HARNESSING CITIZEN PARTICIPATION IN WATERSHED MANAGEMENT FOR CLIMATE RESILIENCY

Empower poor Indian farmers through skill-building in watershed development and climate adaptation to mitigate drought, build community resilience, and improve economic security

PROJECT GOALS

The Georgetown University India Initiative (GUII) partnership with the Watershed Organization Trust (WOTR) will reduce poverty by empowering rural communities with the skills to regenerate the watersheds they depend on, enabling sustainable livelihoods and more resilient communities among Maharashtra's 60 million citizens reliant on agricultural employment.

Severe drought debilitates large portions of India: inadequate monsoon rains and depleted groundwater caused drought in 43% of India in 2019, and the situation is projected to worsen. Participatory watershed management at the village level improves groundwater storage, mitigates the negative impacts of changing rainfall patterns, and provides an inclusive platform to bridge community divisions and empower women.

With additional funding, WOTR can expand its reach physically and digitally, improving accessibility and application by farmers and non-farmers alike. Rigorous monitoring & evaluation protocols will inform behavioral-change communication strategies to disseminate evidence-backed lessons to millions of farmers desperate for solutions to the water crisis facing India and the world, and, quite literally, save lives.

ABOUT OUR ORGANIZATIONS

Founded in 1993, WOTR is a non-profit that engages at the intersection of practice, knowledge, and policy with the goals to reduce poverty and improve the overall quality of life, especially in vulnerable rural communities in India.

- HQ in Pune, Maharashtra; works in 7 Indian states
- Knowledge partner for flagship Government of Maharashtra drought-prevention scheme, JYSA
- UN Land for Life awardee

Founded in 2015, GUII has expertise in research design, impact evaluation, and data analytics, particularly in the context of water scarcity, drought and participatory community development, as well as U.S.-India policies within a global context.

- Based in Washington, DC
- Experience working with the Government of Maharashtra, World Bank, and Gates Foundation
- WOTR partner since 2017

PARTNERSHIP OVERVIEW

Given India's worsening drought crisis, community mobilization for watershed management is a critical, cost-effective resource to be harnessed. This project reflects our shared commitment to expanding WOTR's participatory water management programming and strengthening its digital education capacity. Villagers are responsible for water data collection and resource allocation; this way, every drop is accounted for, and every household is held accountable for water usage. The expansion of WOTR's physical reach will be accompanied by new, evidence-backed digital trainings designed to make WOTR's knowledge accessible to villages and villagers outside their existing footprint.
FUNDING POSSIBILITIES
Though these initiatives are large-scale, long-term plans, any amount of funding helps to drive this partnership toward sustainable, community-driven solutions in the face of climate change in Maharashtra and beyond. These funding tiers offer the exciting ability to seek change at-scale and offer a chance to augment the other.

With $1 million, a focused, year-long project would:
- Support WOTR's existing field sites in MH
- Strengthen the evidentiary basis for WOTR's participatory watershed management model
- Study watershed development projects in 1000 villages through a mixed-methods evaluation
- Review of WOTR's programs and training courses to inform best practices

With $5 million, a focused, 2-year project would also:
- Extend WOTR's work to 500 new villages in MH
- Develop digital curriculum based on WOTR programming, informed by review
- Create partnerships with local organizations in new states

With $10 million, over a 3-5 year project term, we would:
- Expand WOTR training program into 7 other states
- Perform an iterative, longer-term impact evaluation to improve upon physical and digital capacities
- Promote collective activity in other social policy contexts

TECHNICAL BACKGROUND
WOTR follows a holistic ridge-to-valley model that includes the construction of water management structures, reforestation, and water-conserving agricultural strategies. This slows the flow of water above-ground to reduce runoff, flooding, and soil erosion, increasing groundwater percolation and water availability during dry seasons.

WOTR's programs utilize a traditional knowledge base that shaped 1970s-era watershed development (WSD) projects, which were intended to help farmers capture and store rainwater, reduce soil erosion, and improve soil nutrients and carbon content for greater agricultural yield and income generation. Today, WOTR's community-led interventions treat WSD as just one component of a larger socio-technical system.

Through “train-the-trainer” workshops at a learning center in Darewadi, Maharashtra, WOTR introduces these techniques to villagers to build local capacity and institutions. Working in 7 states, across 500 villages, WOTR has directly improved the lives of 3+ million citizens, but the potential impact is exponentially higher.

MONITORING & EVALUATION PLAN
Mixed methods M&E will be used to track groundwater levels, the strength of local institutions, and socioeconomic indicators to reflect our goals of increasing local capacity + water availability for improved environment + livelihoods:

1. Measure change in groundwater availability over time using satellite data and well levels, as well as qualitative surveying of village-level data on water presence, farming methods, community engagement, and the growth of local institutions. Using difference-in-difference analysis to compare similar villages, these micro-data will allow us to track benefits to local communities, taking into account the length of the intervention period, and geographic and hydrological differences. The data collected will provide information about the successes of WOTR's initiatives in reducing drought vulnerability, and in strengthening local collective action institutions and SEC indicators.

2. Evaluate behavioral change communications (BCC) strategy to disseminate the learnings from WOTR's accumulated record to farmers beyond WOTR's reach or area of specialization. This will require the use of randomized control trials involving informational interventions in which the content and medium of the BCC is manipulated. The RCTs will provide insight on the successes of digital versus in-person trainings.