

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 3593
TO BE ANSWERED ON WEDNESDAY, 22ND MARCH, 2023**

STUDY ON RISING TEMPERATURE

3593. MS. RAMYA HARIDAS:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has conducted or proposes to conduct a detailed study of rising temperature and depleting source of water due to global warming;
- (b) if so, the details thereof; and
- (c) the modern technologies that are proposed to be used for the said purpose, including action plan for depleting source of water and decreasing ground level of water particularly in Kerala?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a)-(b) Central Ground Water Board (CGWB), under the Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation is periodically monitoring the ground water levels throughout the Country on a regional scale, through a network of monitoring wells.

The Dynamic Ground Water Resources of the country are also being periodically assessed jointly by CGWB and State Governments. As per the 2017 assessment, out of the total 6881 assessment units (Block/ Taluks/ Mandals/ watersheds/ Firkas) in the country, 1186 units in 17 States/UTs have been categorized as 'Over-exploited' where the total Current Annual Ground Water Extraction is more than Annual Extractable Ground Water Resource.

Central Ground Water Board is implementing a nationwide programme of "National Aquifer Mapping and Management (NAQUIM)" for mapping of aquifers (Water bearing formations), their characterization and development of aquifer management plans to facilitate sustainable development of ground water resources. So far about 11 lakhs sq.km have been covered. Aquifer maps and management plans have been shared with the respective State Government agencies. Public Interaction Programs are being organised at grass root level for disseminating the tenets of the Aquifer Management Plans for the benefit of the stakeholders.

The Research & Development Division, Project Planning Wing, Department of Water Resources, River Development and Ganga Rejuvenation wing of Central Water Commission (CWC) have awarded studies on impact of climate change on water resources to some of the premier educational institutes. The studies are being implemented under the supervision of Indian National Committee on Climate Change (INCCC).

Name of the Scheme	State/institution
Impact Assessment of Climate Change on Hydro- meteorological processes and Water Resources of Mahanadi River Basin	IISC Bangalore (Lead Instt.)
	IIT Bhubaneswar
Climate change impact studies for Rajasthan Area of inland drainage and Mahibasin	MNIT Jaipur (Lead Instt.)
	CU Ajmer Rajasthan
	IIT Delhi
Impact of Climate Change on Water Resources of Tapi Basin	SVNIT Surat(Lead Inst./.)
	MNIT Jaipur
	MANIT Bhopal
Effects of Climate Change and land use/land cover changes on spatial and temporal water availability In Subarnarekha Basin	IIT Kharagpur
Impact of Climate Change on Water Resources of Sabarmati Basin	IIT Gandhinagar(Lead Instt.)
	SVNIT Surat
Impact of Climate Change on Water Resources in River Basins from Tadrilo Kanyakumari	IIT Mumbai (Lead Instt.)
	NIT Surathkal
	CWRDM Kozhikode
Statistical Downscaling for Hydro-climatic Projections with CMIPS Simulations to Assess Impact of Climate Change	IIT Mumbai (Lead Instt.)
	IIT Guwahati
	IIScBangalore
	IIT Gandhinagar
	IIT Kanpur
Dynamic Downscaling to study Climate Change Impact on Water Resources in India	IIT Delhi
	IITMadras
	Anna University
Hydro-Geological Assessment and Socio-Economic Implications of Depleting Water Resources in Nainital	BHU Varanasi
Hydro-Geological Assessment and Socio-Economic Implications of Depleting Water Resources in Nainital	CEDAR Dehradun
Irrigation Efficiency Improvement Through On-Farm Water Management	IIT Roorkee

- (c) CGWB has prepared NAQUIM report for all the states in the country including the State of Kerala wherein the information is available for about 11 districts and the report is available at <http://cgwb.gov.in/AQM/Kerala%20%20Reportdistrict.html>.

Also CGWB has brought out “Master Plan for Artificial Recharge to Ground Water in India” (<http://cgwb.gov.in/documents/masterplan-2013.pdf>) and also “Manual on Artificial Recharge of Ground Water” (<http://cgwb.gov.in/documents/Manual-Artificial-Recharge.pdf>) wherein various new technologies are discussed.
