

Policy Framework for Improved Water Management

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Chairman

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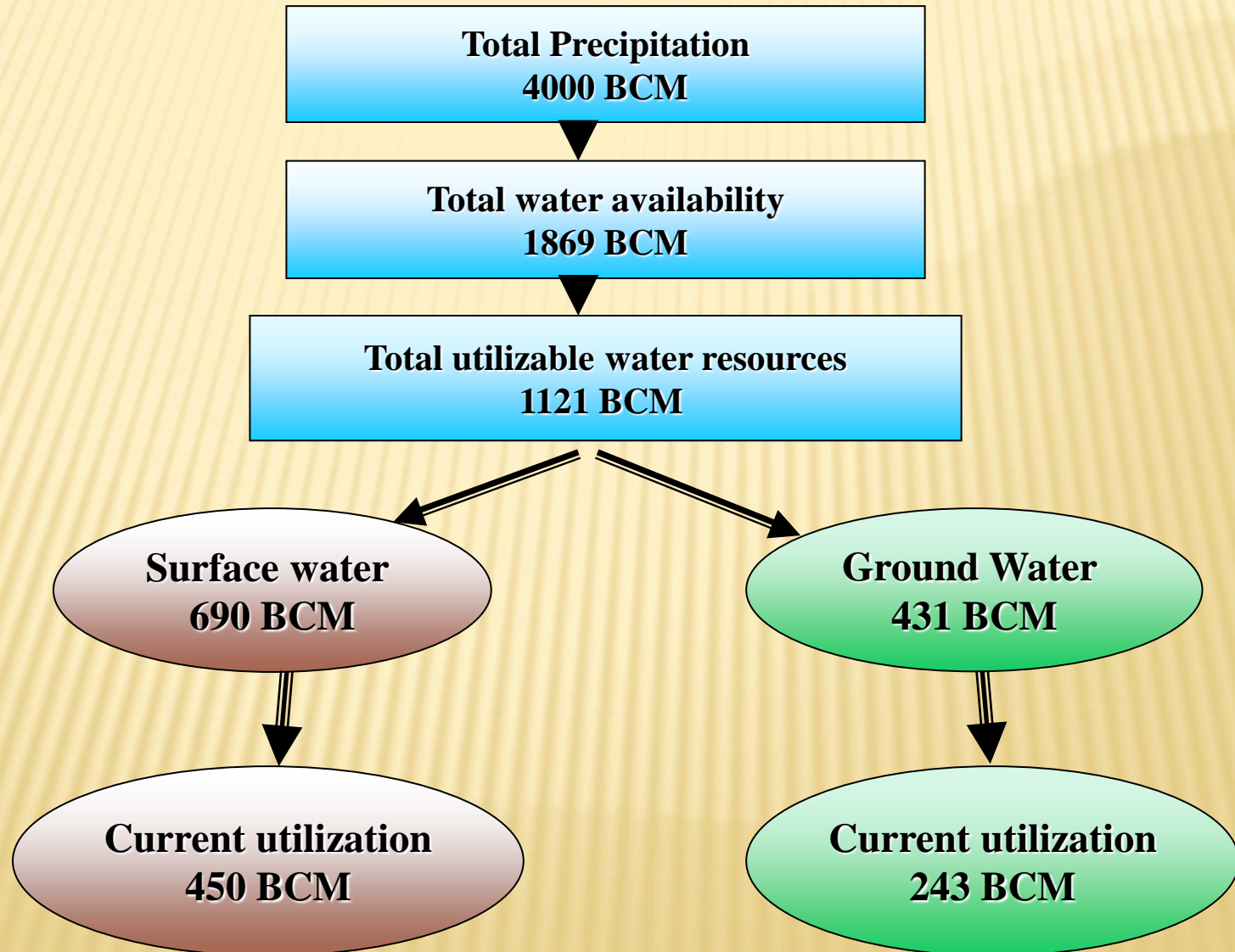
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Overview of Water sector in India

