Water Governance -for Water Security & Sustainability

National Water Mission

Ministry of Water Resources,

River Development & Ganga Rejuvenation

NWM -Origin / Rationale

Constituted as a strategy to adapt to and to mitigate the effects of Climate Change under -

National Action Plan on Climate Change.

Some of possible implications of climate change on water resources

- Decline in the glaciers & snowfields in the Himalayas and rise of sea levels;
- Increased drought like situations due to overall decrease in the number of rainy days;
- Increased flood events due to overall increase in the rainy day intensity;
- Effect on groundwater quality in alluvial aquifers due to increased flood and drought events;
- Influence on groundwater recharge due to changes in precipitation and evapo-transpiration; and
- Increased saline intrusion of coastal & island aquifers due to rising sea levels

NWM: Objective and 5 Goals

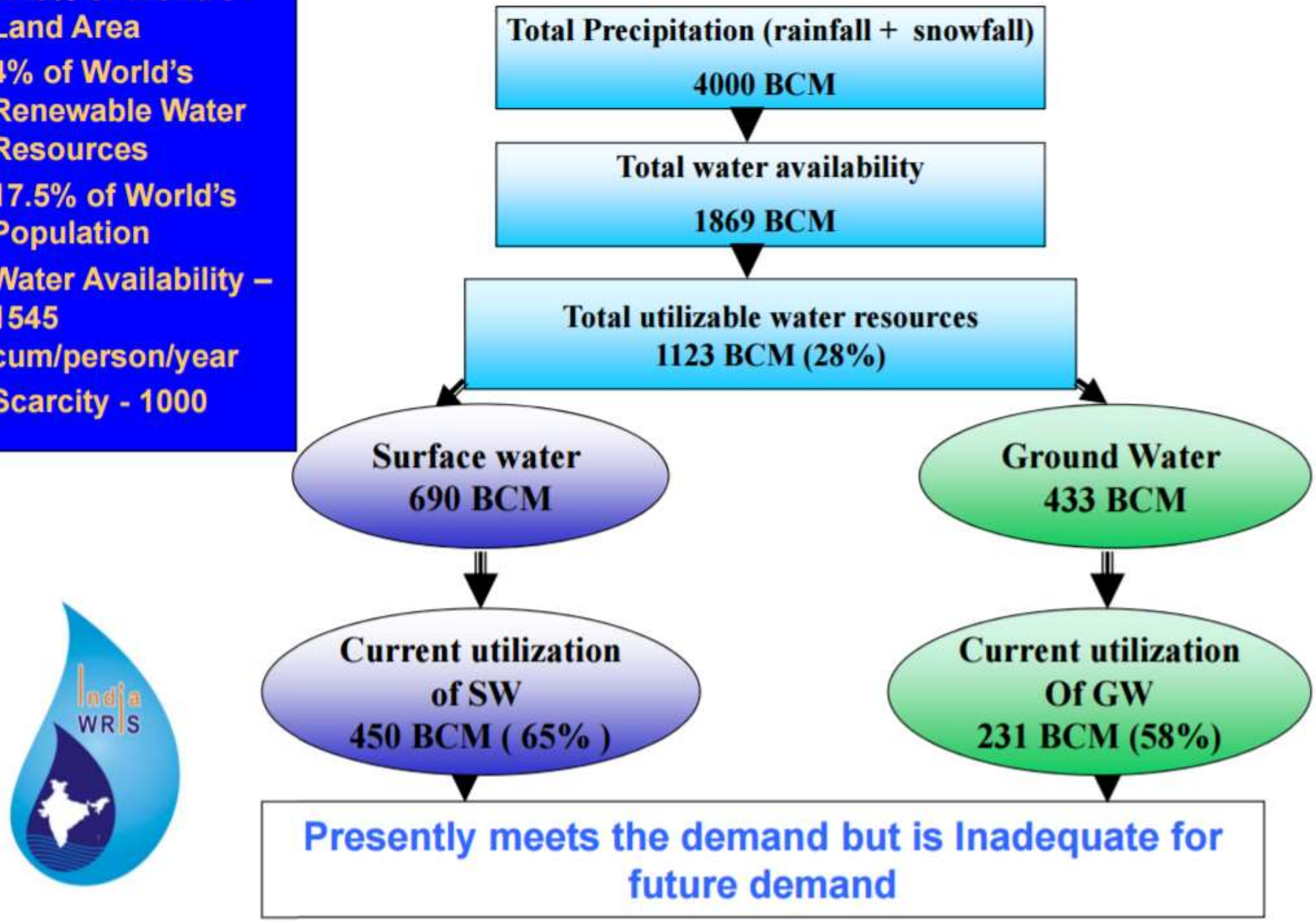
Objectives:

1. Conservation of water,
2. minimizing wastage and
3. ensuring its more equitable distribution –
   both across and within States through integrated water resources development and management.

