



# Challenges and Opportunities in India's Water Sector and Role of IWWA.

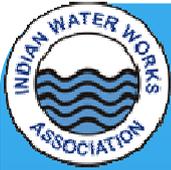
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## What is IWWA?

- Founded in 1968
- Purpose was to bring Water Professional together for the purpose of improvement of the water and sewerage infrastructure of India,
- work to eliminate water borne diseases, improve water quality, preserve water resources
- Today
  - Foremost and only water association in India.
  - Membership and knowledge organization, making it easier for water professionals to excel with confidence
  - Helping decision makers and political Leaders...to cater to citizen's needs of water and sanitation and treatment and management waste water.
  - Education, Conferences, Publications, Advocacy, Standards, Manuals, Networking, Career Advancement.



## IWWA In brief

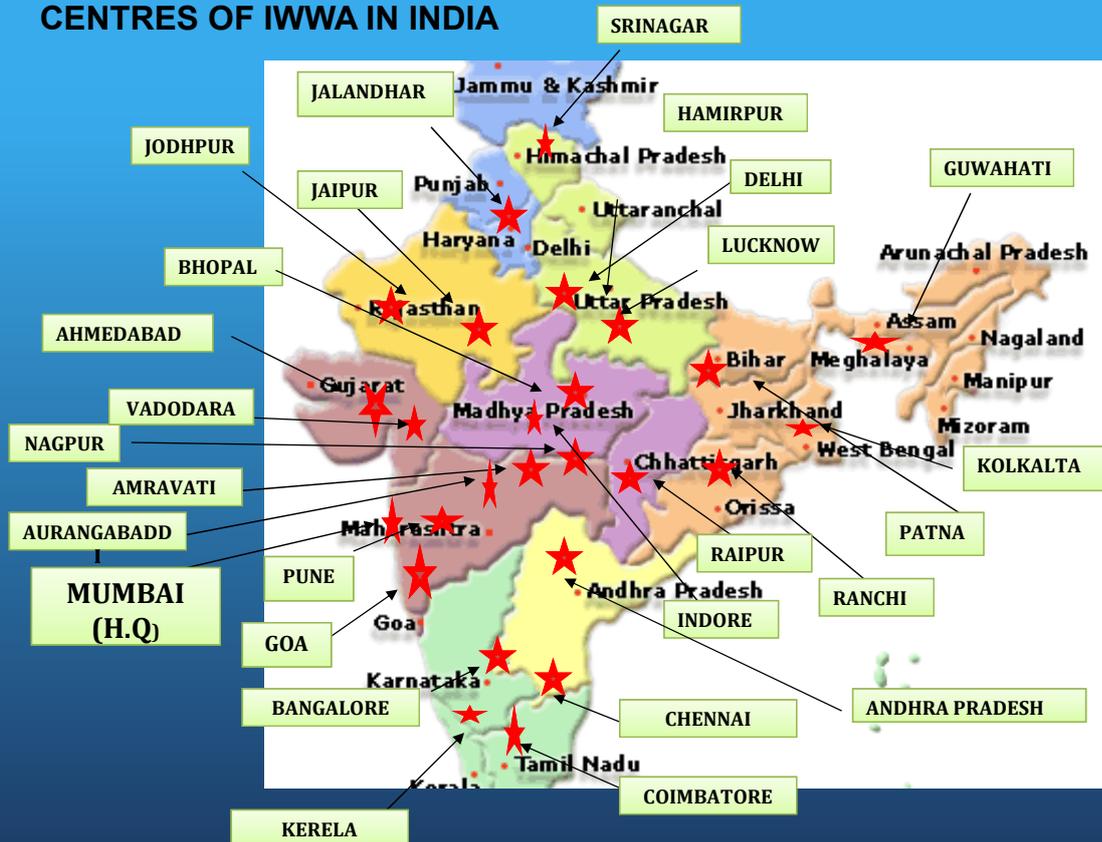
- Registered under society's act
- Membership over 10,000
- Special Focus on water, wastewater, reuse and recycle
- Education of professionals and operators
- Representation with policy makers
- Professional networking and growth



## IWWA and Organizational Structure

- IWWA has strong council of Management .
- Head Office in Mumbai with 34 centers all over India.
- It is headed by President and have 5 different directorate.
- Technical Journals for research papers .

