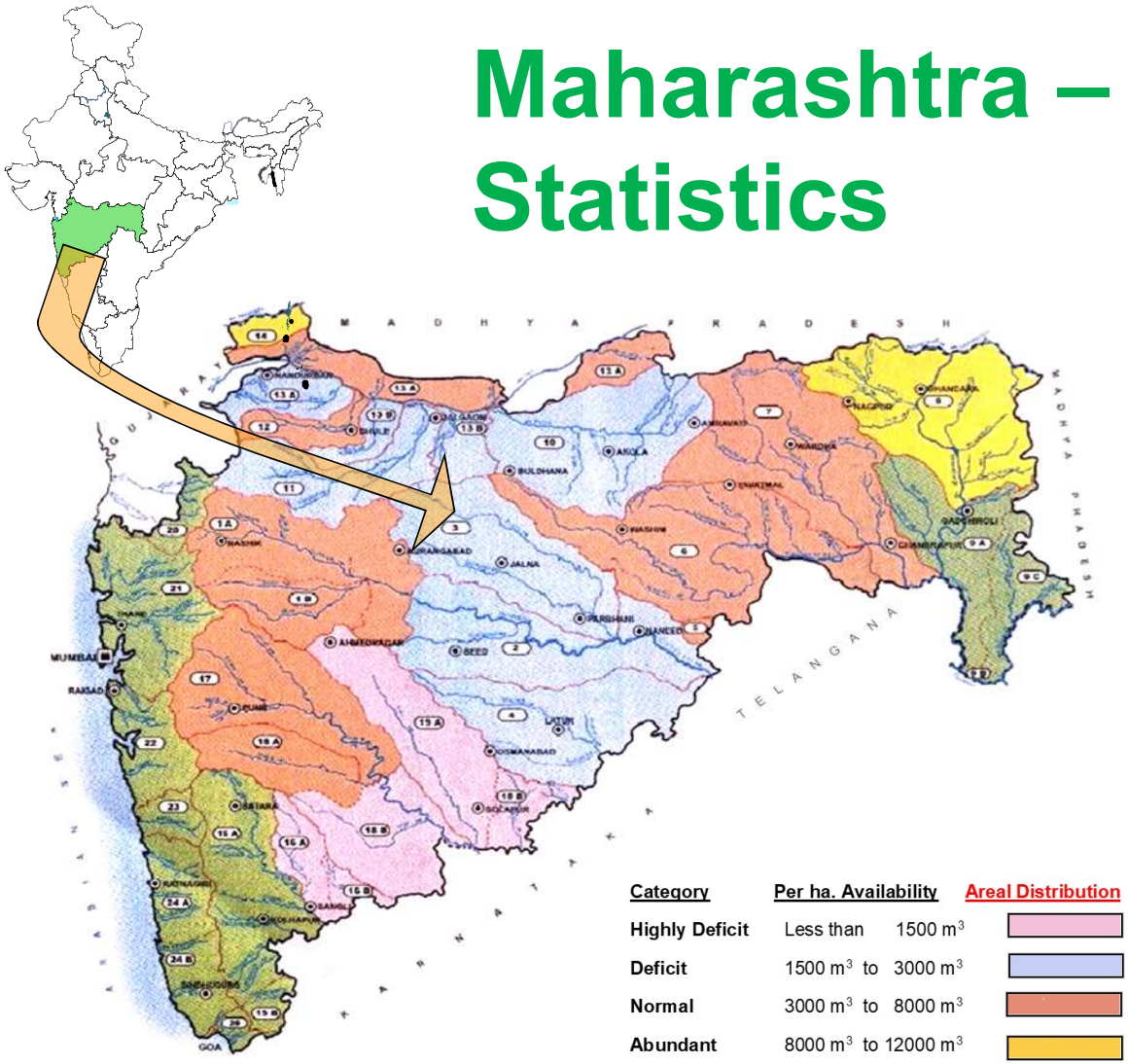
INDIA INTERNATIONAL WATER WEEK (IIWW) -2026

Community-Led Water Security Initiatives

Er. Prakash Misal
Secretary (CAD)
Water Resources Department
Government of Maharashtra

