

India-EU Water Partnership  
Capacity Building workshop on  
River Basin management Planning and Governance  
14-15 June 2016, New Delhi

Governance regarding Inter-State Water  
Resources Management in India:  
Key Management Issues

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# Overview of Presentation

- Water Availability Issues
- Constitutional and Legal Issues
- Water Allocation Issues
- Initiatives of the MoWR, RD & GR
- Comparison
- Impressions

# India

- World's Land Area = 2.45 %
- World's Renewable Water Resources = 4 %
- World's Population = 17.85 %

# Water Resources of India



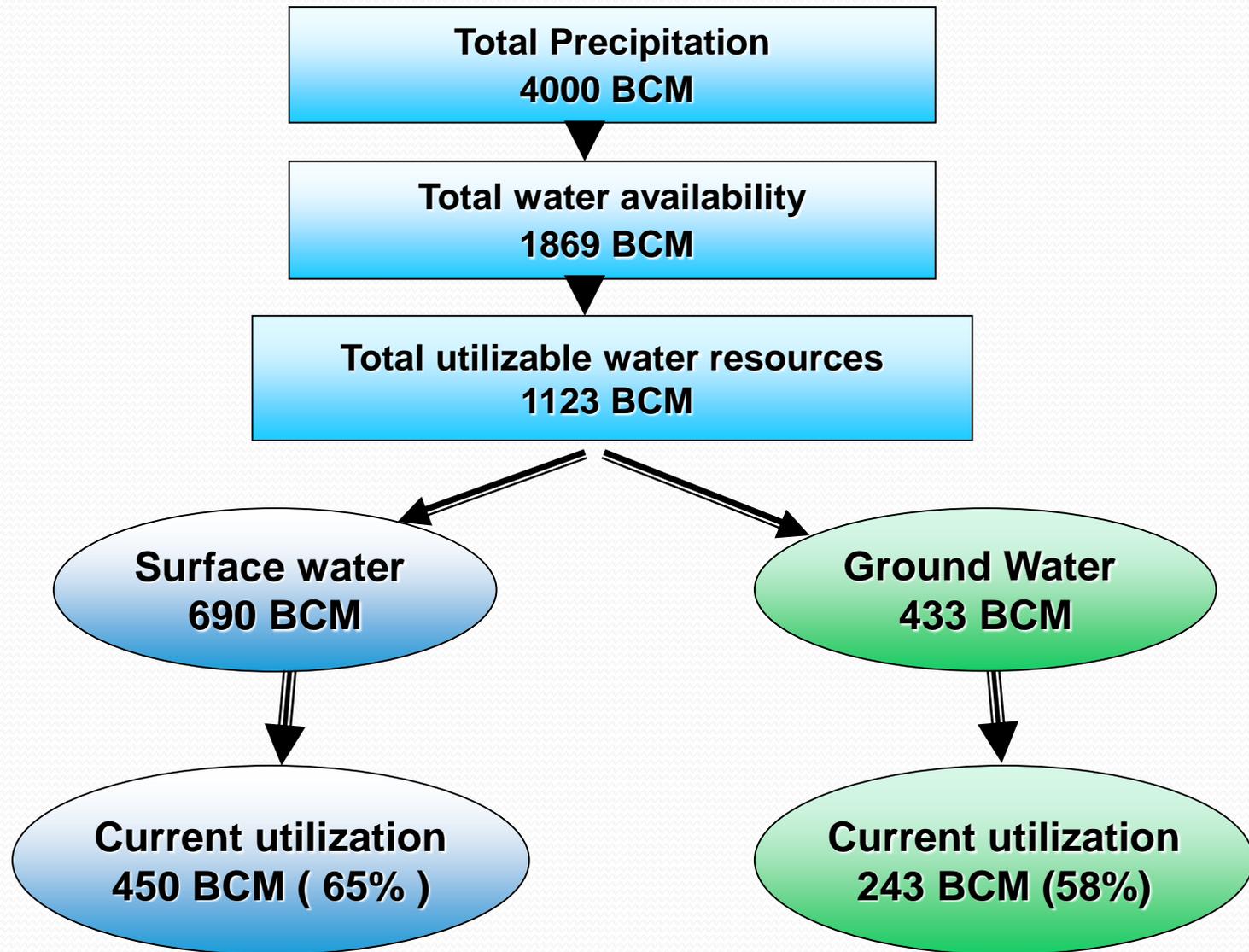
Estimated annual precipitation (including snowfall)	4000 BCM
Average annual potential (in rivers)	1869 BCM
Estimated utilisable water potential (total)	1123 BCM
(i) Surface	690 BCM
(ii) Ground	433 BCM

## Estimated Water Demand\* in BCM

Year	2010	2025	2050
Irrigation	557	611	807
Drinking Water	43	62	111
Industry	37	67	81
Energy	19	33	70
Others	54	70	111
<b>Total</b>	<b>710</b>	<b>843</b>	<b>1180</b>

