Integrating resilience into Monitoring and Evaluation of climate and development practices in Hindu-Kush Himalaya

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0:00-0:30

Problem Statement

- Transitioning livelihoods in changing climate context across the HKH region
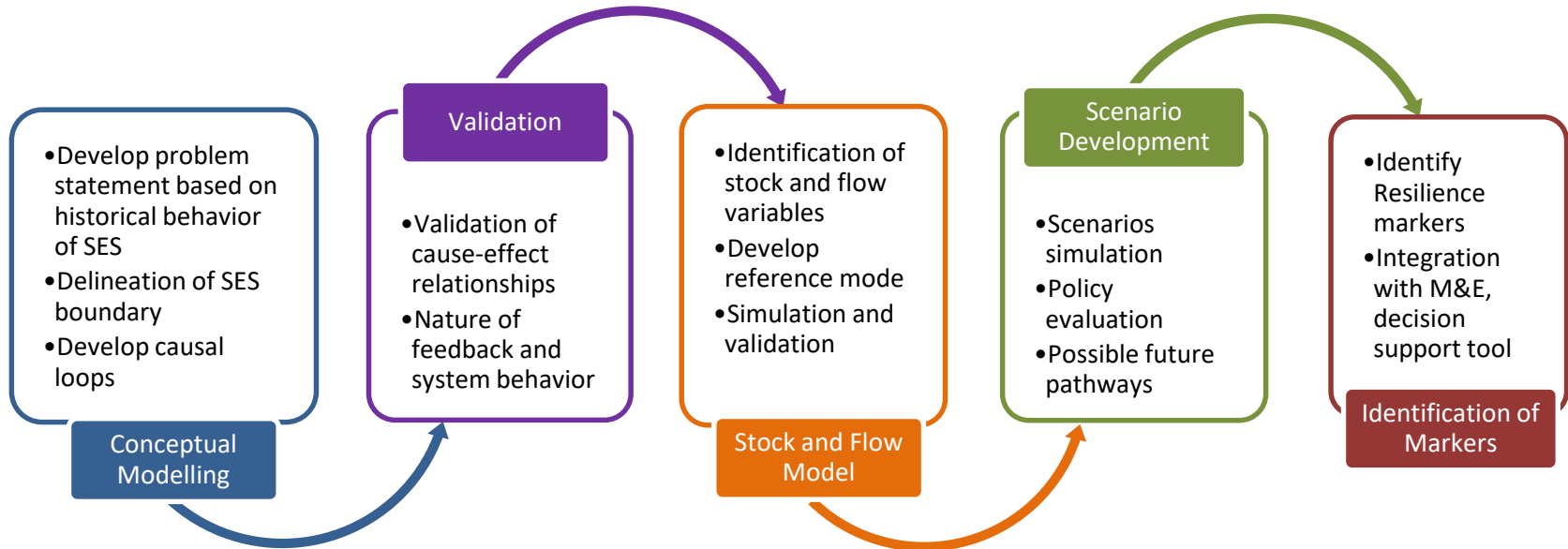
Country	SES Context	Resilience of what?	Resilience to what?	Outcomes of Concern
Myanmar (Shan State)	Aspirations from Primary to Secondary Livelihoods	Energy dependent non-farm occupations	Hazards	Household Economy
Nepal (Dadeldhura)	Shift from Traditional to Cash Crops	Agri-based livelihood system	Droughts	Household Income, Crop Diversity
Bhutan (Haa)	Yak herding to outmigration for yak herding youths	Livestock (yaks) based livelihoods	Climate Change, Hazards	Yak Population, Household Income

- Challenge to assessment of social ecological resilience and integrating into M&E.
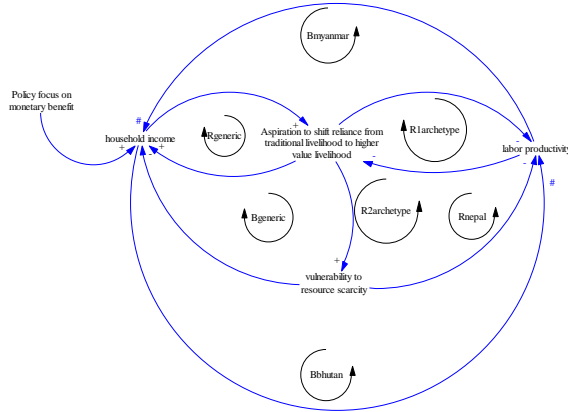
0:30-2:00

Methodology

Iterative process and reflexive at each stage.

Conceptual Modelling
- Develop problem statement based on historical behavior of SES
- Delineation of SES boundary
- Develop causal loops

Validation
- Validation of cause-effect relationships
- Nature of feedback and system behavior

Stock and Flow Model
- Identification of stock and flow variables
- Develop reference mode
- Simulation and validation

Scenario Development
- Scenarios simulation
- Policy evaluation
- Possible future pathways

Identification of Markers
- Identify Resilience markers
- Integration with M&E, decision support tool

Identification of similar system archetypes based on case specific insights for regional synthesis.

2:00-3:30

Progress, Insights, and Questions

System Dynamics Society

Any suggestions?

– Approach and Synthesis

– Integration into M&E Framework

Change Areas	Myanmar (Shan State)	Nepal (Dadeldhura)	Bhutan (Haa)
(1) Exchange of Vulnerability and Reliance	Primary vocations to Secondary vocations	Traditional farming to Cash crops	Youth yak herding to Aspirations for city
	(+) Income → *(+) Aspiration to Shift* → (+) Vulnerability to Resource Scarcity		
(2) Dynamics of Mountain Labour	Labour Productivity (Women engaging in firewood gathering)	Labour Productivity (Outmigration)	Labour Productivity (Shortage of Youths)
	Vulnerability to (Scarcity of Energy Resources)	Vulnerability to (Memory Loss of Cereal Crops farming)	Vulnerability to (Scarcity of Natural Feed)
	(+) Aspiration to Shift → *(-) Labour Productivity / (+) Vulnerability* → (-) Income		
(3) Tradeoff between aspiration and vulnerability (Analysis)	**[R Loop 1]** (+) Labour Productivity → *(-) Aspiration to Shift* → (+) Labour Productivity		
	[R Loop 2] (+) Labour productivity → (-) Aspiration to Shift → *(-) Vulnerability* → (+) Labour Productivity		