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

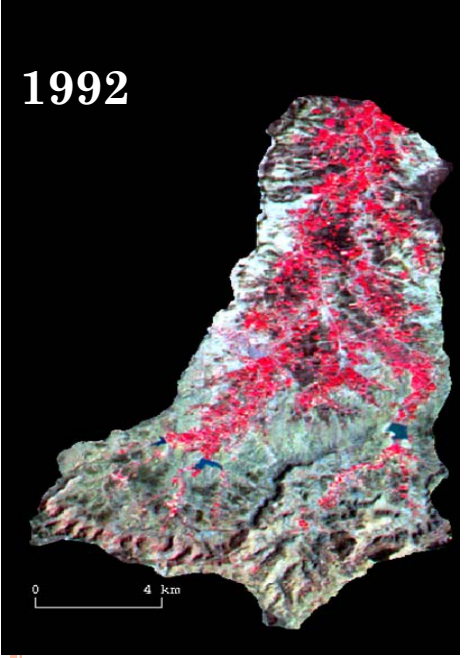
- **Water Resource Endowments**
  - 16 % of the world's population
  - Only 4 % of its water resources
  - Erratic Rainfall (100mm to 11000mm)
  - Temporal Rainfall (only 3 months rain)
  - Utilizable water resource -1,132 BCM
- **Water Stresses**
  - In 1947 1.8 Lacs cu ft available annually per head, 2001 only 90K cu ft.
  - In the Last 3 decades increase in the levels of suspended solids in rivers by a factor of 4.

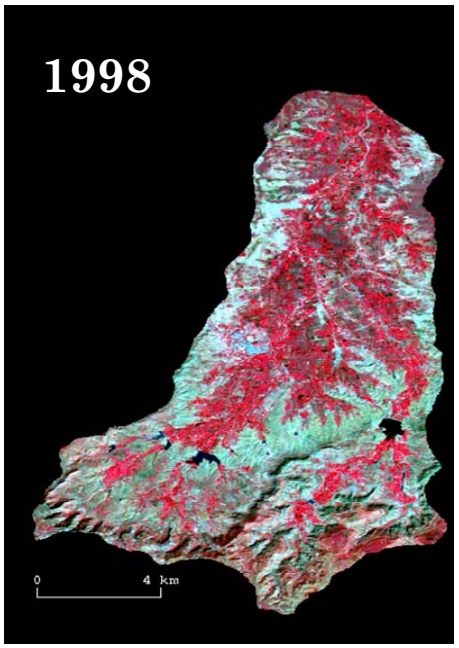
INDIA – A BIGGER PICTURE

- **National Water Resource Development**
  - National Commission for Integrated Water Resources Development Plan (NCIWRD) -13th 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

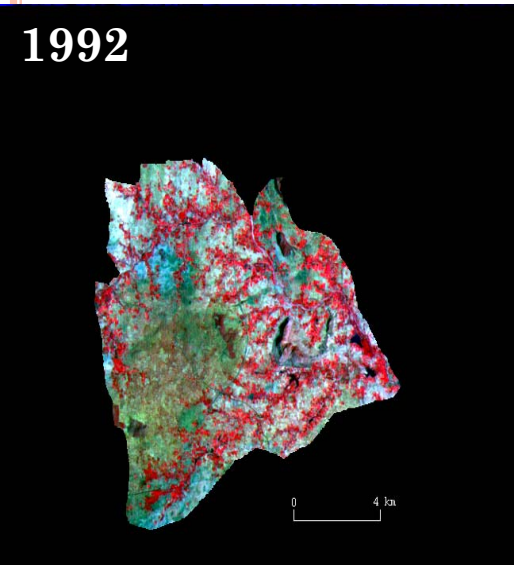
- **Role of Science & Technology**
  - Integrated Mission for Sustainable Development (IMSD) Projects- 175 Districts
  - Water Shed development Plans
  - R&D Areas identified by NCIWRD

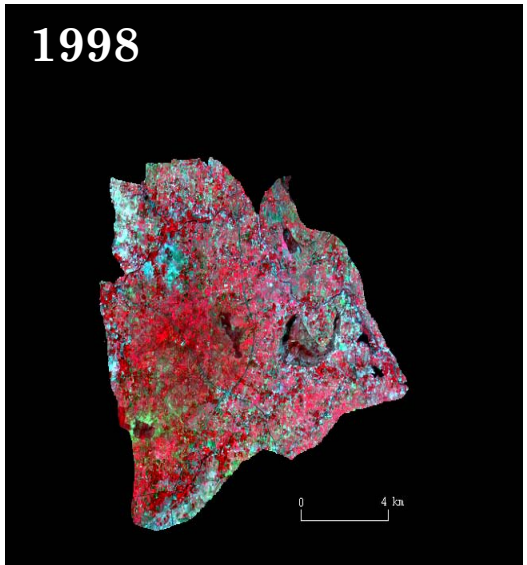




Dense vegetation - 1992 - 50.72 ha
Sparse vegetation - 1992 - 69.12 ha

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.*
     - *Rejuvination 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 ingression*

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"