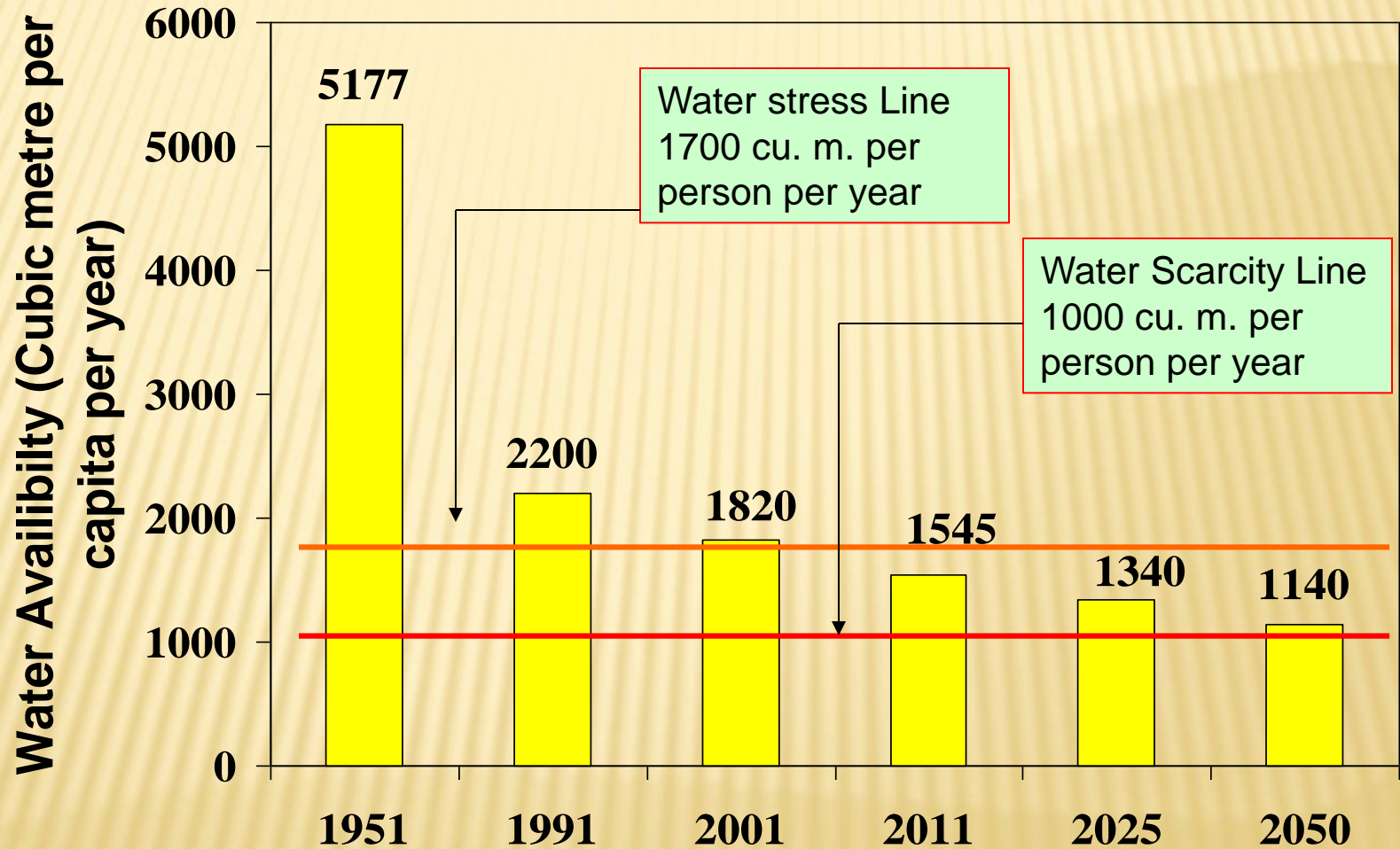
India vis-à-vis World

- ❑ **2.4% of World's Land Area**
- ❑ **4% of World's Renewable Water Resources**
- ❑ **18% of World's Population**
- ❑ **Primary source is surface rainfall limited to about 100 days in a year- that too in spells**
- ❑ **Uneven distribution over the territory**

