GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 2636

ANSWERED ON 24.03.2025

WATER MANAGEMENT IN LIGHT OF CLIMATE CHANGE

2636 #. SHRI RAMJI LAL SUMAN

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

(a) the policy for involving the country's gram panchayats to deal with water management and climate change in view of ongoing climate change; and

(b) the details of the steps taken towards mitigating climate change, the details of the amount spent during the last five years, year-wise and expenditure-wise?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) Water is a State subject and the Central Government supplements the efforts of the States through technical and financial support. Water management is one of the foremost priorities of the Government. Government of India is implementing Atal Bhujal Yojana, a Central Sector Scheme in identified water stressed areas of 8203 Gram Panchayats under 229 blocks in 80 districts of Seven States viz. Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh with an aim to arrest decline in ground water level through community led sustainable groundwater management.

Gram Panchayat-wise Water Security Plans having details about water budget and proposed demand side interventions such as micro-irrigation, crop diversification, use of underground pipelines etc., and supply side interventions including Rain Water Harvesting Structures such as check dams, farm ponds, recharge shafts and other artificial recharge / water conservation structures are prepared and executed through convergence of ongoing schemes.

The **National Water Policy, 2012**, has inter-alia, following provisions relevant to water management & climate change:

- **Para 3.6**: Community should be sensitized and encouraged to adapt first to utilization of water as per local availability of waters, before providing water through long distance transfer. Community based water management should be institutionalized and strengthened.
- **Para 4.1**: Climate change is likely to increase the variability of water resources affecting human health and livelihoods. Therefore, special impetus should be given towards mitigation

at micro level by enhancing the capabilities of community to adopt climate resilient technological options. Para 4.2: The anticipated increase in variability in availability of water because of climate change should be dealt with by increasing water storage in its various forms, namely, soil moisture, ponds, ground water, small and large reservoirs and their combination. States should be incentivized to increase water storage capacity, which interalia should include revival of traditional water harvesting structures and water bodies.

- **Para 4.3**: The adaptation strategies could also include better demand management, particularly, through adoption of compatible agricultural strategies and cropping patterns and improved water application methods, such as land levelling and/or drip / sprinkler irrigation as they enhance the water use efficiency, as also, the capability for dealing with increased variability because of climate change. Similarly, industrial processes should be made more water efficient.
- **Para 4.4**: Stakeholder participation in land-soil-water management with scientific inputs from local research and academic institutions for evolving different agricultural strategies, reducing soil erosion and improving soil fertility should be promoted. The specific problems of hilly areas like sudden run off, weak water holding capacity of soil, erosion and sediment transport and recharging of hill slope aquifers should be adequately addressed.
- **Para 4.5**: Planning and management of water resources structures, such as, dams, flood embankments, tidal embankments, etc., should incorporate coping strategies for possible climate changes. The acceptability criteria in regard to new water resources projects need to be re-worked in view of the likely climate changes.
- **Para 10.2**: Land, soil, energy and water management with scientific inputs from local, research and scientific institutions should be used to evolve different agricultural strategies and improve soil and water productivity to manage droughts. Integrated farming systems and non-agricultural developments may also be considered for livelihood support and poverty alleviation.
- **Para 15.5**: To meet the need of the skilled manpower in the water sector, regular training and academic courses in water management should be promoted. These training and academic institutions should be regularly updated by developing infrastructure and promoting applied research, which would help to improve the current procedures of analysis and informed decision making in the line departments and by the community. A national campaign for water literacy needs to be started for capacity building of different stakeholders in the water sector.

(b) The Department of Water Resources (DoWR), Ministry of Jal Shakti, integrates climate change adaptation and mitigation into all its initiatives, ensuring water security and resilience against climate impacts. Programs like **Atal Bhujal Yojana** promote sustainable groundwater management, while **Namami Gange**

and the National River Conservation Plan focus on river rejuvenation and pollution control. The **Jal Jeevan Mission** and **Swachh Bharat Mission** enhance climate-resilient water supply and sanitation, while **PMKSY** and **CADWM** improve irrigation efficiency and agricultural resilience. The Flood Management Programme addresses disaster mitigation, and campaigns like **Jal Shakti Abhiyan – Catch the Rain&Jal Sanchay and Jan Bhagidari** encourage rainwater harvesting. **National Aquifer Mapping and Management Programme (NAQUIM**) under the scheme of Ground Water Management and Regulation **(GWMR**) with an aim to delineate aquifer disposition and their characterization for preparation of aquifer/ area specific ground water management plans with community participation. Through integrated water resource management, and policy frameworks, DoWR strengthens water sustainability, aligning with India's climate commitment.