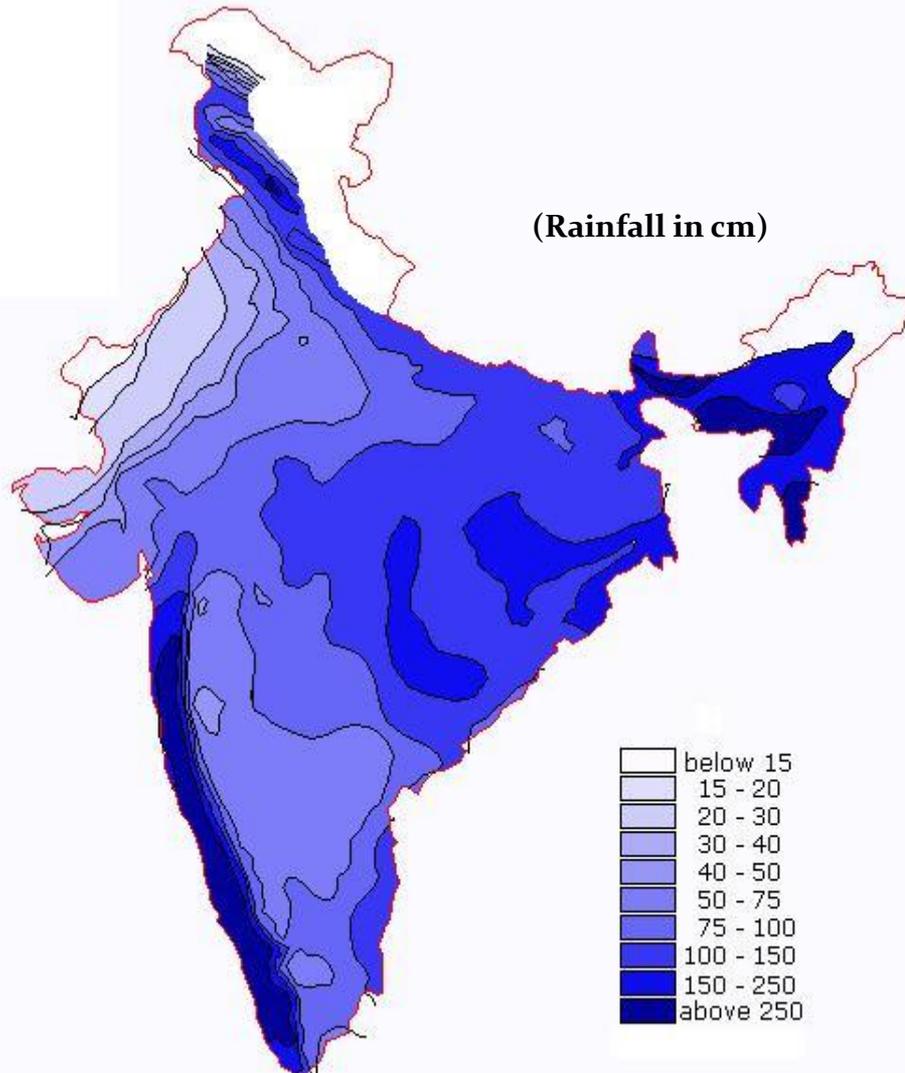
\* As estimated by National Commission for Integrated Water Resources Development (NCIWRD), 1999

# Water Availability - INDIA



# Water Scenario in India – complexities & challenges

High variability in space and time



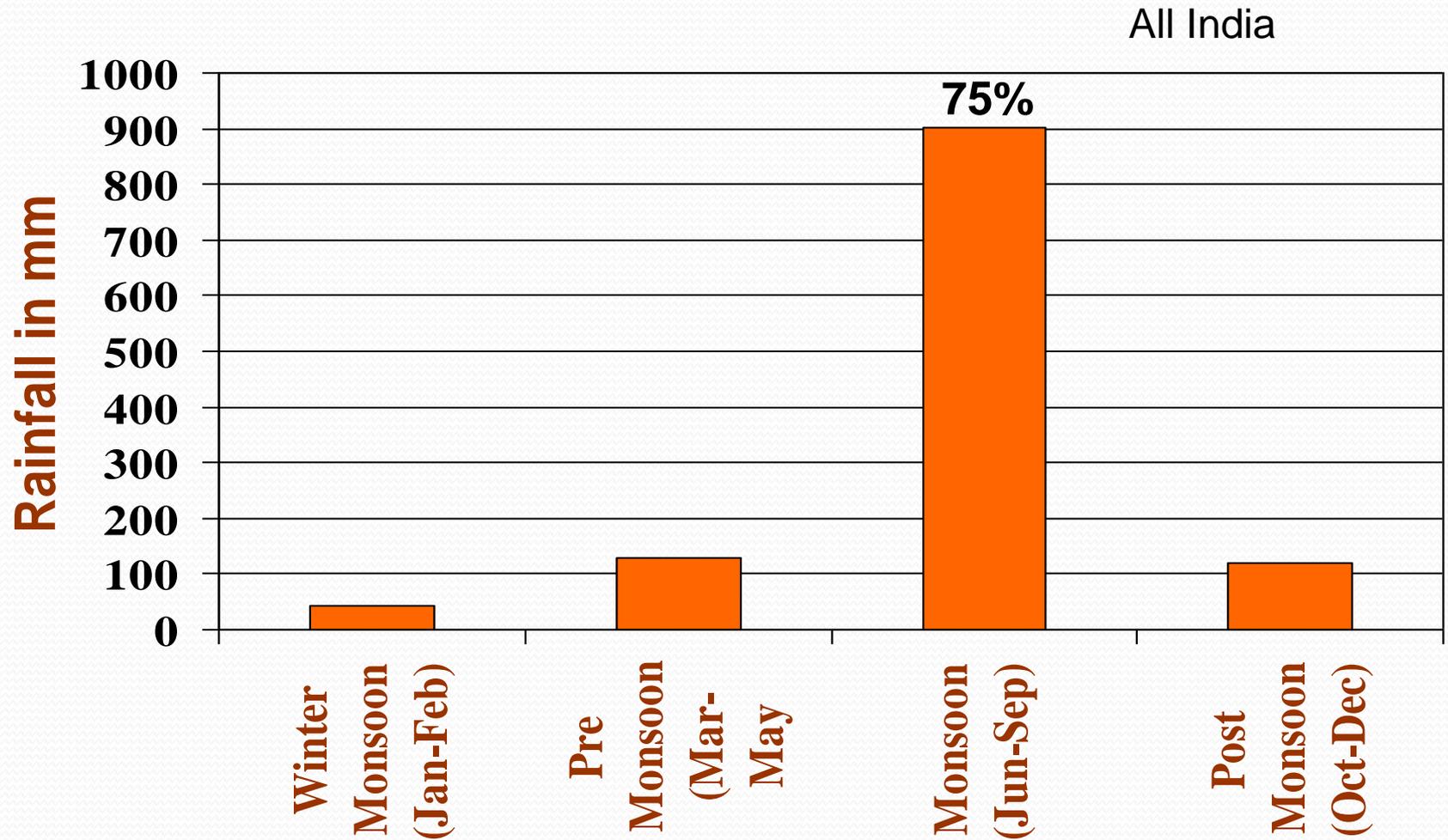
( June to Sept. 3000 BCM (75%)  
annual rainfall in four months)

