WATER GOVERNANCE – NEW THINKING

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GOOD WATER MANAGEMENT

- Good water management can provide clean drinking water and sanitation, the basics of good health,
- Good water management can bring hydroelectric power to homes and industry, irrigation for agriculture, and improve the economy,
- Good water management allows water for wildlife to maintain biodiversity, and provides opportunities for recreation and tourism,
- Good water management can result in harmonious and mutually beneficial water agreements with neighbouring countries,
POOR WATER MANAGEMENT

• Poor water management can increase disease and suffering.
• Poor management can mean lack of power, desiccated crops, floods and famine.
• Poor management can result in parched ground, dried-up lakes and silted harbors.
• Bad management can trigger tensions and conflict.

In short, good water management brings tangible benefits to a country.
INDIA – A BIGGER PICTURE

**Water Resource Endowments**
- 16% of the world’s population
- Only 4% of its water resources
- Erratic Rainfall (100mm to 11000mm)
- Temporal Rainfall (only 3 months rain)
- Utilizable water resource -1,132 BCM

**Water Stresses**
- In 1947 1.8 Lacs cu ft available annually per head, 2001 only 90K cu ft.
- In the Last 3 decades increase in the levels of suspended solids in rivers by a factor of 4.
INDIA – A BIGGER PICTURE

National Water Resource Development

- National Commission for Integrated Water Resources Development Plan (NCIWRD) - 13\textsuperscript{th} September 1996.

- Aims:
  - Maximise the conversion of available water of 1000 BCM to utilizable water.
  - Optimise the use of utilizable water to yield maximum benefits.
  - Prevent the resource from being rendered unfit for use through pollution control.
INDIA – A BIGGER PICTURE

- **Role of Science & Technology**
  - Integrated Mission for Sustainable Development (IMSD) Projects - 175 Districts
  - Water Shed development Plans
  - R&D Areas identified by NCIWRD
Dense vegetation - 1992 - 50.72 ha
Sparse vegetation - 1992 - 69.12 ha

Dense vegetation - 1998 - 803.68 ha
Sparse vegetation - 1998 - 1058.08 ha

Dense vegetation - 1992 - 523.26 ha
Sparse vegetation - 1992 - 246.12 ha

Dense vegetation - 1998 - 1326.81 ha
Sparse vegetation - 1998 - 481.87 ha
INDIA – A BIGGER PICTURE

- **Support of S & T in policy decision implementation**
  1. Maximisation of available water to utilizable water:
     - Assessment of water resources.
     - Rejuvenation of surface waterbodies
     - Locating Water Harvesting Structures
     - Artificial Groundwater Recharge
  2. Optimise the use of utilizable water to yield maximum benefits
     - Landuse Planning
     - Interbasin Transfer
  3. Prevent the resource from being rendered unfit for use through pollution control
     - Agriculture
     - Industrial
     - Domestic sector
     - Land Management
     - Groundwater contamination & Salinity ingressions
WATER LAWS IN INDIA – NATIONAL WATER POLICY 2002

- Water Resource Planning
- Water Allocation priority
- Ground Water development
- Irrigation
- Participatory Approach to Water Resources Management
- Conservation of water
- Drought-prone area development
- Water Sharing / Distribution amongst the States
PROJECTS AND ACHIEVEMENTS IN INDIA

- Conservation of natural resources
  - National Lake Conservation Plan
  - Seva Mandir approach
  - Restoration of lakes - HUDA

- Rain Water Harvesting Initiatives
  - HUDA and Govt of TN

- Integrated Water management
  - Integrated Wastewater recycling project
  - Decentralised Wastewater Treatment
  - Wastewater recycling
  - Dual piping system
CONCLUSION

“If the public leads, politicians will surely follow.”
- Time Magazine

“Water is a resource to be managed and a service to be delivered”