

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI,
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA
REJUVENATION
RAJYA SABHA

UNSTARRED QUESTION NO. 2977

ANSWERED ON 27.03.2023

IMPACT OF CLIMATE CHANGE ON WATER BODIES

2977. DR. PRASHANTA NANDA

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

- (a) whether Government has conducted any study regarding impact of climate change on water bodies;
- (b) if so, details of such study, state wise;
- (c) details of steps taken by Government to check environmental pollution of water bodies in the State of Odisha; and
- (d) present status of such effort?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI BISHWESWAR TUDU)

(a) & (b) The details of studies conducted through funding from Central Government regarding impact of Climate Change on river basins /sub-basins/ water bodies, indicating coverage of States, is given in **Annexure-I**.

(c) & (d) Action related to planning, funding and execution of projects to check environmental pollution of water bodies is undertaken by the State Government concerned. Government of India provides technical support and in some cases, partial financial assistance under the existing schemes, to facilitate the State Governments. The steps taken by Central Government to check environmental pollution of water bodies in Odisha are as under:

- i. Under National River Conservation Plan, projects for pollution abatement of two rivers Brahmani (at Chandbali, Dharamshala, Talcher towns) and Mahanadi (at Cuttack town), and also for coastal area at Puri were sanctioned at total cost of Rs.92.74 crore. Works include setting up of three STPs of total capacity of 50 MLD along with interception & diversion, sewerage system, low cost sanitation facilities, improved wood crematoria, river front development, etc.
- ii. Focused interventions under successive Jal Shakti Abhiyan campaigns taken up by the Government of India and the State Governments, inter-alia, include renovation of traditional and other water bodies/ tanks, enumeration, geo-tagging and making inventory of all water bodies,

and removal of encroachments of tanks/ lakes, and de-silting of tanks, and protection of water catchment area.

- iii. Central Government is providing financial assistance to States for Repair, Renovation & Restoration (RRR) of Water Bodies for its comprehensive improvement and restoration under the component “Har Khet Ko Pani (HKKP)” of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). Since 2015, 1437 water bodies of Odisha with total estimated cost of Rs. 988.52 Crore has been included for funding under the scheme. The total central assistance released till date is Rs. 150.29 Crore
- iv. To give impetus to ‘Amrit Sarovar’, under Azadi ka Amrit Mahotsav, and to connect citizens to water bodies around them, projects on rejuvenation of water bodies have been taken up under AMRUT 2.0 in a special tranche. So far, 18 water bodies rejuvenation projects worth ₹89.50 crore taken up in Odisha.
- v. CPCB executes National Water Quality Monitoring Programme (NWMP) for assessment of water quality of aquatic resources in the country. Accordingly, Odisha Pollution Control Board under NWMP monitors water quality of aquatic resources at 344 locations including rivers, lakes, ponds and tanks. CPCB has also identified 19 polluted river stretches during the year 2018 in Odisha. A four-member “River Rejuvenation Committee (RRC)” under the chairmanship of Principal Secretary, Environment, Govt. of Odisha has prepared action plan for rejuvenation of polluted river stretches identified by CPCB. Monitoring of implementation of action plans is undertaken by the State Government under the overall supervision and coordination of Principal Secretary, Environment, Govt. of Odisha. The progress of implementation of action plans of various State Governments is also undertaken by Central Monitoring Committee (CMC) constituted under the Chairmanship of Secretary, Ministry of Jal Shakti at Central Level. So far, CMC has conducted 15 meetings with States/UTs.

Further, as per information received, State Government of Odisha, has identified 281 water bodies having water spread area above 10 Ha across the state for periodic monitoring of its water quality at present. Steps are taken for restoration and rejuvenation of these water bodies to check the effects of environment pollution, wherever necessary.

ANNEXURE REFERRED TO IN REPLY TO PART (a) & (b) OF UNSTARRED QUESTION NO. 2977 TO BE ANSWERED IN RAJYA SABHA ON 27.03.2023 REGARDING “IMPACT OF CLIMATE CHANGE ON WATER BODIES”.

