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STANDING COMMITTEE ON WATER RESOURCES

(2023-24)

SEVENTEENTH LOK SABHA

MINISTRY OF JAL SHAKTI – DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION

'Groundwater: A Valuable but Diminishing Resource'

[Action Taken by the Government on the Observations / Recommendations contained in the Twenty Second Report (Seventeenth Lok Sabha) of the Standing Committee on Water Resources]

TWENTY FIFTH REPORT

LOK SABHA SECRETARIAT

NEW DELHI

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Presented to Lok Sabha on 11.12.2023

Laid on the Table of Rajya Sabha on 11.12.2023

LOK SABHA SECRETARIAT
NEW DELHI

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3. Shri Nihal Chand Chauhan
4. Shri Bhagirath Choudhary
5. Shri Chandra Prakash Choudhary
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27. Shri Arun Singh
28. Sant Balbir Singh
29. Shri Pramod Tiwari
30. Dr. Anbumani Ramadoss*
31. Vacant**

* Dr. Anbumani Ramadoss, MP (Rajya Sabha) has been nominated to the Committee w.e.f. 24 November, 2023.

** Consequent upon his resignation from Rajya Sabha, Dr. Kirodi Lal Meena, ceased to be Member of the Committee *w.e.f.* 6th December, 2023

SECRETARIAT

1.	Smt. Suman Arora	-	Additional Secretary
2.	Shri Ajay Kumar Sood	-	Director
3.	Shri P. Ashok	-	Deputy Secretary
4.	Smt. Shanta B. Datta	-	Under Secretary

INTRODUCTION

I, the Chairperson, Standing Committee on Water Resources (2023-24) having been authorized by the Committee to submit the Report on their behalf, present the Twenty Fifth - Report on the Action Taken by the Government on the Observations/Recommendations contained in their Twenty Second Report (Seventeenth Lok Sabha) on 'Groundwater: A Valuable but Diminishing Resource'.

2. The Twenty Second Report of the Committee was presented to Lok Sabha on 20 March, 2023 and laid in Rajya Sabha on 17 March 2023. The Action Taken replies of the Government to all the recommendations contained in the Report were received in this Secretariat on 19 June, 2023.

3. The replies of the Government were examined and the Report was considered and adopted by the Committee at their sitting held on 06.12.2023.

4. An analysis of the Action Taken by the Government on the Observations/Recommendations contained in the Twenty Second Report (Seventeenth Lok Sabha) of the Committee is given in Annexure-II.

New Delhi
06 December, 2023
15Agrahayana, 1945 (Saka)

Parbatbhai Savabhai Patel
Chairperson
Standing Committee on Water Resources

CHAPTER I

REPORT

This Report of the Standing Committee on Water Resources deals with the Action Taken by the Government on the observations / recommendations contained in their Twenty Second Report (17th Lok Sabha) on the subject 'Groundwater: A Valuable but Diminishing Resource" of the Ministry of Jal Shakti (Department of Water Resources, River Development & Ganga Rejuvenation), which was presented to Parliament on 20 March, 2023. Action Taken Notes received from the Government in respect of all the 31 observations / recommendations of the Committee, have been categorized as under:

(i) Observations / Recommendations which have been accepted by the Government (Chapter II):
Recommendation Sl. Nos. 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30 and 31

(Total – 26)

(ii) Observations / Recommendations which the Committee do not desire to pursue in view of the Government's replies (Chapter III):
Recommendation Sl. Nos. NIL

(Total – NIL)

(iii) Observations / Recommendations in respect of which replies of the Government have not been accepted by the Committee (Chapter IV):
Recommendation Sl. Nos. 8, 16, 17, 18 and 25

(Total – 05)

(iv) Observations / Recommendations in respect of which final replies of the Government are still awaited (Chapter V):
Recommendation Nos. NIL

(Total – NIL)

2. **The Committee desire that replies to recommendations made in the Chapter-I of this Report may be furnished to the Committee expeditiously.**

3. The Committee will now deal with the action taken by the Government on some of the observations / recommendations in the succeeding paragraphs.

A. Water use efficiency in agriculture – Funding pattern under PMKSY-Per Drop More Crop (PDMC)

Recommendation Sl. No. 8 (Para No. 9)

4. The Committee noted that micro irrigation was being promoted by the Department of Agriculture & Farmers' Welfare through their PMKSY-Per Drop More Crop

(PDMC) scheme, using Drip and Sprinkler Irrigation system. The scheme also supports micro level water storage or water conservation/ management activities to supplement Micro Irrigation. The Committee noted that financial assistance under PMKSY-Per Drop More Crop (PDMC) was being provided by the Centre on 60:40 basis to States based on their demand, submitted through States' Annual Action Plans (AAP) except the States in the North Eastern parts and Himalayan States, in whose case the funding pattern was 90:10 while it was 100% in case of Union Territories. However, in view of the Committee, this had created contradiction since States such as Punjab and Haryana which had severe Ground water crisis had been allocated meager amount of funds for implementing micro irrigation system. Since funding pattern for micro irrigation should be on the basis of water deficiency in the area rather than on the basis of principles of Centrally Sponsored Schemes, the Committee were of the considered view that more Central assistance should be given for micro irrigation in those areas which were water starved and had Ground water depletion. The logic of North Eastern States requiring more Central support (90:10) due to topographical and socio-economic conditions which h ers utilization of full potential of the rain fall and Ground water resource and hence requiring micro irrigation for increasing the water use efficiency at farm level to enhance the production & productivity of the crops and increase the income of the farmers does not hold good in case of assistance for micro irrigation as these States have abundant water supply and actual problem is to harness it so as to reduce the flood menace. The Committee, therefore, were of the opinion that the existing policy of giving more financial assistance to such States appeared to be in contradiction with the objectives. They, therefore, recommended the Ministry of Jal Shakti to take up this matter with the Ministry of Finance in consultation with the Department of Agriculture & Farmers' Welfare (DA&FW) and impress upon the need to change the funding pattern in the ratio of 90:10 for States suffering from water shortage and 60:40 for water abundant States. Although the allocation under the scheme is based on the principle of inclusivity and are released on the basis of demand, the Committee were of the view that the DA&FW had to play a more proactive role. The DoWR, RD & GR should impress upon the DA&FW to strive to release funds under the scheme to those States which cultivate water intensive crops but have not been actively implementing micro irrigation methods, the need for utilizing funds under PDMC on the basis of approved Annual Action Plan (AAP) and clear previous unspent balances, so as to reduce dependence on Groundwater.

5. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

> *"Per Drop More Crop Scheme, operational from 2015-16 which mainly focuses on enhancing water use efficiency at farm level through precision/micro irrigation (Drip and Sprinkler Irrigation,) is providing more focus in Himalayan and North-Eastern region since there is substantial shortages of water during winter and summer seasons due to topographical reasons though they encounter high rainfall during monsoon.*
>
> *In this regard, it is further mentioned that:*

- *One of the objectives of PDMC is to increase area of coverage of micro irrigation in water intensive crops. The Department is taking various initiatives for increasing coverage of area under micro irrigation in water intensive crop to increase water use efficiency.*
- *So far, 77.90 lakh ha. Area has been covered under micro irrigation in the country since 2015-16 till now. Out of this, area under water intensive crops i.e. cotton, sugarcane, banana etc. is 7.33 lakh ha.*
- *Besides, Union Finance Minister in the Union Budget 2017-18 announced setting up of a dedicated Micro Irrigation Fund (MIF) to be instituted with NABARD with an initial corpus of Rs. 5,000 crore. The objective of the fund is to facilitate the States in mobilizing resources for expanding coverage of micro irrigation by taking up special and innovative projects and also for incentivizing micro irrigation beyond the provisions available under PDMC to encourage farmers to install micro irrigation systems. MIF has to be augmented by additional amount of Rs.5,000 crore.*

  Further, the funding pattern under Centrally Sponsored Schemes is largely guided by NITI Aayog vide its O.M No. 011013/02/2015-CSS & CMC dated 17th August,2016 which has been issued based on the recommendations of the Sub-Group of Chief Ministers and in consultation with various Ministries/ Departments and other Stakeholders, with the approval of the Cabinet. The arrangements in these OMs are in force since 2016-17. In lieu of the Jammu & Kashmir Reorganization Act, 2019, clause 4 and 11 of the NITI Aayog's OM were modified and were communicated vide NITI Aayog's OM dated 26.10.2019. In addition to the above, scheme under reference in PMKSY-Per drop more crop was approved by the Cabinet/Competent authority which also included the fund sharing pattern."

6. The Committee note from the replies that Per Drop More Crop Scheme, operational from 2015-16 which mainly focuses on enhancing water use efficiency at farm level through precision/micro irrigation (Drip and Sprinkler Irrigation) is providing more focus in Himalayan and North-Eastern region since there is substantial shortages of water during winter and summer seasons due to topographical reasons though they encounter high rainfall during monsoon. They further note that the funding pattern under Centrally Sponsored Schemes is largely guided by NITI Aayog O.M which was issued based on the recommendations of the Sub-Group of Chief Ministers and in consultation with various Ministries/ Departments and other Stakeholders, with the approval of the Cabinet. However, in view of the Committee, the Centrally Sponsored Per Drop More Crop scheme should be viewed differently as far as financial assistance for encouraging micro irrigation is concerned, since as suggested by them earlier, priority for giving incentive to micro irrigation should be those areas which have over exploitation of

Ground water and also have surface water scarcity. Though, as informed by the Department, Himalayan and North-Eastern region also suffer from substantial shortages of water, the Committee are of the opinion that equal emphasis needs to be given to those States where Ground water reserves have depleted substantially due to agriculture of water intensive crops. The Committee would, therefore, reiterate their earlier recommendation to the Ministry of Jal Shakti to take up the matter of increasing Central assistance under PDMC scheme to severely water starved States also, with the Ministry of Finance in consultation with the DA&FW and impress upon the need to change the funding pattern to the ratio of 90:10 for those States which have substantial consumption of water in agriculture but are suffering from water shortage. More funds under the PDMC would give impetus to those States to actively implement micro irrigation methods, thereby reducing water footprint in agriculture, i.e. amount of freshwater needed for cultivation of crops. The Committee would like to be apprised of the details of measures taken in this regard within three months of presentation of the Report.

B. Ground Water use in industries

Recommendation Sl, No. 13 (Para No. 14)

7. The Committee noticed that Central Ground Water Authority (CGWA) grants NOC/renews NOC for Ground water withdrawal for commercial purposes, after ensuring that recharge is done as per the quantity of Ground water drawn and stage of their development. Further, as per the direction of Hon'ble NGT vide OA no. 176/2015 dated 11.09.2019, any industry drawing Ground water illegally is liable to pay Environmental Compensation to the respective State Pollution Control Boards. Also, CGWA, in their latest Guidelines issued in September 2020, had fixed Environmental compensation for Groundwater withdrawal by industries, infrastructure units and mining projects without a valid NOC from appropriate authority. Environmental Compensation Rate (ECRGW) had been based on the approved norms prescribed by CPCB. In addition, deterrent factor had also been introduced to compensate for the losses and environmental damages, based on the duration of illegal Groundwater extraction. However, the Committee were surprised to note that a large number of industries were operating without taking the NOCs due to a lack of mandatory linkage between the SPCBs/PCCs and CGWA, as pointed out by CAG. They further noticed that though CGWA had imposed penalty of Rs. one lakh/ industry under Section 15 of the Environment (Protection) Act 1986 for non-compliance of NOC conditions on 20 Industries, only 5 industries/companies had paid Environmental Compensation to CGWA/District Magistrate. Also, no compensation had been paid to CPCB/SPCBs as directed by NGT in their 11.9.2019 order. They also found that out of the 21 packaged drinking water units, located in 6 States, which were studied by CPCB, only 4 had obtained NOC from CGWA for abstraction of Ground water resources for manufacturing package drinking water. Further, only 10 out of 21 units had obtained Consent under Water (Prevention and Control of Pollution) Act, 1974 from respective State Pollution Control Boards. While the regulations are in place to ensure