The budget details of the Department of Water Resources (DoWR), Ministry of Jal Shakti are at **Annexure I** and the details of some of the major schemes of the department are at **Annexure II**.

Department of Agriculture & Farmers Welfare (DA&FW) is implementing Centrally Sponsored Scheme of **Per Drop More Crop (PDMC)** in the Country from 2015-16. PDMC focuses on enhancing water use efficiency at farm level through Micro Irrigation namely Drip and Sprinkler Irrigation Systems. From the year 2015-16 to 2021-22, the PDMC was implemented as a component of **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).** From the year 2022-23, the PDMC is being implemented under the Rashtriya Krishi Vikas Yojana (RKVY). The status of fund release and achievement of the scheme of PDMC in the country is at **Annexure III.**

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 2636 TO BE ANSWERED IN RAJYA SABHA ON 24.03.2025 REGARDING "WATER MANAGEMENT IN LIGHT OF CLIMATE CHANGE".

Year	BE (Rs. in crore)	RE (Rs. in crore)	Expenditure (Rs. in crore)
2021-22	9022.56	18008.70	17215.16
2022-23	18967.88	14000.00	11962.07
2023-24	20054.67	19516.92	19081.62
2024-25 (so far)	21323.10	21640.88	13854.09
Total	**69368.21**	**73166.5**	**62112.94**

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 2636 TO BE ANSWERED IN RAJYA SABHA ON 24.03.2025 REGARDING "WATER MANAGEMENT IN LIGHT OF CLIMATE CHANGE".

Details of major schemes of DoWR, RD & GR (Rs. in crore)														
Sl. No.		**2021-22**			**2022-23**			**2023-24**			**2024-25**		**Exp. as on 10.02.2025**	**BE 2025-26**
1	**Schemes**	**BE**	**RE**	**ACTUALS**	**BE**	**RE**	**ACTUALS**	**BE**	**RE**	**ACTUALS**	**BE**	**RE**	**ACTUALS**	
2	Dam Rehabilitation and Improvement Programme	25	25	23	100	25	23.79	50	54.05	53.63	46.98	42.28	31.56	50.3
3	National Ganga Plan	600	1400	1394.03	2800	2500	2047.98	4000	2400	2396.1	3345.7	3000	2800.5	3400
4	National River Conservation Plan	850.01	500	498.67		-	0			0				
5	River Basin Management	199	177.3	168.31	97	101.64	78.14	110	94	63.59	154.79	143	114.61	243
6	Atal Bhujal Yojana	330	330	327.48	700	700	1155.43	1000	1778	1738.21	1778	600	76.86	1780.4
7	Development of Water Resources Information System	175	160	155.23	185	140	157.71	162.13	171	168.67	115	170	128.05	63.39
8	Ground Water Management & Regulation	275	170	168.99	375	315	177.18	330	280	202.31	325	240	117.93	509
9	National Hydrology Project	200	412	388.74	800	512.51	481	500	426	321.26	661.2	492.8	220.78	13
10	Research & Development and Implementation of National Water Mission	29.5	40.5	30.79	52.88	35	36.45	50	50	42.67	67.06	45	30.96	70
11	AIBP & CADWM	0	3700	2198.45	4281.69	1940	767.68	3522.23	1736.69	1508.24	3900	2140	730.56	3350
12	PMKSY(incl Har Khet Ko Pani)	4500.5	4608.56	5000.04	5369.97	4424.5	4193.85	4175	4374.41	4579.36	4349.8	4480.85	3757.56	4909.85
13	National River Conservation Plan - OB	100	232.68	203.16	250.68	300	442.64	300	432	411.56	592.11	591.12	282.72	558.09
14	Interlinking of Rivers	0	4300	4634.46	1400	1100	624.34	3500	1400	1390.73	4000	2000	1371.83	2400
	Total	**7284.0**	**16056.0**	**15191.4**	**16412.2**	**12093.7**	**10186.2**	**17699.4**	**13196.2**	**12876.3**	**19335.6**	**13945.1**	**9663.9**	**17347.0**

ANNEXURE-III

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 2636 TO BE ANSWERED IN RAJYA SABHA ON 24.03.2025 REGARDING "WATER MANAGEMENT IN LIGHT OF CLIMATE CHANGE".

Year	Central Assistance released (Rs. in crore)	Area covered under Micro Irrigation (in lakh ha)
2019-20	2700.02	11.73
2020-21	2562.19	9.37
2021-22	1796.12	10.15
2022-23	1901.37	11.02
2023-24	2103.50	11.40
2024-25 (so far)	2235.02	7.08
Total	**13298.22**	**60.75**

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