> 1,000 cm in north eastern region  
(1100 cm at Mawsynram, Meghalaya)

< 10 cm in western part of Rajasthan

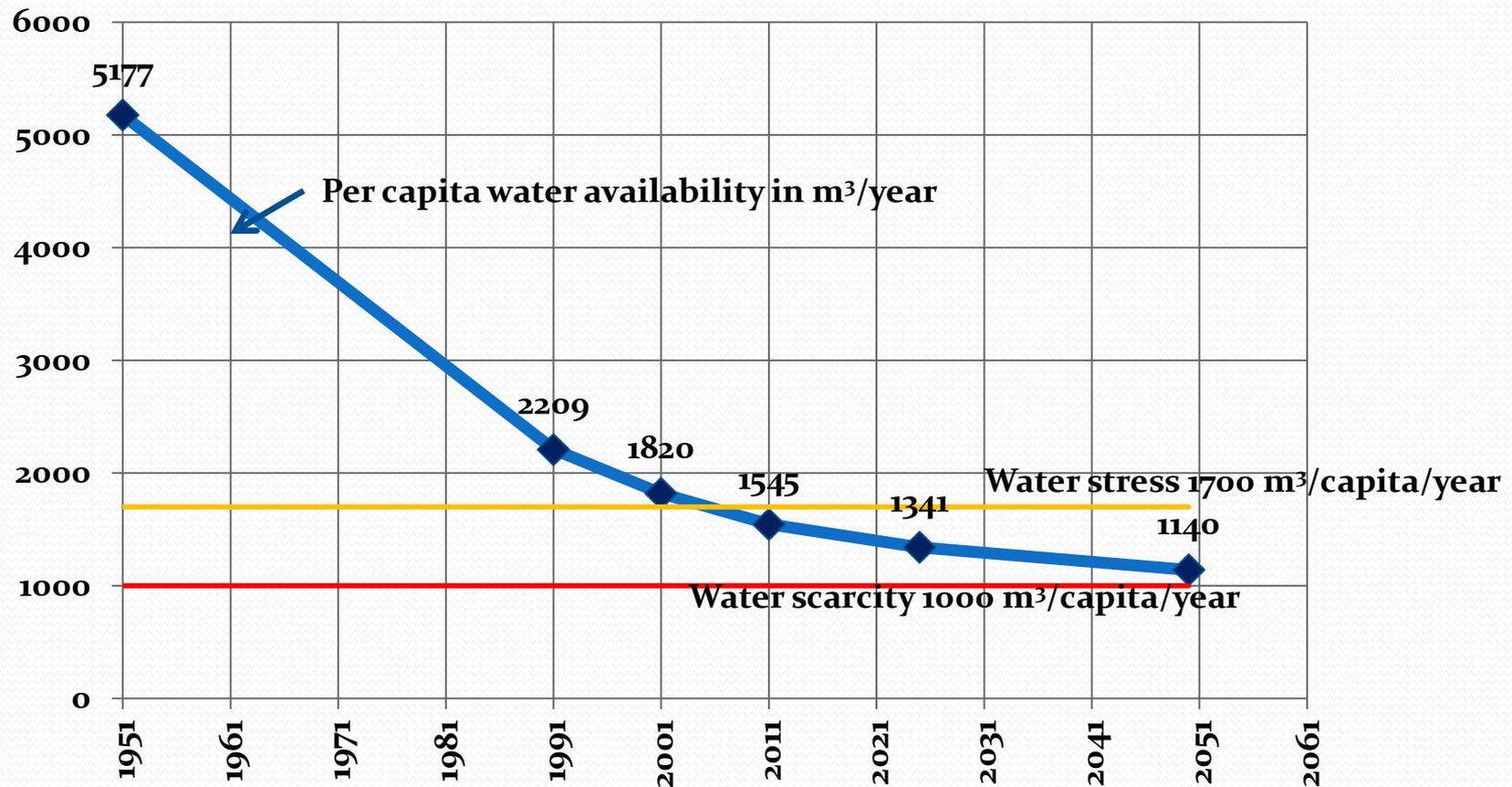
# Water Scenario in India – complexities & challenges

