GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1508

ANSWERED ON 09.12.2024

LOSS IN WEST BENGAL DUE TO GANGA EROSION

1508. SHRI SAMIRUL ISLAM

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

(a) the number of houses and land that were lost this year due to Ganga erosion in West Bengal;

(b) whether compensation has been provided to those who lost their properties; and

(c) whether is the department's plan to prevent further Ganga erosion, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) State wise data on flood damages is compiled by Central Water Commission based on information received from concerned States. The flood damage data pertaining to West Bengal for last 3 years i.e. 2021 to 2023 is given at **Annexure**.

(b) The primary responsibility of disaster management rests with the State Government concerned. The Central Government supplements the efforts of the State Government and provides requisite logistics and financial support. The State Government undertakes assessment of damages caused due to 12 notified natural calamities including rain and floods and provide relief assistance from State Disaster Response Fund (SDRF) already placed at their disposal as per Government of India's approved norms. Additional financial assistance is provided from National Disaster Response Fund (NDRF), as per laid down procedure in case of disaster of 'severe nature' which includes an assessment based on the visit of an Inter-Ministerial Central Team (IMCT).

(c) Flood management and anti-erosion schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas. To strengthen the structural measures of flood management, Ministry had implemented during XI & XII Plan Flood Management Programme (FMP) for providing Central Assistance to States for works related to river management, flood control, anti-erosion, drainage development, anti-sea erosion, etc. which subsequently continued as a component of "Flood Management and Border Areas Programme" (FMBAP) for the period from 2017-18 to 2020-21 and further continued for a period of 5 years from 2021-22 to 2025-26 with total outlay of Rs. 4,100 crore.

Further, As per the request of State Government of West Bengal, a Committee comprising members from the State Government of West Bengal and concerned Central Government Departments, under the chairmanship of Chairman, Central Water Commission has been constituted by the Department of Water Resources, River Development & Ganga Rejuvenation to undertake a joint detailed technical study for an integrated plan to combat the threat of erosion posed by Ganga-Padma river in the district of Malda, Murshidabad & Nadia in West Bengal.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1508 TO BE ANSWERED IN RAJYA SABHA ON 09.12.2024 REGARDING "LOSS IN WEST BENGAL DUE TO GANGA EROSION".

WEST BENGAL											
STATEMENT SHOWING FLOOD DAMAGE DURING 2021 TO 2023											
Sl. Nos.	**Year**	**Area affected in (m. ha.)**	**Population affected in (million)**	**Damage to Crops**		**Damage to Houses**		**Cattle lost nos.**	**Human lives lost nos.**	**Damage to public utilities (Rs. Crore)**	**Total damages crops, houses& public utilities (Rs. Crore)**
				Area (m. ha)	**Value (Rs. Crore)**	**Nos.**	**Value (Rs. Crore)**				
1	2021	1.01	4.00	0.97	6355.76	236201	3383.23	136	163	6340.46	16079.45
2	2022	0.02	0.06	0.00	0.26	3028	3.11	1	25	0.32	3.69
3	2023	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	TOTAL	**1.03**	**4.06**	**0.97**	**6356.02**	**239229**	**3386.34**	**137**	**188**	**6340.78**	**16083.14**

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1509

ANSWERED ON 09.12.2024

SCHEMES FOR FLOOD CONTROL AND DRAINAGE IN FLOOD- PRONE AREAS

1509. DR. KANIMOZHI NVN SOMU

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

(a) whether Government has implemented any schemes for flood control and drainage in flood- prone areas;

(b) if so, the details thereof and if not, the reasons therefor;

(c) whether any flood control and drainage projects have been introduced in flood prone areas of Tamil Nadu;

(d) if so, the details thereof including the outcomes and benefits achieved and if not, the reasons therefor; and

(e) the details of other steps taken to achieve flood control and drainage in Tamil Nadu?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) to (d) Flood management including drainage control falls within the purview of the States. Flood management and drainage control schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas. Flood management measures are broadly categorized as structural measures and nonstructural measures. Integrated flood approach aims at adopting judicious mix of structural and nonstructural measures to provide a reasonable degree of protection against flood damages at economic cost.

To strengthen the structural measures of flood management, Union Government had implemented Flood Management Programme (FMP) during XI & XII Plans for providing central assistance to States for works related to flood control, anti-erosion, drainage development, anti-sea erosion, etc. which subsequently continued as a component of "Flood Management and Border Areas Programme" (FMBAP) for the period from 2017-18 to 2020-21 and was further extended up to 2026 with limited outlay. Total Central assistance amounting to Rs 59.82 Cr. has been released under FMP component to Government of Tamil Nadu since inception benefiting an area of about 3.19 Lakh Hectare and population of about 20.17 Lakh.

For Non-structural measures, Central Water Commission (CWC) is the nodal Organisation entrusted with the task of flood forecasting & early flood warnings in the country. The network has been established in consultation with the State Governments and UTs. Besides short-range forecasts with response time of 24 hours, CWC has also developed basin wise flood forecasting model based on rainfall-runoff mathematical modelling for 7 days' advance advisory at its forecasting stations in order to provide more lead time to the local

authorities to plan evacuation of people & take other remedial measures. Presently, flood forecasts are issued by CWC at 340 stations (200 level forecasts and 140 inflow forecasts). In Tamil Nadu flood forecasts are issued by CWC at 15 stations (4 level forecasts and 11 inflow forecasts).

(e) As intimated by Government of Tamil Nadu various flood mitigation works were carried out through Greater Chennai Corporation, Water Resources Department, Municipal Administration, and Highways department with the funds allocated under the sub-window of State Disaster Mitigation Fund.

NDMA of Ministry of Home Affairs has initiated a Technical Co-operation project with JICA (Japan International Co-operation Agency) to develop and implement a project for "Comprehensive Flood control Master Plan' for the urbanized areas of the Chennai River Basin.

During last five years, the Union Government has released an amount of Rs. 3889.65 Crore under State Disaster Response Fund (SDRF) and Rs. 853.27 Crore under National Disaster Response Fund (NDRF) to Government of Tamil Nadu.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1510

ANSWERED ON 09.12.2024

FLOODS MITIGATION IN TELANGANA

1510. SMT. RENUKA CHOWDHURY

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

(a) whether Government is aware of the devastation caused by floods in various districts of Telangana during Monsoon 2024, if so, the recent steps taken by Government to prevent such devastation and for flood mitigation; and

(b) whether Government is considering the construction of a retaining wall along the banks of the Munneru river in Khammam district, if so, the progress made so far?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) Government of India is aware of the floods in various districts of Telangana during the Monsoon of 2024. The central team has started conducting the Post Disaster Needs Assessment (PDNA) to assess the damage and needs for flood-affected areas.

Under State Disaster Relief Fund (SDRF), an amount of Rs. 416.80 Crore has been released to Government of Telangana by the Union Government during 2024-25 upto 31.11.2024.

Further, Central Water Commission (CWC) issues short-range flood forecasts with lead times of up to 24 hours, as well as 7-day Flood Advisory Forecasts, as a non-structural measure of flood management to reduce loss of life and ensure proper reservoir operation.

Presently, flood forecasts are issued by CWC at 340 stations (140 Inflow Forecast Stations + 200 Level Forecast Stations) as per Standard Operating Procedure. The network has been established in consultation with State Govt./Project authorities. There are total 15 (10 inflow & 5 level) Flood Forecasting Stations in Telangana maintained by CWC.

