

# Water Stewardship & Water Governance Standards and Certification

**Scoping Meeting**

**National Water Mission**

**Dr Ambedkar International Centre, New Delhi**

**20<sup>th</sup> November 2018**

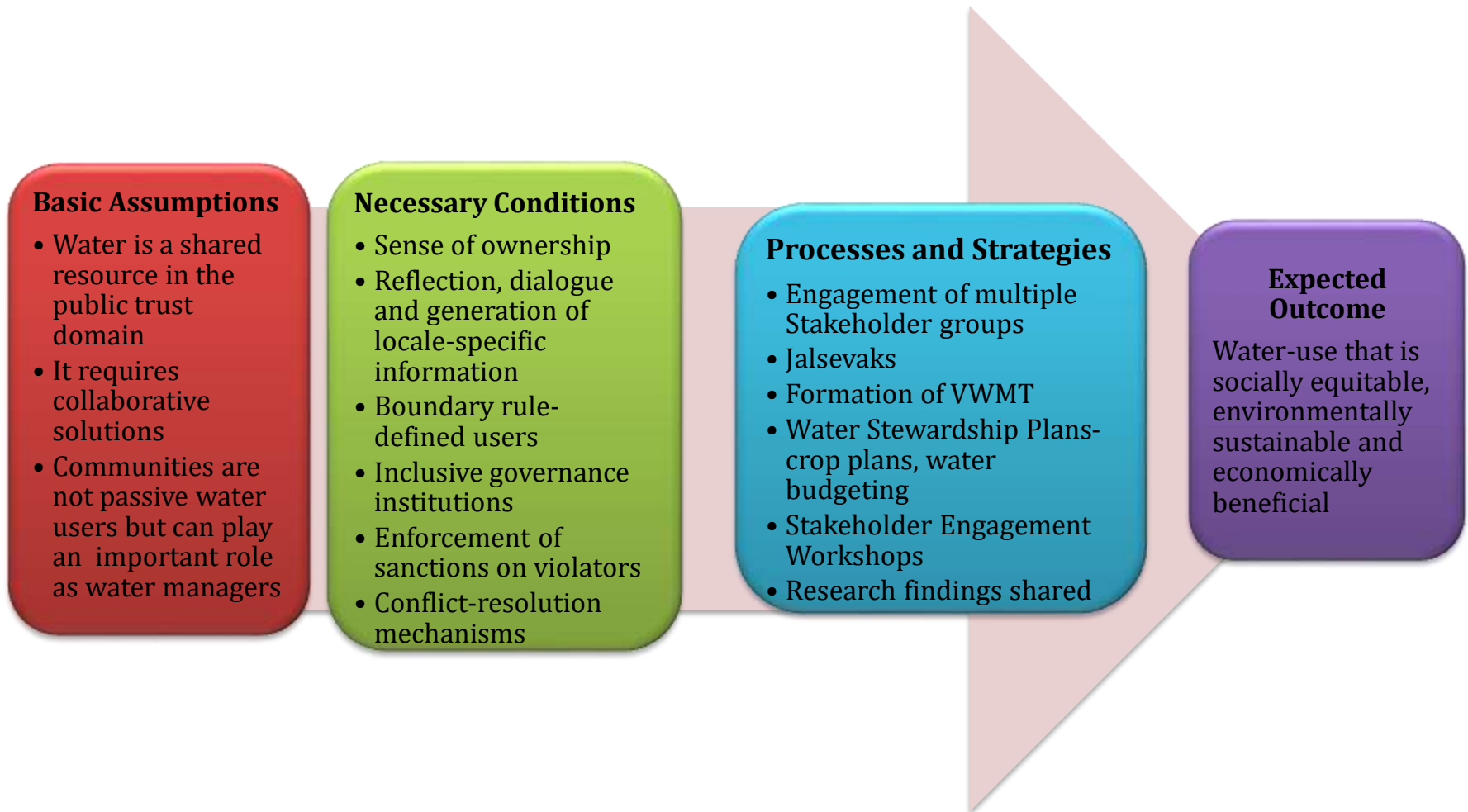


**Presented By:  
Rishu Garg  
Deputy Director  
WOTR**

# Water Stewardship Initiative

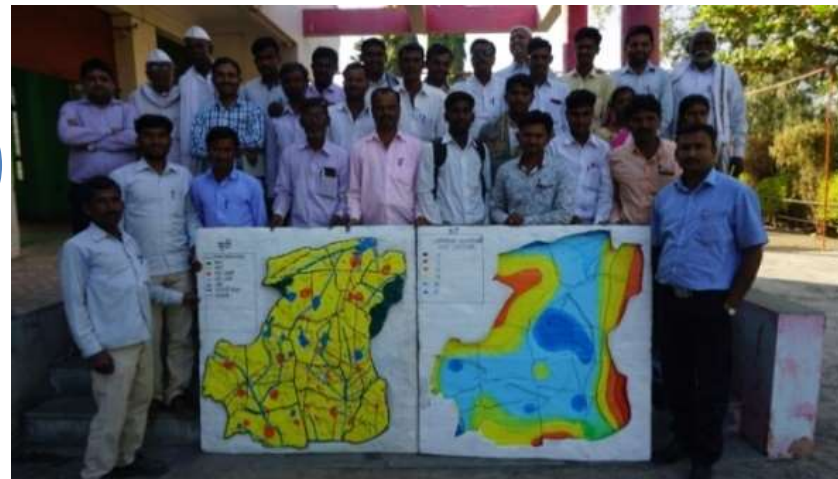
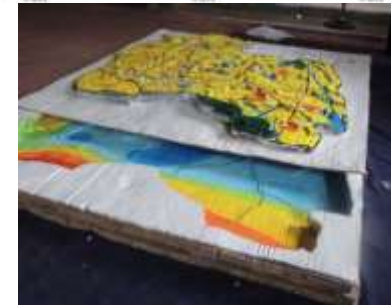
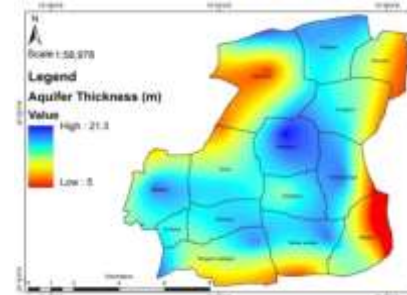
- **Demand side water management and Water Governance issues are not addressed adequately**
- **Pilot to operationalize the Maharashtra Groundwater (Development and Management) Act, 2009**
- **Implemented in three districts, five blocks and 106 villages**
- **Stewardship approach**

# Water Stewardship Initiative: Collective conservation and management of Ground Water



# Piloting Key Principles of Maharashtra Groundwater Act 2009

- Institutional Governance (WWRC): Pilot at Aquifer level and VSRT formed in 106 villages, Jal Sevaks
- Cropping pattern based on water budget and plan optimum withdrawal of Ground water: Assessment of village water health, Water Stewardship Plans
- Registration of Wells, ban on deep wells and mandatory permission for sinking new well: Community makes their own rules in WSI