Maharashtra – Key Water Statistics



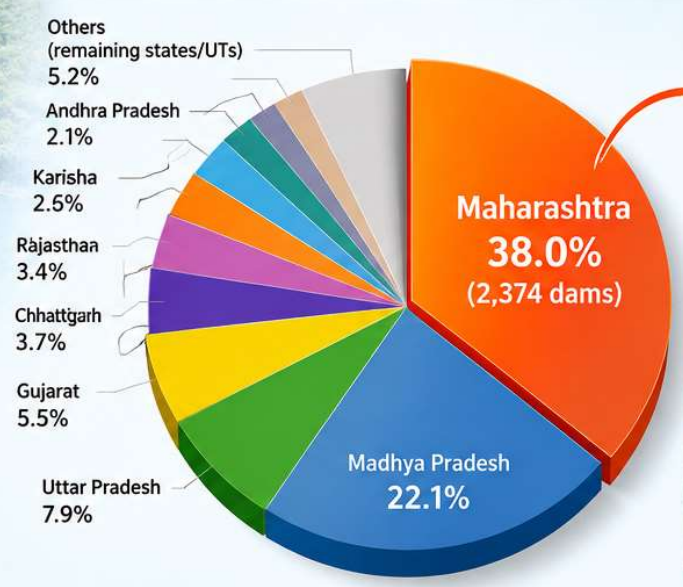
Category	Per ha. Availability	Areal Distribution
Highly Deficit	Less than 1500 m^3	
Deficit	1500 m^3 to 3000 m^3	
Normal	3000 m^3 to 8000 m^3	
Abundant	8000 m^3 to 12000 m^3	
Highly Abundant	More than 12000 m^3	

Particulars	Value
Geographical Area	**308** Lakh Ha
Annual Rainfall	**1146 mm** (400 - 6500 mm)
Culturable Area	**225** Lakh Ha
Targeted Irrigation Potential	**125** Lakh Ha
▸ From Ground Water	**41** Lakh Ha
▸ From Surface Water	**85** Lakh Ha
Irrigation Potential	
▸ IP Created	**58** Lakh Ha
▸ IP Irrigated	**45** Lakh Ha
Number of Projects	**3697**
▸ Major	86
▸ Medium	298
▸ Minor	3313
Storage Capacity	**43477 Mcum** (1536 TMC)

STATEWISE DISTRIBUTION OF LARGE DAMS (EXISTING & ONGOING) IN INDIA

DAMS FOR A STRONGER & WATER SECURE INDIA

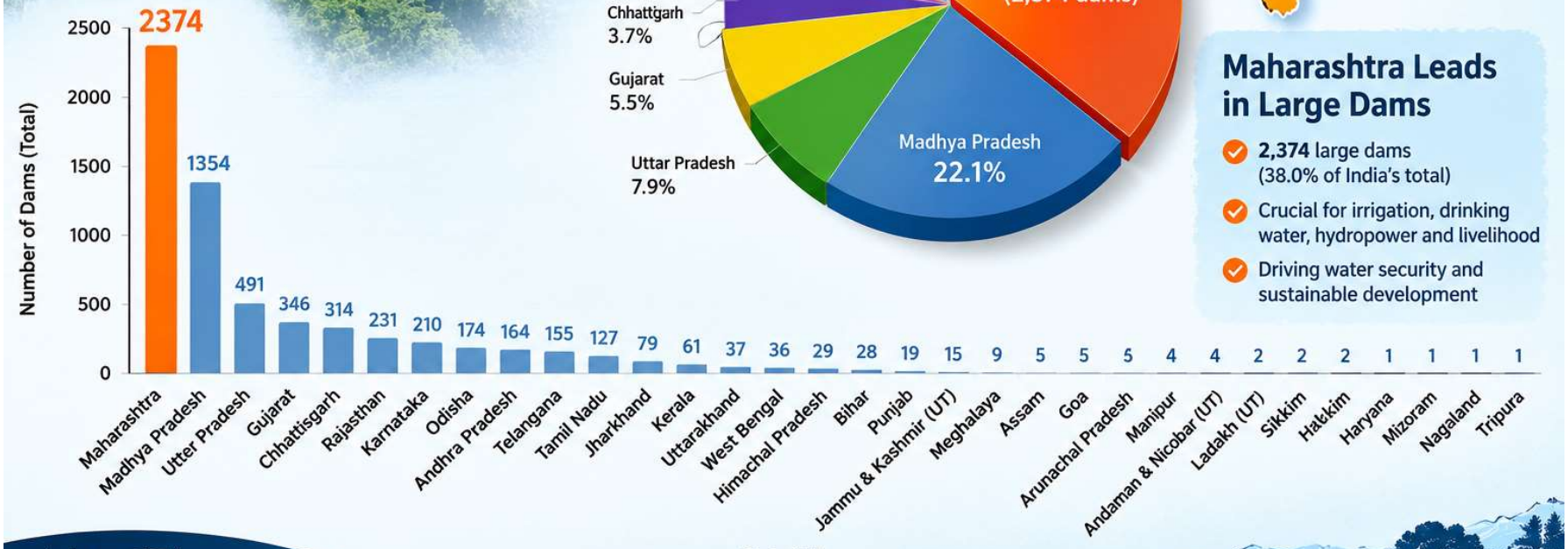






Maharashtra Leads in Large Dams

- **2,374** large dams (38.0% of India's total)
- Crucial for irrigation, drinking water, hydropower and livelihood
- Driving water security and sustainable development



