Medium (2) Low (1) Very low (Community is not receptive to change and makes few innovations)
(9) Traditional knowledge related to biodiversity		
Local knowledge and cultural traditions related to biodiversity are transmitted from elders and parents to young people in the community	Are local knowledge and cultural traditions related to biodiversity transmitted from elders and parents to young people in the community?	(5) Very high (Local knowledge and cultural traditions are transmitted to young people) (4) High (3) Medium (2) Low (1) Very low (Local knowledge and cultural traditions are lost)

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(10) Documentation of biodiversity associated knowledge		
The biodiversity in the landscape or seascape, including agricultural biodiversity, and knowledge associated with it is documented, stored and made available to community members.	Is agricultural biodiversity, and associated knowledge documented and exchanged?	(5) Very high (Documentation is robust) (4) High (3) Medium (2) Low (1) Very low (Little or no documentation in the community)
(11) Women's knowledge		
Women often have specific knowledge, experience and skills about biodiversity, its use and management, which are different from those of men.	Are women's knowledge, experiences and skills recognized and respected at household, community and landscape levels?	(5) Very high (Women's knowledge, experiences and skills recognized and respected at all levels) (4) High (3) Medium (2) Low (1) Very low (Women's knowledge, experiences and skills are not recognized and respected)
Governance and social equity		
(12) Rights in relation to land/water and other natural resource management		
Customary or formal rights over land/water and other natural resources are clearly defined and recognized by relevant groups and institutions, for example governments and development agencies.	Does the community have customary and /or formally recognized rights over land, (seasonal) pastures, water and natural resources?	(5) Very high (Rights are fully recognized and not disputed) (4) High (3) Medium (2) Low (1) Very low (Rights are not recognized and heavily disputed)
(13) Community-based landscape/seascape governance		
The landscape or seascape has capable, accountable and transparent local institutions in place for the effective governance of its resources and the local biodiversity.	Is there a multistakeholder landscape/seascape platform or institution able to effectively plan and manage landscape resources?	(5) Very high (Landscape/seascape platform or institution is capable of transparent, participatory, and effective decision making) (4) High (3) Medium (2) Low (1) Very low (There is no multistakeholder landscape platform or institution)
(14) Social capital in the form of cooperation across the landscape/seascape		
Individuals within and between communities are connected and coordinated through networks that manage resources and exchange materials, skills and knowledge.	Is there connection, coordination and cooperation within and between communities for the management of natural resources?	(5) Very high (Very high level of cooperation and coordination in natural resource management) (4) High (3) Medium (2) Low (1) Very low (Little or no cooperation and coordination in natural resource management)
(15) Social equity (including gender equity)		

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Rights and access to resources and opportunities for education, information and decision-making are fair and equitable for all community members, including women at household, community and landscape levels	Is access to opportunities and resources fair and equitable for all community members, including women at household, community and landscape level?	(5) Very high (Access to resources and opportunities is fair and equitable at all levels) (4) High (3) Medium (2) Low (1) Very low (Access to resources and opportunities is not fair and equitable)
Livelihoods and well-being		
(16) Socio-economic infrastructure		
Socio-economic infrastructure is adequate for community needs.	Is the socio-economic infrastructure adequate for the needs of the community?	(5) Very high (Socio-economic infrastructure meets all community needs) (4) High (3) Medium (2) Low (1) Very low (Socio-economic infrastructure does not meet community needs)
(17) Health of people and environmental conditions		
The overall state of human health in the community taking into consideration the prevailing environmental conditions	What is the general health situation of local people taking into consideration the prevailing environmental conditions?	(5) Very high (Health situation is good) (4) High (3) Medium (2) Low (1) Very low (Health situation is bad)
(18) Income diversity		
People in the landscape or seascape are involved in a variety of sustainable income-generating activities	Are households in the community involved in a variety of sustainable, income-generating activities?	(5) Very high (Households are involved in a variety of sustainable, income generating activities) (4) High (3) Medium (2) Low (1) Very low (Households have no alternative economic activities)
(19) Biodiversity-based livelihoods		
Livelihoods improvements in the landscape or seascape are concerned with innovative use of local biodiversity	Does the community develop innovative use of the local biodiversity for its livelihoods?	(5) Very high (Livelihoods are being improved by innovative use of local biodiversity) (4) High (3) Medium (2) Low (1) Very low (Livelihoods improvements are not related to local biodiversity)
(20) Socio-ecological mobility		

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Households and communities are mobile in terms of natural resource use and are able to move around to take advantage of shifts in production opportunities and avoid land degradation and overexploitation	Are households and communities able to move around between different production activities and locations as necessary?	(5) Very high (There are sufficient opportunities for mobility) (4) High (3) Medium (2) Low (1) Very low (There are no opportunities)
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