GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1526

ANSWERED ON 09.12.2024

MITIGATING THE IMPACT OF CLIMATE CHANGE IN THE COUNTRY'S WATER RESOURCES

1526. SHRI JOSE K. MANI

Will the Minister of **JAL SHAKTI** be pleased to state:

(a) the steps are taken by Government to mitigate the impact of climate change in the country's water resources;

(b) the studies or programs in place to assess the impact of changing rainfall patterns on water availability; and

(c) the steps being taken to enhance the resilience of water infrastructure to climate extremes?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) to (c) The Government of India has taken several initiatives to address the impact of climate change on water resources. One of the key initiatives in this regard is the establishment of the National Water Mission (NWM) under the National Action Plan for Climate Change (NAPCC) launched by the Government of India. The Mission outlines five specific goals: (1) creating a comprehensive water database in the public domain; (2) assessing the impact of climate change on water resources; (3) promoting citizen and state action for water conservation, augmentation, and preservation, with focused attention on vulnerable areas, including over-exploited regions; (4) enhancing water use efficiency by 20%; and (5) fostering basin-level integrated water resources management. Though, all the goals of the mission are designed to collectively address and mitigate the broader effects of climate change, the Goal 2 of the National Water Mission specifically targets the assessment of impacts of climate change on India's water resources. In this regard, seven climate change studies, which includes assessment of the impact of changing rainfall patterns, for different river basins have been completed under the scheme "Research and Development Programme in Water Sector and Implementation of National Water Mission". The list of these studies is given at **Annexure**.

Steps taken by the Government to enhance resilience of water infrastructure to climate extremes include implementation of various programme/schemes such as Dam Rehabilitation and Improvement Project (DRIP) with an objective to improve the safety and operational performance of selected existing dams along with institutional strengthening; Flood Management and Border Area Programme (FMBAP)

for taking up critical works related to flood control, anti-erosion, drainage development, etc.; Atal Bhujal Yojana for improved management of ground water resources including rainwater harvesting in water stressed areas; Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)which supports assured irrigation; Inter-Linking of Rivers projects for transfer of excess water from the surplus river basins of country to the deficient river basins and for the effective management of floods and drought in the country;"Jal Shakti Abhiyan: Catch The Rain" campaign for water conservation; etc.

Central Water Commission (CWC) has been entrusted with the task of flood forecasting & early flood warnings in the country. CWC has been monitoring 902 Glacial Lakes and Water Bodies of water spread area greater than 10 Hectare, every year from June to October, using Remote Sensing techniques. This enables the detection of relative change in water spread area of Glacial Lakes & Water Bodies, as well as identifying the one's which have expanded substantially during the monitoring month, from disaster perspective. CWC also monitors live storage status of 155 important reservoirs in the country on weekly basis and issues weekly bulletin on every Thursday.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) to (c) OF UNSTARRED QUESTION NO. 1526 TO BE ANSWERED IN RAJYA SABHA ON 09.12.2024 REGARDING"MITIGATING THE IMPACT OF CLIMATE CHANGE IN THE COUNTRY'S WATER RESOURCES".

S.No.	List of the Climate Change Studiescompleted under the scheme "Research and Development Programme in Water Sector and Implementation of National Water Mission"
1	Impact Assessment of Climate Change on Hydro-meteorological processes and Water Resources ofMahanadiRiver Basin
2	Climate change impact studies for Rajasthan (Area of inland drainage and Mahi basin)
3	Impact of Climate Change on Water Resources of Tapi Basin
4	Effects of Climate Change and land use/ land cover changes on spatial and temporal water availability in Subarnarekha Basin
5	Impact of Climate Change on Water Resources of Sabarmati Basin
6	Impact of Climate Change on Water Resources in River Basins from Tadri to Kanyakumari
7	Statistical Downscaling for Hydro-climatic Projections with CMIP5 Simulations to Assess Impact of Climate Change

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