

Water@2047-IWRM & Future Road Map



What adaptation strategies are necessary to address the challenges posed by climate change on water resources?

IWRM is process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

Water security:

Securing food supply, protecting ecosystems, managing risks, water and cities, water industry, water and health.

Global Climate change:

Intensification of hydrological cycle (More rainfall, runoff, Evaporation and less recharge)

Success story:

(Nature's Waters, 2023) bring valuable insights on crop switching in the Indo-Gangetic Plain (IGP). They found that switching from rice to millets (pearl millet) and sorghum in the Kharif (monsoon) season and

Climate Change adaptation measures

- Drought, flood & salt-tolerant/resistant crop varieties
- Water storage structures
- Change in crop calendars
- Soil moisture retention
- Soil fertility- improvements
- Water and land use planning for various uses
- Livestock management
- Efficient irrigation technologies
- Reduction in water storage and conveyance losses
- Recycling of waste water
- Affordable filtration technologies for good quality drinking water
- Harvesting of rainwater, dew, stream flow etc
- Enhanced ground water recharge
- Prevention & mitigation of water borne diseases
- Water audit in building, industries, agriculture etc

Impacts on water resources

- More rain but less number of rainy days
- Higher ambient temperature
- Flash flood and storm water logging
- Enhanced glacier melts
- Frequent droughts
- Rise in sea water level
- Change in onset and withdrawal dates of monsoon

Water Governance

Issues:

- **Conflict resolution**
- **Equity issues**
- **Water scarcity and water security**
- **Scenario planning**
- **Mainstreaming gender in water management**
- **Economic and financial instruments**
- **Capacity building and skill development**
- **Stakeholders participation**

Integration & linkage

- **Land , forests and water**
- **Surface water and ground water**
- **Upstream and downstream water interests**
- **Water value and water cost**
- **Blue water and green water**
- **Water and health**
- **Water Environment**
- **Water and livelihood**
- **Water and food**
- **Water and waste water**
- **Stake holders and actors**