

## Project Approach and Activities

The project involves

- Downscaling of climate change scenarios, including discussions of “what if” scenarios at community level
- Climate impact studies of ecosystems, water resources, agricultural resources, and human systems (households, social groups, institutions)
- Wells and water resources management survey
- Participatory community resource mapping, including participatory GIS mapping with satellite imageries
- Community and household surveys of implications of climate change for livelihoods strategies, farming systems, local institutions, and adaptive capacity
- Multi-criteria analysis and multi-stakeholder identification of adaptation options, barriers to adaptation and short term coping versus long-term risk reduction strategies
- Review of governance, policy and institutional linkages to local farming systems and village socio-political conditions
- Capacity needs assessments and training, with a focus on women and vulnerable groups

The pilot phase is located in three clusters of three villages each in order to investigate local variability in impacts (ecological, social, institutional) and differences in responses by different social groups to broadly similar extreme weather events and other circumstances. A key focus is on understanding the perspectives of local communities and policy makers and their responses in terms of furthering adaptation and drought risk management.

## Consortium Partners

The project involves five partners:

- Norwegian Institute for Urban and Regional Research (NIBR)
- The Energy and Resources Institute (TERI)
- Center for International Climate and Environmental Research, Oslo (CICERO)
- Norwegian Institute for Water Research (NIVA)
- Action for Food Production (AFPRO)

The project is managed by NIBR under the umbrella of CIENS - Oslo Centre for Interdisciplinary Environmental and Social Research ([www.ciens.no](http://www.ciens.no)).

For more information visit:

<http://www.teriin.org/projects/eva>



Participatory community resource mapping  
(Nivdunga village, Jalna, Sep 2012)

Photo Credit: Divya Mohan

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Extreme Risks, Vulnerabilities,  
and Community-Based  
Adaptation in India (EVA):  
A Pilot Study in Maharashtra

Indo-Norwegian Research Collaboration on Climate Change Adaptation





## Drought and Climate Change in Maharashtra

The drought of 2012 in Maharashtra was the worst drought in several decades. Farmers of the Marathwada region of the Maharashtra state have been among the worst impacted with huge losses in both *kharif* and *rabi* yields. The semi-arid region of Marathwada falls under the monsoon shadow region and experiences on an average only about 700-750 mm rainfall per annum. In 2012, however, the rainfall was very low with about 60% departure from the normal long term average rainfall in August in Jalna district in Marathwada region. The region is important for the production of crops such as cotton, bajra, jowar, wheat and tree crops such as sweet oranges.

Agriculture is the main source of livelihoods for the mainly smallholder farmers of the region. The dependence on rainfed farming is quite high such as in Jalna District in the region where it is close to 85 per cent. Watershed development is also not widely practiced in the region. Thus, the communities are both exposed and vulnerable to extreme climate events such as droughts. This state of affairs raises the need to better understand local variations in impacts and responses to climate extremes, such as droughts, and offers an opportunity to work with local communities to better understand their perspectives on how adaptive strategies and greater resilience can be built among vulnerable groups and communities, including women. Under climate change scenarios such droughts may become more frequent.



Photo credit: Divya Mohan

Water being carried in tankers from outside the village to meet drinking water demand (Asarkheda village, Jalna, Sep 2012)

## The EVA Project (2012-2014)



Photo credit: Guro Aandhal

A Farmer comparing the reduced growth of cotton in drought year as compared to the growth in normal year (Pimpalgaon Barav village, Jalna, Sep 2012)

In light of the challenges faced by the communities in the drylands of Marathwada region, this two year project is being undertaken in the Jalna District of Maharashtra among farmers who have been impacted by extreme drought. The project has been funded by the Royal Norwegian Embassy in New Delhi.

### Project Goal and Objectives

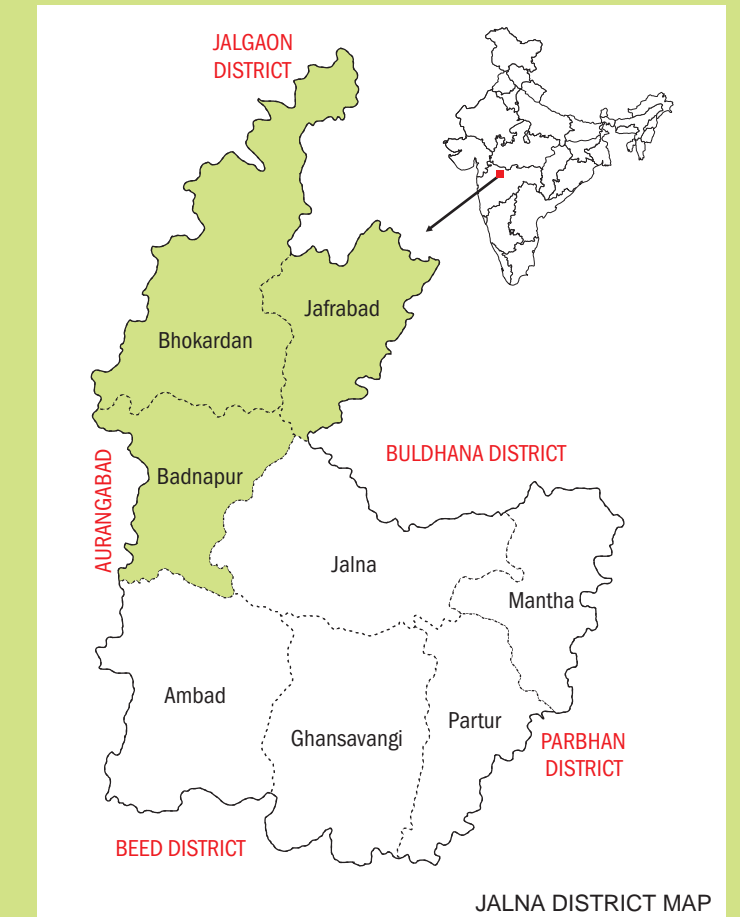
The main goal of the project is to assess the enabling conditions for effective community-based adaptation to the impact of extreme events at the community level.

The specific objectives are:

- to assess extreme risks, vulnerabilities and adaptive capacities

- to identify strategies for better community-driven adaptation and disaster risk reduction
- to build local capacities and approaches
- to create a knowledge platform for further research and capacity building
- to prepare a new long-term research collaboration program

The project involves participatory approaches in identification of problems and solutions. It involves close cooperation with government authorities and stakeholders at local, district, state and national levels.



JALNA DISTRICT MAP