Goal	Statement
I	Comprehensive data base in public domain and assessment of impact of climate change on water resource
II	Promotion of citizen and state actions for water conservation, augmentation and preservation
III	Focussed attention on vulnerable areas including over-exploited areas
IV	Increasing water use efficiency by 20%
V	Promotion of basin level integrated water resources management

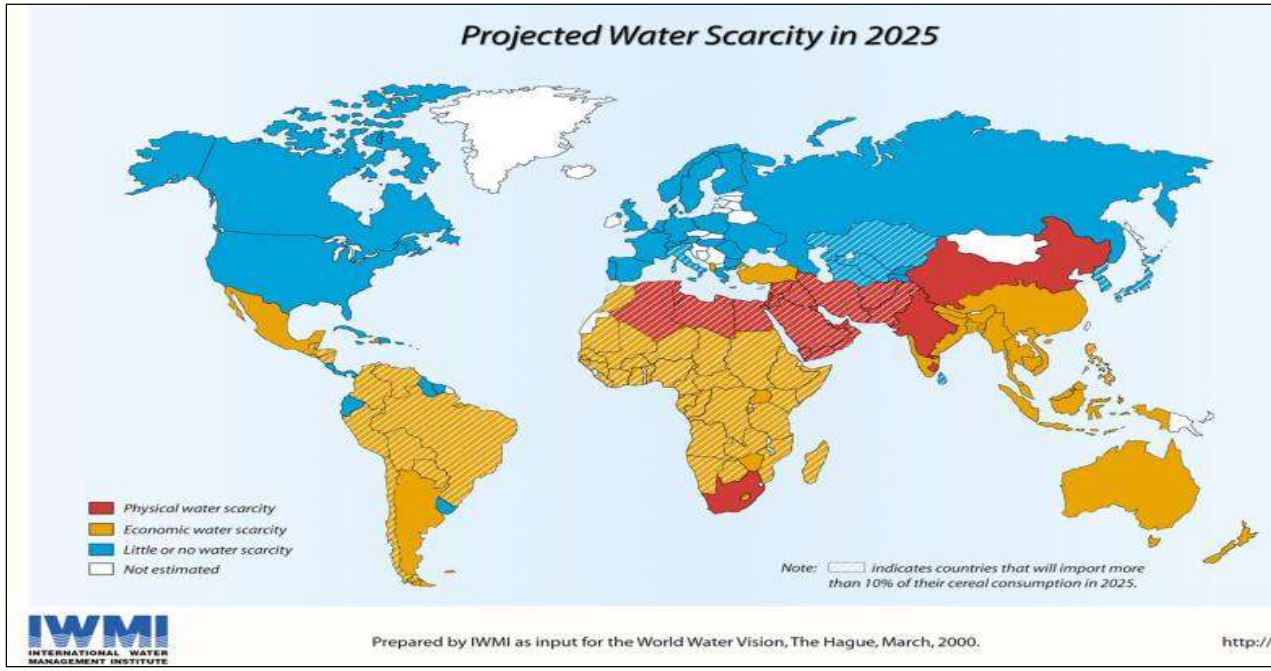
Water Resources Scenario - INDIA

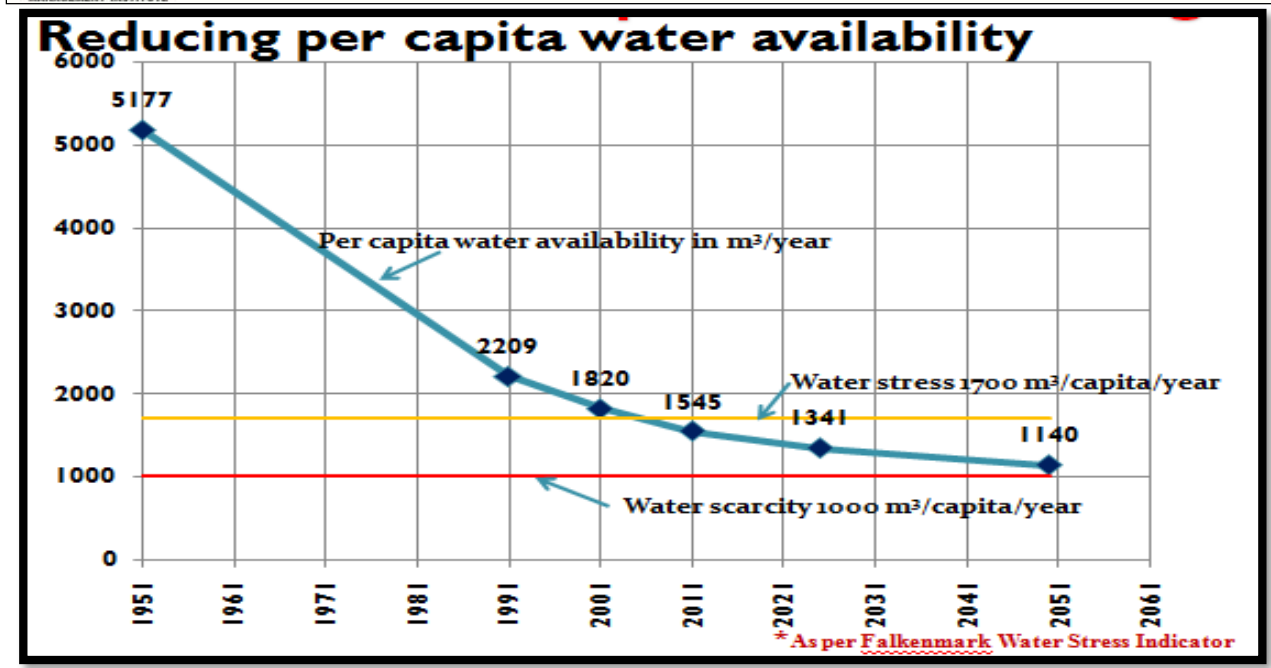
- 2.45% of World's Land Area
- 4% of World's Renewable Water Resources
- 17.5% of World's Population
- Water Availability – 1545 cum/person/year
- Scarcity - 1000



Rationale and Objectives

- Critical analysis of existing water scenario
- Critical review of existing water policies, regulations, institutions and various ongoing interventions / Schemes / Programmes
- To Identify current and future development needs, challenges; vulnerable areas and communities; and explore possible solutions and strategies
- To document Impact of Climate Change
- To formulate strategic action plan to manage the impact of climate change.
- To formulate a comprehensive and integrated water security and safety plan





State / UT Specific Action Plan on Water

1. Status Report/ Development Plan on WR Development & Mgt
2. Preparation of interim report on:
    1. Impact of Climate change on State.
    2. Alternative Interventions required to address each of the issues/concerns identified in Status Report and Interim Report.
3. SSAP- Water