that Ground water is not extracted without adequate measures for recharge, the lack of effective implementation and supervision has made the regulations toothless. The Committee were, therefore, of the view that to stop unrestricted use of Ground water for commercial uses, strict enforcement of the Regulations/Guidelines was required along with stringent vigil and appropriate penalties. They, therefore, recommended the CGWA and CPCB to work in unison so that projects using Ground water were issued Consent to establish and Consent to operate only after issuance of NOC by CGWA. Further, vigilance capacity and inspections should be enhanced to ensure compliance with stipulated provisions which could act as an effective deterrent against misuse of Ground water. Keeping in view the essential aspect of recycle and reuse of water in bringing down the water use, the Committee desired to be apprised of the details of total quantity of recycled/reused water used by different categories of industries in the country along with total number of industries flouting these norms and measures taken to remedy the situation.

8. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

"*Central Ground Water Authority (CGWA) was constituted under sub-section(3) of section 3 of the Environment (Protection)Act, 1986 for the purposes of regulation and control of ground water management and development and has been regulating ground water development and management by way of issuing "No Objection Certificate (NOC)" for ground water extraction to industries or infrastructure projects or mining projects etc. and framed guidelines in this connection from time to time in 19 States & UTs, where ground water development is not being regulated by the State Government/ UT administration concerned.*

Ministry of Jal Shakti, CGWA notification dated 20.09.2020 has empowered District Collectors/ Deputy Commissioners (DCs) /District Magistrates (DMs) to take enforcement measures like sealing of unauthorized ground water abstraction structures, disconnection of electricity, launching of prosecution against those violating the No Objection Certificate conditions and taking action for imposition of environmental compensation.

It is further submitted that some of the SPCBs/PCCs are issuing Consent to Establishment /Operate to the industry after verifying the NOC issued by CGWA. Also, some SPCBs are issuing consent to establishment / operate with a condition to obtain NOC from CGWA/SGWA.

Further, CPCB has intimated that they are not maintaining the details of total quantity of effluent generated / treated / recycled and reused by different categories of industries. However, CPCB monitors the compliance of 17 categories of highly polluting industries, common facilities etc., on real time basis through Online Continuous Effluent Monitoring Systems (OCEMS) and in case of exceedance to

standards, SMS alerts are generated and sent to industries and SPCBs/PCCs for appropriate follow-up action for the compliance of discharge norms."

9. The Committee note that some of the State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) are issuing Consent to Establishment /Operate to the industries after verifying the NOC issued by CGWA. Also, some SPCBs are issuing consent to establishment / operate with a condition to obtain NOC from CGWA/SGWA. While appreciating this, the Committee are of the opinion that all SPCBs/PCCs need to be urged to follow the same practice for better enforcement of CGWA restrictions on Ground water withdrawal. For this, there is a need for better coordination between CPCB and CGWA for synergetic policy approach to ensure effective deterrence and suitable action against violators. Further, though an Online Continuous Effluent Monitoring Systems (OCEMS) has been put in place which generates SMS alerts in case of exceedance to standards, and sends to industries and SPCBs/PCCs for appropriate follow-up action for the compliance of discharge norms, the Committee feel that maintaining a proper record of effluents generated, treated and discharged will further strengthen monitoring mechanism to monitor the amount of effluents being generated and treated and water being reused by industries to reduce Ground water depletion and contamination. The Committee would, therefore, recommend the Department of Water Resources, River Development and Ganga Rejuvenation to take initiative in consultation with the Ministry of Environment, Forest and Climate Change, in establishing a mechanism to create a record of effluent generation and discharge by each of the industries using Ground water and apprise them of the details in this regard within three months of presentation of this Report.

C. Collection of data on Ground water pollution and contamination

Recommendation Sl. No. 14 (Para No. 15)

10. The Committee noticed that Ground water contamination occured through both natural and anthropogenic sources. Contamination through various sources such as salinity, fluoride, nitrate, arsenic, iron, etc. were reported from a large number of partly affected districts in Assam, Bihar, Karanataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Odisha and Uttar Pradesh with other remaining States also having a few affected districts. They further noted that Central Ground Water Board (CGWB) had been monitoring Groundwater levels through a network of 22,730 observation wells, four times a year and the information was being disseminated to the concerned State agencies in the form of reports and maps. Ground water quality was also being monitored by CGWB at regional level once every year through their network of about 15000 observation wells located all over the country. Further Ground water management studies, Groundwater exploration, Industrial/pollution cluster studies, etc.

is also undertaken to find out the extent of contamination. However, they noted that CPCB along with SPCBs and PCCs, also were monitoring Ground water quality at 1231 locations throughout the country under National Water Quality Monitoring Programme (NWMP) except Andaman & Nicobar Islands, Arunachal Pradesh and Sikkim on a half yearly frequency. Under NWMP, Groundwater quality monitoring stations were selected considering the criteria such as Drinking water sources located in sanitary conditions and prone to sewage contamination, preferably in shallow aquifer in the vicinity of septic tanks; sewage treatment plant; oxidation pond, cess pools, garbage dump sites, tube-wells, hand pumps or dug-wells located in industrial areas prone to contamination and were in use as well as Groundwater sources in residential areas. The Committee were not able to comprehend the rationale for involving two agencies, entrusted with the same task of monitoring contamination in Groundwater. Since Groundwater is basically under the domain of CGWB with CGWA being regulatory authority, monitoring and data collection on its quality should primarily be dealt with by CGWB which could be shared with CPCB to enable adoption of suitable remedial measures. They therefore, recommended the Department to appropriately address the issue and take measures for convergence of activities relating to better management of Ground water under the aegis of a single, Centralised body/Agency.

11. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

"National Water Informatics Centre (NWIC) has developed the Water Information Management System (WIMS), which is an online database for water related data including groundwater quality data. There is provision in WIMS for entering ground water quality data of State and Central Agencies including CPCB and CGWB. The WIMS application has been recently rolled out for CGWB. CGWB is updating the data in WIMS portal. This integrated database will be available for use by all the concerned agencies. India-WRIS is a platform to share data in public domain, which is developed by NWIC. Letter from CGWB to CPCB and Department of Drinking Water & Sanitation has been sent for integrating the groundwater quality data.

CPCB under National Water Quality Programme (NWMP) is monitoring groundwater quality with a limited number of 1,235 locations, based on the criteria stipulated for selection of locations to regulate contamination due to industrial discharges. The generated data from the year 2012 to 2021 is shared with NWIC for integration on India-WRIS portal, developed by MoJS.

Further, a common format is being developed by the CGWB and shall be shared with CPCB /States /NWIC for convergence and ease of uploading in the NWIC server for use by various stake-holders."

12. The Committee note that that an online database namely, Water Information Management System (WIMS) has been created, wherein water related data including Ground water quality data will be uploaded by both State and Central Agencies including CPCB and CGWB. The WIMS application has been recently

rolled out for CGWB and they are updating the data in WIMS portal. Further, CGWB has issued letter to CPCB and Department of Drinking Water & Sanitation for integrating the Ground water quality data. The integrated database will be available in public domain in India-Water Resource Information System (India-WRIS) platform. The Committee further note that CGWB is also developing a common format which will be shared with CPCB /States / National Water Informatics Centre (NWIC) for convergence and ease of uploading in the NWIC server for use by various stake-holders. While commending the above efforts, the Committee however, would like to be apprised of the rationale for involving both CGWB and CPCB in monitoring of Ground water quality through their own networks. They further desire that the integrated data sharing should be expedited to enable seamless exchange of information by the agencies/departments involved and better monitoring and synergy of policies amongst all the implementing agencies and accessible in public domain. They, therefore, recommend the CGWB to complete this work within a prescribed period and intimate the same to the Committee at the earliest.

D. Ground Water pollution by industries – Need for a unified approach

Recommendation Sl. No. 16 (Para No. 17)

13. The Committee noted that CGWB had found contaminated Ground water in most of the 88 industrial clusters identified by CPCB. Further, 38 industrial clusters had been identified by CPCB as Critically Polluted Areas (CPAs) with Comprehensive Environmental Pollution Index (CEPI), [which is a rational number (ranging from 0 to 100) to characterize environmental quality at a given industrial area following algorithm of pollution source, pathway and receptor], score of 70 and above and 31 industrial clusters had been identified as Severely Polluted Areas (SPAs) in the CPCB's assessment of CEPI scores in 2018 at 100 identified industrial clusters (including 88 industrial clusters above) in 21 States across the country. They were particularly concerned to note that out of 72,314 industries requiring Effluent Treatment Plants (ETPs), only 70,555 industries had functional ETPs, of which 1040 industries did not comply with environmental standards. The Committee observed that CPCB had taken following measures for preventing industrial pollution of Groundwater : (i) Industry Specific Standards and General Standards for discharge of effluents notified under the Environment (Protection) Act, 1986, (ii) Time-Targeted Action Programme under Corporate Responsibility on Environment Protection (CREP),(iii) Establishment of Common Effluent Treatment Plants (CETPs) for cluster of Small Scale Industries, (iv) Installation of Online Continuous Effluent / Emission Monitoring System (OCEMS) with real time data connectivity to CPCB, and (v) Zero Liquid Discharge (ZLD) to protect the water quality in view of lean flow situation in rivers and streams in a larger non monsoon period. However, they noted that little progress seemed to be made in reducing Ground water pollution, a fact, admitted by the CPCB itself attributing it to unabated growth of

population and resultant waste water generation along with uncontrolled abstraction of Surface and Groundwater causing reduction in recharge potential. In this regard they noted the submission made by the MoEF&CC that (i) absence of a policy on water pollution, (ii) preponderance of State Government agencies in implementation of policy as Water is a State subject, (iii) difficulty in implementation of policy due to sharing of aquifers by a number of States and (iv) involvement of multiple agencies at Central and State level had further compounded the problem. Further, lack of proper monitoring of NOC conditions while permitting abstraction of Ground water under The Water (Prevention and Control of Pollution) Act, 1974, no data on water consumption by the municipalities, local bodies and industrial units post repeal of Water Cess Act, etc. reflected the dire state of affairs in policy implementation regarding Groundwater. The Committee were therefore of the opinion that water being most important resource for survival of life, its governance could not be left scattered over multiple jurisdictions. Further, there was an imperative need for chalking out a Scheme/Programme specifically to control Ground water pollution. Therefore, in addition to the need for urgent measures for setting up a Nodal agency/Centralised body, the Committee further recommended that immediate steps should be taken to formulate programme to prevent Ground water pollution. Besides, monitoring of compliance by the industries needed to be done scrupulously to reduce violations. Also, quarterly physical inspections of all the functional ETPs were prerequisite to ensure that untreated water was not discharged. Accordingly, the Committee recommended the Department to take appropriate measures and apprise them about their details within three months of presentation of the Report.

14. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

"For strengthening monitoring mechanism and effective compliance through self-regulatory mechanism, CPCB directed all 17 categories of highly polluting industries, Grossly Polluting Industries (GPIs) of Ganga basin, CETPs, biomedical waste management facilities and common hazardous waste facilities to install Online Continuous Effluent/Emission Monitoring Systems (OCEMS) for constant vigil on pollution levels. From these OCEMS, real-time values of environmental pollutants of trade effluent and emissions, discharged from industrial units are transmitted online to CPCB and concerned SPCB/PCC on 24x7 basis. Central software processes the data and incase value of pollutant parameter exceeds prescribed environmental norms, an automatic SMS alert is generated and sent to industrial unit, SPCB and CPCB, so that corrective measures can be taken by the industry immediately and appropriate action can be taken by concerned SPCB/PCC.

