

National Water Mission under National Action Plan on Climate Change Comprehensive Mission Document

A National Action Plan on Climate Change (NAPCC) has been drawn up by the government on realising the degree of dependency that India's masses and economy have on the climate. This is with the objective of best charting out India's adaption techniques to the changing climate as well as to enhance it's sustainability initiatives.

Released by the Prime Minister of India on 30th June 2008, the NAPCC seeks to meet the challenges posed by the onset of Climate Change through eight National missions that are:

- (a) National Solar Mission
- (b) National Mission for Enhanced Energy Efficiency
- (c) National Mission on Sustainable Habitat
- (d) National Water Mission
- (e) National Mission for Sustaining the Himalayan Ecosystem
- (f) National Mission for Green India
- (g) National Mission for Sustainable Agriculture
- (h) National Mission on Strategic Knowledge for Climate Change

With respect to the water resource, varying availability of which could gravely impact livelihoods of the rural poor, the National Water Mission (NWM) has identified several direct implications of climate change which are:

- ~ Decline in glaciers and snowfields in the Himalayas
- ~ Increased drought like situations due to overall increase in the number of rainy days over a major part of the country
- ~ Increased flood events due to overall increase in the rainy day intensity
- ~ Effect on groundwater quality in alluvial aquifers due to increased flood and draught events
- ~ Influence on groundwater recharge due to changes in precipitation and evapo-transpiration
- ~ Increased saline intrusion of coastal and island aquifers due to rising sea levels

Chapter II of the mission document highlights the need to better allocate and use water resource to meet both rural as well as urban demands in the most efficient way possible. They have sought to integrate the concept of Integrated Water Resource Management (IWRM) for better inter-state distribution while developing a framework to increase water use efficiency and optimising water usage through the imposition of tariffs regulatory mechanisms. Recycling of wastewater is viewed as a means by which urban water demands can be better met and appropriate technologies are to be considered to better meet the need of coastal cities that lack adequate sources of water. The mission also seeks to implement these regulatory mechanisms in the rural areas as well with the primary motive of optimising the efficiency of the irrigation systems in place including rehabilitation of run down systems as well as expand irrigation in a bid to increase storage of the resource.

Functioning of the NWM will be at a ministry level with there being constituted inter-sectoral groups that shall combine resources from other relevant ministries, industry, academia and civil society. The 11th and 12th plan periods are seen as crucial to reprioritise activities and enhance allocation of the water resource as is feasible. The Prime Ministers Council on Climate Change is the reporting body as far as NWS is concerned and annual performances are to be reported publicly.

NAPCC sees the building of public awareness as a crucial part of its campaign and a role in its success. This is to be carried out by engaging with media, civil society; bringing out national portals, reforming curricula as well as constitution of awards and recognition for positive steps taken towards combating climate change by an empowered group. Development of appropriate technologies and relevant indicators to monitor progress of avoided emissions, etc. along with means of assessing adaptation benefits of actions undertaken.

Chapter III of the document highlights the strategies and methodologies for the implementation of actions outlined by the NAPCC. Given the nature of implementation of water resources scheme that span many departments and ministries of the government thus making it important to have in place a consultative mechanism for coordination of work. Six sub-committees have thus been formed to look after the various aspects of water resources management which are:

- ~Policy and Institutional Framework
- ~Surface Water Management
- ~Ground Water Management
- ~Domestic and Industrial Water Management
- ~Efficient Use of Water for Various Purposes
- ~Basin Level Planning and Management

Recommendations from these six sub-committees has resulted in the charting out of strategies to be pursued in the following four areas:

§ **Assessment of Impact of Climate Change**

It is of prime importance to assess the impact of climate change on the availability as well as quality of the water resource from both surface as well as ground resources which requires undertaking data collection, modelling of potential outcomes and impacts and development of techniques for efficient utilisation.

Several activities have been identified under the NAPCC for better monitoring and management of the resource and this seeks to implement strategies identified through collaborations with several nodal agencies such as Central Water Commission, Central Ground Water Board, Indian Meteorological Department, State Governments to name a few.