Water Today A Stronger Tomorrow

Source – National Register of Large Dams, 2023

PEOPLE | WATER | PROGRESS

Water Resources in Maharashtra: Challenges

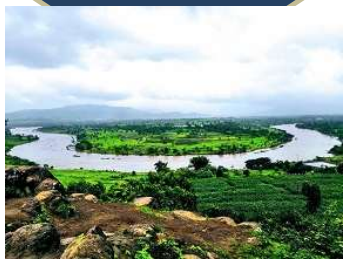
Geographical Area (GA) **307 lakh ha**



Cultivable Area (CA) **225 lakh Ha** (73% of GA)



Surface Water **85 lakh Ha** (38% of CA)



Ground Water **41 lakh Ha** (18% of CA)



Rainfed **99 lakh Ha** (44% of CA)



Potential Created till now **58 Lakh ha**

Potential Utilized in 2025 **45 Lakh ha**

Challenge 1 = **Achieve 85 lakh ha Irrigation Potential**

Challenge 2 = **Remove Gap between IP Created (58) & Utilized (45)**

- 5 Basins, 25 Sub-basins & 1505 watersheds
- Spatial & Temporal Variation
- 4 months of Monsoon Season in a year, 40 rain days
- 96 rain hours (Climate Change Impacts – 40 rainy days)
- Drought prone area = 40%
- Flood prone area = 7%

Government of Maharashtra Initiatives for Community-Led Water Security

Government of Maharashtra continuously taking efforts to increase farmers participation in irrigation management i.e. Participatory Irrigation management by encouraging formation of Water Users Associations & facilitating to WUAs

Maharashtra Irrigation Act-1976

- This act is related to Stake holder base & participatory Management.
- Water committees/ Water Users Associations can manage water distribution, resolve disputes, maintain infrastructure, impose penalties.
- This was early model of participatory irrigation management.
- It requires 51% consensus among beneficiaries for scheme.

Farmers Participation in Irrigation Management

Maharashtra Management of Irrigation System by Farmers (MMISF) act 2005

Salient Features of MMISF Act 2005

- Water for irrigation shall be supplied to WUAs only.
- All landholders or leaseholders must be member of WUAs (unlike earlier 51% of landholders or 51% users).
- Water will be supplied on volumetric basis.
- WUAs have freedom of cropping pattern.
- Adequate representation to tail enders and 33 % women members participation in management committee of WUA
- Time bound program of completion of rehabilitation works before transfer to WUAs.

Maharashtra Water Resources Regulatory Authority (MWRRA)

- **Stakeholders Participation in Tariff Fixation.**

MWRRA cannot fix tariffs in isolation. It must include the views, concerns, and suggestions of the stakeholders before deciding on the water tariffs For transparency, equity, sustainability, efficiency and complacence.

Stakeholders participation carried out by public hearings, consultation documents, representations, workshops, survey and feedback forms.

- **Water Use Right Enforcement.**

under Section 11(o) MWRRA authority can monitor and control how much water is being used, by whom, and for what purpose and take action if it is not used properly

- **Grievances Redressed.**

Under the MWRRA Act, 2005, grievances related to water entitlements and supply are first addressed by a Primary Dispute Resolution Officer (PDRO) appointed at each River Basin Agency. If the party is unsatisfied with the PDRO's decision, they can file an appeal to MWRRA, which reviews and gives a final verdict using civil court-like powers

Retention and Refund of Collected Water Charge to strengthen the WUAs financially

- For registered WUAs which actively involved in assessing and collecting irrigation water revenue from farmers.
- Receives up to 75% of the collected water charges back from the government as a refund.
- purpose is to strengthen the WUAs financially
- also this returned capital is utilized by the local WUAs for Operation & Maintenance (O&M) of canals, minor distributaries field channel and system.

