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
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 locale-specific 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
• **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

ICCG Best Climate Practices 2017 Award

Building Resilience to Climate Disaster Risk

Special Mention of the Jury to

Watershed Organization Trust

for the project “Promoting Water Stewardship for water and food security in semi-arid regions”

Venice, 13 October 2017

Prof. Carlo Carraro

Direttore, Initiative on Climate Change Policy and Governance