During current monsoon season till 30th November 2024, a total of 311 forecasts (243 inflow forecasts & 68 level forecasts) were issued for the State of Telangana of which 305 forecasts were within limit with an accuracy of 98.07%. The flood forecasts formulated by CWC have been shared with the State Government and district authority.

(b) Flood management and anti-erosion schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas under Flood Management and Border Areas Programme (FMBAP).

At present, project namely "Construction of a retaining wall along the banks of the Munneru river in Khammam district" has not been received from State Government of Telangana under FMBAP.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1511

ANSWERED ON 09.12.2024

INTER-STATE RIVER WATER DISPUTES

1511. SHRI AYODHYA RAMI REDDY ALLA

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

(a) the socio-legal implications of prioritizing urbanization and industrialization over agricultural and rural water needs in inter-State river water disputes, the details thereof;

(b) whether power dynamics and hegemonic interests influence the negotiation and resolution of inter-State river water disputes, and what are the consequences for marginalized communities; and

(c) what are the epistemological and ontological assumptions underlying dominant water management paradigms, and manner in which they shape the framing and resolution of inter-State river water disputes?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) to (c) 'Water' being a State subject, steps for augmentation, conservation and efficient management of water resources which positively impact over addressing the urban and rural water needs are primarily undertaken by the respective State Governments. However, in order to supplement the efforts of the State Governments, Central Government provides technical and financial assistance to them through various schemes and programmed.

For adjudication of disputes relating to waters of inter-state rivers and river valley thereof, the Parliament has enacted the Inter-State River Water Disputes (ISWRD) Act, 1956 (as amended). Tribunals formed for adjudication on such disputes under the provisions of this Act; the issues raised in the request made by the State/ States to the Central Government u/s 3 of this Act are adequately considered, heard and addressed.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1512

ANSWERED ON 09.12.2024

MULTIPURPOSE NORTH KOEL RESERVOIR PROJECT

1512.# SHRI ADITYA PRASAD

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

(a) whether Government has fixed any target for completion of the multipurpose North Koel Reservoir Project of Jharkhand;

(b) the amount released, so far, for this purpose;

(c) the current status of North Koel Reservoir Project and the quantum of work completed in this regard;

(d) whether the work is being carried out as per the stipulated timeframe;

(e) if there is delay, the reasons therefor; and

(f) the manner in which Government is monitoring the said project for its timely completion?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) to (e) The Union Government, in October, 2023, approved the proposal to complete the balance works of North Koel Reservoir Project at a revised Cost of Rs 2430.76 Crore (Central Share: Rs 1,836.41 Crore). An amount of Rs 771.04 Crore, as Central Share, has been released till date.

There is 10% progress on Dam &Appurtenant works, 100% on Barrage; 86% on Left Main Canal, 22% on Right Main Canal (Jharkhand portion) and 15% on Right Main Canal (Bihar Portion).

The target date for completing the balance works of the project is March 2026 as per the timeline set during approval of the project in October, 2023.

(f) An Empowered Committee headed by Secretary, Department of Water Resources, River Development and Ganga Rejuvenation and a Technical Evaluation Committee headed by Member (WP&P), Central Water Commission and having members from Department of Water Resources, River Development & Ganga Rejuvenation, both the State Governments of Bihar and Jharkhand and Water & Power Consultancy Services(India) Ltd. have been monitoring the progress of implementation of the balance works of the project.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1513

ANSWERED ON 09.12.2024

WATER CRISIS IN VARIOUS STATES

1513. SHRI BABUBHAI JESANGBHAI DESAI

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

(a) whether Government is planning to address the severe water crisis in various States particularly in Nashik, Pune and surrounding areas, given that the reservoir levels have fallen drastically to only 33 per cent of capacity; if so, the details of the steps taken/being taken by Government; and

(b) whether any strategy has been formulated to reduce the water leakage rate in Maharashtra, which is currently estimated at 35 per cent, to ensure equitable distribution of water among residents, if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & (b) As 'Water' is a State subject, the steps for augmentation, conservation and efficient management of water resources are primarily undertaken by the respective State Governments. In order to supplement their efforts Union Government provides technical and financial assistance to them through various schemes and programs.

As informed by the State Government of Maharashtra, a Policy of equitable water distribution as per provisions in the “Maharashtra Water Resources Regulatory Authority Act, 2005” has been adopted by the State Government. The water use planning up to 15th July of next year is done on the basis of water available in dams on 15th of October of the current year. As per State Water Policy, drinking water is given the top most priority and that is followed by irrigation and industrial use.

As far as, Nasik and Pune region of Maharashtra State are concerned, the water storage in water bodies & reservoirs are respectively 84.67% and 88.17% of their full capacities. Therefore, there is no such case as stated in the question for this year.

Water loss due to leakage and percolation into the ground from distribution network is observed, as majority of the canals are unlined. The State Government has taken a policy decision to distribute for new project water through Pipe distribution network (where ever feasible) in lieu of open canal system to minimize leakage. The State Government undertakes repairs of project components under various heads and accounts to ensure minimum leakages in the projects. Further, the State Government has instituted water audit mechanism to ensure efficient use of available water resources.

Important steps taken by the Ministry of Jal Shakti and other Ministries for water conservation, control and regulation of ground water and to promote rainwater harvesting/artificial recharge/water use efficiency etc. can be seen at the URL:

https://cdnbbsr.s3waas.gov.in/s3a70dc40477bc2adceef4d2c90f47eb82/uploads/2024/07/20240716706354487.pdf

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1516

ANSWERED ON 09.12.2024

AQUIFER MAPPING IN NCR OF HARYANA

1516. SMT. KIRAN CHOUDHRY

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

(a) whether it is a fact that high resolution aquifer mapping has been initiated in various States in the country;

(b) if so, the details of blocks included for the mapping particularly in NCR area of Haryana i.e. Faridabad, Gurugram and Bhiwani etc;

(c) whether the mapping has been completed; and

(d) if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & (b) The High-Resolution Aquifer Mapping using Heliborne Transient Electro-Magnetic (TEM) survey has been taken up and completed in parts of the states of Rajasthan, Gujrat, and Haryana. Further, in Haryana 9 blocks in the Districts of Kurukshetra and Yamuna Nagar have been covered. However, the areas falling within the NCR region, including districts such as Faridabad, Gurugram, and Bhiwani, have not been covered.

(c) & (d) The High-Resolution Aquifer Mapping has been completed for an area of around 1 lakh sq. km. in the above mentioned water stressed areas of Northwest India, including 2,644 Sq. Km in Haryana. Under the survey, the advanced helicopter-borne TEM technology was employed for regional scale rapid coverage in almost continuous mode for obtaining 3D geophysical maps. These results were further corroborated by ground based geophysical methods, drilling, geophysical logging and pumping tests. The heliborne data was processed and interpreted to derive the following outcomes:

- Sub-surface disposition of various litho-units/fracture zones down to the depth up to 500 m in normal hydrogeological conditions has been deciphered.
- Demarcated saline/freshwater-bearing zones in the study area.
- Delineated saturated/unsaturated zones within the identified aquifers.
- 3D geophysical model, geophysical thematic maps at horizontal and vertical plains have been prepared.
- 1296 potential sites for ground water development (158 in Haryana) as well as 1029 sites for managed aquifer recharge (122 in Haryana) have been identified.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1517

ANSWERED ON 09.12.2024

DISPLACEMENT DUE TO THE POLAVARAM PROJECT

1517. **SHRI NIRANJAN BISHI**

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

(a) the total number of villages that are likely to be submerged in Odisha after the completion of Polavaram Project, and the total number of families that will be displaced;

(b) the steps Government has taken to ensure the rehabilitation and resettlement of displaced people from the affected villages in the Malkangiri district; and

(c) the measures that have been taken by Government to address the concerns raised by Odisha, regarding the negative impact of the project?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) As per Socio Economic Survey, 2005, if option of protective embankments with adequate drainage arrangement to protect the lands and properties above EL +150 ft against submergence is not exercised by Odisha, then 8 nos revenue villages, with 1,002 estimated project affected families in Malkangiri District of Odisha are likely to be affected by submergence due to completion of Polavaram Irrigation Project (PIP).

