Building the resilience for managing groundwater under climate change: Lessons from the Water Stewardship Initiative, India

Dr. Eshwer Kale, Dr. Marcella D'Souza, Hemant Pinjan, Arianna Tozzi





The WOTR Centre for Resilience Studies www.wotr.org

Water Stewardship: The Framework

Basic Assumptions

- Water is a shared resource in the public trust domain
- It requires collaborative solutions
- Resilience building to CC is the key to reduce the different vulnerabilities.
- Communities are not passive water users but can play an important role as water managers

Necessary Conditions

- Sense of Ownership
- Reflection, dialogue and generation of localespecific information
- Boundary rule- defined users
- Inclusive governance institutions
- Enforcement of Sanctions on violators
- Conflict-resolution mechanisms
- Capacity to take informed choices

Processes and Strategies

- Engagement of multiple Stakeholder groups
- Jal Sevaks
- Formation of VWMT
- Water Stewardship Plans
- Stakeholder Engagement Workshops
- Research findings shared
- Water Stewardship Plans

Expected Outcome

Water-use that is socially equitable, environmentally sustainable and economically beneficial

(Water secured communities)

Source: Water Stewardship Manual, WOTR





Results

- Communities are governing around 38.39 billion liters of water annually
- Additional water harvested around 9 billion liters of during the 2016-2018
- Over 2000 farmers (54% rise) have adopted practices of micro irrigation, mulching, vermicomposting, and organic manures and saved 3.24 billion liters water
- Stakeholders have voluntarily collecting daily rainfall data through 212 rain gauge units and monitoring water level data
- Water Stewardship Plans in 106 villages and efforts are made to execute them.











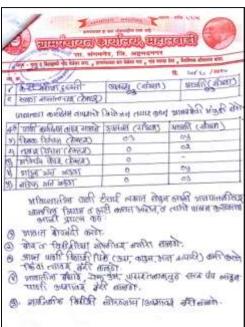


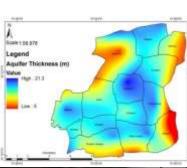
Results

Piloting Key Principles of Maharashtra Groundwater Act 2009

- Groundwater as a buffer for dealing with droughts and low rainfall
- **Institutional Governance (WWRC):** Pilot at Aquifer level and VWMT formed in 106 villages
- Prospective crops plans: Water Stewardship Plans
- Ban on deep wells and mandatory permission for sinking new well: Community makes their own rules in WSI





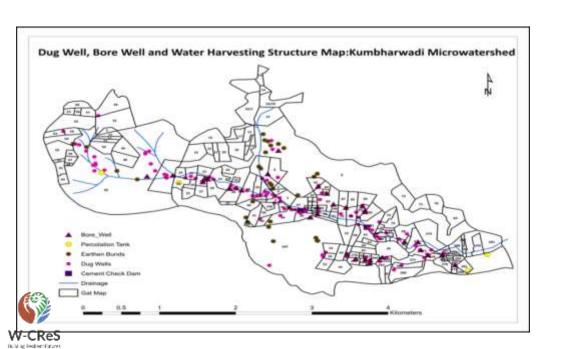




Results

Piloting Key Principles of Maharashtra Groundwater Act 2009

- Working with Government officials
 Village teams presented Water stewardship plans to government officials.
- Registration of Abstraction structures
 Piloting in selected wells







Special Mention by Initiative on Climate Change Policy and Governance, Venice, Italy