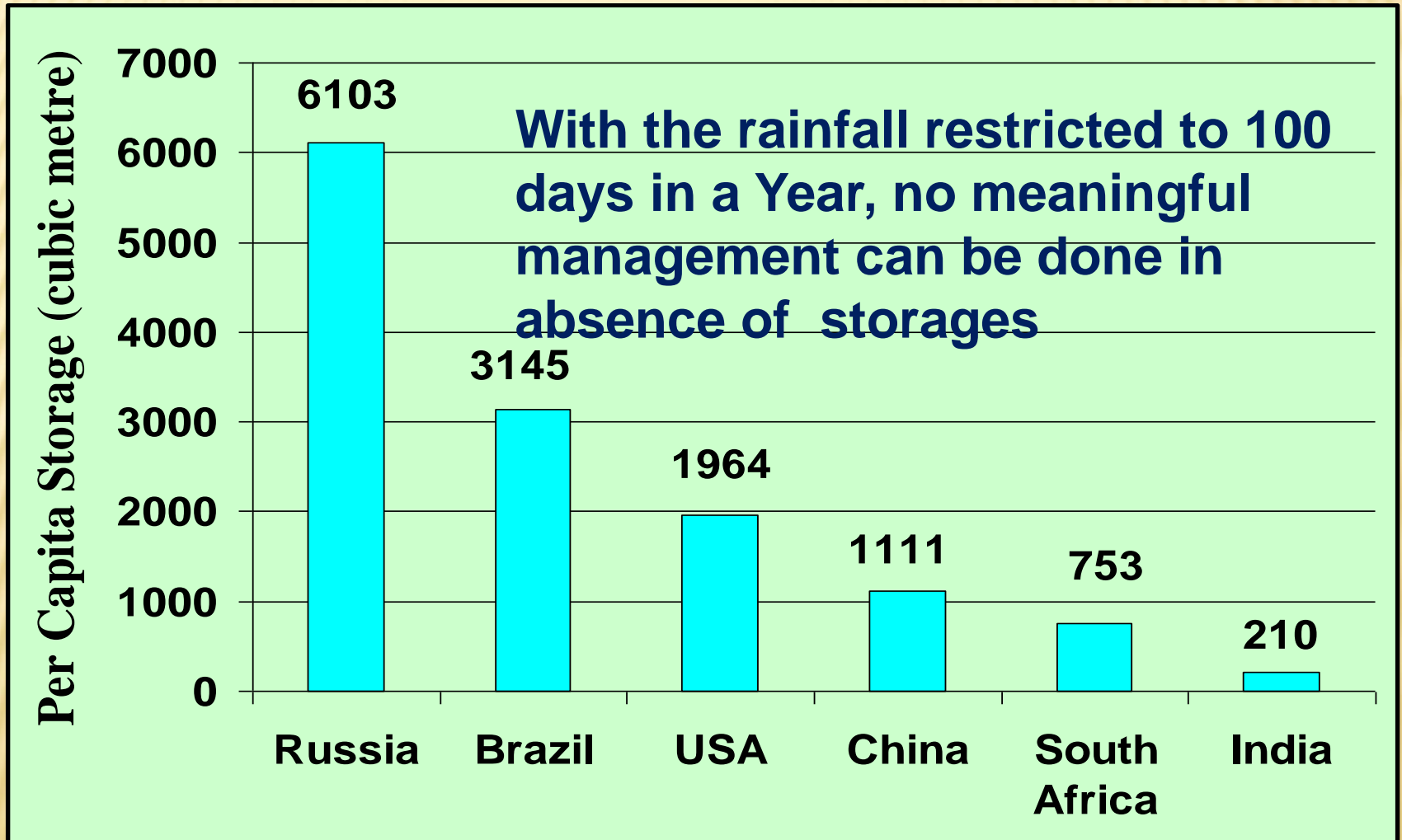
Water Availability



Per Capita Water Availability (National Average)



Per Capita Storage (m³)



