



WORKSHOP ON

Resilience marker methodology

25–28 August 2020 | Microsoft Teams

Background

Resilience means many things, but in the context of mountain lives and ecology it is the ability of the socio-ecological system to prepare for shocks (anticipate), recover from shocks (bounce back), and create a transformative change (bounce forward). However, establishing a resilience baseline and assessing resilient interventions continue to pose a huge challenge as there are constant interactions among the structural components of the mountain socio-ecological system, which determine a definite system behaviour in a given state/context. Such interactions are often non-linear processes with complex cause–effect relationships and feedback mechanisms influencing the system’s behaviour.

Therefore, to understand the resilience behaviour of the socio-ecological system, ICIMOD’s Resilient Mountain Solutions (RMS) Initiative together with the National University of Singapore has co-developed a methodology on resilience markers that focuses on the systems thinking approach. Systems thinking unpacks complex

causalities and identify non-linear processes that are captured by structural components. This helps identify key influences on the system’s behaviour in a given state, which can be used to ensure its adaptability. Several illustrative case studies have been conducted in the last two years across the Hindu Kush Himalayan region using this methodology, and RMS partners from Bhutan, India, and Nepal are leading additional case studies in their respective countries from 2020 onwards.

About the workshop

The RMS Initiative is organizing a virtual workshop to acquaint its partners on the resilience marker methodology. The core team dedicated to resilience marker research from the College of Natural Resources (CNR) in Bhutan, the BAIF Development Research Foundation in India, and the Southasia Institute of Advanced Studies (SIAS) in Nepal will participate. Both morning and afternoon sessions will be virtually conducted (via MS Team) in English language.

Objectives

This workshop primarily aims to develop partners' capacity in applying the resilience marker methodology for selected case studies in Bhutan, India, and Nepal. The specific objectives are as follows:

- Provide stepwise understanding on the resilience marker methodology
- Introduce the VENSIM model (a free software) for socio-ecological system modelling
- Conduct a preliminary assessment of individual case studies led by the partners

Expected outcomes

- Improved understanding of the methodology and use of the VENSIM model
- Formulation of basic conceptual models for the case studies led by the partners

Agenda

DAY 1 – TUESDAY, 25 AUGUST 2020

Link to join the meeting: [Day 1 join here](#)

Time (NPT)	Programme	Responsibility
MORNING SESSION PLAN		
10:00–10:30	Welcome remarks Self-introduction Overview of the workshop's objectives	Nand Kishor Agrawal Arabinda Mishra
10:30–11:00	Basic concepts and overview of the methodology	Erica Udas
11:00–11:15	Tea/coffee break	
11:15–12:30	Step 1a: Problem definition How to specify the historical behaviour of a socio-ecological system Example from an ICIMOD case study Partners to make brief presentations (10 min each) to introduce their case studies Discussion on “reference mode” for the case studies	Arabinda Mishra Lipy Adhikari BAIF/CNR/SIAS Arabinda Mishra
AFTERNOON SESSION PLAN		
14:00–15:00	Step 1b: Identifying causation in the system Getting acquainted with causal loops; example from an ICIMOD case study Demonstrating a causal loop using information from a partner case study site	Arabinda Mishra SIAS
15:00–15:15	Tea/coffee break	
15:15–16:00	Introduction to the VENSIM model with exercise	Sabarnee Tuladhar
16:00–16:15	Concluding discussions	Arabinda Mishra

DAY 2 – WEDNESDAY, 26 AUGUST 2020

Link to join the meeting: [Day 2 join here](#)

Time (NPT)	Programme	Responsibility
MORNING SESSION PLAN		
10:00–12:00	Working on the VENSIM model to create basic conceptual models of partners' case studies (40 min for each case study)	Lipy Adhikari Erica Udas Sabarnee Tuladhar
AFTERNOON SESSION PLAN		
14:00–15:00	Step 2: Stock flow model Introduction to the stock flow model, with example from an ICIMOD study Taking participants through VENSIM features on the stock flow model	Arabinda Mishra Sabarnee Tuladhar
15:00–15:15	Tea/coffee break	
15:15–16:15	Demonstrating the development of a stock flow model for one partner's case study	Navarun Verma
16:15–16:30	Briefing about work plan for 27 August	Arabinda Mishra

DAY 3 – THURSDAY, 27 AUGUST 2020

Link to join the meeting (Bhutan team): [Bhutan group work join here](#)

Link to join the meeting (India team): [India group work join here](#)

Link to join the meeting (Nepal team): [Nepal group work join here](#)

Time (NPT)	Programme	Responsibility
10:00–12:00 14:00–16:00	Work with country-specific team on an individual case study	BAIF/CNR/SIAS

DAY 4 – FRIDAY, 28 AUGUST 2020

Link to join the meeting: [Day 4 join here](#)

Time (NPT)	Programme	Responsibility
MORNING SESSION PLAN		
10:00–11.15	Presentations from partners and discussions	BAIF/CNR/SIAS
11:15–11:30	Tea/coffee break	
11.30–12.30	Step 3: Introduction to simulations and scenarios development	Navarun Verma
AFTERNOON SESSION PLAN		
14:00–15:00	Data issues, validation, and iteration	Arabinda Mishra Lipy Adhikari and Erica Udas
15:00–15:15	Tea/coffee break	
15:15–16:00	Open discussions, work plan, and way forward	Arabinda Mishra Nand Kishor Agarwal
16:00–16:15	Closing remarks	Eklabya Sharma, Deputy Director General, ICIMOD

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