§ **Changes in Policies and Practices** : Based on various studies and projections, impacts of climate change on the hydrological cycle seem evident and likely to jeopardise the availability of the resource. Thus a review of policy and practice with respect to water resources (irrigation, cropping pattern, etc.) would be of utmost importance to identify measures for mitigation.

The Ministries of Water Resources, Rural Development, Agriculture, Urban Development along with the Planning Commission and State Governments would be roped in for work on policy and practices.

§ **Measures of Mitigation** : Conservation, efficient use and adoption of better management practices of water resources form the primary measures of mitigation of impacts of Climate Change. The list of measures drafted under the NWM comprises of sixteen measures that cover aspects of irrigation, ground and surface water, rainwater and different management systems that surround the resource. Ministries of Water Resource, Rural Development, Agriculture; along with State Governments and organisations such as Central Groundwater Board and Central Water Commission amongst others have been identified for implementing identified strategies.

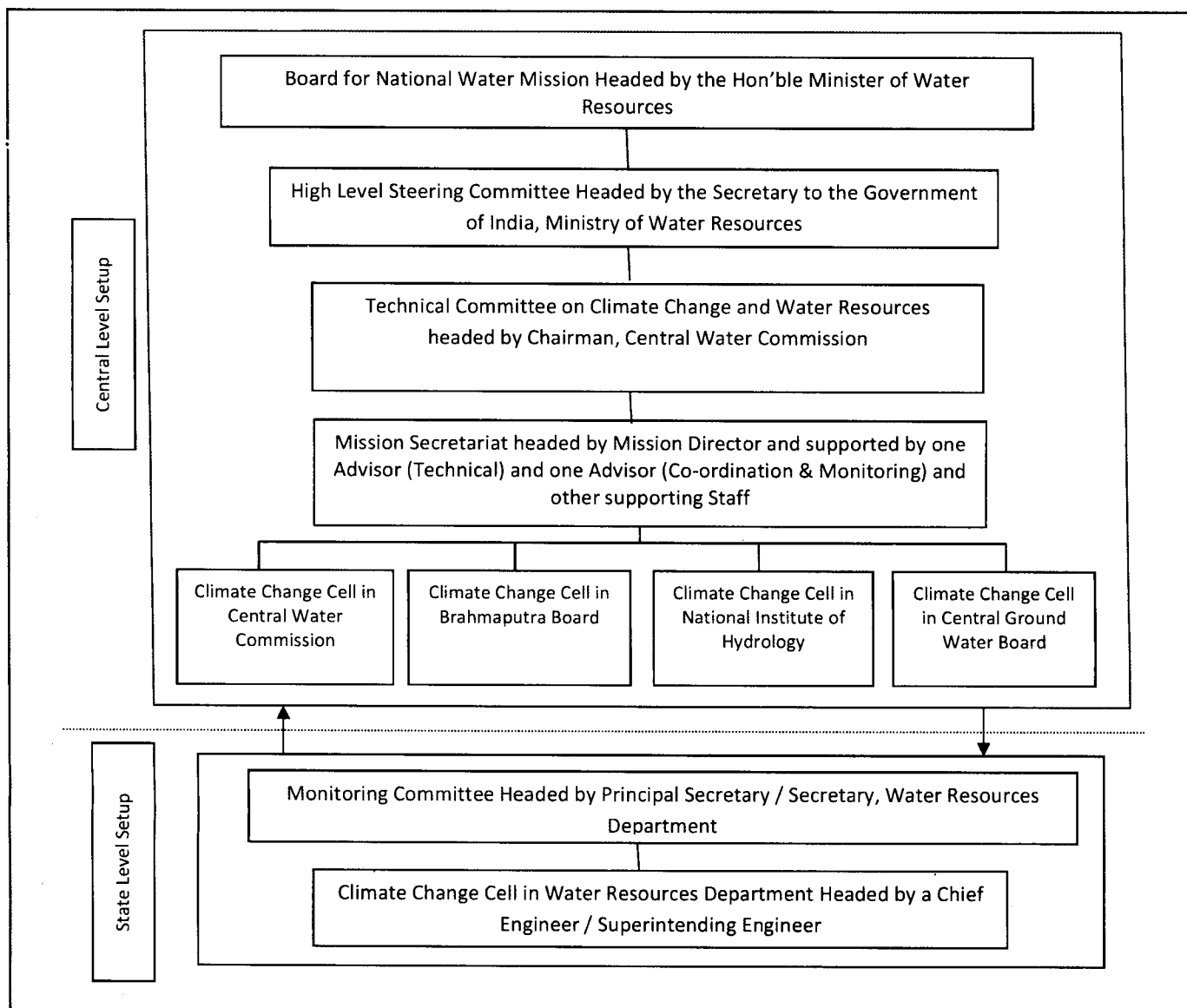
§ **Measures for Adaptation** : Creating awareness as well as identification of measures for adaptation through suggested changes in practices in design and planning stages of projects, agricultural and water usage practices would be key measures for adaptation. Again Ministries of Water Resource, Agriculture, Rural Development, Urban Development along with State Governments and bodies such as the Central Water Commission shall be involved in the framing and identification of measures.