List of studies conducted through funding from Central Government regarding impact of Climate Change on River basins /sub-basins/water bodies					
Sl. No.	Title of project	Implementing Institute	Funding Ministry/ Department	River basins /sub-basins/water bodies	State Covered
1	Impact Assessment of Climate Change on Hydro-meteorological processes and Water Resources of Mahanadi River Basin	IISC Bangalore (lead Instt) and IIT Bhubaneswar	DoWR,RD &GR	Mahanadi River Basin	Chhattisgarh,Odisha, Jharkhand and Maharashtra
2	Climate Change Impact Studies for Rajasthan (Area of Inland Drainage and Mahi basin	MNIT Jaipur (Lead Instt.), CU Ajmer Rajasthan and IIT Delhi	DoWR,RD &GR	Mahi basin and areas of Inland Drainage in Rajasthan	Madhya Pradesh, Rajasthan and Gujarat
3	Impact of Climate Change on Water Resources of Tapi Basin	SVNIT Surat (Lead Instt.), MNIT Jaipur and MANIT Bhopal	DoWR,RD &GR	Tapi Basin	Maharashtra, Madhya Pradesh and Gujarat
4	Impact of Climate Change on Water Resources in River Basins from Tadri to Kanyakumari	IIT Mumbai (Lead Instt.), NIT Surathkal and CWRDM Kozhikode	DoWR,RD &GR	West Flowing River Basins from Tadri to Kanyakumari	Kerala, Karnataka, Tamil Nadu and Union Territory of Puducherry
5	Effects of Climate Change and land use/land cover changes on spatial and temporal water availability in Subarnarekha Basin	IIT Kharagpur	DoWR,RD &GR	Subarnarekha Basin	Jharkhand, Odisha and West Bengal
6	Impact of Climate Change on Water Resources of Sabarmati Basin	IIT Gandhinagar (Lead Instt.) and SVNIT Surat	DoWR,RD &GR	Sabarmati Basin	Rajasthan and Gujarat
7	Hydrogeological Assessment and Socio-Economic Implications of Depleting Water Resources in tourist towns of Uttarakhand	Centre for Ecology Development and Research, Dehradun	DoWR,RD &GR	Nainital Lake	Uttarakhand
8	High-resolution Climate Scenarios for Basin-scale Water Resource Management Applications	IIT, Delhi	DoWR,RD &GR	Indo-Gangetic Plain	Uttarakhand, Himachal, Chhattisgarh, UP, Bihar, Jharkhand, West Bengal, Madhya Pradesh, Delhi, Rajasthan and Haryana

9	Impact assessment of climate change on the hydrological response of a snow and glacier melt runoff dominated Himalayan river (Spiti River)	NIH	DoWR,RD &GR	Spiti River	Himachal Pradesh
10	Hydrological sensitivity of a large Himalayan basin to the climate change. (Sutlej Basin)	NIH	DoWR,RD &GR	Sutlej Basin	Himachal Pradesh and Punjab
11	Effect of climate change on runoff of a glacierized Himalayan basin. (Dokriani Glacier basin)	NIH	DoWR,RD &GR	Dokriani basin	Uttarakhand
12	Effect of climatic variation on runoff regime of River Chenab	NIH	DoWR,RD &GR	River Chenab	Himachal Pradesh, Jammu and Kashmir and Punjab
13	Status report on climate change and its impact on water resources	NIH	DoWR,RD &GR	All river Basin	Entire India
14	Climate change and its impact on flow characteristics of River Beas upto Pandoh Dam in Indus basin.	NIH	DoWR,RD &GR	River Beas	Himachal Pradesh
15	Climate change and its impact on flow characteristics of River Bhagirathi upto Tehri Dam in Ganga Basin	NIH	DoWR,RD &GR	River Bhagirathi	Uttarakhand
