

## 71<sup>st</sup> ICID Foundation Day

International Webinar  
On  
Agricultural Water Management Strategies in Changing Situation

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### Regulatory interventions in water sector in India (Maharashtra's example)

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#### Regulatory interventions in water sector in India

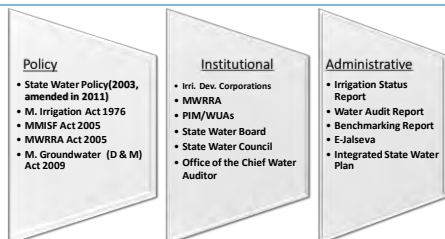
• **Background**

1. Water Regulatory Authorities required by International Financial Institutions for loans.
2. The National Water Policy-2012 recognized need of Water Regulatory Authorities
3. State Water Policies –became base for enactment of laws to establish Water Regulators
4. Several states passed Acts –examples- UP, Andhra Pradesh, J & K, Gujarat, Arunachal Pradesh, Maharashtra and now Punjab
5. While laws enacted in several States, Authorities active only in Maharashtra, UP and J & K

• **Role of water regulatory authorities**

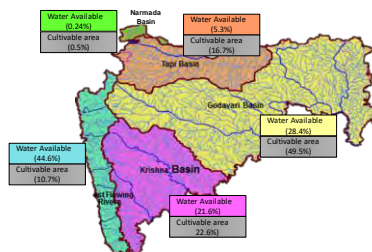
1. Water tariff system – through O&M cost recovery/ O&M cost + depreciation and subsidy costs
2. Water entitlement – allotment of share of water between water user groups
3. Sustainable water resource management – conservation and efficient use

#### Key Water Sector Reforms in Maharashtra



Maharashtra Water Resources Regulatory Authority, Mumbai

#### Basin-wise permissible water availability (as a % of the total allocation) and share of cultivable area (%) in Maharashtra



**Maharashtra Water Resource Regulatory Authority (MWRRA) Profile:**

- To facilitate & ensure judicious, equitable distribution, sustainable management, allocation and utilization of water resources
- Established in June 2005 by enactment and Functional since August 2006.
- Has Chairman & 4 members (WR Engineering, Law, Water Economy, Ground Water).
- Regulating both surface as well as groundwater resources of the State.
- To determine criteria for Bulk Water Tariff for agriculture, industrial, domestic and other purposes,
- To accord clearance to water resources projects,
- To act as the State Ground Water Authority,
- To support the enhancement and preservation of water quality

Vision : " To be a Proactive, Professional & Trustworthy WR Regulator"

Mission : " To provide Sustainable water security to the State of Maharashtra"



**Regulatory Interventions For Judicious & Equitable Distribution of Water in the Basin/Sub-basin:**

- Devised methodology for basin/sub-basin level equitable distribution after extensive debate and consultations
  - Upper Godavari Sub-basin.
  - Girna Sub basin
  - Ghod Sub-basin
  - Bhima Sub-basin
- The orders are upheld by the Hon. High Court & are being followed .

Visual Impact : Conflicts between beneficiaries of Upper catchment & Lower catchment are reduced.



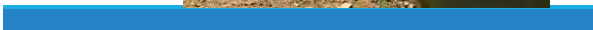
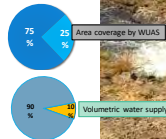
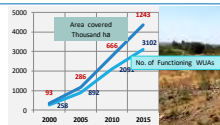
**Regulatory Interventions For Sharing Deficit in Dry Years:**

- devised formula for judicious sharing of water during deficit-among the Domestic, Agricultural & Industrial users.

Visual Impact : reduction in conflicts



**Volumetric Water Supply & Pricing to WUAs**



#### Regulatory Interventions For Promoting Efficient Water Use & Reducing Wastage in Non-Irrigation Sector:

- Established reasonable use standards for domestic and industrial sectors
- Entitlements based on reasonable use standards.
- Increasing Block Tariff introduced which is co-related to reasonable use standards.
- Electronic metering made mandatory at supply end.
- Water budget & Water Audit made mandatory.
- Banned water intensive industries in deficit basins.

Visual Impact : NI consumption reduced, Conservation awareness increased among users.

#### Regulatory Interventions For Promoting Efficient Water Use & Reducing Wastage in Agriculture Sector:

- PIM & Micro irrigation promoted through tariff incentives.
- Micro irrigation made mandatory w.e.f December 2019 (Now further extended) for farmers lifting water from reservoirs and growing water intensive crops. After stipulated time limit the water permissions of defaulters will stand cancelled.

Visual Impact : 2981 WUAs, Area under micro-irrigation increasing. Water conservation awareness increasing.

#### Adjudication of Water Disputes:

- Prescribed regulations for adjudication of disputes.
- Constituted transparent & trustworthy platform for grievance redressal.
- Established a formal court room for conducting hearings to introduce seriousness in compliance
- Disposed 38 dispute petitions in 3 years against 11 in the first 11 years.
- No order of the Authority is set aside by the High Court or the Supreme Court.
- All orders are kept in public domain.

Impact : Water governance improved. Awareness about water rights and obligations is increased

#### Capacity Building, Knowledge Sharing & Motivating For Action:

- MOUs with
  - Government of South Australia
  - NMCG (NAMAMI GANGE)
  - IIT Mumbai,
  - Science & Technology Park Pune.
  - Government of Rajasthan
- Established M-CIPRAW : Maharashtra Centre for Innovation, Progressive Regulation & Awareness in Water" which is a Centre of Excellence in Water Sector
- Conferences on "Reuse & Recycling of Water", "Reasonable Water Use Standards" & Water Tariff, All India Water Regulators'.
- Certificate of Appreciation to MWRRRA from Government of South Australia for M-CIPRAW

### Wide Public Consultations is an Integral Part of the decision-making process in MWRRA



### Groundwater Act 2009

- Act notified on 3<sup>rd</sup> December 2013 ,
- Became effective from 1 June 2014

To facilitate and ensure sustainable, equitable and adequate supply of groundwater of prescribed quality, for various category of users, through supply and demand management measures, protecting public drinking water sources with community participation, the exploitation of groundwater within the State of Maharashtra



### Overall Impact on State Water Resources:

- Water Governance is improved.
- Water conflicts reduced.
- Awareness regarding water rights, obligations & need for conservation increased.
- Full recovery of O & M cost through water charges. Water recover increased from INR 5150 Millions (2012-13) to INR 10,460 Millions (2018-19)
- Sustainability & operational efficiency of irrigation system improved due to generation of more funds for O & M through recovery.
- Gap between IPC & IPU reduced from 2.276 Mha (2012) to 1.09 Mha (2018)
- Agriculture water use efficiency increased up to 212 ha/MCM.

### Conclusion:

- Reforms are not readily accepted by all- stakeholders and line departments.
- Water sector is dominated by the government and socio-political system dominates the decision.
- MWRRA has done extensive work in the bulk water tariff, equitable distribution of water in a sub-basin and dispute resolution.
- Decision-impartial, transparent and taken after wide public consultations.
- Regulatory Authorities need more powers for reducing deliberate defaults.
- Water reforms take place at slow pace – take decades-hence patience, steadiness and firmness

*Thank you*

