



Challenges & Strategy for Water Reforms

Ministry of Water Resources, River
Development & Ganga Rejuvenation

“रहिमन पानी राखिये, बिन पानी सब सून
पानी गए न उबरे, मोती, मानुष चून”

“If the wars of this century were fought over oil,
the wars of the next century will be fought over
water- unless we change over approach to
managing this precious and vital resources”

Ismail Serageldin in 1995



- Water is state subject.
- Planning, development and management of water resources primarily rest with the state government.
- Central Government provides technical and need based financial assistance.

Issues of Water Availability

Particulars	Quantum	
	BCM*	%
Precipitation received	4000	100
Water Resource Potential	1869	46.7
Utilizable Water Resource	1123	28.1
Ground Water	433	10.8
Surface Water	690	17.2

- Space & time related variability
- Per capita availability !



Global per capita annual availability of water:

Year 1804: 42,370 M³

Year 2017: 5,575 M³

.....for India: 1400 M³

Population-2017
 Global: 7.6 Billion
 India: 1.34 Billion
 (17.6%)

Future Water Demand in India from different sectors

Particulars	Water Demand in Km ³ or BCM		
Year	2010	2025	2050
Water Demand from all Sectors	710	843	1180
Irrigation	557	611	807
Drinking Water	43	62	111
Industry	37	67	81
Energy	19	33	70
Others	54	70	111
Availability of Utilisable Water	1123	1123	1123
Excess/Short fall	413	280	-57

Issues of Irrigation Sector & need for Reforms

- Water Availability
- Inadequacy of Potential creation
 - Net Sown Area :- 139.99 Mha
 - Area Under Irrigation:- 66.1 Mha
 - Percentage Coverage:- 47.22 Mha
- Gap between irrigation potential created and irrigation potential utilized.
- Irrigation potential created – 112.53 Mha
- Irrigation potential utilized - 89.26 Mha

Issues of Irrigation Sector & need for Reforms- contd.

- Climate Change- uneven distribution of rainfall over time and space. Intensity and frequency of extreme events will rise.
- Sustainability of Ground water.
- Pricing of Irrigation Water.
- Over emphasis on large dams and supply side management.

Way Forward

- ❖ Need for the paradigm shift.
- ❖ Bridging gap between IPC & IPU--- **PMKSY-AIBP**
- ❖ Ensuring last mile connectivity—**PMKSY-HKKP(CAD, SMI, RRR & GW)**
- ❖ Need for strengthening Participatory Irrigation Management
- ❖ Shifting water from surplus to deficit Basin-**Interlinking of River.**
- ❖ Pricing of irrigation water
- ❖ Improving water use efficiency- **PMKSY - more crop per drop.**
- ❖ Scientific Application of water Science- **NAQUIM, NHP.**
- ❖ Promoting Demand Side Management.- **Atal Bhujal Yojana**

THANK YOU