# Water Budgeting

An approach as well as tool geared towards ensuring optimum, equitable and most efficient use of water and behavioral change

It is defined as 'an estimate of harvest of water resources and its utilization for a set period of time'.

- Assess season-wise water availability - surface and groundwater at the village level
- Assess current and projected water demand for domestic, agriculture, livestock and livelihood purposes
- Match existing water availability with demand
- Choose crops and cropping patterns in line with net water availability keeping in mind household food security and market (income) needs
- Introduce water saving technologies –drip, sprinkler, mulching, etc., and encourage harvesting more water
- Shift from supply driven approach to demand side management





# WOTR वॉटरशेड ऑर्गनायझेशन ट्रस्ट - (वॉटर)



## वॉटर बजेटिंग-पाण्याचा ताळेबंद

### जावामध्ये उपलब्ध होणारे पावसाचे एकूण पाणी

गावाचे क्षेत्रफळ x	पट्टणारा पाऊस = ३२०	उपलब्ध पावसाचे पाणी
१०९ हेक्टर	मीटर (१०० मी.मी.=१ मीटर)= ०.३२	२९०.८८ हेक्टर मीटर
(१ हेक्टर मीटर=१ कोटी लिटर) म्हणून जावामध्ये उपलब्ध होणारे पावसाचे एकूण पाणी = २९०.८८ कोटी लिटर		

