



The Institute for Social and Environmental Transition  
(ISET)

**Flexibility for the Future: Adapting in an Uncertain Climate**  
ISET Action Pledges to Support the Nairobi Workplan Programme

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# Flexibility for the Future: Adapting in an Uncertain Climate

## ISET Action Pledges to Support the Nairobi Workplan Programme

The Institute for Social and Environmental Transition (ISET) seeks to improve understanding and elevate the level of dialogue as civil society attempts to respond to natural resource and environmental challenges in a rapidly changing global context. ISET focuses on environmentally sustainable development and poverty alleviation within the context of rapid social, economic, political and environmental (including climate change and variability) change, particularly within South Asia. Practically, ISET seeks to achieve these objectives through the following activities that underlie all of ISET's projects:

- Identify, demonstrate and support the implementation of practical, innovative solutions to basic humanitarian needs;
- Disseminate information on basic resource, environmental and humanitarian topics;
- Educate upcoming generations and evolving community, policy and private sector audiences;
- Serve as a framework enabling evolution of new strategies in response to rapidly changing local and global conditions while learning from the results of current and past initiatives.
- Incorporate disaster risk reduction strategies into current and future initiatives.

In response to the requests for support of the Nairobi Work Programme, ISET pledges to support the two thematic areas of the programme through the following activities. The overall objectives of ISET's pledge are:

- Assessing the costs and benefits of pro-active disaster risk management to meet the needs of vulnerable communities in South Asia.
- Seeking to understand the autonomous processes of adaptation that individuals, households, businesses and communities take in response to the opportunities, constraints and risks climate change poses to their livelihood systems.
- Strengthening the planned adaptive response that governments, organisations, and sometimes businesses take by developing strategies that are capable of responding to both incremental and pulsed changes. *Specifically, we are attempting to change the mindset surrounding planned adaptive strategies to embrace flexible frameworks and soft resiliency measures that allow for uncertainty in the nature, timing, severity and impacts of disasters.*
- Piloting methods, such as shared learning dialogues, to facilitate communication, understanding, shared learning, and cooperation between public and private sectors, all levels of government, and communities. Through such methods, we hope to encourage a balance between planned adaptive responses and autonomous adaptive actions.
- Studying and seeking to support interventions that increase diversification of livelihood options and economic systems. This can be accomplished by supporting programmes that strengthen basic communication, transport, finance, and educational systems.
- Studying and supporting interventions that emphasize learning to live with risk, climate variability and change. Rather than attempting to control the climate or insulate society from disaster risks, we recognize that a blend of *hard resilience* measures (the direct strength of

structural control measures) and *soft resilience* measures (the ability of systems to absorb variation while maintaining basic environmental and human services) are needed.

These objectives are described in greater detail within the context of current and future ISET projects. Each of ISET's current projects seeks to address one or more of the objectives.

### *Current Initiatives*

The three current initiatives being undertaken by ISET and ISET's partners (Winrock International, ISET-Nepal, Ekgaon, the Madras Institute of Development Studies 'Midas', Geag, Utthan, Sara Ahmed, Piedad, Fawad Khan, King's College London and IIASA) are closely linked. The methodologies of each programme support the other programmes, as do the information and lessons learned from each. All of ISET's programmes are focused on the South Asia region, specifically India, Nepal and Pakistan. Flood, droughts and tropical cyclones are endemic to the region and affect many. Climate change is likely to exacerbate both the frequency and intensity of extreme storm events. The South Asia region also has one of the highest population densities in the world. The livelihoods of the majority of the population are directly tied to land, ocean, and climate conditions. Land-use changes, agricultural and fishing practices, and infrastructure can interact with localized climate regimes and be influenced by weather and climate events. ISET's work focuses on identifying strategies for adapting livelihoods, governance, policy, and infrastructure to a variety of uncertain, dynamic climate hazards.

### **1. Risk to Resilience in South Asia**

The Risk to Resilience Programme in South Asia is focused on assessing the costs and benefits of pro-active disaster risk reduction strategies for vulnerable communities in Pakistan, Nepal and India. Disasters severely constrain development and exacerbate poverty. Therefore, disaster risk reduction is key to responding to the potential increase in frequency and intensity of climate related hazards and meeting basic development goals.

