India

India - Challenges and Prospects for Adaptation: Climate Change & Disaster Risk Reduction in Coastal Tamil Nadu

Location:	Tamil Nadu, India
Date:	May 2007
Sector focus:	Fishing & agricultural dependent communities facing erratic monsoon, flood & cyclone hazards
Spatial focus:	Village and District

Organization

ISET

Bibliographical details.

S. Janakarajan (2007) "Challenges and Prospects for Adaptation: Climate and Disaster Risk Reduction in Coastal Tamilnadu." In: M. Moench & A. Dixit, eds. *Working with the Winds of Change*, chapter 9, pp. 235-270. Boulder, CO: ISET
http://www.proventionconsortium.org/themes/default/pdfs/winds_of_change.pdf

Language availability

English

Abstract

This case study examines the challenges of climate change impacts and disaster risk reduction strategies. It outlines the existing prevalent responses by the people and by the governments. Adaptation processes and strategies currently undertaken needed to better cope with future climate change impacts are also discussed. These include the context of the potential rise in sea level, accelerating sea erosion, increasing risks from cyclones and storms, the ongoing flooding and inundation due to backwater and freshwater floods, droughts, increasing salinization of land and groundwater, etc. The study is being undertaken in three ecosystems where the basic livelihoods are fishing and agriculture.

Using a method called "Shared Learning Dialogue" (SLD) focus groups at village level made up of different socio-economic groups discussed hazards, losses, coping methods, knowledge of weather,

and other topics. They also ranked a variety of possible interventions by perceived costs and benefits. SHDs were also held at District and State level.

Intended users

Planners and administrators at district and state level as well as NGOs and technical officers.

Background and context of country, location and project

- **Recent disasters?** The Tamilnadu coast was heavily affected by the December 2004 Asian tsunami, especially Nagapatinam District, one of those that was the focus of the study. Deadly and costly cyclones hit this coast in 1964, 1972, 1977, 1978, 1984, 1991, 1992, 1993, 1996, and 2005.

- **Other recent crises (economic, political)?** None.

- **Recent displacements and population movements?** Some resettlement due to loss of homes in some of the recent cyclones and the 2004 tsunami.

- **Recent conflict?** Some of interior Tamilnadu is affected by Maoist-inspired Naxalite rebels, but not the coast.

Technical description

- **Hazard/risk type:** High wind speeds with heavy rainfall, flooding; seawater ingress, inundation, salinity of land and groundwater; excessive heat; erratic monsoon rains over past 10 years

- **Type of assessment:** A method called “Shared Learning Dialogue” (SLD) that involves focus groups at village level made up of different socio-economic groups that discuss hazards, losses, coping methods, knowledge of weather, and other topics. These groups also ranked a variety of possible interventions by perceived costs and benefits. SHDs were also held at District and State level.

CRA process

- **Vulnerability analysis:** Village focus groups listed their recent losses in cyclones and floods, giving a rough estimate of their vulnerability to future events.

- **Capacity analysis:** Village focus groups developed a list of available physical and social infrastructure and also compiled a list of their individual coping methods.

- **Analytical methods:** Village focus groups ranked on a scale of 1-10 the costs and benefits of a variety of hazard mitigation, preparedness, and loss reduction methods, both in the short and also in the long term.

- **Tools:** Benefit-cost ranking, village mapping (by external specialists), collection and analysis of met data (by external specialists).

Notes on Methods and Tools

Focus groups were organized by socio-economic groups. None of these were exclusive for women by themselves. The report does not say how the socio-economic groups were chosen. Several rounds of “shared learning dialogue” were carried out as insights were gathered and new topics came up. This iterative method is innovative, but the report does not say how many rounds were conducted.

SLDs at the district and state levels were conducted, more key informant interviews (at district level) and larger workshop at the state level. It is unclear from the report if feed back to the village groups took place after SLDs at district and state level.

Lessons learned

A. For fishermen in all ecosystems:

- Except in some places there is no bio-shield in the villages. Mangroves could benefit and save the fisher population. Many people have shown preference for coconut trees as bio-shield
- People need skill based acquisition in non-fishing activities such as carpentry, masonry, electrical works, plumbing operations, heavy vehicle driving, and communication.
- Insurance and credit facility
- Training in fish processing industry such as manufacturing of fish pickles, prawn pickles and tinned fish, including knowledge on export
- Need better schools for children and particularly education in the English language
- Every one appreciated the idea of community FM station for information dissemination during times of disaster
- Safe drinking water is one of the most important demands in this area. Groundwater is saline and polluted
- Vilage Information Centre (VIC) is considered a good facility but needs to be integrated with people’s preferred needs. There is a case for strengthening existing VICs by providing them with reliable climate information.
- Sponsoring young boys and girls in employment oriented courses such as industrial training, computer training, science courses, training in NGO activities and the English language.

B. For Agriculture dependent populations in all ecosystems:

- Skill acquisition in non-farm activities such as industrial trades (fitter, welder), carpentry, masonry, plumbing, electricals and electronics servicing.
- Sheep breeding and dairy, fodder which could be grown within the village even in saline land (subapul, for example, is a salt resistant crop which is also a fodder). Several other crops could be grown in brackish water to be used as animal fodder. Sheep breeders are less affected by the problems mentioned above in these villages
- Poultry farming as another alternative livelihood option
- Training and awareness for brackish water shrimp and fish culture
- Sponsoring young boys and girls in employment oriented courses such as industrial training, computer training, science courses, training in NGO activities, English language courses, etc.
- VIC and FM radio
- Improving the local library with Tamil and English newspapers to learn about education and employment opportunities.

Key words

Climate change, cyclone, drought, floods, storm surge, tsunami, wind, community based organizations, government staff, local government, NGOs, planners, policy makers, community,

district, provincial (state), agricultural production, disaster risk management, flood hazard mitigation, rural livelihood security, cost benefit analysis, hazard analysis, livelihood analysis, focus group interviews, meteorological data gathering tools, secondary data.

Resource people

Marcus Moench, moenchm@i-s-e-t.org

Author of Explanatory Note

Ben Wisner, bwisner@igc.org