(b) Polavaram irrigation project is being taken up as per the interstate agreement between the States of Andhra Pradesh, Madhya Pradesh (now Chhattisgarh) & Odisha dated 02.04.1980, and also as per the provisions of Godavari Water Dispute Tribunal (GWDT) Award, 1980 and as per these, Odisha can exercise option either for protective embankments with adequate drainage arrangements to protect the lands and properties likely to be affected above RL+150 ft in their territories or for compensation (rehabilitation and resettlement of displaced people from the affected villages) for the areas and properties going to be affected on the same pattern as below +150 ft, at the project cost. Further, provision of construction of protective embankment with suitable drainage arrangements for total length of 30.20 km (12 km along Sileru River and 18.20 km along Sabari River) in Malkangiri District of Odisha has been kept in the project.

(c) For resolution of concerns of Odisha raised vide letter dated 10.07.2023 from Government of Odisha, which highlighted the apprehensions of Odisha mainly on backwater study of PIP, extent of submergence in Odisha due to the project and also in compliance of the directions given by Hon'ble Supreme Court dated 06.09.2022 in matter of Original Suite 04/2007, several meetings have been held in Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti and Central Water Commission with the officers of the stakeholder States including Odisha and steps were taken for seeking convergence on resolution of issues.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1518

ANSWERED ON 09.12.2024

FLOOD MANAGEMENT SCHEMES

1518.# SHRI NARHARI AMIN

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

(a) the major schemes in the country for flood management;

(b) whether Government has received complaints regarding delay in these schemes;

(c) if so, the States from where complaints of delay in the schemes have been received; and

(d) whether any flood management project is being implemented in the State of Gujarat and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) Flood management, including erosion control falls within the purview of the States. Flood management and anti- erosion schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas.

To strengthen the structural measures of flood management, Ministry had implemented during XI & XII Plan Flood Management Programme (FMP) for providing Central Assistance to States for works related to river management, flood control, anti-erosion, drainage development, anti-sea erosion, etc. which subsequently continued as a component of "Flood Management and Border Areas Programme" (FMBAP) for the period from 2017-18 to 2020-21 and further continued for a period of 5 years from 2021-22 to 2025-26 with total outlay of Rs. 4,100 crore. Total Central assistance amounting to Rs 7136.00 Cr. has been released under FMP component to various states upto October 2024.

(b) & (c) No complaints regarding delay in the flood management schemes has been received from any of the States.

(d) No flood management project under FMBAP scheme is being implemented in the State of Gujarat as on date.

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GOVERNMENT OF INDIA

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DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1519

ANSWERED ON 09.12.2024

POLAVARAM PROJECT

1519.# SHRI MAYANKBHAI JAYDEVBHAI NAYAK

SHRI BABURAM NISHAD

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

(a) the details of primary concerns related to deadlines and safety associated with the Polavaram project and the manner in which Government is addressing these issues through consultations with experts; and

(b) the specific recommendations made by experts to minimize safety risks and ensure that the project is completed on time?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) The primary concerns related to safety and project completion of Polavaram irrigation project are detailed as below;

i. Seepage in Earth Core Rock Fill (ECRF) dam pit area in Gap-2 portion.
ii. Health assessment & strengthening of upstream & downstream cofferdams.
iii. Ground Improvement works in foundation of ECRF dam in Gap-1 & Gap-2.
iv. De-watering arrangements in main dam area during monsoon season to facilitate uninterrupted construction.
v. Design, planning & construction of new Diaphragm wall in Gap-2 portion and ECRF dam in Gap-1 & Gap-II portions.

The Government has engaged Panel of Experts (PoE) for Polavaram irrigation project comprising of four international experts for providing consultation on technical & construction management issues concerning safety and completion of Polavaram irrigation project. PoE has visited the project during 30th June to 3rd July, 2024 in first visit and during 6th to 9th November, 2024 in second visit. The key concerning issues of the Polavaram irrigation project were discussed during these visits.

(b) The PoE has recommended following steps to minimize safety risks and to ensure timely completion of Polavaram irrigation project;

i. Remedial measures to address the seepage issue from both coffer dams, based on the test results.
ii. Buttress berm construction in both cofferdams for safety considerations.
iii. Water management plan for taking up the constructions works with safety.
iv. Ways to address the issues in ground improvement works.
v. Suggestions on planning & construction of new Diaphragm wall.
vi. Tests suggested to finalize design of main dam at Gap-1 and Gap-2.
vii. PoE has given its observations on project planning, construction management and site organization structure to minimize the safety risks and in-time project completion.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1520

ANSWERED ON 09.12.2024

JAL SANCHAY, JAN BHAGIDARI INITIATIVE

1520. SHRI PRAMOD TIWARI

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

(a) whether rainwater harvesting structures are proposed to be constructed under Jal Sanchay, Jan Bhagidari initiative;

(b) if so, the details thereof;

(c) the parameters laid down for constructing such structures; and

(d) the manner in which such structures will be instrumental in enhancing rainwater harvesting and ensuring long-term water sustainability?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & (b) Jal Sanchay Jan Bhagidari initiative taken under the Jal Shakti Abhiyan:Catch The Rain (JSA:CTR) campaign of the Ministry of Jal Shakti is for construction/ renovation of artificial recharge structures for rain water harvesting with focus on borewell recharge structures / defunct borewells recharge/ recharge shaft and recharge pit. Around 2.93 lakh rainwater harvesting structures have been created till 5.12.2024.

(c) Ministry of Jal Shakti has issued an advisory on 07.10.2024 to State Governments which inter-alia include the indicative guidelines drafted by Central Ground Water Board (CGWB) for creation of such artificial recharge structures.The proposed recharge structures are scientifically designed low costs structures which are locally tailored made structures, the cost of which depends upon various factors like topography of the area, soil conditions, rainfall pattern, catchment area, roof material, rainwater storage capacity etc. Several types of artificial recharge structures have been defined which include rainwater harvesting systems in public & private buildings, injection borewells, recharge pits, restoration of open wells & recharge wells, recharge shafts, pond stabilization, stepwell restoration, etc.