### जावत वापरसाठी एकूण उपलब्ध होणाऱ्या पाण्याचे नियोजन

भूजलावरील उपलब्ध पाणी (एकूण वापरता येण्याच्या १५%)	०.१५ x पावसाचे एकूण पाणी २९०.८८	४३.६३ कोटी लिटर
मातीचा ओसावा (एकूण उपलब्ध पाण्याच्या ३५%)	०.३५ x पावसाचे एकूण पाणी २९०.८८	१०१.८० कोटी लिटर
भूजमितीत उपलब्ध पाणी (एकूण उपलब्ध पाण्याच्या १५%)	०.१५ x पावसाचे एकूण पाणी २९०.८८	४३.६३ कोटी लिटर
वापरासाठी उपलब्ध होणारे एकूण पाणी =	१८९.०६	कोटी लिटर

### एकूण उपलब्ध पाण्यापैकी वापरसाठी उपलब्ध होणारे पाणी

वापर	एकूण संख्या (x)	प्रतिदिन लागणारे पाणी (x)	दिवस (x)	१०००००० (१ कोटी) (x)	कोटी लिटर
मणूस्य	१०५०	४० लिटर	३६५	१०००००००	१०.०९ = कोटी लिटर
मोडीजगाळे	४००	६० लिटर	३६५	१०००००००	०.८७ = कोटी लिटर
लहान जगाळे	५००	३० लिटर	३६५	१०००००००	०.२७ = कोटी लिटर
पक्षी	१०००	२ लिटर	३६५	१०००००००	०.५१ = कोटी लिटर
वर्षभर पिण्यासाठी लागणारे एकूण पाणी					२.७४ = कोटी लिटर

### हवामानाची स्थिती दाखवणारा तक्ता

दिनांक	तापमान (अंश से.)	हवेतील आर्द्रता (%)	हवेचा दाब (हे.पा)	वाऱ्याची दिशा	वाऱ्याचा वेग (km/hr)	पाऊस (मी.मी.)
● आवडपुऱ्याची माहिती ●						
१२/११/२३	२५.०	३४.१	९३५	उत्तर	६	
● मासिक माहिती ●						
जानेवारी						
फेब्रुवारी						
मार्च						
एप्रिल						
मे						
जून	३१	३५	१५/१०		१५/१३	१४/०
जुलै	३१	२३	११/०		१३/१२०	१०/०
ऑगस्ट	३१	०	११		१२/१२३	११/०
सप्टेंबर	३१	१३	१३/५		१३/११३	१०/०
ऑक्टोबर	३१	१३	११/५२		१२/१२५	११/०
नोव्हेंबर						१२ (२२-१०-२)
डिसेंबर						
एकूण						

### भूजलाच्या पातळीची नोंद

वर्ष	बोअरवेल १.		बोअरवेल २.		बोअरवेल ३.		विहीर १.		विहीर २.	
	२५ W	४th W	२५ W	४th W	२५ W	४th W	२५ W	४th W	२५ W	४th W
जानेवारी										
फेब्रुवारी										
मार्च										
एप्रिल										
मे										
जून	२२.७	२२.५	१५.३	-			२९.३	२०.२		
जुलै	२२.७	२१.६	१६.५	-			२३.५	२०.८		
ऑगस्ट	-	१५.३	-	-			६.७			
सप्टेंबर	१२.४	११.५	१४.६	१५.६			६.८	५.८		
ऑक्टोबर	५.३		१०.५				५.६	१०.५		
नोव्हेंबर										
डिसेंबर										

### पिकासाठी शिल्लक राहणारे पाणी

वापरासाठी उपलब्ध होणारे एकूण पाणी (-)	पिण्यासाठी लागणारे पाणी (-)	खरीप पिकासाठी वापरले गेलेले पाणी (-)	पिकासाठी शिल्लक राहणारे पाणी (=)
१८९.०६ कोटी लिटर	२.७४ कोटी लिटर	४५.४६ कोटी लिटर	१४०.८६ कोटी लिटर