## Temporal Variation of Rainfall



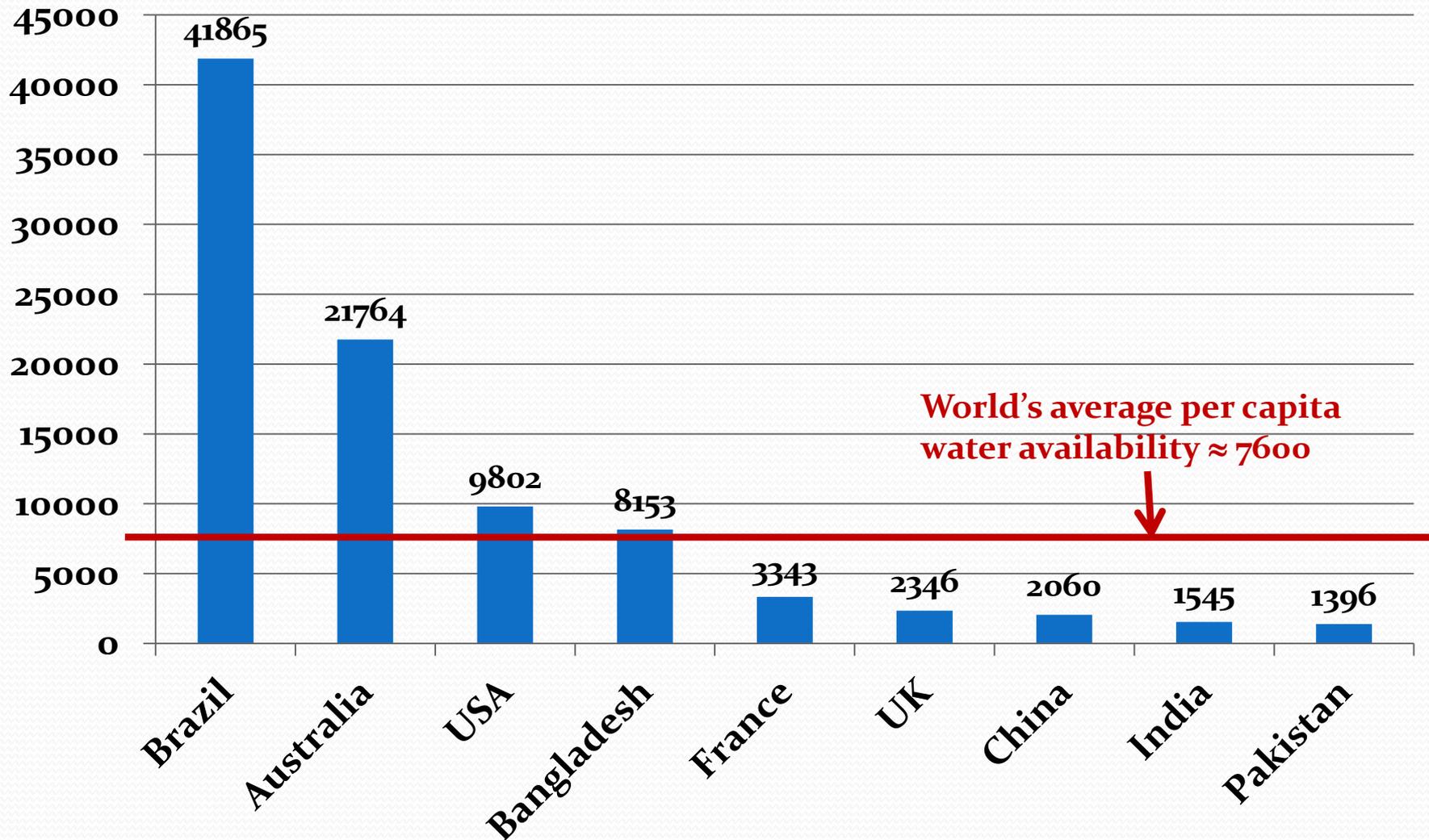
# Water Scenario in India – Complexities & Challenges

## Reducing per capita water availability



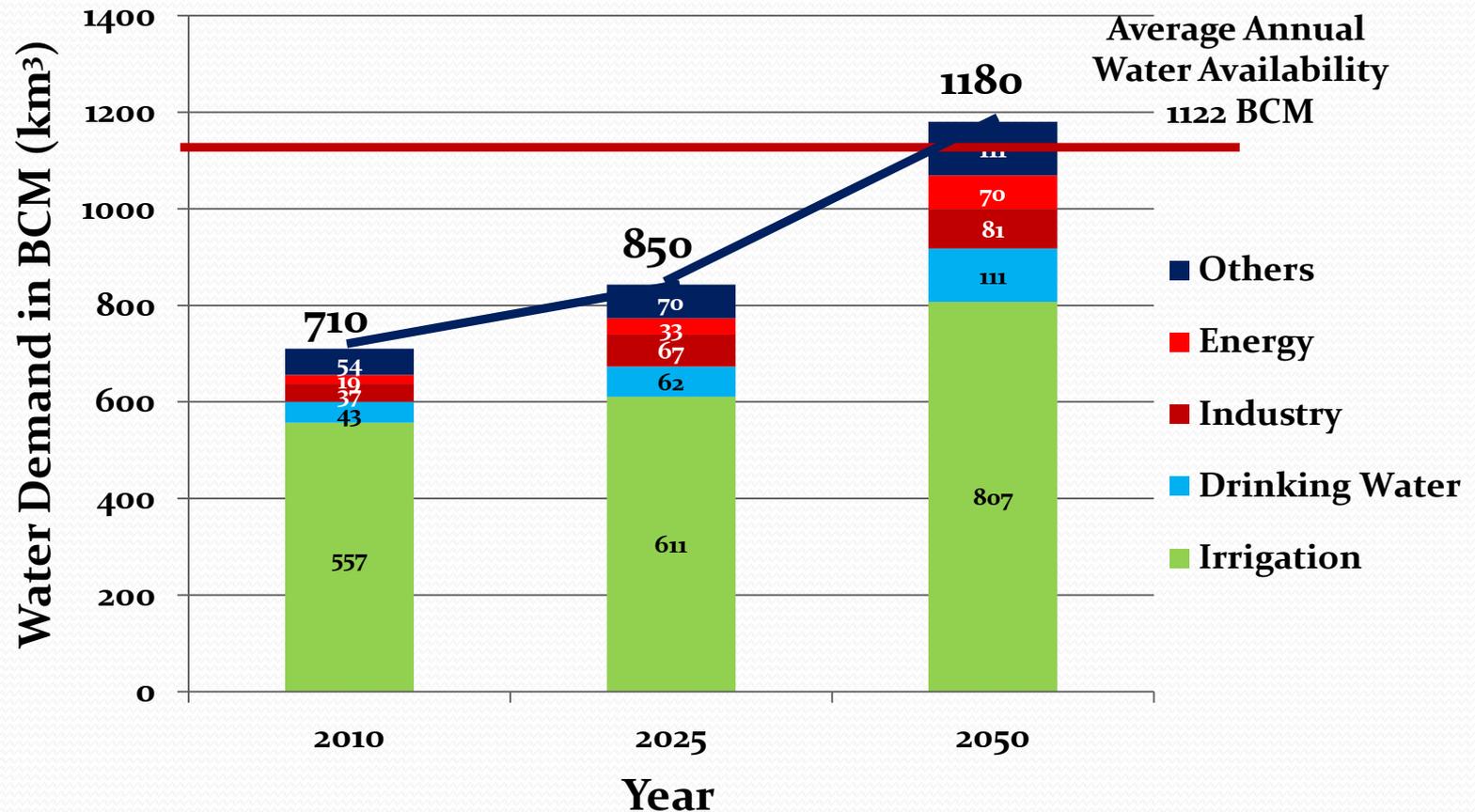
# Global Vs India's Per Capita Water Availability