(d) The primary aim of creating/renovating such structures is to enhance groundwater levels and support sustainable water management practices throughout the country, particularly during dry spells, supporting agriculture, drinking water supply thereby addressing water scarcity. Moreover, the rainwater harvesting structures inter–alia ensure boosting in groundwater levels, promotion of water conservation, enhancement of climate resilience by fostering sustainable groundwater management, improvement of water quality etc., thereby reducing vulnerability to droughts & ensuring long-term water sustainability by providing equitable access to water resources across diverse user groups.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1521

ANSWERED ON 09.12.2024

REJUVENATION OF GHAGGAR RIVER

1521. SHRI SATNAM SINGH SANDHU

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

(a) the details of steps taken by to rejuvenate Ghaggar River and detoxify it;

(b) the details of grants provided by Government to Punjab, Haryana, and Rajasthan to clean the river, if any; and

(c) the steps taken by Government for rejuvenation of rivers in Punjab and allocation made towards the same?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) to (c) It is the primary responsibility of States/Union Territories (UTs) and local bodies to ensure required treatment of sewage and industrial effluent, before discharging into recipient water bodies or land for prevention and control of pollution therein. For conservation of rivers, this Ministry has been supplementing efforts of the States/UTs by providing financial and technical assistance for abatement of pollution in identified stretches of rivers in the country through the Central Sector Scheme of Namami Gange for rivers in Ganga basin, and Centrally Sponsored Scheme of National River Conservation Plan (NRCP) for other rivers.

Punjab Pollution Control Board has informed that to treat waste water from the towns falling in the catchment of Ghaggar river, 28 STPs of total capacity 291.7 MLD have been installed and 15 STPs of 97 MLD are in different stages of implementation.

Under NRCP, pollution abatement schemes for conservation of Ghaggar river in Punjab were sanctioned at a total cost of Rs.57.11 crore. An amount of Rs.32.61 crore was released as part of Central share for implementation of these schemes, and sewage treatment capacity of 15 million litres per day (MLD) was created.

For conservation of Satluj and Beas rivers in Punjab, Rs.483.53 crore was released as Central share and sewage treatment capacity of 648 MLD was created under NRCP.

In order to address pollution concerns of Satluj river due to discharge of Buddha Nallah, the State Government of Punjab has undertaken Buddha Nallah Rejuvenation project which included setting up STPs

of 225 & 60 MLD, rehabilitation of four STPs, two effluent treatment plants of capacity 3.75 MLD & 2.25 MLD for treatment of waste water from dairy complexes in Ludhiana. Also, to prevent and control of industrial discharge from clusters of small/medium scale dyeing industries in Ludhiana, Common Effluent Treatment Plants of capacity 40 MLD, 50 MLD & 15 MLD, have been made operational.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1522

ANSWERED ON 09.12.2024

PRADHAN MANTRI KRISHI SINCHAYEE YOJANA

1522.# SHRI BANSHILAL GURJAR

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

(a) the specific projects funded under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY); and

(b) the measures being adopted to ensure efficient utilization of funds and successful completion of projects under PMKSY?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) Pradhan Mantri Krishi Sinchai Yojna (PMKSY) is an umbrella scheme, consisting of two major components being implemented by the Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti, namely, Accelerated Irrigation Benefit Programme (AIBP), and Har Khet Ko Pani (HKKP). HKKP, in turn, consists of four sub-components: (i) Command Area Development & Water Management (CAD&WM); (ii) Surface Minor Irrigation (SMI); (iii) Repair, Renovation and Restoration (RRR) of Water Bodies; and (iv) Ground Water (GW) Development. In 2016, with the launching of revised AIBP format, CAD&WM sub-component of HKKP has been taken up for pari passu implementation with AIBP.

Further, in December, 2021, implementation of PMKSY for the period 2021-22 to 2025-26 has been approved by Government of India. However, approval of Ground Water component under PMKSY-HKKP has provisionally been accorded till 2021-22 only for committed liabilities, which has been extended subsequently till completion of ongoing works. Also, Per Drop More Crop component, which was earlier a component of PMKSY, is now being implemented separately by Department of Agriculture and Farmer's Welfare (DoA&FW) under Rashtriya Krishi Vikash Yojna (RKVY). In addition, Watershed Development Component (WDC) is being implemented by Department of Land Resources (DoLR).

Ninety-Nine (99) ongoing Major/Medium Irrigation Projects (MMI) (and 7 phases) spread in 18 States were identified under PMKSY-AIBP during 2016-17 along with pari-passu implementation of CAD&WM in 88 projects, in consultation with States, to be completed in phases. 62 MMI projects have been reported completed under PMKSY-AIBP with creation of 25.80 lakh hectare of irrigation potential through these projects during 2016-24 against balance irrigation potential of 34.64 lakh hectare. Command area development of 19.28 lakh hectare has been achieved during 2016-24.

Nine (09) new MMI/ERM projects have been included in the scheme since 2021-22. The targeted potential to be created by these projects is 4.01 lakh hectare.

Details of completed and ongoing projects under PMKSY-AIBP are placed as **Annexure.**

Besides above, irrigation potential of 4.64 lakh hectare has been created under PMKSY-HKKP-SMI and RRR and irrigation potential of 88.55 thousand hectare has been created under PMKSY-HKKP-GW during 2016-17 to 2023-24.

Further, an area of 84.11 lakh hectares has been covered under micro irrigation under the PDMC Scheme being implemented by DoA&FW during 2016-24. Also, a total of 9,364 projects in 89.23 lakh hectare area have been taken up by Department of Land under Watershed Development Component of PMKSY during 2016-24.

(b) To ensure efficient utilisation of funds and successful completion of projects under the PMKSY, the projects are regularly monitored by the Central Water Commission under DoWR, RD&GR, as well as by a dedicated Project Management Unit (PMU) under this Ministry. The physical and financial progress of these projects is also monitored through a dedicated dashboard, backed with a management information system maintained by DoWR, RD&GR.

Apart from the above, the implementation and progress of the projects are also monitored at the highest level in this Ministry. Secretary, Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti takes project-wise periodic reviews of the physical and financial progress of the projects and actions to be taken by the various State Governments are finalized for early resolution of issues. Issues and bottlenecks under the projects are also flagged over the Project Monitoring Group (PMG) portal and resolved in PMG meetings under Secretary (Coordination), Cabinet Secretariat.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1522 TO BE ANSWERED IN RAJYA SABHA ON 09.12.2024 REGARDING "PRADHAN MANTRI KRISHI SINCHAYEE YOJANA".

A. List of ongoing Projects under PMKSY-AIBP

State	S No	Name of the Project
Andhra Pradesh	1	Gundlakamma Project
	2	Tadipudi LIS
	3	Thotapally Project
	4	Musurumilli Project
	5	Pushkara LIS
	6	Yerracalva Project
	7	TarakaramTeerta Sagaram Project
Assam	8	Borolia Project
	9	ERM of Sukla irrigation Project
Bihar	10	Durgawati Project
	11	Punpun Project
Chhattisgarh	12	Kelo Project
Gujarat	13	Sardar Sarovar Project
Himachal Pradesh	14	Nadaun Project
	15	Phina Singh Multipurpose Project
Jharkhand	16	Subernarekha Multipurpose Project
Karnataka	17	Upper Tunga Irrigation Project
Kerala	18	Muvattupuzha Project
	19	Karapuzha Project
Madhya Pradesh	20	Bargi Diversion Project Phase - II (km. 63 to km 104)
	21	Pench Project
	22	Bargi Diversion Project Phase - III (km. 104 to km 154)
	23	Bargi Diversion Project Phase - IV (km. 154 to km 197)
Maharashtra	24	Waghur Project
	25	Lower Wardha Project
	26	Bembla Project
	27	Morna (Gureghar) Project
	28	Lower Pedhi Project
	29	Nardave (Mahamadwadi) Project
	30	Kudali Project
	31	Upper Pen Ganga Project
	32	Gosikhurd Project
	33	Aruna Project
	34	Jihe Kathapur Project
	35	Bodwad Parisar SinchanYojana Phase-I
Manipur	36	Thoubal Project
	37	ERM of Loktak Lift Irrigation Scheme
Rajasthan	38	Parwan Multipurpose Project
Odisha	39	Subernarekha Project
	40	Integrated Anandpur Barrage Project
	41	Kanupur Project