### पिकापट्टत आणि सध्या असलेल्या पाण्याचा वापर

पिकाचे नाव	क्षेत्रफळ (हेक्टर मध्ये)	हेक्टरला लागणारे पाणी (कुठिलिटर)	पाण्याचा वापर (कुठिलिटर)
ऊस	-	२.३७	
जव	-	०.३७	
भाजीपाला	-	०.८	
फळे (अंबा)	०.२५	१.२	०.३
होमले	३	०.५	१.५
कपारी	२	१.०५	२.१०
कांदा	१५	०.७५	११.२५
बटाटा	-	०.२६६५	
मका	२५	०.२६६५	६.६६
कडधान्य	६	०.१०९	०.६५
तेलबीया	-	०.०९	
वाजरी	५०	०.१६	८
डाळींब	१०	५	१५

### हवामानाचा अंदाज

पिकासाठी लागणारे एकूण पाणी ४५.४६



# Stakeholder Engagement: The Key Strategy

- 34,600 farming households in 106 villages
- Village Stakeholder Teams formed in all villages
- 27 Jalsevaks (capacitated rural youth) facilitated and motivated villagers for water management
- 65 Stakeholder engagement workshops organized where more than 2000 village level stakeholders participated
- In more than 70 villages, people offered shramdaan (local voluntary contribution)
- Several Government officials participated in workshops
- Collaborations with officials and departments ensured



# Achievements...

- Communities are governing around 38.39 billion liters of water annually
- Around 9 billion liters of additional water harvested during the project period
- Over 2000 farmers (54% rise) have adopted practices of micro irrigation, mulching, vermi-composting, and organic manures and saved 3.24 billion liters water
- Stakeholders have been 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.



Water Stewardship Plan	
Village: _____	
1. Name of the Village	_____
2. Name of the Gram Panchayat	_____
3. Name of the Block	_____
4. Name of the District	_____
5. Name of the State	_____
6. Name of the Country	_____

Water is the most precious resource available to us. It is essential for our survival and the well-being of our communities. We must take steps to ensure that we have enough water to meet our needs for the future.

1. Save water at home.
2. Use water wisely in the office.
3. Use water wisely in the shop.
4. Use water wisely in the school.
5. Use water wisely in the public places.
6. Use water wisely in the public places.
7. Use water wisely in the public places.
8. Use water wisely in the public places.