Industrial pollution (Compliance of discharge / emission norms) of about 6,500 industries including about 950 Grossly Polluting Industries in catchment of river Ganga is monitored on real time basis through Online Continuous Effluent Monitoring Systems (OCEMS).

In addition to above, the steps/measures taken for the compliance of norms are:

i. The Ministry of Environment Forest and Climate Change (MoEF&CC), Government of India notifies industry specific discharge standards under Schedule-I: 'Standards for Emission or Discharge of Environmental Pollutants from various Industries' of Environment Protection Act, 1986. So far, industry specific environmental standards, for 81 industrial sectors (including effluent standards for 47 sectors), have been notified. Industrial sectors, for which specific standards are not available, general standards as notified under Schedule-VI of Environment Protection Rules, 1986 shall be applicable. In order to ensure conservation of water, load-based standards have also been prescribed for water consumption and wastewater generation for about 15 water-intensive industries, namely, thermal power plant, jute processing industry, integrated iron and steel, sugar, pulp and paper, fermentation, caustic soda, man-made fibre, starch, dairy, fertilizer, natural rubber processing, coal washeries, edible oil and vanaspati, tanneries, petroleum oil refinery and paint industry. Industries must meet these prescribed environmental standards. The State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) issue consent to establish/consent to operate and authorization to the industries in the States. SPCBs/PCCs monitor the compliance of industrial emissions/effluent according to the prescribed standards. In case of non-compliance, action against industry is taken under provisions of Water Act, 1974, Air Act, 1981 and Environment (Protection) Act, 1986.

ii. In order to prioritize pollution control and environmental surveillance programs, CPCB has identified seventeen industrial sectors, having high potential to pollute the environment. The seventeen categories (of high pollution potential) industries include (i) Aluminum Smelters, (ii) Chlor-Alkali Plant, (iii) Cement Plant, (iv) Copper Smelter, (v) Distillery Industry, (vi) Dyes& Dye-Intermediate Industry, (vii) Fertilizer Industry, (viii) Iron & Steel Plant, (ix)Tanneries, (x) Pesticide (basic) Manufacturing, (xi) Petro-Chemical Industry, (xii) Pharmaceuticals (basic) Plant, (xiii) Pulp & Paper Industry, (xiv)Oil Refinery, (xv) Thermal Power Plant (xvi) Sugar and (xvii) Zinc Smelter.

iii. CPCB classifies industrial sectors into red, orange, green and white categories, on the basis of pollution index (PI) which is a function of water pollution, air pollution, hazardous waste generation, fuel consumption and amount of waste water generation. Further, in order to prioritize environmental management and surveillance programs, CPCB has also classified as industries under 17 categories of highly polluting industries and grossly polluting industries (water polluting industries). So far, CPCB has categorized 254 industrial sectors i.e. 61 under red, 90 under orange, 65 under green and 38 under white category, and directed SPCBs/PCCs to adopt the same.

The recommended environmental surveillance frequency and Consent to Operate (CTO) validity for different categories of industries are:

Industrial Category	*Potential of Pollution*	*PollutionIndex (PI)*	*No of Sectors Categorizedby CPCB*	*CTO validity period recommended by CPCB*	*Minimum EnvironmentalSurveillance Frequency*
Red	*High*	*≥60*	*61*	*5 years*	*6months*
Orange	*Moderate*	*41 to59*	*90*	*10 years*	*1year*
Green	*Low*	*21 to40*	*65*	*15 years*	*2 years*
White	*Nil*	*≤20*	*38*	*Not required**	*-*
Total			*254*		

*Note: *White category of industries, which are considered as practically non-polluting, are not required to obtain consent to operate from SPCBs/PCCs and an intimation to concerned SPCB/PCC shall suffice.*

As per the information received from SPCBs/PCCs, there are total 4,572 industries under 17 categories, in the country. Out of which, 3,880 units are operational and 692 units are self-closed. Number of complying and non-complying units are 3,429 and 451, respectively. Show cause notice to 315 units and closure directions to 68 units were issued for non-compliance. Legal actions were initiated against 7 units and action is under process against 61 units. State-wise status of 17 categories of industries is given at ***Annexure-III.***

The above measures are being scrupulously implemented by CPCB in consultation with SPCBs and infrastructure to improve the monitoring & surveillance measures are being implemented through various Central/State government schemes."

15. The Committee notice that for strengthening monitoring mechanism and effective compliance through self-regulatory mechanism, Online Continuous Effluent Monitoring Systems (OCEMS) has been installed which enables real time monitoring of compliance of discharge / emission norms by the industries. Besides, several measures such as industry specific discharge standards, classification of industrial sector into red, orange, green and white categories on the basis of pollution index, classification of highly polluting industries and grossly polluting industries in 17 categories have been taken by the Ministry of Environment, Forest and Climate Change to improve the monitoring and surveillance measures. However, no reply has been furnished with regard to a formulation of a specific programme for controlling water pollution including Ground water. Though several measures have been taken with an aim to reduce pollution of Ground water, the Committee feel that in absence of a cohesive policy on water pollution, the problem of Ground water pollution will continue to exist. In their view, there is a need for convergence amongst inter ministerial/departmental

schemes and programmes in coordination with State Government so that unified approach could be adopted for water pollution control. The Committee further note that as per the information furnished by the Department, there are 3,429 complying and 451 non-complying industrial units respectively under 17 categories of grossly polluting industries. While show cause notices have been issued to 315 units, closure directions have been issued to 68 units for non-compliance. Also legal actions have been initiated against 7 units and in case of 61 industrial units, action is under process, which is alarming. While closing down of industrial units may not be the best solution to tackle Ground water pollution, in view of the Committee, effective monitoring of compliance norms along with incentive for efficient working of Effluent Treatment Plants is the need of the hour. The Committee therefore, believe that till the time a Centralised/ nodal agency is created, the CGWA needs to play a greater role in coordination with CPCB/SPCBs to persuade industries to have state of the art Effluent Treatment Plants including measures for ensuring quarterly physical inspection of all the functional Effluent Treatment Plants. They desire to be apprised of the details of the measures taken in this regard within three months of presentation of this Report.