Tamil Nadu	42	Kannadian channel Project
Telangana	43	Palemvagu Project
	44	Peddavagu @ Neelwai Project
	45	SRSP Stage II Project
	46	Rajiv Bheema L.I. Scheme
	47	Peddavagu @ Jagannathpur Project
	48	Indiramma Flood Flow Canal Project
	49	J. Chokha Rao LIS
Uttar Pradesh	50	Arjun sahayak Project
	51	Madhya Ganga Canal Project Phase-II
Uttarakhand	52	Jamrani Dam Multipurpose project
UT - Ladakh	53	Prakachik Khows Canal Project

B. List of completed projects under PMKSY-AIBP

State	S No	Name of the Project
Andhra Pradesh	1	Maddigedda Project
Assam	2	Champamati Project
	3	Dhansiri Project
Chhattisgarh	4	Maniyari Tank Project
	5	Kharung Project
Goa	6	Tillari Project
Karnataka	7	Sri Rameswar Irrigation Project
	8	Bhima LIS
	9	Karanja Project
	10	NLBC System Project
Madhya Pradesh	11	Singhpur Project
	12	Mahuar Project
	13	Sagad Project
	14	Sindh Project Phase II
	15	Indira Sagar Project Canal Phase - I & II (km. 0 to km. 142)
	16	Omkareshwar Project Canal Phase-IV
	17	Indira Sagar Project Canal Phase - V (Khargone Lift)
	18	Bansagar Project Unit 2
	19	Barriyarpur LBC Project
	20	Sanjay sagar (Bah) Project
	21	Bargi Diversion Project Phase - I (km. 16 to km 63)
	22	Mahi Project
	23	Mahan Project
	24	Omkareshwar Project Canal Phase-II (RBC km. 9.70 to km 65.50)
	25	Omkareshwar Project Canal Phase-III (RBC km. 65.50 to km 142)
	26	Indira Sagar Project Canal Phase - III (km. 143 to km. 206)

	27	Indira Sagar Project Canal Phase - IV (km. 206 to km. 243)
Maharashtra	28	Bawanthadi Project
	29	Lower Panzara Project
	30	Dongargaon Project
	31	Warna Project
	32	Nandur Madhmeshwar Project Phase-II
	33	Upper Kundalika Project
	34	Lower Dudhna Project
	35	Khadakpurna Project
	36	Dhom Balaakwadi Project
	37	Wang Project
	38	Krishna Koyana Lift Irrigation Scheme
	39	Gadnadi Project
	40	Tillari Project
	41	Tarali Project
	42	Arjuna Project
	43	Sangola Branch Canal Project
Manipur	44	Dolaithabi Barrage Project
Odisha	45	Upper Indravati Project
	46	Rukura Project
	47	RET irrigation Project
	48	Telengiri Project
	49	Lower Indra Project
Punjab	50	Kandi Canal Extension Project Phase II
	51	Rehabilitation of 1st Patiala Feeder and Kotla Branch Project
Rajasthan	52	Narmada Canal Project
	53	Modernisation of Gang Canal Project
Telangana	54	Gollavagu Project
	55	Rallivagu Project
	56	Mathadivagu Project
	57	Sri Komaram Bheem project
Uttar Pradesh	58	Bansagar Canal Project
	59	Saryu Nahar Priyojana
UT - Jammu & Kashmir	60	Rajpora Lift Irrigation Project
	61	Restoration & Modernisation of Main Ravi Canal
	62	Tral Lift Irrigation Project

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1524

ANSWERED ON 09.12.2024

NATIONAL WATER MISSION

1524. SHRI SANT BALBIR SINGH

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

(a) whether Government is implementing National Water Mission in the country including Punjab, if so, the details thereof;

(b) the physical and financial progress made so far under National Water Mission, targetwise, year-wise and State- wise including Punjab; and

(c) whether Government proposes to increase water use efficiency in domestic sector by 50-60 per cent, if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & (b) National Water Mission is an umbrella Mission with the objective to conserve water, minimize wastage and ensure more equitable distribution both across and within states.

National Water Mission has the following prescribed goals to achieve its objective.

Goal 1: Comprehensive water data base in public domain.

Goal 2: Assessment of the impact of climate change on water resources.

Goal 3: Promotion of citizen and state actions for water conservation, augmentation and preservation, and focused attention to vulnerable areas including over-exploited areas.

Goal 4: Increasing water use efficiency by 20%.

Goal 5: Promotion of basin level integrated water resources management.

The goals of the Mission are aligned with the various programmes/ schemes implemented by the Ministry of Jal Shakti. The Mission as such has no defined targets for implementation within the country. However programmes/schemes implemented by the Ministry furthers the fulfillment of the goals of the Mission. Jal Shakti Abhiyan: Catch the Rain is a flagship annual campaign for water conservation, implemented under the National Water Mission across the country including in Punjab. The objectives of the JSA are implemented in partnership with the States, in which no defined

mandatory targets for water related structures are set but the States are encouraged to achieve the objectives through convergent financing. The details of works undertaken under JSA: CTR in Punjab since 2021 are given in the tabulated statement:

Intervention wise Status Report						
Status From : 22-03-2021 to 05-12-2024						
S.No.	**State**	**Water Conservation and Rain Water Harvesting**	**Renovation of Traditional Water Bodies**	**Reuse and Recharge Structures**	**Watershed Development**	**Total Water Related Works**
1	PUNJAB	8143	25791	5326	42683	**81943**

Further, under JSA: CTR campaign, 23 number of Jal Shakti Kendras have been setup and 23 number of District Water Conservation Plans have been prepared.

(c) Goal 4 of the National Water Mission, as prescribed in the Mission Document, envisages increasing water use efficiency by 20% across sectors including domestic, industrial, and agricultural. The "Bureau of Water Use Efficiency" (BWUE) has been set up under the National Water Mission during October, 2022 for the aforesaid purpose.

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GOVERNMENT OF INDIA

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DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1525

ANSWERED ON 09.12.2024

TACKLING FLOOD SITUATION

1525. SHRI C. VE. SHANMUGAM

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

(a) whether Government assists different States in tackling flood situation;

(b) if so, details of steps taken by Government to tackle flood situation in the country, especially in the State of Tamil Nadu, during the last five years;

(c) the details of funds allocated to Tamil Nadu, to tide over the flood situation during the said period, year-wise;

(d) whether Government has received Utilization Certificate from Tamil Nadu Government;

(e) if so, the details thereof, and if not, response of Government thereon; and

(f) further Steps taken by Government in this regard?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & (b) Flood management and anti-erosion schemes are formulated and implemented by concerned State Governments as per their priority. Government of India promotes and provides technical assistance, as well as promotional financial assistance for critical projects. Some of the key initiatives of Government of India in this regard in the recent past, are given below.

To strengthen the structural measures of flood management, Ministry had implemented during XI & XII Plan Flood Management Programme (FMP) for providing Central Assistance to States for works related to river management, flood control, anti-erosion, drainage development, anti-sea erosion, etc. which subsequently continued as a component of "Flood Management and Border Areas Programme" (FMBAP) for the period from 2017-18 to 2020-21 and further continued during 2021-22 to 2025-26 with limited outlay.