# WSI highlighted in media and Award at International level







## 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

# Water Governance Standard and Certification System

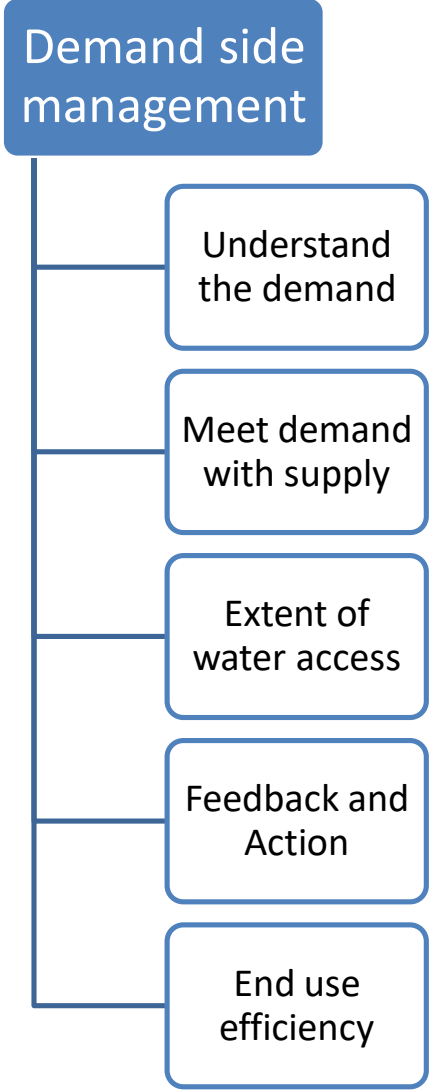
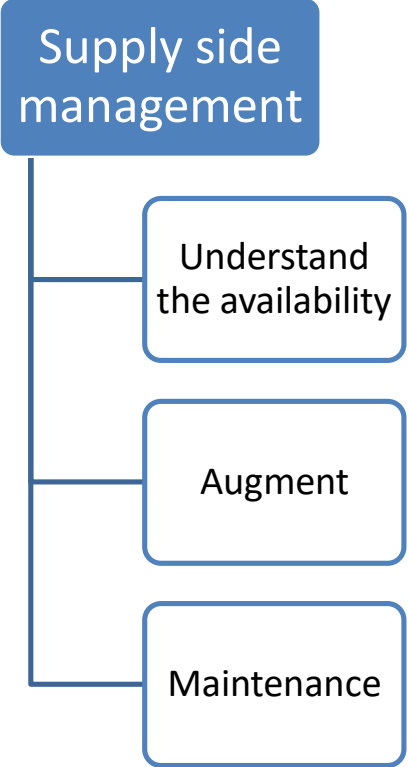
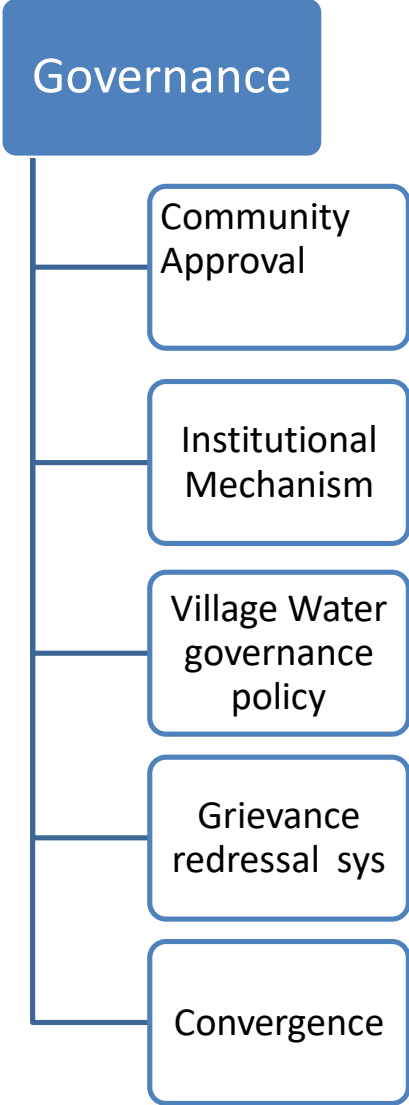
- **Objective**
  - To develop a system that incentivizes agrarian communities to adopt sustainable water governance practices at local level for assured drinking water and enhanced livelihood opportunities
- **Specific objectives**
  - To develop a standard and framework that;
    - Helps objectively assess the level and quality of water governance at the local level;
    - Provides a Benchmark that incentivizes communities to define reachable water-related goals; work to realise them and track progress of implementation;
    - Serves as a decision guideline/ criteria for funding (public / private) to develop and stabilise water resources and infrastructure;
    - Creates a framework for incentivising competitive bidding for water-related financing and resource acquisition;
- **Scope**
  - Dryland agriculture or Rainfed /groundwater dependent agrarian communities across India; currently with focus on Maharashtra

# Design Aspects

- Basis for development
  - Learnings from initiatives in India and International standards
    - WOTR, APFAMGS, ISO etc
- Structure
  - Modular approach
  - Modules can be added in subsequent revisions, if necessary
  - 3 Modules, 13 parameters, 27 criteria, 74 scoring indicators
  - Revenue village unit for Water Governance Standards
  - Gram Panchayat to undertake measures and get the village certified
- Basic message
  - Plan according to the local conditions and execute your own plan
  - Follow sustainability, equity, transparency, and participation considerations in planning and execution



# Structure Overview: Water Governance Standard and Certification System



# Possible Applications

- Inclusion into Flagship Programs: Annual certification can be a mandatory condition for participation in and continuation in funded schemes such as Jalyukt shiwar, Jalswaraj , Adarsh Gram Yojana, etc, as it delivers value for money and enhances sustainability.
- Competition based initiatives and Awards: Water Governance Certification can be a key criteria for determining winning applications/ nominations.
- Government / Public Sector: Annual certification can identify eligible villages or preferential candidates for availing related government schemes.
- Companies under CSR: Supporting communities for implementation of the WGS and certification will enhance sustainability of investments made.



# Thanks

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