The programme is a three-year initiative to research, document, and implement risk reduction and climate adaptation activities and advocacy in South Asia. This programme takes a comparative multi-hazard case-study approach that builds upon prior work by ISET and ISET's partners. The South Asia region faces many natural hazards, not only limited to climate hazards. From prior programmes, we have learned that initiatives that support resilience to multiple hazards, ranging from earthquakes to droughts or sea water inundation are more likely to reduce vulnerability than measures that focus on increasing resilience to a specific hazard.

This programme uses a case study approach and is tied to the other programmes in which ISET is currently engaged. The goal of this programme is to identify cost effective disaster risk management strategies and to uncover the role of governance and institutional factors in reducing risk at local and national levels. The research will uncover more of the relationship between disasters and assets/entitlement losses that contribute to poverty. In addition, disaster risk reduction activities that allow for collaborations with the private sector and other actors in the global market will be explored. Disaster risk reduction activities based on strong business models have a greater likelihood of being self-sustaining than initiatives without inputs from the private sector.

Furthermore, this programme seeks to disseminate the information and lessons learned through the current programmes. Partners in the information dissemination process include the International Institute for Applied Systems Analysis (IIASA), the ProVention Consortium, and the UN International Strategy for Disaster Risk Reduction (ISDR). These partnerships enable the information and lessons ISET learns to be shared with a wider audience.

The Risk to Resilience programme utilizes a combination of qualitative and quantitative research methods to evaluate the costs and benefits of proactive disaster risk management. Specifically, the following areas are being evaluated:

- Financial mechanisms for risk spreading and post-disaster recovery
- Government and civil society risk reduction implementation programmes
- Livelihood and private business incentives

Multiple research sites are being studied in order to document current disaster risk reduction strategies and uncover potential strategies. In one site, a full cost benefit analysis of risk reduction/transfer options will be completed. To support this research, vulnerability analysis is being conducted to determine the exposure of population, capital, crops and infrastructure, as well as identifying potential impacts of climate change, land-use change, and population movements in response to natural hazards. This information is being collected using field studies incorporating interviews, focus groups, and stakeholder dialogues with multiple sectors (governments, insurance companies, and NGOs for example). Site specific information on the frequency, type, and severity of hazards is being collected where such information is available.

The expected results of the programme include:

- A report on the costs and benefits of specific disaster risk reduction and transfer interventions
- Documentation of the case study sites and policy reports on the applicability of disaster risk reduction and transfer interventions. The documentation will include working papers, case and policy papers, and a final synthesis report.
- Information dissemination through multiple communication channels, including the website: [www.climate-transitions.org](http://www.climate-transitions.org)
- Dissemination and report on the methodologies developed in this programme.
- Documentation of stakeholder meetings and input

## **2. Adaptation to Climatic Variability and Change**

The Adaptation to Climatic Variability and Change programme is a two year programme that is investigating and testing mechanisms for incorporating weather and information on climate change and its potential impacts into disaster relief and reconstruction programmes in South Asia. Weather and climate information are rarely considered in relief and reconstruction programmes. Yet, after a natural disaster occurs, a finite window of opportunity is opened in which more disaster resilient policies, infrastructure, livelihoods can be created. If governments, local communities, and non-governmental organizations were to incorporate climate and weather information into relief and reconstruction efforts, it is likely that different decisions would be made. Furthermore, South Asia cannot successfully adapt to climate change if such information is not disseminated and used.

This project is analysing the types of climate information available and the informational needs of different users involved in relief and reconstruction activities. Each user has particular informational needs, dependent on livelihood, educational level, access to technology and other resources, and institutional networks. A rice farmer wants information on precipitation and temperature to make decisions about when and what to plant or whether to seasonally migrate to look for other work. Information about potential flooding and options for protecting assets are also of interest. An NGO might want to know about the potential increase in intensity and/or frequency of cyclonic events in order to better serve coastal populations. The format in which each user can understand such information and the timeframes over which such information is needed varies for each group. Furthermore, the modes of communication available to different users are being explored, including the recent explosion in the availability of cell phone technology in India and Nepal. This research is being carried out at the sites being studied in conjunction with the Risk to Resilience and Adaptation and Livelihood Resilience programmes.