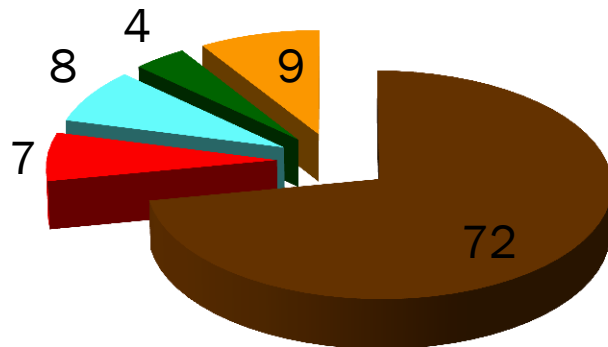
Sector wise Future Demand (BCM)

Sector	Probable Water Demand as Projected by NCIWRD (1999)	
	2025	2050
Irrigation	611	807
Domestic	62	111
Industry	67	81
Energy	33	70
Others	70	111
Total	843	1180 *

*** Against utilizable water resources of 1121 BCM**

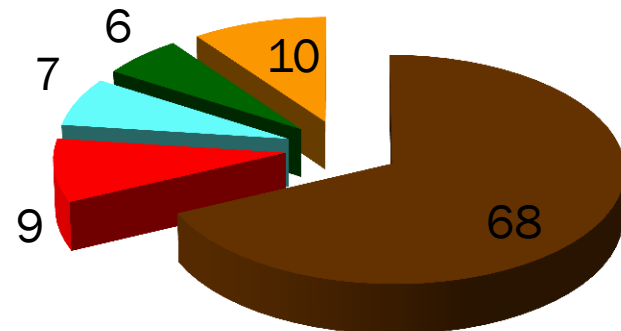
Sector wise Future Demand (%)

2025



- Irrigation
- Domestic
- Industry
- Energy
- Others

2050



- Irrigation
- Domestic
- Industry
- Energy
- Others

Coping with Challenges

Challenges in Water Sector

- ❑ Disjoint between administrative and hydrologic boundaries with administrative boundaries governing deployment
- ❑ Inter-regional, inter-State, intra-State, as also inter-sectoral disputes in sharing of water
- ❑ Planning and implementation of water resources projects in fragmented manner
- ❑ Difficulties in creation of new storage infrastructure
- ❑ Low water use efficiency - Inadequate maintenance of existing irrigation infrastructure
- ❑ Impact of climate change

Challenges in Water Sector.....contd.

- ❑ Issues related to water governance
- ❑ Over-exploitation of groundwater
- ❑ Growing pollution of water resources
- ❑ Low consciousness about the overall scarcity and economic value of water
- ❑ Lack of adequately trained personnel for scientific planning, utilizing modern techniques and analytical capabilities.

National Water Policy - 2012

- ✘ The Government has adopted the National Water Policy - 2012 and the same was released during India Water Week, 2013
- ✘ Policy has addressed issues related to Framework law; uses of water; adaptation to climate change; enhancing water available for use; demand management and water use efficiency; water pricing; conservation of river corridors, water bodies and infrastructure; project planning and implementation; management of flood and drought; water supply and sanitation; institutional arrangements; trans-boundary rivers; database and information system; and research & training needs

Policy Framework

- Focus on water sector from the multi-disciplinary point-of-view needing harmonious blending of technological, social, economic and environmental aspects.
- Integrated Water Resources Management (IWRM) taking river basin / sub-basin as the main principle for planning, development and management of water resources
- Development of a robust and comprehensive database of water and related resources for promoting effective policy making, fostering research activities and disaster mitigation.
- India-WRIS is being developed under a joint collaborative initiative of CWC and ISRO

Policy Frameworkcontd.

- Promotion of citizen and state action for water conservation, augmentation and preservation which inter-alia includes increasing water storage in its various forms, namely, soil moisture, ponds, ground water, small and large reservoirs and their combination.
- States to be incentivized to increase water storage capacity, which inter-alia should include revival of traditional water harvesting structures and water bodies.
- Improvement of water use efficiency and productivity for generating more income per drop of water
- Focus on active community participation in planning and management of resources as well as service delivery facilities

Policy Frameworkcontd.