For Non-structural measures, Central Water Commission (CWC) is the nodal Organisation entrusted with the task of flood forecasting & early flood warnings in the country. The network has been established in consultation with the State Governments and UTs. Besides short-range forecasts with response time upto 24 hours, CWC has also developed basin wise flood forecasting model based on rainfall-runoff mathematical modelling for 7 days' advance advisory at its forecasting stations in order to provide more lead time to the local authorities to plan evacuation of people & take other remedial

measures. Presently, flood forecasts are being issued by CWC at 15 stations (4 level forecasts and 11 inflow forecasts) in Tamil Nadu.

The Central Government also supplements the efforts of the State Government and provides requisite logistics and financial support for relief and mitigation in case of disasters. The State Government undertakes assessment of damages caused due to 12 notified natural calamities including rain and floods and provide relief assistance from State Disaster Response Fund (SDRF) already placed at their disposal as per Government of India's approved norms. Additional financial assistance is provided from National Disaster Response Fund (NDRF), as per laid down procedure in case of disaster of 'severe nature' which includes an assessment based on the visit of an Inter-Ministerial Central Team (IMCT).

National Disaster Management Authority (NDMA) has initiated a Technical Co-operation Project with JICA (Japan International Co-operation Agency) to develop and implement a project for "Comprehensive Flood control Master plan" for the urbanized areas of the Chennai River Basin.

(c) Government of Tamil Nadu informed that the various flood mitigation works were carried out through Greater Chennai Corporation, Water Resources Department, Municipal Administration, and Highways department with the funds allocated under the Sub-Window of State Disaster Mitigation Fund (SDMF) to the tune of Rs 515.54 crore during 2023-24.

Government of Tamil Nadu informed that during the year 2021-22 & 2023-24, an amount of Rs 352.85 crore and Rs 276.00 crores has been released respectively to Government of Tamil Nadu under NDRF. In addition to this an amount of Rs. 45.40 Lakh in Pilot Scheme of Aapda Mitra in year 2017-19 and Rs. 19.42 Crore in Up Scaling of Aapda Mitra in year 2021- 23 has been released by NDMA.

(d) to (f) The receipts of Utilization Certificate is as per the Guidelines of the respective schemes of funding.

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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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GOVERNMENT OF INDIA

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DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1527

ANSWERED ON 09.12.2024

AMOUNT OF AGRICULTURAL LAND THAT IS EXPECTED TO BE SUBMERGED DUE TO POLAVARAM PROJECT

1527. DR. SASMIT PATRA

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

(a) total agricultural land expected to be submerged in Odisha, Chhattisgarh, and Telangana once the Polavaram Project is completed;

(b) steps taken by Government to mitigate loss of agricultural land and livelihood for farmers in these States due to submergence caused by Polavaram Project;

(c) whether Government has conducted any studies or assessments on the long-term impact on agricultural productivity in the affected regions of Odisha, Chhattisgarh, and Telangana;

(d) whether Government plans to provide compensation or rehabilitation packages to the farmers whose land will be submerged due to the Polavaram Project, and if so, the details of the compensation mechanism?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a)

As per survey conducted by Andhra Pradesh, submergence in Odisha and Chhattisgarh due to completion of Polavaram Irrigation Project (PIP) is 648.05 hectare and 795.59 hectare respectively, which fall within the flood margins of Sabari and Sileru rivers. Out of which, 102.16 Ha in Odisha and 0.16 Ha in Chhattisgarh lies in the reserve forest. Further, as per Digital Elevation Model (DEM) study carried out by Survey of India, an extent of 80.84 hectare of land will be submerged in Telangana due to completion of PIP.

(b) & (c) Polavaram irrigation project is being taken up as per the interstate agreement between the States of Andhra Pradesh, Madhya Pradesh (now Chhattisgarh) & Odisha dated 02.04.1980, and also as per the provisions of Godavari Water Dispute Tribunal (GWDT) Award, 1980 and as per these, Odisha can exercise option either for protective embankments with adequate drainage arrangements to protect the lands and properties likely to be affected above RL+150 ft in their territories or for compensation (rehabilitation and resettlement of displaced people from the affected villages) for the areas and properties going to be

affected on the same pattern as below +150 ft, at the project cost. Further, provision of construction of protective embankment with suitable drainage arrangements for total length of 30.20 km (12 km along Sileru River and 18.20 km along Sabari River) in Malkangiri District of Odisha has been kept in the project.

Environment Clearance was accorded by Ministry of Environment, Forest & Climate Change (MoEF&CC) on 25th Oct, 2005 based on Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) studies carried out by the project proponent. In March 2009, the Expert Appraisal Committee of MoEF& CC has directed the project proponent to initiate suitable action by requesting the appropriate authorities in Odisha and Chhattisgarh for conducting public hearings in Odisha & Chhattisgarh in respect of embankment proposal and report back to the Committee. The Water Resources Department (WRD), Government of Andhra Pradesh has made repeated requests to both the States for conducting public hearing in the affected areas of their respective States as per EIA notification, 2006 and as per the directions of MoEF&CC, however, public hearing is not yet held in Odisha & Chhattisgarh.

(d) Project affected families in Andhra Pradesh are identified and Land Acquisition and Rehabilitation & Resettlement (LA & RR) works are being implemented as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement ACT, 2013 (RFCTLARR Act, 2013). For the project affected families in Odisha & Chhattisgarh the compensation shall be made similarly as per provisions of RFCTLARR Act, 2013, if States do not opt for option of protective embankments with adequate drainage arrangements to protect the lands and properties likely to be affected above RL+150 ft in their territories.

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MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1528

ANSWERED ON 09.12.2024

NATIONAL WATER AWARDS

1528. SHRI BRIJ LAL DR. SUMER SINGH SOLANKI

SHRI BANSHILAL GURJAR DR. DINESH SHARMA

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

(a) impact of National Water Awards in development, preservation and efficient management of water as a national asset; and

(b) whether these awards are creating awareness about importance of water?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & (b) National Water Awards (NWAs) focus on the good work and efforts made by individuals and organisations across the country in attaining the government's vision of a *'Jal Samridh Bharat'.* The objective of these awards is to recognize exemplary work done by people in the water sector and to motivate more and more people to work towards water conservation and water management with a greater zeal. The NWAs encourage various stakeholders including the States, Districts, Schools, Civil Societies, Gram Panchayats, Urban Local Bodies, Water User Associations, Institutions, Corporate Sector, etc. to adopt holistic approach towards water resources management in the country. The National Water Awards not only celebrate achievements but also act as a catalyst for nationwide action in water conservation and making efficient water management an integral part of India's development narrative.

Since their inception in 2018, the NWAs have been instrumental in the propagation of the idea of water conservation, preservation and efficient management in general public. It has got reflected in generation of the mass movement through community level participation on a large scale in water conservation campaign of "Jal Shakti Abhiyan" of the Department. Under the Abhiyan, more than 1.05 crore water conservation related works have been completed, out of these nearly 34 lakh works are related to Water conservation and Rainwater Harvesting, 6.5 lakh works on renovation of traditional water bodies, nearly 18.5 lakh related to Reuse and Recharge Structures and nearly 39 lakh works related to watershed development. Besides, NWAs have helped in successful mobilization of communities leading to significant improvements in the groundwater sector. From 2019 onwards, each year, the majority of groundwater monitoring wells (Range 52% to 70%) have shown rising water levels compared

to their average levels from the past decade. This has resulted in significant decline of Over-exploited Assessment units from nearly 17% in the year 2017 to 11% in 2023. While various other factors like rainfall patterns, effective monitoring, support of respective States/UTs, etc have contributed to these achievements in water conservation and management, the contribution of NWAs has been in the form of the awareness generation for successful implementation.