Water Dimensions

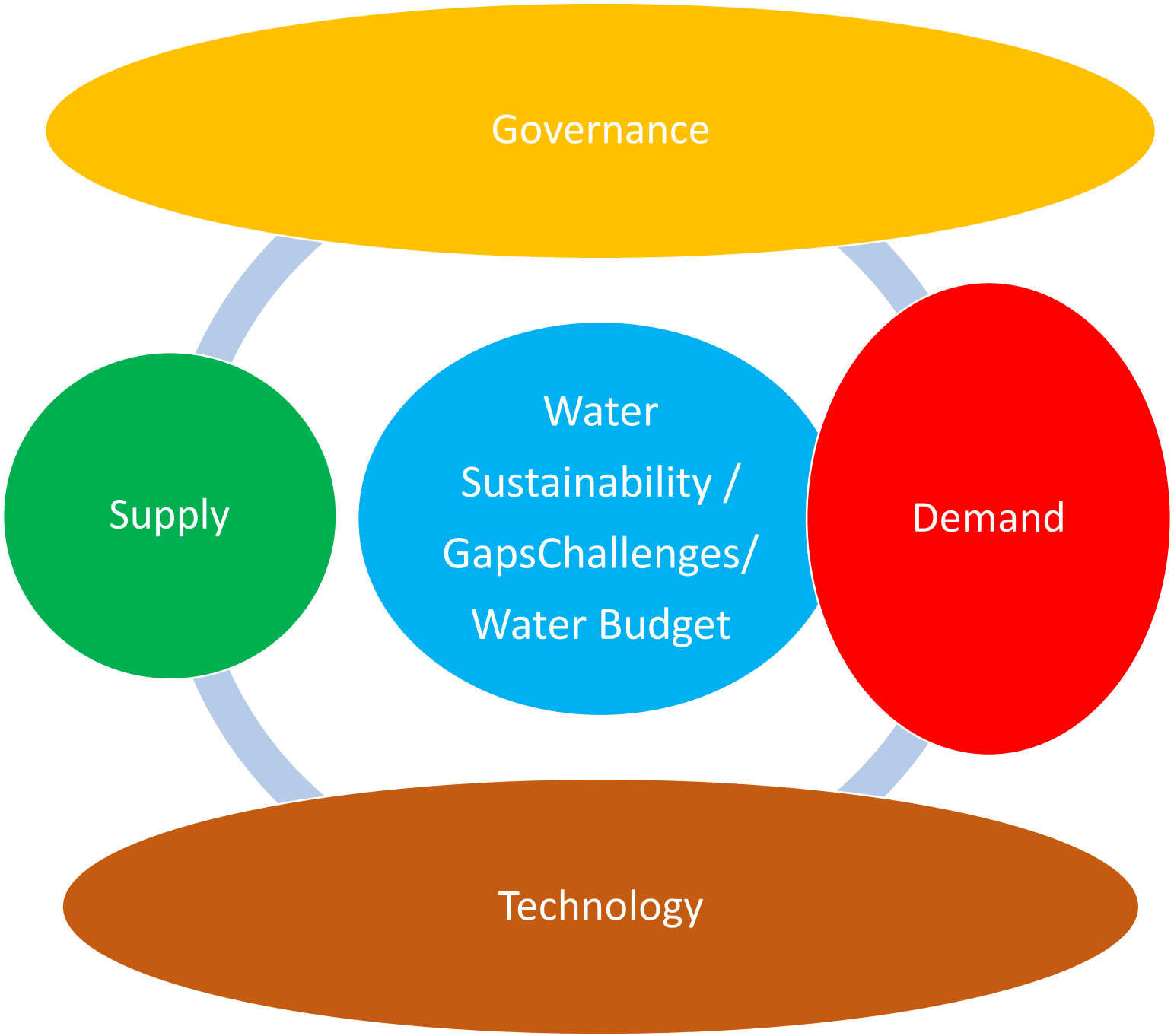
- Quantity
  - Supply Side
  - Demand Side
- Quality

Source wise

1. Climate-Precipitation (Rainfall/ Snow)
2. Glaciers
3. Springs
4. River Basins
5. Projects- Irrigation / Multi-purpose
6. Water Bodies-(urban and Rural) : Ponds & Tanks
7. Water Bodies-(urban and Rural) : Lakes
8. Wetlands
9. Coastal area/ Belt
10. Ground Water Resources
11. Waste Water
12. Other Sources

Demand / Consumption side:

1. Forestry and Wildlife
2. Farm sector
    1. Agriculture- Rain fed& Irrigated
    2. Horticulture
    3. Livestock, Birds and others
    4. Fisheries & Others
3. Industry & Infrastructure
    1. Packaged Water Bottling
    2. Thermal Power Plants
    3. Textiles and Jute
    4. Paper and Pulp
    5. Iron and Steel
4. Establishments
    1. Educational Institutions/ Universities
    2. Hospitals
4. Drinking water and Domestic use


Governance
Supply
Water Sustainability / GapsChallenges/ Water Budget
Demand
Technology

STATE / UT WATER BUDGET- ANNUAL EXERCISE

State/ UT Water Budget

Income		Expenditure		Gap
Utilisable Water Resources		Allocation of Water Resources		
Source wise		Sector wise		
Surface Water		Rain fed Agriculture		
Irrigation Projects		Irrigated Agriculture		
Water Bodies Lakes		Industry		
Ponds / Tanks		Thermal		
Ground Water		Steel		
Other sources		Textiles		
		Others		
		Drinking Water		
Waste water		Other uses		

Pareto principle: 80/20 rule

- For many events, roughly 80% of the effects come from 20% of the causes.
- Pareto noticed that 80% of Italy's land was owned by 20% of the population

Distribution of world GDP, 1989[8]

Quintile of population	Income
Richest 20%	82.70%
Second 20%	11.75%
Third 20%	2.30%
Fourth 20%	1.85%
Poorest 20%	1.40%

Thank you very much