E. Amendment to the Water Pollution and Prevention Act, 1974 empowering SPCBs for imposition of penalties

Recommendation Sl. No. 17 (Para No. 18)

16. The Committee noted that Grossly Polluting Industries on the main stem of Ganga and Yamuna were being monitored through Third Party verification since 2017 and violators were being issued closure orders by SPCBs and also levied environmental compensation. The Committee further noted that CPCB was mainly concerned with framing of Guidelines without any role in their enforcement as most of these powers were vested with the SPCBs under the Water Pollution and Prevention Act, 1974 except the authority to impose fines, for which Courts had to be approached. Therefore, direction for closure is more convenient option for SPCBs to enforce violators to abide by the Guidelines. Admitting the existing gap in enforcement powers, the Secretary, MoEF& CC informed that the Act will be amended to bridge the gap. While agreeing to the need for enforcement of the environmental norms/standards for ensuring industrial development in a sustainable way, the Committee, however, did not approve of closure notices as a widely used option. Since industrial development is also a necessity for employment generation and prosperity, the Committee were of the considered view that a balanced approach needed to be adopted. While strict penalties needed to be imposed for flouting environmental norms, direction for closure should be resorted to as a last option. Further, there should be a mechanism to check that the 'Consent of establishment and Consent to operate' granted to industries, are in accordance with the norms fixed and in case of any change/revision in existing norms, after Consent to establish is issued, closure notices on grounds of non compliance with changed norms

should be avoided. The Committee desired that such cases should be studied and appropriate time frame should be fixed to ensure compliance with the new norms. Also, the SPCBs needed to be vested with power to impose monetary penalties to help them take appropriate action for minor violations without straight away going for closing the violating industrial unit. They, therefore, recommended the DoWR, RD & GR to urge the MoEF& CC to bring the necessary amendments to Water Pollution and Prevention Act, 1974 urgently to sufficiently empower SPCBs to impose fines for violations of minor nature.

17. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

Central Pollution Control Board (CPCB), State Pollution Control Boards(SPCBs)/ Pollution Control Committees (PCCs) are performing its duties mentioned in Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986 and its Rules from time to time and taking action against defaulters responsible for increase in all types of pollution (non-compliance to the effluent/emission norms, waste management etc.). Also based on the 'Polluter Pays Principle' the defaulters are impounded upon Environmental Compensation (EC) for contaminating / damaging the environment.

CPCB has initiated penal action in the form of imposing EC and has evolved a methodology for levying such EC against the industries /facilities not-complying with the norms. Accordingly, action being taken against the violators are:

S.No.	***Actions***	***Under the provisions of Acts & Policies***
1.	*Issuing of directions for correction/remedial/closure depending upon severity of the case.*	*Under Section 5 of the Environment (Protection) Act,1986*
2.	*Issuing of directions towards Construction projects for correction/remedial / closure depending upon severity of the case.*	*Under Section 31A of the Air (Prevention & Control of Pollution) Act,1981*
3.	*Imposing of Environmental Compensations on the construction projects.*	*Methodology developed for Assessing Environmental Compensation and Action Plan to Utilize the Fund by CPCB as per Hon'ble NGT order.*

18. The Committee find that replies furnished by the Department are repetitive. They note that no information has been furnished with regard to the mechanism developed for persuading industries to comply with the environmental norms in the

form of monetary penalties, etc. In case of construction projects only, the CPCB has stipulated Environmental Compensation for damaging the environment. The existing loophole in the Water Pollution and Prevention Act, 1974 Act which neither empowers CPCB to enforce environmental norms nor SPCBs to impose monetary fines, etc. for penalizing violations of minor nature, for which they have to resort to courts making it a cumbersome process, have not been addressed in the replies. The Committee find that to ensure compliance with the extant norms, SPCBs take recourse to easier option of issuing closure notices, as the Act empowers the SPCBs in this regard. Taking note of this loophole, the Secretary, MoEF& CC had also informed the Committee that the Act will be amended to bridge the gap in enforcement powers. Since the replies are silent on this aspect, the Committee reiterate their earlier recommendation that a mechanism should be developed to ensure that the 'Consent of establishment and Consent to operate' granted to industries, are in accordance with the norms fixed and in case of any change/revision in existing norms, after Consent to establish is issued, proper time should be allowed to ensure compliance with changed norms, rather than serving closure notices outrightly. They further reiterate their recommendation to the DoWR, RD & GR to urge the MoEF& CC to bring the necessary amendments in Water Pollution and Prevention Act, 1974 urgently to sufficiently empower SPCBs to impose fines for violations of minor nature and suitably empower CPCB to ensure compliance with its norms. The Committee desire to be apprised of the measures taken in this regard within three months of presentation of this report.

F. Study of effluent discharge by industries

Recommendation Sl. No. 18 (Para No. 19)

19. The Committee observed that CPCB had directed all the 17 category of highly polluting industries to install Online Continuous Effluent/emission Monitoring System (OCEMS) with real time data connectivity to CPCB which conducts regular inspection and takes action on exceedance alerts of OCEMS or offline OCEMS. Although industry Specific Standards and General Standards for discharge of effluents were notified under the Environmental (Protection) Rules, 1986, the Committee observed that Ministry of Jal Shakti also, was in the process of finalizing policy by bringing out standards/limit for treated or used water to utilize/recycle in various sectors including agriculture wherein use of untreated water for irrigation purposes had emerged as a big issue, especially in cities posing health risk for city dwellers. Further, they observed that CPCB is monitoring ETPs regarding discharge of treated water on the basis of computer generated SMS alerts received on violation of effluent and emission standards and recorded in OCEMS. Having noted that despite all the above measures, industrial pollution of Ground water remained a burning problem, the Committee were of the view that stricter vigil of Effluent Treatment Plants (ETPs) was required to ensure that untreated water did not get discharged in any way into water bodies, especially by the industries operating on the banks of rivers and canals. In their view, besides inspection of industries, study of water quality of rivers and canals having industries on their banks also needed to be

conducted to find out how effectively the Effluent Treatment Plants were working. They, therefore, recommended the DoWR, RD & GR to conduct such a study in coordination with CPCBs and SPCBs and furnish the details of number of industries situated on the banks of rivers, numbers of such industries with functional ETPs, volume of water treated by the ETPs before discharge, number of violators and action taken against violators during the last 5 years.

20. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

> "*Inspection of all Grossly Polluting Industries (GPIs) located in five Ganga mainstem States i.e. Uttarakhand, UttarPradesh, Bihar, Jharkhand and West Bengal is being carried-out by CPCB authorized third party technical institutes since 2017 to verify the effectiveness of effluent treatment plant and compliance vis-à-vis effluent discharge standards and as certain specific fresh water consumption, waste water discharge and pollution load etc. Since 2020, the GPIs located in Yamuna main stem States i.e. Uttarakhand, Uttar Pradesh, Haryana, Delhi, Bihar, Jharkhand and West Bengal are also considered for inspection. The Year-wise inventory of GPIs, sector-wise waste water discharge and compliance status in Ganga and Yamuna mainstem States is given in* ***Annexure-IV."***

21. **The Committee find that replies merely state the existing inspection mechanism to ascertain the quality of water being discharged by the Effluent Treatment Plants in Grossly Polluting Industries (GPIs) situated on the banks of river Ganga in five Ganga mainstem States by way of third party verification by CPCB authorized third party technical institutes. No information has been furnished with regard to undertaking any study by the DoWR, RD & GR on quality of water in rivers and canals, which have many industries located on their banks. As this information is vital to know the impact of industrial operations on water quality of rivers and canals with associated potential to create health hazard, the Committee reiterate their recommendation to conduct a study in coordination with CPCBs and SPCBs and furnish the details of number of industries situated on the banks of rivers, numbers of such industries with functional ETPs, volume of water treated by the ETPs before discharge, number of violators and action taken against violators during the last 5 years within three months of presentation of this report.**

G. <u>Need for extending the coverage of the Atal Bhujal Yojana (ATAL JAL) Scheme</u>

Recommendation Sl. No. 21 (Para No. 22)

22. The Committee observed that Atal Bhujal Yojana (ATALJAL), being implemented from 1.04.2020 for a period of 5 years, is the only scheme of the Government of India which has been launched with a view to augment Ground water by managing their

demand side. The Scheme is being implemented on pilot basis in 80 districts of seven States, viz. Haryana, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh with an outlay of Rs 6000 crore. Selection of States was done on the basis of the criticality of Ground water situation, willingness and degree of preparedness. The Committee, however, noticed that several States with acute Ground water shortage such as Himachal Pradesh, Punjab, Delhi and Tamil Nadu had not been included in the pilot scheme. They, therefore, desired to be apprised of the reasons for excluding these States where Ground water situation is equally critical. The Committee were given to understand that the feasibility of upscaling the Scheme to other parts of the Country would be considered only after five years, based on the lessons learnt from implementation of the Scheme and their efficacy/ outcome in improving the long-term sustainability of Ground water resources in the selected 80 districts under the pilot scheme. However, keeping in view the urgency for implementation of such scheme in States having large number of over exploited blocks, the Committee recommended that Scheme should be extended in all States which are suffering from Ground water scarcity and have substantial number of over exploited and critical blocks.

23. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

> *"Atal Jal was started as Pilot Program in certain identified water stressed areas of 7 States viz. Uttar Pradesh, Madhya Pradesh, Gujarat, Rajasthan, Karnataka, Haryana and Maharashtra with an aim to demonstrate the community led ground water management so that later on all the States can take up this approach further to remaining areas. A proposal for extension of Atal Bhujal Yojana to certain other water stressed States has been initiated."*

24. The Committee are happy to note that the Department has initiated a proposal to extend Atal Bhujal Yojana to certain other water stressed States. However, the Committee would like to know the details of specific water stressed States where this programme is proposed to be extended along with the time period envisaged to implement this programme in the newly covered States. They would also recommend to expedite the approval process to implement the scheme in remaining States. Further, the benefits of the programme, if any, identified so far, may be furnished to the Committee within three months of the presentation of this report.

H. Rejuvenation of water bodies in urban areas – Strengthening of Urban Local Bodies (ULBs)

Recommendation Sl. No. 25 (Para No. 26)

25. The Committee noticed that 63 water bodies in cities had been taken up for rejuvenation under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and 151 under Smart Cities Mission (SCM), while rest of the water bodies would be taken up under Jal Jeevan Mission (Urban) of the Ministry of Housing and Urban Affairs (MoHUA).

However, no specific information was provided about water bodies in major cities of Delhi, Mumbai, Chennai and Bengaluru where encroachment and pollution of water bodies remained a big issue. They further noted that in cities and urban areas, Urban Local Bodies (ULBs) were primarily responsible for maintenance of water bodies. However, they were concerned to note that ULBs were unable to ensure proper maintenance of water bodies as these were severely starved of funds both at State and local level. The Committee therefore recommended that the DoWR, RD& GR should urge the MoHUA and State Governments to take steps for strengthening ULBs. They also desired to be apprised of the measures taken in this regard within three months of presentation of the report. Further, they desired that total number of water bodies in urban areas along with the details of the status of encroachment, extinct, etc. along with measures taken/contemplated to restore the water bodies especially in metro cities like Delhi, Chennai, Mumbai, Hyderabad, Kolakata and Bengaluru be furnished to them within three months of presentation of the report.