## CENTRES OF IWWA IN INDIA

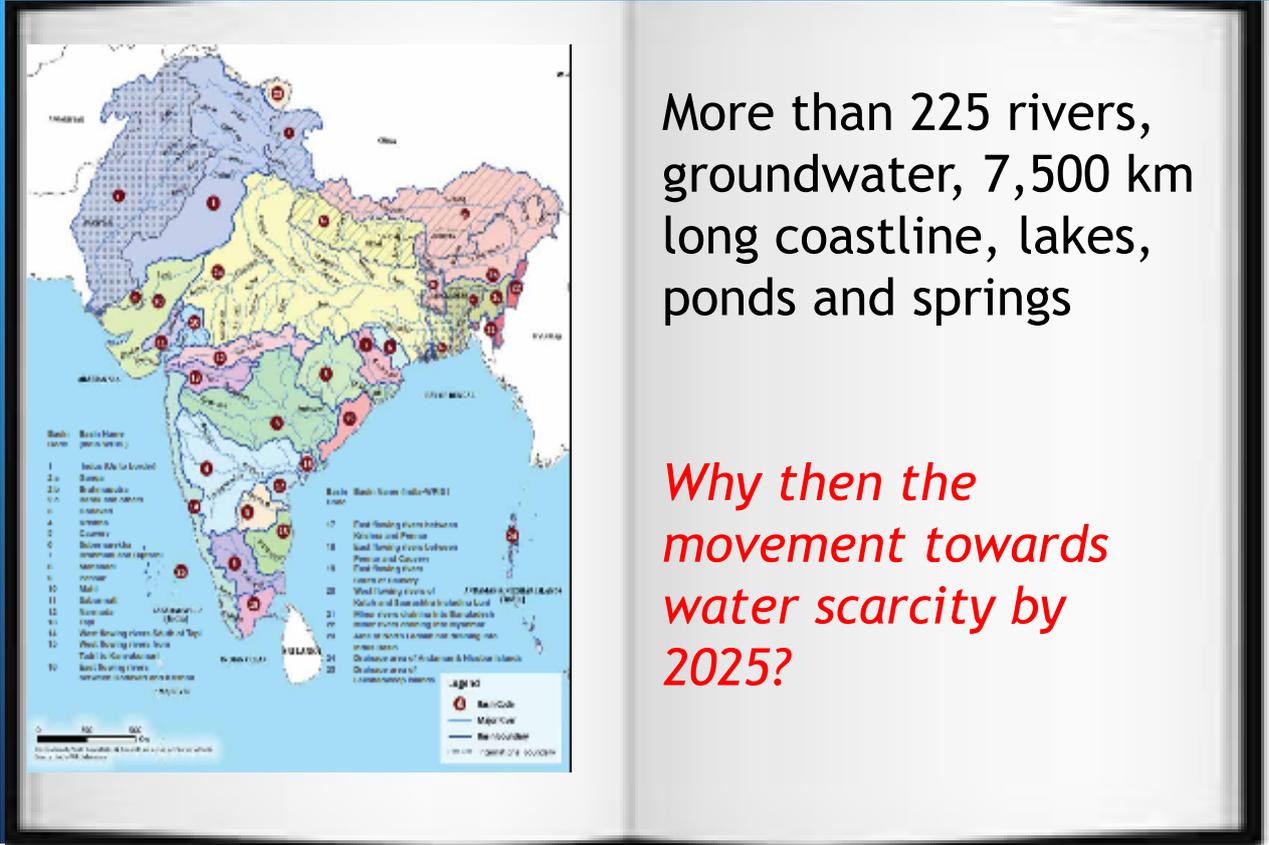


The dissemination of knowledge gained through its common programs, with these organizations, and vide its annual conventions, and with the close proximity with administrators, IWWA has been advocating this cause on continuous basis.



**Indian water Works Association (IWWA)**, is therefore committed to facilitate the pursuance of the common interest of uninterrupted water supply to these three sectors, which is no doubt the "Need of an hour", to maintain the LIFE CYCLE OF THE WATER....