Chapter IV outlines the Monitoring and Evaluation Mechanism, Institutional Setup and Plan of Action. Establishing impacts of climate change on water resources having been identified as the primary need to base further activities on, to carry out research and studies for a realistic assessment of the impact of climate change. Thus for optimisation of the resource and to encourage its judicious use at all levels, the need for policy reviews and constant monitoring measures being implemented and the need for a critical review in order to identify and rectify inappropriate measure has been expressed.

Such a large scale monitoring of the water resource calls for the partnership and proper coordination between many ministries and bodies to monitor various aspects of the resource at all levels. Thus a two tier set up has been proposed with M&E measures being undertaken at the central as well as state levels with the Minister of Water Resources heading the Board for National Water Mission and the Principal Secretaries/ Secretaries of Water Resources Department of every state heading the Monitoring Committees at the state level. Currently a technical Committee on Climate Change and Water Resources headed by the Secretary to GoI, Ministry of Water Resources has been constituted comprising of members from concerned ministries, experts, NGO's and it seeks to further involve members from state governments, professional and private organisations working in the water sector.

A dedicated Secretariat is to be set up with a compact Mission Secretariat headed by a Mission Director (Additional Secretary GoI level) and supported by two advisors, technical evaluation and co-ordination and monitoring. Specific cells created in NIH, CWC, BB and one proposed at CGWB for research and impact studies will feed into and provide support to the Secretariat.

Research and development as well as training and capacity building activities to be undertaken given the pressing need to identify affects on water resources



Institutional Setup for National Water Mission

Source: *National Water Mission Document*

by climate change have been highlighted in Chapter V of the mission document. In addition to studies being conducted at NIH, BB and CWC; professional chairs are to be set up by MoWR in order to integrate research already being done by premier academic institutions such as Indian Institutes of Technology and National Institutes of Technologies, Indian Institute of Science amongst others.

Capacity building is to be carried out for research, water and land management as well as academic institutions identified as a target group in the various states of the country. Awareness programmes are to be carried out for both the masses as well as policy makers and professionals with more evidence based projections rather than the current assumption based facts used to make the impact be known.

Lastly chapter VI looks into additional fund requirements with the Working Group for XI Plan on Water Resources being set up. Additional funds required for the operation of the National Water Mission has been estimated by its six sub committees as Rs. 28,651 Crores with Rs. 10,038 Crores and Rs. 18,613 Crores being needed for implementation at the Central and State levels respectively. Expenses for the Secretariat to be set up at MoWR are Rs. 5 Crore thus pegging total costs at about Rs. 28,656 Crores.

Given the fact that state governments would play a key role in the implementation, it has been considered necessary to seek views of the State governments on additional fund requirements and modify them as needed in the mid-term review of the XI Plan.

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