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DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1529

ANSWERED ON 09.12.2024

CLEANING OF YAMUNA RIVER

1529.# SHRI SANJAY SINGH

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

(a) the action plan formulated for conservation and cleaning of river Yamuna and the status of implementation of the said action plan; and

(b) the budget allocated for the maintenance and cleaning of Yamuna river during the last five years and the year-wise details of expenditure budget with regard to allocated budget?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) The National Ganga River Basin Plan (NGBRP) is a comprehensive plan for conservation and cleaning the entire Ganga basin that includes all the tributaries of River Ganga. In order to implement the plan, the Government of India (GoI) launched the Namami Gange Programme (NGP) in 2014-15 for five years, up to March 2021 and has been further extended to March 2026.

The Government of India has been supplementing the efforts of the States for Rivers by providing financial assistance to different States i.e. Uttarakhand, Himachal Pradesh, Haryana, Delhi, and Uttar Pradesh in a phased manner since 1993 under the Yamuna Action Plan (YAP).

As per National Green Tribunal (NGT) directions, a High Level Committee (HLC) has been constituted under the chairmanship of Chief Secretary, Govt. of NCT, Delhi to coordinate with all Departments involved in Yamuna rejuvenation. HLC has prepared Department wise detailed Action Plan for Rejuvenation of river Yamuna including action plan for trapping of Drains out falling in river Yamuna.

The steps taken by the Government for implementation of the action plan are as under:

i. Under the Yamuna Action Plan Phase, I & II, an expenditure of ₹ 1,514.70 crores have been incurred for the creation of a sewage treatment capacity of 483 MLD and rehabilitation of 328 million litre per day (MLD) Sewerage Tratment Plants (STPs) in the States of Haryana, & Delhi for the conservation of river Yamuna;

ii. Presently, the Government of India/ National Mission for Clean Ganga (NMCG) has sanctioned a total of 33 projects costing ₹ 5,911 crores by which 2,130 MLD STP capacity will be created. They comprise one project in Himachal Pradesh, two projects in Haryana, nine projects in Delhi, and twenty-one projects in Uttar Pradesh, under the Namami Gange programme to abate pollution load discharged in the River Yamuna. The detailed list of sanctioned projects on River Yamuna under the Namami Gange Programme is annexed as **Annexure-I**

iii. The Government of NCT of Delhi is working on the following sewage infrastructure enhancement projects:

a. Rehabilitation of existing 3 STPs at Kondli Phase II, Rithala Phase I, and Yamuna Vihar Phase –II;
b. Upgradation and increasing capacity of existing STPs;
c. Construction of STPs at Sonia Vihar;
d. Various interceptor sewer projects.

(b) Details of funds released to various agencies under the Namami Gange Programme during Financial Year (FY)2019-20 to FY 2023-24 for implementation of Projects contributing to abatement of pollution of River Yamuna are at **Annexure II.**

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1529 TO BE ANSWERED IN RAJYA SABHA ON 09.12.2024 REGARDING "CLEANING OF YAMUNA RIVER".

The list of projects sanctioned under Namami Gange Programme for rejuvenation of river Yamuna:

Sl.No	Name of Project	Treatment Capacity(MLD)	Sanctioned Cost(₹ In crore)
Uttar Pradesh			
1	Rehabilitation of Sewerage Infrastructure & Augmentation/Upgradation of STP (4 MLD) in Vrindavan	4	42.82
2	Rehabilitation/Renovation of Mathura sewerage scheme at Masani	67.8	460.45
3	Interception & Diversion with Rehabilitation work in Agra	177.6	842.25
4	Interception & Diversion and STP works Baghpat	14	77.36
5	Interception & Diversion works in Firozabad	0	51.08
6	Interception & Diversion works in Etawah	44.94	140.6
7	Interception & Diversion works in Muzaffarnagar	44.5	234.03
8	Interception & Diversion works in Budhana	10	48.76
9	Upgradation of Infrastructure of Existing CETP for Textile Printing Units at Mathura Industrial Area, Muthura (6.25MLD)	6.25	13.87
10	I&D and STP Works for balance drains in Mathura	60	292.56
11	Interception & Diversion works in Kairana	15	78.42
12	I&D and STP Works in Chhata	6	56.15
13	I&D and STP Works in Kosi	12	66.59
14	I&D and STP Works in Vrindavan	13	77.7
15	I&D and STP works in Hathras	24	128.91
16	I&D and STP works in Saharanpur	135	577.23
17	I&D and STP works in Banat	5	48.71
18	I&D and STP works in Babri&Bantikhera	5	55.47
19	I&D and STP works in Thanabhawan	10	97.19
20	I&D and STP works in Shamli	40	206.02
21	I&D and STP works in Deoband	20	134.71
Delhi			
1	Rehabilitation of Trunk Sewer No.4	0	87.43
2	Rehabilitation of Trunk Sewer No.5	0	83.4
3	Rehabilitation and upgradation of Kondli Phase-I STP (45 MLD), Phase-II STP (114 MLD) & Phase-III STP (45 MLD)	204	239.11
4	Rehabilitation of Rising Mains	0	59.13
5	Rehabilitation of Trunk Sewers	0	43.92
6	Rehabilitation of Rising Main	0	45.4
7	Rehabilitation and up-gradation of Phase-I STP (182 MLD)	182	211.79
8	Construction of 564 MLD (124 MGD) Waste Water Treatment Plant (WWTP)	564	665.78
9	Construction of 318 MLD (70 MGD) at Coronation Pillar, Delhi	318	515.07
Himachal Pradesh			
1	Sewerage scheme for Zone II & III of Paonta Sahib	3.16	11.57
Haryana			
1	Sewerage and Sewage Treatment Plant (STP) in Panipat	90	129.51
2	Sewerage and Sewage Treatment Plant (STP) in Sonipat	55	88.36

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 1529 TO BE ANSWERED IN RAJYA SABHA ON 09.12.2024 REGARDING "CLEANING OF YAMUNA RIVER".

Funds released during Financial Year(FY) 2019-20 to FY 2023-24 for Projects contributing to abatement of pollution of River Yamuna

Rs. in Crore

State	Beneficiary Agencies & Projects	F.Y 2019-20	F.Y 2020-21	F.Y2021-22	F.Y 2022-23	F.Y 2023-24	Total
Himachal Pradesh	Irrigation Department (Sewerage Project for Zone II &III of Paonta Town ,District Simour	----	1.25	2.50	----	----	3.75
Uttar Pradesh	Hybrid Annuity Mode (HAM) Projects at Mathura	52.29	25.63	94.01	13.88	46.68	232.49
	Hybrid Annuity Mode (HAM) Projects at Agra				20.65	71.00	91.65
	Mathura AudhyogikChettra and PradushanNivaran Company, Mathura (for Common Effluent Treatment Plant)	----	----	1.63	7.89	0.19	9.71
Delhi	Delhi Jal Board(Construction and Rehabilitation of STPs, Laying & Rehabilitation of Sewer lines etc.)	214.47	235.00	405.00	75.40	161.18	1,091.05
	Total	**266.76**	**261.88**	**503.14**	**117.82**	**279.05**	**1,428.65**

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1530

ANSWERED ON 09.12.2024

RESEARCH AND DEVELOPMENT FOR ERADICATION OF ARSENIC

1530. SHRI NEERAJ SHEKHAR

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

(a) the details of fund allocated, released and utilized by Government for Research and Development for eradication/permanent solution of contamination of arsenic in groundwater during 2023-24 and 2024-25 till date, year-wise; and

(b) the details of activities/research undertaken so far for eradication , and outcome thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) The details of funds allocated, released and utilized by the Department of Science and Technology (DST) under Ministry of Science and Technology for research activities for remediation/mitigation of arsenic from water during 2023-24 and 2024-25 till date, year-wise; is given at **Annexure**.