WUAs Status in Maharashtra

Stages	MMISF Act 2005		Co- operative Act 1960		Total as per both Act	
	No of WUA's	Area (ha.)	No of WUA's	Area (ha.)	No of WUA's	Area (ha.)
Functional	3587	1545552	616	177482	4203	1723034
Registered	2237	926055	283	96623	2520	1022678
Total	5824	**2471607**	867	266088	6691	**2745712**

Water Users Association Facilitation Cell at Various Offices of W.R.D.





Water Users Association Awards

- Punyashlok Ahilyadevi Holkar State Level Award under Mahatma Phule WUA Abhiyan.
- In order to encourage water use institutions to become competent and strong on their own, the government started the Punyashlok Ahilyadevi Holkar Water Use Association Management Competition from the year 2009.
- Water use institutions can manage irrigation with the participation of farmers, which can increase irrigation efficiency.
- Evaluation is made on basis of water use, utilization, agricultural and social parameters
- The award has resulted in appreciating WUAs efforts and motivating others to work better

Successful initiatives of participation in Irrigation Management in Maharashtra

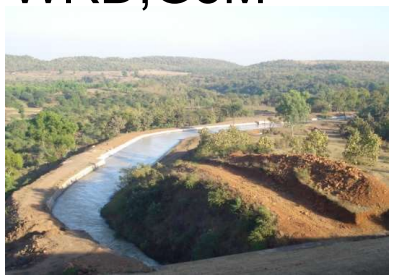
First successful initiative was taken to form WUA @ Chanda Tal. Nevasa, Dist. Ahilyanagar, on Mula project named Datta WUA, and now it is replicated in all over Maharashtra for example.

1) Waghad Project Level Association, Mohadi Tal. Dindori,dist,nashik
2) Pentakli Project Level Association,Mehtar, dist. Buldhana
3) Maa. Shardashram wua, Boridhivare, Tal, Mauda, Dist.Nagpur
4)Samrudhhi WUA Itkheda, Tal.Arjuni morgaon, Dist. Gondia
5) Jaylxami WUA Lagam, Tal.Chamorshi, Dist.Gadchiroli



Waghad Dam

WRD,GoM



Waghad Canal

PLWUA

Minor of Waghad Canal



WUA

Field Channel



Highlights of Waghad WUA

Integrated use of surface & ground water resulting in eight months irrigation to round the year irrigation.

- Active women participation
  - ➢6 Chair-persons are women, out of 25 WUAs.
  - ➢In total 75 members are women in 25 WUAs.



Impact of Irrigation Management Transfer (IMT)