# India: The water can



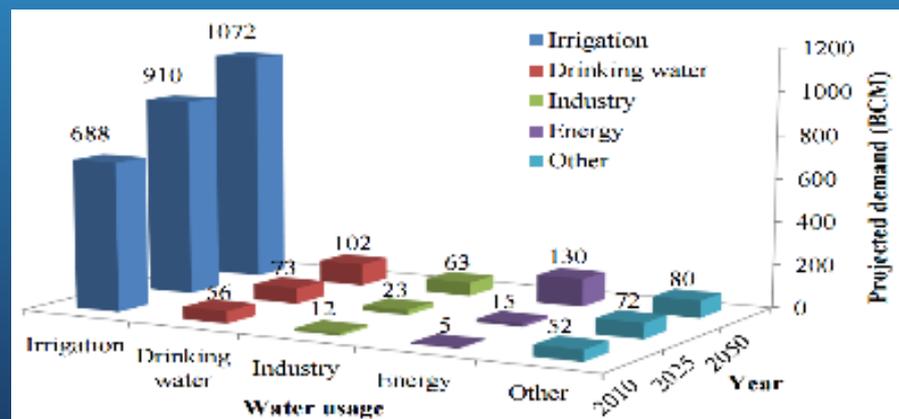
More than 225 rivers, groundwater, 7,500 km long coastline, lakes, ponds and springs

*Why then the movement towards water scarcity by 2025?*

## Future of Water in India

- Domestic and Industry will account for 85% of increased demand by 2050 (IWMI, 2007)
- Demand for water in energy sector will also increase substantially

**Sector Wise Projected Water Demand**





# Challenges Ahead

- Growing concern on availability of freshwater resources is raising many questions pertaining to drinking water availability and economic as well as socioeconomic development of the nation.
- Relentless pressure is mounting on water resources due to population growth, rapid urbanization, large-scale industrialization and environmental concerns in almost everywhere.
- The increased pressure is spilling over the groundwater resources because of the hydrological uncertainty, growing groundwater contamination problems and excessive and unscientific groundwater exploitation.
- The time has come to have a retrospect view on the water use and misuse to take serious viewpoints towards water management



# Challenges Ahead

- Water demand for various purposes is significantly increasing because of increased population, urbanization, changing lifestyle and industrial growth.
- Wastewater generation is increasing manifold and managing wastewater is becoming a major challenge as waste disposal is no longer an easy task for industries
- Due to limited availability of freshwater from the river, the dependence on groundwater resources is increasing.
- Urban growth changes population and land use dynamics that often lead to unplanned and exorbitant groundwater exploitation and poor groundwater management, which in turn impacts adversely as evident in terms of declining groundwater level and groundwater quality deterioration.
- Management of groundwater resources becomes further complicated when the hydrological uncertainties, climate change and groundwater contamination are encountered.

# FAST GROWING INDIAN CITIES

Category	City
10 Million+ (3)	Greater Mumbai, Kolkata, Delhi
5 – 10 Million (3)	Chennai, Bangalore, Hyderabad
3- 5 Million (2)	Ahmadabad, Pune
2 – 3 Million (5)	Surat, Kanpur, Jaipur, Lucknow, Nagpur
1 – 2 Million (22)	Patna, Indore, Vadodara, Bhopal, Coimbatore, Ludhiana, Kochi, Visakhapatnam, Agra, Varanasi, Madurai, Meerut, Nasik, Jabalpur, Jamshedpur, Asansol, Dhanbad, Faridabad, Allahabad, Amritsar, Vijayawada, Rajkot

35- million plus cities/ urban agglomerations  
Almost 800,000 more in cities/week.

## Sustainable Technologies for Water Management

- Groundwater recharging through rainwater harvesting
- Groundwater recharge using wastewater
- Groundwater recharge through storm water drainage
- Rehabilitation of existing surface water bodies
- Optimizing river flood plain storage
- Exploring new groundwater storages in flood plains of rivers and their canal commands
- Integrated water resources management
- Utilization of recycled wastewater
- Utilization of construction dewatered draft
- Water conservation and recharging lagoons
- Groundwater remediation

## Initiatives by IWWA.

- Sensitization of ULBs for
  - Asset Management.
  - Rehabilitation of old pipelines
  - Advance techniques for leak detection
  - Reuse and recycle of treated water
  - Natural treatment processes

Capacity Building.

Publication of case studies on best practices.

Manuals on Waster water and water treatment technologies.

## Possible areas of Co-operation :

- Exchange of Knowledge for
  - Reliable meters of AMR type.
  - 24x7 water supply and NRW.
  - Advance GIS mapping
  - Public sanitation systems.
  - Waste Water Treatment systems.
  - Joint Organization of technical trainings.



**Thank You**