

# Addressing Climate Change and Vulnerability in South Asia

## Building Adaptive Communities

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with inputs from the ISET Partnership  
[www.climate-transitions.org](http://www.climate-transitions.org)  
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## The Problem

- Increasing frequency and intensity of extreme events coupled with longer-term slow onset related problems:
  - Drought, floods and climatic variability, but also
  - Economic, political and social fluctuations
- Overlying major changes in basic resource systems (groundwater overdraft, drainage congestion, changing land use, pollution), social structures (urbanization, migration, economic shifts) and policies.
- The effectiveness of conventional management responses to water security and disasters is increasingly limited.
- But water security and disaster management are only part of the solution – changes in livelihoods at local levels and the way they link to larger economic, social and political systems are also essential.

## The Core Challenge

*Building adaptive capacity and livelihood resilience*

Without this vulnerability can not be reduced and sustainability can not be achieved

Adaptive capacity, for our purposes, is the ability to *restructure livelihood systems* in ways that maintain standards of living and meet other core social objectives (such as environmental protection) in the presence of change, surprise and the risk patterns those create.

Resilience is the ability of *existing livelihood systems* to maintain standards of living and meet other core social objectives despite disruption.

## Conceptually, this means

- Livelihood systems must be sufficiently resilient to absorb the shocks associated with droughts, floods and other variability; and
- Households and communities require the skills, assets and other resources necessary to adapt to on-going change processes.
- Recognize diversity (social, physical, ecological)
- Transformative change (empowering, enriching)

## Our Projects: the ISET Partnership

With support from DFID, IDRC, NOAA, GEF

A growing attempt to understand the factors enabling communities to adapt to floods, droughts and climatic variability *by examining the courses of action households are actually taking during flood and drought events* and locating these courses of action in a wider review of regional trends, government programs, systems theory and social analysis

*Strategy: Link climate change responses to existing disaster response mechanisms*

## Methodologies

- Four case areas in South Asia:
  - Responses to drought, floods and sea surges in coastal Gujarat
  - Responses to coastal storms and sea surges in Tamil Nadu
  - Responses to drought and floods in Eastern U.P. and Nepal Terai
  - Responses to floods in Lai Basin, Islamabad
- **Identifying vulnerability:** qualitative narratives (PRAs, FGDs) and quantitative indicators (household/village surveys)
- **Shared learning dialogues:** strategies for disaster risk reduction at different institutional levels, diversity of stakeholders
- **Global review** of literature and conceptual frameworks and policy review on disaster management in India, Nepal and Pakistan

## Adaptive capacity depends on

- **Economic diversification:** risk spreading, diverse livelihood strategies, migration
- **Financial mechanisms:** access to banking, micro-credit/insurance services before, during and after a disaster event
- **Access to communication and information services:** climate/weather, early warning
- **Access to adaptive infrastructure:** raised buildings, roofs, handpumps, sanitation

## Building resilience...

- **Education:** basic language and skills necessary to understand risks, changes in livelihood strategies
- **Organization:** collective institutions, participation, governance and rights
- **Knowledge generation, planning, learning:** proactively identify risks, develop appropriate strategies and share learning through facilitated mechanisms
- *Cross-cutting: gender, vulnerability, exclusion*

## What are we doing in Eastern UP?

- In Gorakhpur with GEAG, IIASA, WII, ISET....
- CBA of hard and soft resilience measures including flood embankments, crop insurance, health and micro-credit (SHGs)
- Early warning system with support from ISET-Nepal and Ekgaon Technologies using SMS, internet servers, FM radio, public access system
- Developing livelihood resilience: sustainable agriculture, micro-credit, institution building

## What are we doing in Gujarat?

- In Bhavnagar with Utthan:
- Adaptive infrastructure: raised handpumps
- Livelihood diversification: lobster farming
- Early warning system for floods: community loudspeaker, youth groups
- Building capacity: disaster management committees, recognized by panchayats
- Ensuring participation of poor women, marginalized groups

## Key Challenges

- Facilitating **effective linkages** between the science of climate variability, disaster mitigation responses at different levels and economic and social change processes
- Developing and **testing tools** for identifying vulnerability and undertaking CBA of disaster risk reduction measure (e.g. preference ranking matrices) – useful for policy, donors, civil society
- Building **collaborative partnerships:** shared values, diversity, role clarity, gender sensitivity