

## **An ecosystem-based response vital during disasters, including COVID-19**

On Friday, May 1, 2020, the Maharashtra Foundation Day, Watershed Organisation Trust (WOTR), the WOTR Centre for Resilience Studies (W-CReS) and TMG Research gGmbH, Berlin, came together for a state-level online workshop. The session discussed at length 'Ecosystem-based Adaptation for Building Resilience to Climate Risks during COVID-19 in Rural Maharashtra'.

The agenda was to explore ways to draw up an informed roadmap for Ecosystem-based Adaptation (EbA) in rural Maharashtra to mitigate the fallout of the climate crisis, now exacerbated by COVID-19.

"The objective is to improve the resilience of Maharashtra's land resources and especially the lives of the people of rural Maharashtra," said W-CReS Director Marcella D'Souza in the welcome note.

The session kicked off with TMG Research Managing Director Alexander Muller expressing grave concern: "Now we are aware robust EbAs are a tool to avoid a pandemic," he said stressing the need for upscaling and mainstreaming rapid response mechanisms. Mr Muller is current head of a global study by the UN Environment Program on "The Economics of Ecosystems and Biodiversity for Agriculture and Food" and also the former Assistant-Director General of the Food and Agriculture Organization of the United Nations (FAO)

Among the seventy-odd participants, comprising various policymakers, researchers and thought leaders from across sectors, was the Agricultural Secretary to the Maharashtra Govt, Eknath Dawale, who observed that the ongoing lockdown has cut supply chains and put the grape and mango farmers of Maharashtra in a fix; some, however, were finding ways to mitigate the losses incurred by engaging in innovative ways. "Anything that happens in Brazil or the US affects the soybean or cotton farmer in Maharashtra. From the EbA point of view, a rethink is absolutely necessary to draw proper responses to the unfolding climate emergency," he said.

Though various key points were raised and discussed, the one thing that stood out was the Bhojdari case study. While it is testimony to the benefits of watershed development, the reverse urban-rural migration post COVID-19 may help support livelihoods in rural Maharashtra, thanks to timely EbA interventions, observed WCREs senior researcher Dr Niraj Joshi.

Nandurbar district is the most vulnerable to climate risks and Satara the least, State Environment Department Director Narendra Toke revealed while unveiling plans for 'climate-proofing' villages. Senior WOTR researcher Arjuna Srinidhi explained how soil, water and the catchment area -- an ecosystem's smallest building blocks -- make up the core components of EbA.

"We must make sure the concerned agencies do not abandon the farmers after project

completion, as the contexts and related challenges keep shifting rapidly. Could this be the way forward?", asked W-CReS Director Marcella D'Souza.

According to WOTR's Managing Trustee Crispino Lobo, a robust and nuanced EbA strategy should be holistic, multi-sectoral and keeping in mind system-dynamics for proper design and implementation. It must be rooted in the hydrological basis of the watershed or the sub-basin. "The sheer complexity of EbA requires a multitude of stakeholders - a "coalition of the willing and a symphony of helping hands'- coming together to overcome policy constraints, implementation gaps and political hurdles," Lobo concluded.

**Brief note on the project:** This consultation was a part of the project titled "Climate-SDGs Integration Project: Supporting the Implementation of the Paris Agreement and the 2030 Agenda Through Ecosystem-based Adaptation" that is funded by the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Germany, and jointly implemented by the Watershed Organisation Trust (WOTR), Pune, and TMG Research gGmbH, Berlin. In India, the project is envisaged for Maharashtra and aims at developing a Roadmap for upscaling ecosystem-based adaptation (EbA) in the state.

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### **Bhojdari: A case in point**

Of late, Bhojdari in Ahmednagar district has been witnessing shifting rainfall patterns due to erratic and extreme weather events. Appropriate watershed management, information dissemination on weather to local farmers, water budgeting, sustainable adaptive agriculture, access to indigenous seeds, organic manure/composting, and other capacity building measures such as conserving biodiversity, beekeeping, etc., show how timely and informed interventions have contributed to DRR (Disaster Risk Reduction) and have helped rural Maharashtra adapt to erratic climate events. The EbA project has considerably reduced distress migration. Quite a few farmers in Bhojdari are already opting for a second crop -- in place of millets and groundnuts now one sees cash crops. There is an increasing demand for consumer durables which point to an economic shift.

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***Watershed Development work in Bhojdari, an example of Ecosystem-based Adaptation***



***Pic: A farmer field school in progress in Bhojdari, another example of Ecosystem-based Adaptation***



*Pic: Participants at the virtual EbA workshop*