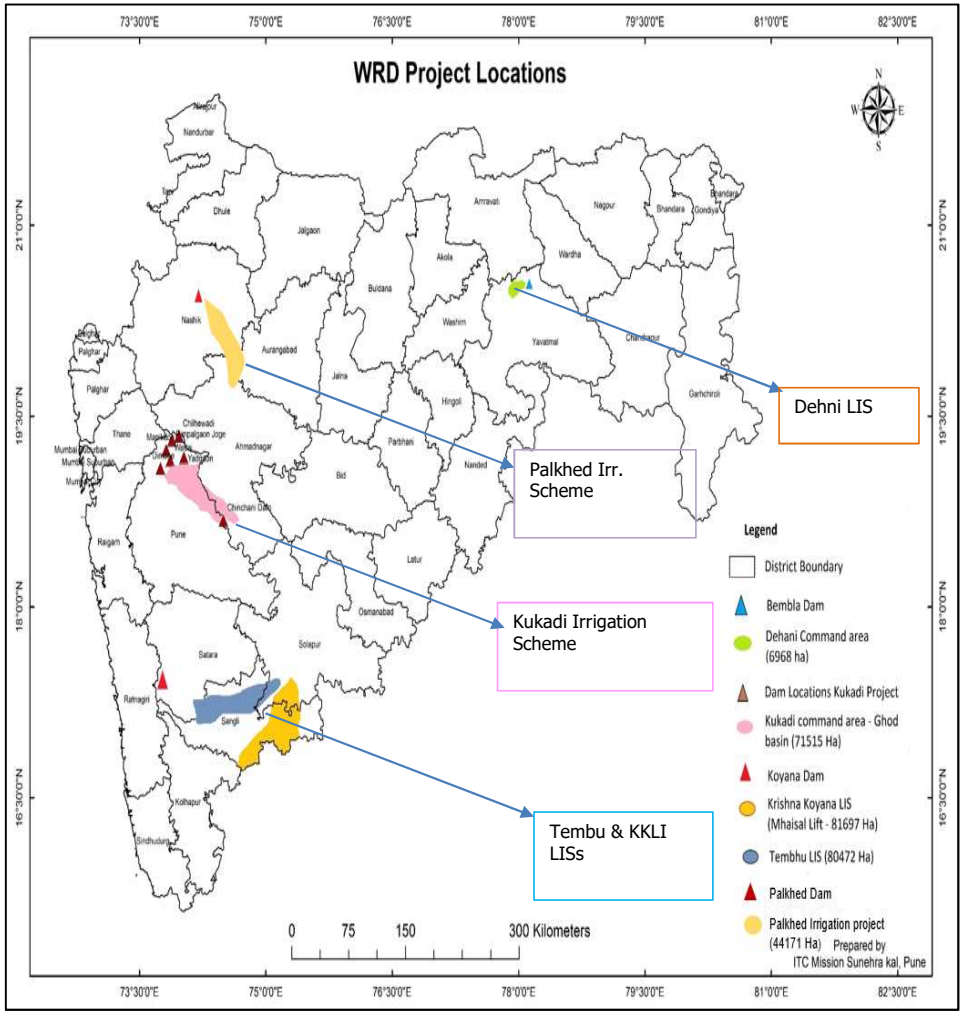
Sr. No.	Description	Before Transfer of Irrigation Management to PLA (2004-05)	After transfer of management to PLA (2024-25)
1	Average Area Irrigated in Hectare	7885	11550
2	Mode of Water Supply	Volumetric supply at minor head	Volumetric supply at main canal head
3	Water Saving	-	27 % Water saving as compared to 2004-05
4	Average Water charges Recovery in Rs.	1.012 Million	5.50 Million
5	Average Percentage of Recovery of Water Charges	72 % (of the water billed for the actual irrigated area)	100 %
6	Crop pattern	Cereal, Grapes, Vegetables	Crop diversification to Floriculture, Medicinal plants, etc. along with grapes and vegetables.
7	Employment Generated (No of days/ year)	150-175	250-300
8	Irrigation Methods	75 % Flood, 25 % Drip & Sprinkler	60% Flood, 40 % Drip & Sprinkler
9	Average Net Income (Rs per Ha)	60,000	5,50,500

Private Sector Participation ITC-WRD Partnership

A camp was organized for the officers and Members of the Water Users Association in the Command areas of Palkhed Project to empower the Water Users Association in collaboration with ITC Mission Sunehara Kal and Water Resources Department.



WRD- ITC PPP: Progress & Outcome



Outcomes	UoM	Total		
		Universe	Baseline	Progress
Demand Side Management				
Area under water use efficient practices (Active)	Ha	131410	12050	53055
Area under micro irrigation (Active)	Ha	59542	5831	11733
Supply side management		0	0	0
No. of WUAs preparing water budgeting	No	511	0	351
No. of WUAs submit water indents*	No	454	9	274
No. of WUAs initiated O & M activities (through shramdan /WRD/MGNREGA/any others)	No	454	0	49

Academic Institution Participation

- Government of Maharashtra has involved esteemed academic institutes for supporting WUAs in improving water use efficiency and productivity.
- Mumbai School of Economics- Lower Dudhana Project.
- Gondwana University, Gosikhurd

Empanelment of NGO for WUA Empowerment

- Government of Maharashtra has empanelled NGO for their capacity building and handholding of WUAs for Operation & maintenance.

Transformation WUAs into producer company

Name of the project	Total FPCs	Number of WUAs including in FPC	Total number of members in FPC	Specific area covered of WUAs in FPC
Gosikhurd National project	12	22	8638	9658 ha
Lower Dudhana Project	03	27	11267	7354 ha
Waghad Irrigation Project	03	12	7127	5328 ha

Technology Intervention for Efficient Water Management

- Tisgaon Dam -450 SCADA based Meters being fixed by 811 farmers which are members of 7 WUAs formed at Tisgaon Dam.
- RTDAS – Krishna and Bhima Basin.
- PM Gati-Shakti – Mapping of all Major, Medium and Minor projects.
- Evapotranspiration based Irrigation performance assessment.

Tisgaon Medium Project SCADA based Meter.

The Tisgaon Medium Project under Palkhed division has become the first project in the Maharashtra state to install 100% water meters for beneficiaries through the lift Irrigation Association.





Conclusions

1. Various Acts in Maharashtra empowers community led water management.
2. With Technology Intervention, it will further facilitate participation of farmers and various stakeholder.
3. With inclusive water resource management approach goal of Sustainable Development of water users association can be reached.

Thank You