

Water Stewardship and Water Budgeting: A Pathway to manage the water available in a time of growing water scarcity in rainfed Maharashtra

POLICY BRIEF: February 2020

Context:

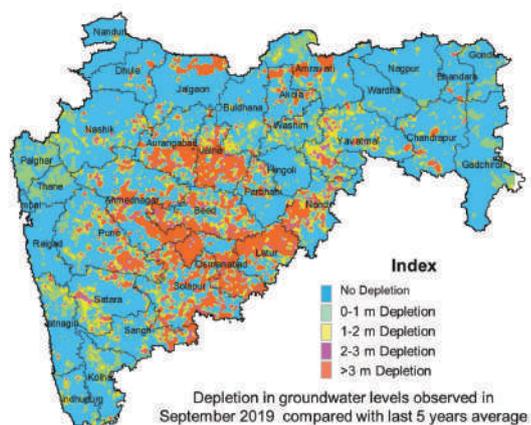
- The state is facing repeated droughts in many regions, resulting in crop loss and failure, despite substantial water harvesting interventions (supply side). The drastic depletion of groundwater is resulting in an increase in the number of villages dependent on tankers for drinking water and livestock needs.
- A major cause of the growing water scarcity is absence of appropriate governance at the community level, which is particularly challenging where, under Indian law groundwater is seen as private property. With water being attached to land ownership, only a handful enjoy its benefits.

Key Recommendation:

A “Water Stewardship” approach and Water Budgeting process which promotes the sustainable use and management of water, needs to be incorporated into existing soil and water conservation programs, such as JSY, IWMP, NRM, as well as initiatives that focus on water literacy.

Introduction:

Maharashtra is the third largest state in the country where 52% of its land area is prone to droughts (GSDA, 2014). With the state reeling from the effects of consecutive drought years and unregulated extraction of groundwater, growing water scarcity has become one of the key challenges. According to the GSDA, out of 353 talukas in Maharashtra, water levels have dropped from 1 to 3 meters in villages across 245 talukas, between 2014 and 2019 (GSDA, 2019).



With most of the state led interventions focusing on the supply side potential, rural communities are still unable to mitigate the effects of the unprecedented rates of extraction, coupled with erratic rainfall and droughts. The need of the hour is to equip rural communities with the necessary knowledge and tools to ensure the sustainable use and management of water, while they earn from agriculture productivity.

Objectives:

To build skills and capacities of villagers to prepare water budgets, monitor its application, and build resilience to drought / drought-like conditions.

Approaches and Interventions:

- Jal Sevaks (Water-use promoters) – trained as para-technologists for water management, motivate the “Water Stewards” i.e. committees and users / farmers to prepare and implement Water Stewardship Plans.
- Village Water Management Team - representatives of different resource owners and social groups prepare & monitor the water management plans.
- Drinking water security is a priority.
- Systematic and well-planned discussions are held with the diverse stakeholders, to understand, dialogue on local water related issues, with the aim of the building knowledge and consensus on the same.
- Preparing village water health chart, village water budgets as well aquifer management are proposed as in the Maharashtra Groundwater Act 2009.
- Rainfall and groundwater is monitored locally by villagers
- A 3D model of the aquifer and surface topography is used to mobilize villagers to consider water a common good
- Villagers formulate rules in the Gramsabha on water and crop use and make efforts to follow.

Research Results:

Watershed Organisation Trust piloted the Water Stewardship Initiative (WSI) in 100 villages in the Ahmednagar, Dhule and Jalna districts in Maharashtra since 2016. It has been implemented with the support of 27 Jal Sevaks and Village Water Management Teams of the 100 villages. An assessment in March 2019 provides the following impacts,

- Following the drought year of 2018, out of 100 villages 78 had water available for domestic use, at least until January 2019
- During the two and a half years, 3.24 billion litres of water were saved through mulching and by micro-irrigation adopted by 2000 farmers between October 2015 and March 2018. The total area under drip irrigation increased by 597.27 ha and sprinkler irrigation by 218.48 ha.
- Jal Sevaks and some members of VWMTs have the know-how and prepare village water budgets and appropriate crop plans, They also prepare plans to increase water harvesting through repairs of old structures. This helps them save water during the pre-kharif and in the pre-rabi periods.
- Rainfall data and groundwater monitoring data is collected locally and helps the Jal Sevak and Village Team to prepare the water budget plans.
- Of the 100 project villages, 78 villages have discussed these issues in the Gramsabha and have the rules ratified in their records. These villages have adopted some or all of these rules, each according to their local conditions, such as: (a) ban on drilling of new bore wells; (b) limit the depth of bore well; (c) ban on cultivating water intensive crops during a year of low rainfall; (d) ban on direct lifting of water from harvesting structures. The other 22 villages could not come to a consensus.
- Village Water Management Teams and the Gram Panchayats of 30 villages submitted the Village Water Stewardship plans to district officials.

"The area under cotton has been drastically reduced and is replaced with soya bean and chickpea in our village. Water budget process initiated in the village has played a great role in achieving this. Now, farmers have come to know the amount of water required to grow each crop. This information has helped us shift to low water requiring crops, keeping in mind the water available in the village."

- Kisan Icche, Sarpanch of Kotha Jahangir village (Bhokardan) and member of VWMT

Policy Recommendations:

- In natural resource management programs, such as the JYS and IWMP, a water stewardship approach with a focus on adoption of water budget plans & its implementation by the community helps in demand side water management.
- Water stewardship at the local level is an important drought proofing strategy. These activities ensure that groundwater is made available during periods of low rainfall or dry spells.
- For sustainable water management to be effective, participation and building skills and confidence of villagers is key. A stakeholder engagement approach helps in increasing and creating a common knowledge on the water situation of the cluster / aquifer shared villages. Participation of the local community in collecting data of the rainfall and groundwater level and local monitoring encourages their active engagement.
- Sufficient time and investment is required for capacity building at various levels which helps in seeding the concept and sustainability of the impacts in this crucial and sensitive subject of water management.
- The initiative provides important contributions: 1) It helps the country to meet its Sustainable Development Goals 6, 12, 13 and 16. 2) It serves as a blue-print for operationalizing and implementing the Maharashtra Groundwater Act, 2009 across the state, and helps inspire and inform similar efforts in other states.

References: 1) GSDA, 2014, Report on the Dynamic Groundwater Resources of Maharashtra (2011-2012).

2) GSDA, 2019, Report of Predicted Water Scarcity for drinking water for 2019-2020.

Additional Sources: 1) The booklet published on the WSI, available at <https://bit.ly/36pC3sw>.

2) Short film on WSI, available at <https://bit.ly/2Pg9wA6>



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