(m<sup>3</sup>/year/person)



# Water Scenario in India – complexities & challenges

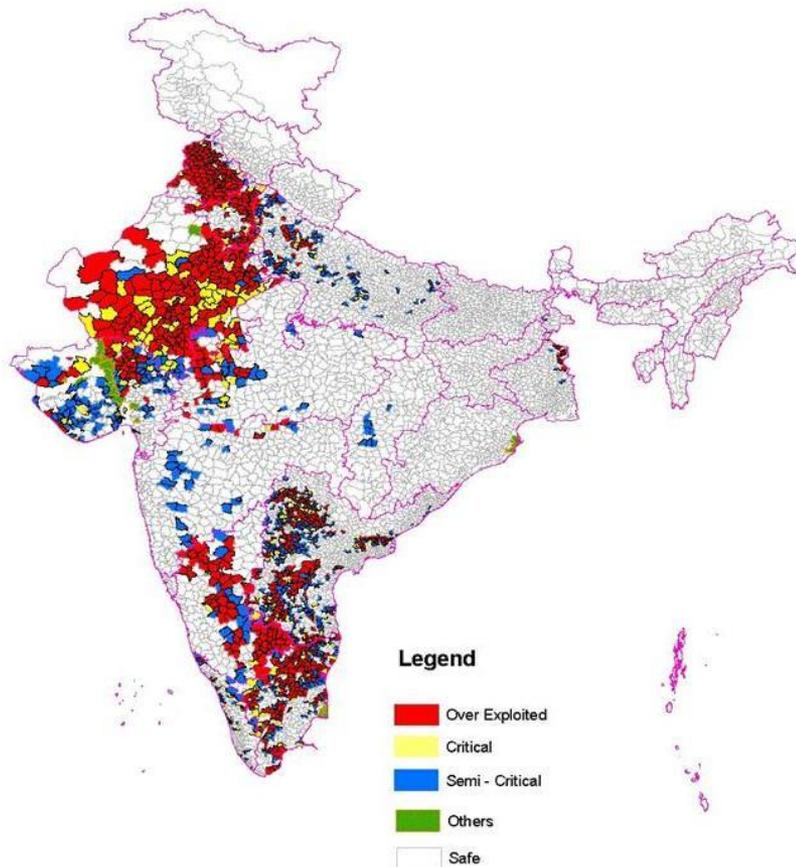
Increasing demands of water for various purposes



# Water Scenario in India – complexities & challenges

## Unplanned development - over-exploitation of ground water

Map Showing Categorization of Blocks/ Mandals/ Taluks  
As on March 2004



### Groundwater status (2009)

▪ Total units	5845
▪ Safe	4280
▪ Semi critical	522
▪ Critical	169
▪ Overexploited	803
▪ Saline	71

**82 over-exploited areas has been notified for regulating development & management of ground water.**

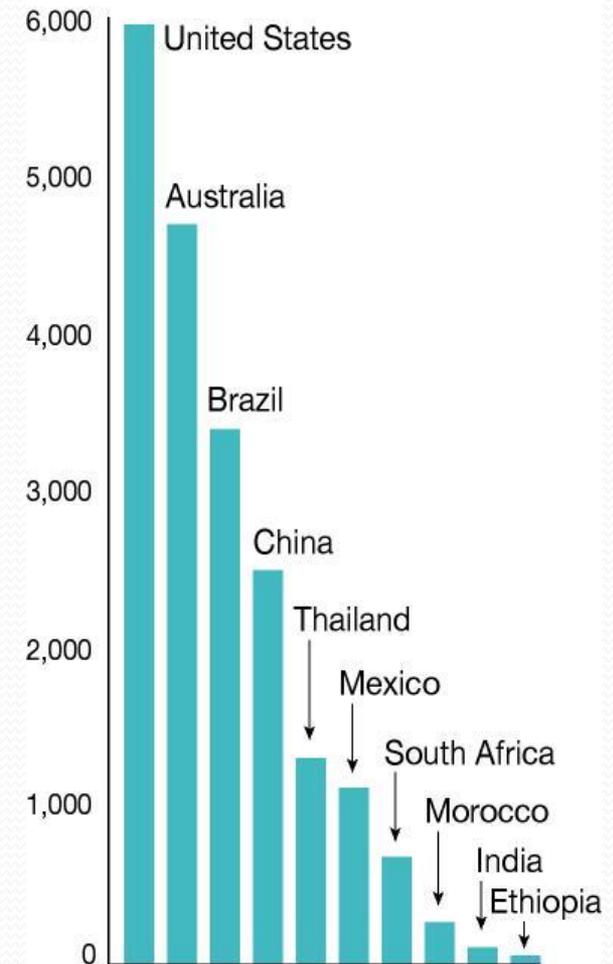
# Inadequate Storage Capacity

## Total Live Storage

- Pre Plan = 16 KM<sup>3</sup>
- Constructed (XI Plan) = 253 KM<sup>3</sup>
- Under Construction = 51 KM<sup>3</sup>
- Planned = 110 KM<sup>3</sup>