Publicly available climate information and products, such as those available through the National Center for Atmospheric Research (NCAR) or the Intergovernmental Panel on Climate Change (IPCC), are being collected and processed. The information and products are then being tested at the field-sites in decision-making contexts and with interviews with key actors in vulnerable communities, relief organizations, and governmental entities. This project also involves shared learning dialogues to encourage interactive learning between ISET, ISET's partners and key actors at the study sites and ensures that results will be disseminated to the key actors.

The expected results of the programme include:

- An assessment of publicly available climate information and its presentation.
- An assessment of the informational needs of various users and the ways in which climate and weather information can be useful to particular users.
- An assessment of the communications resources available to various users.
- Dissemination of weather and climate information in a manner that meets the informational needs of various users.

### **3. Adaptation and Livelihood Resilience**

The adaptation and livelihood resilience programme seeks to improve adaptation and livelihood resilience in communities throughout South Asia that are vulnerable to climate change and variability, particularly in the Nepal Tarai, Eastern Uttar Pradesh and Bihar, and coastal and drought prone areas in Gujarat and Tamil Nadu. There are several primary objectives associated with this program:

- Assess the vulnerabilities of communities in the case areas and understand the local adaptation strategies and measures the communities currently take in response to extreme climatic events. The assessment is also of autonomous adaptive measures that the communities are likely to take in the future.
- Through shared learning dialogues, an action and implementation plan for enhancing adaptation and livelihood resilience will be developed with stakeholders.

- Balancing the planned adaptive strategies and the autonomous adaptive activities by promoting capacity building through adaptive learning and changed interactions within communities and between communities, government bodies and international agencies.
- Engaging national and international policy makers in shared learning dialogues to institutionalize vulnerability reduction, adaptation and preparedness of institutions and communities.
- Narrowing the gaps in communication systems and transmission of information to various stakeholders.
- Active sharing and dissemination of knowledge gained through the vulnerability assessments and shared learning dialogues.

This programme actively seeks to identify and implement adaptation strategies on various levels, from the communities being studied. The vulnerability assessments of the Risk to Resilience project will be used to uncover potential adaptation activities. In addition to the vulnerability assessments, a social assessment will be undertaken to uncover the social networks, belief systems, traditions and customs that can enhance or hinder a community's resilience and ability to adapt to climate change. These assessments will be used in support of the project's objectives.

#### *Future Goals*

##### **Global Environment Facility**

Much of India's population, infrastructure and economy are vulnerable to the effects of climate change. In response to the potential impacts of climate change, the Indian government is applying to the Global Environment Facility (GEF) for funding to support climate resilient development and adaptation policies and strategies. Because of its work in India and established relationships with partners in India, ISET and its partners aim to support the Indian government's efforts to develop adaptation strategies under the GEF project. ISET's capabilities to assist the Indian government are primarily focused on informational needs. ISET will provide to the Indian government:

- Information from the vulnerability and social assessments with regard to climate change.
- Inputs and synthesis on the financial systems, climate disaster risk reduction, and multi-sectoral issues.
- Facilitation of the drafting of case site adaptation activity plans and case reports.

##### **Adaptation Incubation**

ISET's previous and current work has uncovered the importance of livelihood options and adaptability in responding to the uncertain challenges and opportunities of climate change. The Adaptation and Livelihood Resilience Programme is demonstrating that individuals and communities are more resilient to climate change when they have flexible livelihood options. Practically speaking, some of the day-to-day livelihood and economic activities that an individual can undertake are better able to handle disruption from markets, natural hazards and social change.

In order to facilitate livelihood adaptation and resilience, ISET is exploring the possibility of partnering with and fostering social entrepreneurs with climate resilient and environmentally sustainable business models, ideas for adaptive livelihoods, financial risk spreading, and the diversification of markets. While this approach might seem a little different from traditional research approaches on investigating the development of practices for adaptation, our previous work has shown that business and economic incentives are important adaptation strategies. Exploring the socio-economic implications of climate adaptation strategies should be a research priority. The adaptation incubation approach is a way to directly observe and test adaptation strategies that work and, as importantly, fail in particular economic and social settings. ISET would serve as an incubation group providing information, expertise and potentially capital to such entrepreneurs until such time that the business ventures could successfully stand on their own. ISET could also serve as a communication focal point for the entrepreneurs to exchange ideas and information about adaptation strategies in livelihood and business settings.