(b) Details of activities/research undertaken for mitigation/removal of arsenic from water are given below:

i. Department of Drinking Water & Sanitation under Ministry of Jal Shakti is implementing Jal Jeevan Mission (JJM) since August, 2019 to provide potable tap water supply in adequate quantity, of prescribed quality and on regular & long-term basis to every rural household in the country. Under JJM, while planning water supply schemes, priority is given to habitations affected by chemical contaminants including Arsenic. Under JJM, while allocating the funds to States/ UTs, 10% weightage is given to the population residing in habitations affected by chemical contaminants. States/ UTs have been advised to plan and implement piped water supply schemes based on alternative safe water sources for the villages with water quality issues. Under JJM, as an interim measure, States/ UTs have been advised to install Community Water Purification Plants (CWPPs) especially in Arsenic and Fluoride affected habitations to provide potable water to every household to meet their drinking and cooking requirements. Since launch of JJM, as reported by States/UTs, the number of reported arsenic affected habitations have reduced over the years from 14,020 in August, 2019 to 314 as on

04/12/2024. Further, provision of safe drinking water for cooking and drinking requirements has been made available in all the remaining 314 arsenic affected habitations.

ii. Central Ground Water Board (CGWB) is implementing Ground Water Management and Regulation (GWMR) Scheme. Under this scheme, CGWB constructs arsenic free wells in arsenic affected areas using the cement sealing technology. CGWB has constructed arsenic safe exploratory wells in arsenic affected parts of the States of West Bengal, Bihar and Uttar Pradesh. So far, 525 exploratory wells tapping arsenic safe aquifers have been constructed under National Aquifer Mapping and Management (NAQUlM) programme including 40 in Bihar, 191 in West Bengal and 294 in Uttar Pradesh. The innovative cement sealing technique of CGWB has been shared with the state agencies to utilize to construct arsenic free wells.

iii. The research study titled "Ascertaining Arsenic Mobilization in Soil-Water-Plant System and Exploring Possible Remedial Measures in West Bengal" has been carried out under the Research and Development scheme of the Ministry of Jal Shakti. The arsenic accumulation in the crops irrigated with contaminated groundwater was observed in the study area. It was found that storing the extracted (arsenic affected) groundwater in ponds reduced arsenic levels through sedimentation and rainwater dilution, offering a potential remedial option for conjunctive use of surface and groundwater in irrigation, thereby bringing lesser toxin to the soil-crop system.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1530 TO BE ANSWERED IN RAJYA SABHA ON 09.12.2024 REGARDING "RESEARCH AND DEVELOPMENT FOR ERADICATION OF ARSENIC".

Details of funds allocated, released and utilized by the Department of Science and Technology (DST) under Ministry of Science and Technology for research activities for remediation/mitigation/removal of arsenic from water				
Financial Year 2023-24				
S.No.	**Details of the Activity / Research Undertaken**	**Fund Allocated (Rs.)**	**Fund Released (Rs.)**	**Fund Utilized (Rs.)**
1	In situ remediation of arsenic by ferrous sulfide under heterogeneous porous media Up-Scaling effect and evaluation of long term fate.	₹47,62,800	₹43,62,800	₹38,21,879
Financial Year 2024-25				
1	Demonstration of sustainable mitigation of groundwater arsenic in arsenic-polluted Gangetic River aquifers of Bihar, Uttar Pradesh and West Bengal	₹2,48,47,822	₹1,75,95,942	₹1,72,21,609
2	Development of a low cost technology based on biochar supported green zerovalent iron for arsenic and fluoride removal from water	₹32,49,980	₹22,08,282	₹14,13,202

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1531

ANSWERED ON 09.12.2024

ATAL BHU JAL YOJANA

1531. SHRI LAHAR SINGH SIROYA

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

(a) whether it is a fact as reported that Karnataka Government has not adequately utilized the grants for many projects under the Ministry, including the Atal Bhu Jal Yojana; and

(b) if so, details of the Central Government grants withdrawn and that of the unutilized grants by Government of Karnataka, in this regard?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) There is no such information that Karnataka Government has not adequately utilised the grants for projects under the Ministry. However, the details of grants released to Karnataka under Atal Bhujal Yojana and its expenditure are given in table below:

(Amount in Rs. Crores as on 30.11.2024)

	IS&CB	**Incentive**	**Total**
Total Amount Released	88.40	731.11	819.51
Total Expenditure	87.41 (98.88%)	621.78 (85.05%)	709.19 (86.54%)

Under the Incentive Component the funds are released as per performance of the State as per Pre-defined Disbursement Linked Indicators (DLIs) in the scheme.

(b) Does not arise in view of the (a) above.

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GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1593

ANSWERED ON 09.12.2024

RESERVOIRS IN THE COUNTRY

1593. SHRI AKHILESH PRASAD SINGH

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

(a) whether the important 140 reservoirs in the country mentioned by Central Water Commission (CWC) have only 32 per cent live water storage compared to their capacity and if so, the reasons thereof;

(b) whether there has been a steady weekly drop in storage from 43 per cent in the beginning of April 2024;

(c) whether many river basins also have storage below the average of the last five years;

(d) whether Government has conducted a study on the manner in which the crisis of water storage affects socio-economic conditions of the regions that are dependent on the rivers for water supply; and

(e) if not, the reasons thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) & (b) As per reservoir storage bulletin dated 28.3.2024 published by the Central Water Commission, live storage available in 150 reservoirs was 64.60 Billion Cubic Meter (BCM), which is 36% of total live storage capacity of these reservoirs. As per reservoir storage bulletin dated 28.11.2024, live storage available in 155 reservoirs is 147.94 BCM, which is 82% of total live storage capacity of these reservoirs.

(c) As per reservoir storage bulletin dated 28.11.2024, Brahmani & Baitarni, Mahanadi and Indus are having storage less than from last 10 year's average storage.

(d) & (e) No such study has been conducted. However, the weekly Bulletin is shared with the Water Resource Departments of concerned States and also uploaded on the Central Water Commission website. This weekly bulletin is also shared with Crop Weather Watch Group (CWWG) of the Ministry of Agriculture and Farmers Welfare. Representatives of CWC also attend meetings convened by CWWG to review agricultural activities across the country and to suggest remedial measures to states in case of likely distress situation. Crop Weather Watch Group on Drought Management (CWWGDM) of Ministry of Agriculture & Farmers Welfare, Government of India holds meeting every week during Pre-Monsoon season which is being attended by representative of CWC to appraise status of Reservoir Storage in the country to enable CWWGDM to take further necessary action.

Further, the Natural Resource Management Division of Indian Council of Agricultural Research (ICAR) under Ministry of Agriculture and Farmers Welfare has informed that no systematic survey/study has been conducted to assess the impact of declining water levels on agricultural activities and produce.

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