**Maximum Feasible Storage = 450 KM<sup>3</sup>**

Cubic metres per capita



Source: World Bank, 2005

# Irrigation for Food security

**Food Security - 450 MT cereal - 1.7 Billion People (2050)**

□ **Status of irrigation Development**

	<b>Major &amp; Medium</b>	<b>Minor</b>		<b>Total</b>
		<b>SW</b>	<b>GW</b>	
<b>Assessed irrigation potential</b>	<b>58.47</b>	<b>17.38</b>	<b>64.05</b>	<b>139.90</b>
<b>Irrigation potential created upto 3/2012</b>	<b>46.23</b>	<b>16.43</b>	<b>47.70</b>	<b>110.37</b>

(in Mha)

# Water in Indian Constitution



**Entry 17; State List (List II)** - Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of entry 56 of List I.

**- No exclusive jurisdiction**

States have the competence to make laws, formulate and implement plans and schemes for development of water resources for water supply, irrigation, hydropower etc. Several States have enacted different laws also. There are more than 300 Acts on water.



**Why Central Intervention?**

# Provisions for Central Intervention

- **Entry 56; Union List (List I)** - Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest
- **Entry 20; Concurrent List (List III)** – Economic and social planning
- **Article 249** – Parliament empowered to make laws on matters in the State List, if Rajya Sabha resolves (but this has limitations)

# Provisions for Central Intervention

**Article 262 (1):** Parliament may by law provide for the adjudication on any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter- state river or river valley.

**Article 252** - Parliament may be empowered to legislate on State matters for two or more States by consent and such legislation may be adopted by any other State

**Art 253** - Parliament has power to make any law for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body

## SUSTAINABLE DEVELOPMENT GOALS

**Article 257(1)** - authorizes Centre to give directions to a State

# Central Legislature on

The two laws enacted by the Union under Article 262 and Entry 56 of List I :

1. Inter-State Water Disputes Act, 1956 (as amended up to 1980) and
2. River Boards Act, 1956.

# INTER-STATE WATER DISPUTE TRIBUNALS

## I. Water Disputes Tribunals – Awards finalized

- ✓ Godavari Water Disputes Tribunal (July, 1980)
- ✓ Krishna Water Disputes Tribunal – I (May, 1976)
- ✓ Narmada Water Disputes Tribunal (Dec., 1979)

## II. Existing Water Disputes Tribunals

- ✓ Ravi-Beas Water Disputes Tribunal  
(Final award awaited. Presidential Reference pending before Supreme Court, as such matter is sub-judice)
- ✓ Cauvery Water Disputes Tribunal  
(Award published on 19<sup>th</sup> Feb 2013. Hearing on Further reference is going on . Meanwhile, Special Leave Petition (SLP) filed by party States in Hon'ble Supreme Court pending and as such the matter is sub-judice. )
- ✓ Krishna Water Disputes Tribunal (KWDT) – II  
(Final award notification stayed by Supreme Court. Term extended till 31<sup>st</sup> July, 2016 as per Section 89 of Andhra Pradesh Re-organisation Act, 2014)
- ✓ Mahadayi Water Disputes Tribunal (under adjudication)
- ✓ Vansadhara Water Disputes Tribunal (under adjudication)

# River Boards in India

Systematic functioning of development projects through the Control Boards, construct, implement and supervise various river valley projects and even day-to-day functioning of these projects:

The Bhakra-Nangal Management Board

Tungabhadra Control Board

Bansagar Control Board

Betwa River Board

Narmada Control Authority

Damodar Valley Authority

etc.

# Water Allocation

- Competing Water Uses
- National Water Policy 2012
  - ✓ Pre-emptive needs
  - ✓ A portion of river flows be kept aside to meet ecological needs following the pattern of natural flow regime.
  - ✓ Adaptation strategies in view of climate change – compatible agricultural strategies, increasing storage, micro-irrigation techniques (drip/sprinkler methods)
  - ✓ A system to evolve benchmarks for water uses for different purposes, i.e., water footprints, and water auditing be developed to ensure efficient use of water
- State Water Resources Regulatory Authorities