- Maintaining water quality to desirable standards through a broad environmental approach for reducing pollution
- Principle of differential pricing may be retained for the pre-emptive uses of water for drinking and sanitation; and high priority allocation for ensuring food security and supporting livelihood for the poor.
- Available water, after meeting the above needs, should increasingly be subjected to allocation and pricing on economic principles so that water is not wasted in unnecessary uses and could be utilized more gainfully.

Government's Initiatives

- ✘ Central government provides role of facilitator for improved water management.
- ✘ Inter state allocation determination of water share of common basins is a vexatious task and involves very long time periods.
- ✘ Quantum based fixed allocations create environment conducive to unsustainable practices
- ✘ Central Government schemes to financially support the sustainable interventions of the states
- ✘ Encouragement to institution building and capacity enhancement
- ✘ Providing legislative framework for common areas of interest

ACCELERATED IRRIGATION BENEFITS PROGRAMME

- ✘ AIBP- launched in the year 1996-1997 to provide Central Assistance to approved major and medium irrigation projects to expedite implementation of projects which were beyond resource capabilities of a State Govt. or were in advance stage of completion.
- ✘ A large number of projects have been completed since inception of this programme.
- ✘ Command Area Development and Water Management programme (CADWM), which aims to optimize agricultural production and productivity through efficient land and water management in the irrigated commands was started in 1975.
- ✘ Implementation of CADWM made “pari passu” with infrastructure creation
- ✘ Minor Irrigation projects of specified states are also eligible for support

MANAGING WATER BODIES

- ✘ Repair, Renovation and Restoration of water bodies

Government's Initiatives

- Focus on water governance aspects through legal reforms such as National Water Framework Bill, River Basin Management Bill
 - Framework Bill is an umbrella statement of general principles governing the exercise of legislative and/or executive (or devolved) powers by the Centre, the States and the local governing bodies
 - The River Basin Management Bill, 2012 proposes to establish River Basin Authority for preparation of a River Basin Master Plan for development, management and regulation of an Inter-State River Basin

National Water Mission

- ✘ National Action Plan on Climate Change (NAPCC) has identified the approach to be adopted to meet the challenges of impact of climate change through eight National Missions.
- ✘ Five Goals identified under National Water Mission
 - + Comprehensive water data base in public domain and assessment of the impact of climate change on water resources
 - + Promotion of citizen and State actions for water conservation, augmentation and preservation
 - + Focused attention on vulnerable areas including over-exploited areas
 - + Increasing efficiency by 20%
 - + Promotion of basin level integrated water resources management

XII FIVE YEAR PLAN- Water Sector

- ✘ Need for a paradigm shift
- ✘ Multidisciplinary, participatory management approach to major and medium irrigation projects, with central emphasis on command area development and a sustained effort at improving water use efficiency.
- ✘ A participatory approach to sustainable management of groundwater based on a new programme of aquifer mapping.
- ✘ All urban water supply projects to necessarily integrate sewage systems within them.
- ✘ Targets for recycling and reuse of water by Indian industry to move in conformity with international standards.

XII FIVE YEAR PLAN- Water Sector

Major & Medium Irrigation Projects Reforms

- ✘ To complete the huge backlog of ongoing MMI projects by prioritising the allocation of investible funds to ongoing projects while taking up new only as a matter of exception
- ✘ To close the gap between **IPC and IPU by at least 10 million ha** by prioritising investments in Command Area Development and Management (CAD&M) projects and restore an **additional 2.2 million ha of lost irrigated potential through ERM** works in old MMI projects;
- ✘ To catalyse, support and incentivise deep reform in irrigation departments by strengthening and broad-basing their human resources, by building capacities of civil engineers, capacitating Water and Land Management Institutes (WALMIs) and other irrigation training and research institutions
- ✘ Strengthening incentives in irrigation service provision and Irrigation Service Fee (ISF) collection;
- ✘ **National Irrigation Management Fund (NIMF)** to catalyse and support demand for irrigation management and institutional reforms.

THANKS