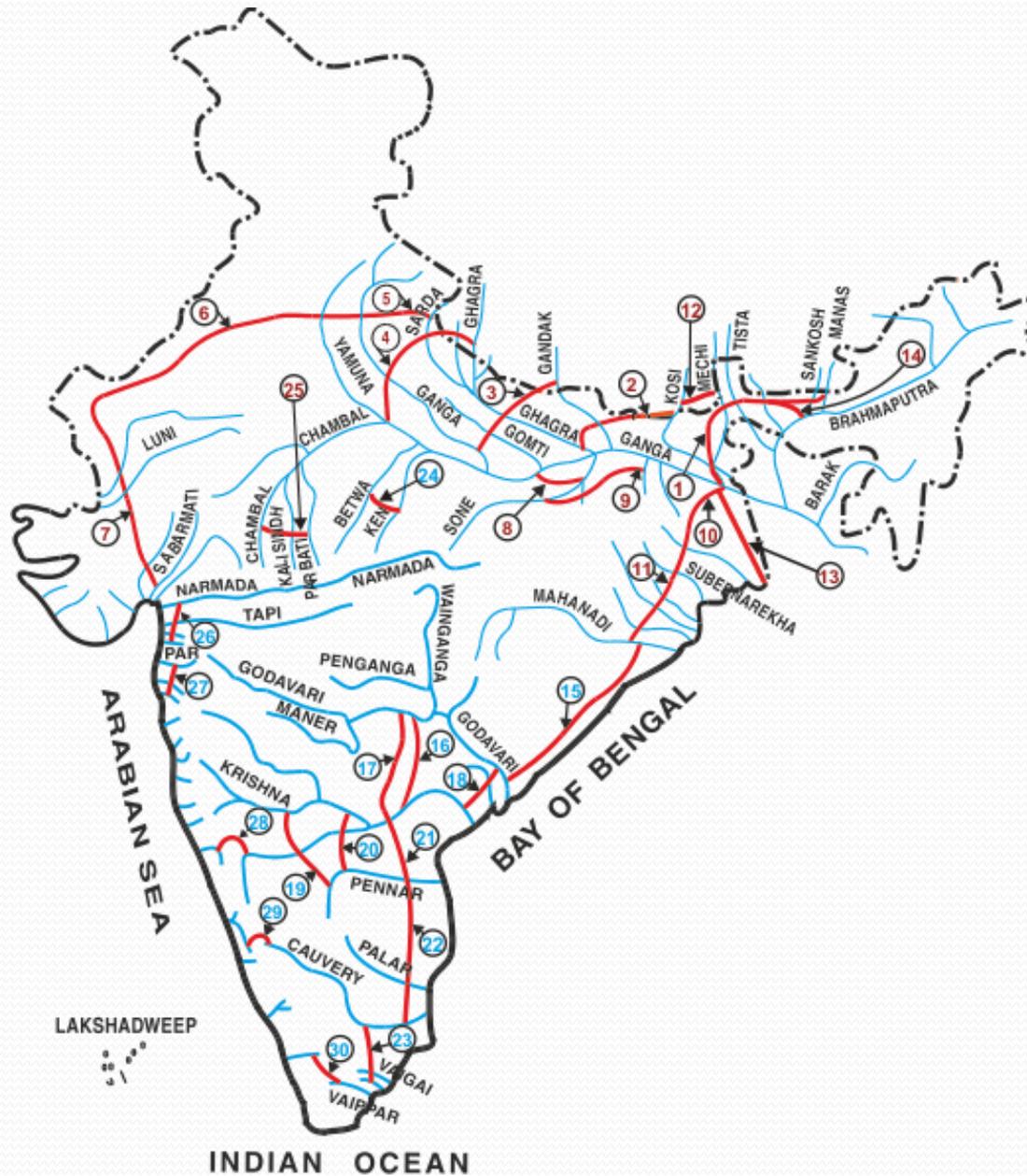
# Initiatives of MoWR, RD & GR

- National Water Informatics Center (NWIC)
  - Inter Linking of river (ILR)
  - National Water Framework Law (NWFL)
  - River Board Act
- etc.

# National Perspective Plan For Water Resources Development

- In 1980, the then Ministry of Irrigation and Central Water Commission formulated the National Perspective Plan (NPP) for Water Resources Development envisaging Inter Basin Water Transfer comprising of two Components :
  - Peninsular Rivers Development - 16 links
  - Himalayan Rivers Development - 14 links

# Proposed Inter Basin Water Transfer Links



## **Benefits of ILR**

- 1) Additional Irrigation Potential: 35 Mha
- 2) Hydro- power generation- 34,000 MW
- 3) Domestic and Industrial Water supply
- 4) Mitigation of Drought & Flood Control
- 5) Employment Generation & Extension of Gainful Fisheries,
- 6) Pollution Free Water Transport

# Draft National Framework Law

- In view of the above Ministry of Water Resources initiated action for preparation of Water Framework Act. A Drafting Committee was constituted for Drafting National Water Framework Law on 3rd July, 2012 which was headed by Dr. Y.K. Alagh, Chancellor, Central University of Gujarat; Vice-Chairman, Sardar Patel Institute of Economics & Social Research; Former Minister of Power, Planning Science and Technology, Government of India.
- The other Members of the Drafting Committee were
  - Padma Shri Prof. N.R. Madhava Menon, IBA-CLE Chair in Continuing Legal Education, NLSIU, Bangalore;
  - Prof. K.P. Singh, Professor, Punjab University;
  - Ms. Jyoti Sharma, FORCE;
  - Shri Vivek Upadhyay, Advocate; and
  - Officers from Ministry of Water Resources, Central Water Commission, Central Ground Water Board.

# Salient Features .....1/3

- ✓ It proposes eighteen Basic Principles for Water Management to bring different State legal interventions within a framework of governing principles and alignment of existing legislations both at the Central as well as State level to conform to the principles and provisions of this Bill.
- ✓ It proposes that every individual has a right to a minimum quantity of potable water (not less than 25 litres per capita per day) for essential health and hygiene and within easy reach of the household, which may be provided free of cost to eligible households, being part of pre-emptive need.
- ✓ It proposes establishment of an independent statutory Water Regulatory Authority by every State for ensuring equitable access to water for all and its fair pricing on volumetric basis, for drinking and other uses such as agricultural and industrial.

# Salient Features .....2/3

- ✓ It proposes that the groundwater shall be protected, conserved and regulated through appropriate laws and by adequate and efficient measures using precautionary approach, with active participation of Community Based Institutions.
- ✓ It proposes that all water resources projects shall conform to the River Basin Master Plan to be prepared, applicable efficiency benchmarks and shall take into account all social and environmental aspects in addition to techno-economic considerations.
- ✓ It proposes conformance to the Service Level Benchmarks for water supply, sanitation, solid waste management and storm water drainage, as may be prescribed.

# Salient Features .....3/3

- ✓ It proposes that industries to either withdraw only the make up water or have an obligation to return treated effluent to a specified standard back to the hydrologic system and to file annual 'Water returns'.
- ✓ It proposes that the appropriate Government take all possible measures to synergise and integrate different development schemes including schemes for water conservation, sanitation and improvement of water quality at Panchayat or Municipality level, as the case may be, and further at sub basin and basin level.
- ✓ It proposes setting up of a High Powered Committee at the Centre and in each State for coordination and policy support mechanism between different agencies dealing with water.

## Draft National Framework Law – Action Taken

- The Committee submitted its Report to the Government in May, 2013 and the same was placed before the National Forum of Water Resources/Irrigation Ministers of States for wider consultations at its Meeting held on 29.05.2013.
- The same has also been circulated amongst all States/Union Territories and related Central Ministries. The same was also placed on the Ministry of Water Resources website
- ✓ Comments have been received from 8 States/UTs, 5 Central Ministries, 12 NGOs and several individuals. These have been analyzed and issues for stakeholder consultation have been identified.

## Draft National Framework Law – Action Taken

- ✓ Regional consultation meetings have been planned for wide spread consultation with the State Governments, NGOs, Academia/ Professionals and Panchayati Raj Institutions to improve upon these draft legislations and bring broader consensus.
- ✓ Presently five workshops at Delhi, Jaipur, Bengaluru, Kolkata and Guwahati have been planned in next three months.

# Draft National Framework Law – Action Taken

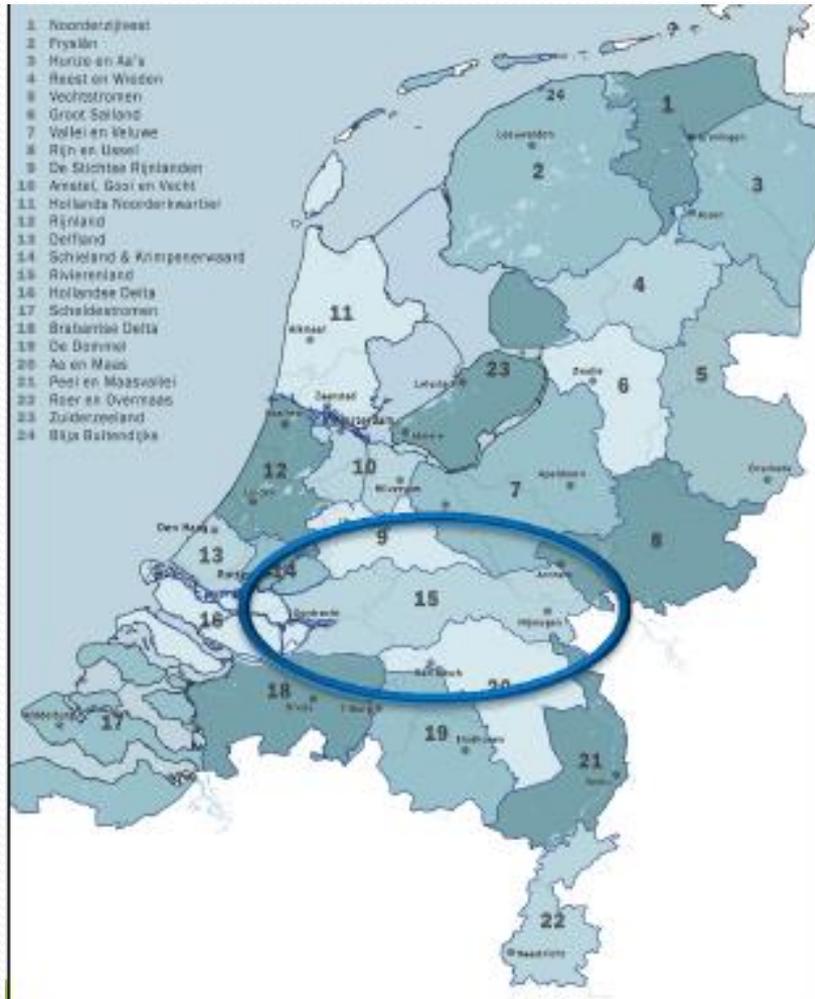
- ✓ A committee is proposed to be constituted under the chairmanship of Dr. Mihir Shah, former Member Planning commission to examine the provisions of the Draft National Water Framework Law and Draft River Basin Management Bill and suggest changes / modification therein taking into account
  - The emerging challenges in the water sector
  - Reuse of waste water after treatment.
  - The likely impact of climate change on water resources
  - Importance of river restoration / rejuvenation
  - Water contamination issues
  - Sand mining as a serious challenge
  - Problems related to River valleys and necessity of maintaining minimum flows in the river.
  - Synergy between Ground water section of Draft National Water Framework Law and Draft Model Model Bill for Conservation, Protection and Regulation of Ground Water, 2011

# Comparison

Dutch Water Authority Rivierenland

v/s

Bhakha Beas Management Board



# Origin

Dutch Water Authority Rivierenland

13<sup>th</sup> Century

v/s

Bhakha Beas Management Board

1<sup>st</sup> October 1969

# Jurisdiction

Dutch Water Authority Rivierenland  
(one of 24) covers 38 Municipalities

v/s

Bhakha Beas Management Board  
Punjab, Haryana, H.P., Rajasthan, Delhi

# Manpower

Dutch Water Authority Rivierenland

700

v/s

Bhakha Beas Management Board

15,949

# Mandate

Dutch Water Authority Rivierenland

Flood Protection, Water Mgmt, Waste water  
treatment & Musk Rat

v/s

Bhakra Beas Management Board

Admn, Operation and Maintenance of  
Bhakra nangal and associated projects

# Composition

Dutch Water Authority Rivierenland

Representation from Stakeholders in  
Executive Board + Others

v/s

Bhakha Beas Management Board

State Government Officials

# Finance

Dutch Water Authority Rivierenland

Separate Taxation from Public + Penalty from  
Pollutors

v/s

Bhakha Beas Management Board

State Finance / Power Generation

# Impressions

- Applicability of European model in Indian Context
- Storage v/s Conservation
- Administration v/s Mediation
- Joint Vision
- Grassroots Participation



जल बचत - जल संचय



# Thanks