26. The Department of Water Resources, River Development & Ganga Rejuvenation, in their action taken note have replied as follows: -

> *"Under AMRUT mission, ULBs /States may take up projects related to new/ augmentation /rehabilitation of water supply system; rejuvenation of water bodies for water supply including in Metro cities and recharge of ground water etc. So far 1,342 projects worth Rs 42,760.91 crore have been grounded including 963 completed projects worth Rs 18,749.57 crore.*
>
> *As per first Census report 2023 on water bodies, total number of water bodies in Urban areas falling in 33 States are 69,485. Total number of encroached water bodies in these States are 1,760. The information collected through the Census are being shared with States/UTs for taking corrective action as per extant guidelines through relevant Central/State schemes.*
>
> *As far as sharing of the information collected in census with States/UTs is concerned, it is informed that letters from Secretary, D/o Water Resources, RD & GR have been sent to the States/UTs for taking measures to remove the encroachment and revival of defunct water bodies".*

27. From the replies it is seen that out of 69,485 of water bodies in Urban areas in 33 States, 1760 water bodies are encroached as per the first Census of water bodies held in 2023. Further, ULBs /States have been entrusted with the task of taking up projects for new/ augmentation /rehabilitation of water supply system; rejuvenation of water bodies for water supply including in Metro cities and recharge of Ground water etc. under Atal Mission for Rejuvenation and Urban Transformation (AMRUT). However, no reply has been furnished about the measures taken to strengthen ULBs, which are stated to be financially weak, as informed to the Committee earlier. Also, the replies lack information on measures taken/proposed to be taken to restore the encroached water bodies in urban areas

especially in metro cities like Delhi, Chennai, Mumbai, Hyderabad, Kolakata and Bengaluru, etc. The Committee, would therefore, again recommend the DoWR, RD & GR to urge the Ministry of Housing and Urban Affairs (MoHUA) and State Governments to take steps for strengthening ULBs and apprise them of the details. Further, they would also like to be apprised of the measures taken to revive and restore encroached water bodies of urban areas within three months of presentation of this report.

CHAPTER – II

OBSERVATIONS/RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

RECOMMENDATION NO.1

Ground water, a diminishing resource

Ground Water resources of India has become an important source for catering to drinking water and irrigation needs of the country, with 80 percent of rural drinking water, 50 per cent of urban drinking water and 2/3rd of irrigation water being met from Ground water. The Committee observe that despite being endowed with sufficient Surface water sources, the growing dependence on Ground water is due to its decentralized availability, increasing demands for fresh water, vagaries of rainfall, increased population, industrialization and urbanization, etc. resulting in severe depletion in Ground water levels. The Committee note that as per the 2020 assessment, out of the total annual extractable Ground water resource of 398 Billion Cubic Metre (BCM), 245 BCM of Ground water is being extracted in the country and the stage of Ground water development which is a measure of annual Ground water extraction for all uses over annual extractable Ground water resource, in the country is 61.6 per cent. They observe that out of the total 6965 assessment units (Block/ Taluks/ Mandals/ Watersheds/ Firkas) in the country, 1114 units have been categorized as 'Over-exploited' while 270 units have been categorized as 'Critical' and 1057 units as 'Semi- critical'. They further observe that more assessment units have reported deterioration in Chattisgarh, Gujarat, Haryana, Madhya Pradesh and Rajasthan in 2020 assessment as compared to those improved. Although a marginal improvement in overall Ground water situation in 2020 assessment as against in 2017 has shown a ray of hope, the Committee still believe that concerted actions are needed for conservation and judicious use of Ground water. The Committee find that the Central Water Commission, in their June 2019 report stated that availability of free power supply has resulted in the excess drawal of Ground water through more than 20 million pumps and is getting wasted. Continued extraction has resulted in further deepening of water levels as reflected in the comparison of depth to water level of Pre-monsoon 2020 with mean of last 10 years (2010-2019) wherein 37 per cent of the observation wells registered a decline of Ground water table by 0-2 metres. A decline of more than 4 metres was observed in 10 per cent of the wells in Andhra Pradesh, Chandigarh, Delhi, Haryana, Punjab, and Rajasthan and in isolated pockets of most of the other States/ UTs except Arunachal Pradesh, Bihar, Daman & Diu, Himachal Pradesh, Jharkhand, Meghalaya, Nagaland and Tripura. Depth to water level in the country ranged between less than 2 to more than 40 metres Below Ground Level during the pre-monsoon period of 2020 with major parts of North-Western and Western States having water level in the range of 10 to 40 metre Below Ground Level. This calls for a relook at the policy measures being adopted for Ground water management in both deficient and surplus areas for their balanced and judicious use in order to fulfill various water demands of the country in most

harmonious way. The Committee are of the opinion that management of Ground water resources should be given topmost priority in areas where the underground water reserves are seriously threatened while at the same time ensuring judicious use of Ground water resources in areas where there is significant reserve, as a complement to Surface water.

Need for holistic and centralized management of Ground water

The Committee find that regional distribution of Ground water is also varied, with Northern mountainous terrain of Himalaya (from Kashmir to Arunachal Pradesh) being major source of recharge for the vast Indo Gangetic and Brahmaputra alluvial plains. The States of Uttar Pradesh, Bihar, Assam and West Bengal falling in this region has sub optimal Ground water development except in Haryana and Punjab. They observe that Peninsular Shield located south of Indo-Gangetic-Brahmaputra plains has limited Ground water potential while coastal tracts have potential multi-aquifer systems in the States of Gujarat, Kerala, Tamil Nadu, Andhra Pradesh and Orissa. However, inherent quality problems and the risk of seawater ingress impose severe constraints in Ground wat er development from these aquifers. The Committee observe that a number of measures such as Atal Bhujal Yojana, water harvesting and conservation works under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Pradhan Mantri Krishi Sinchayee Yojana – Watershed Development Component (PMKSY-WDC) have been taken by the Central Government. The problem of Ground water contamination is being handled by Central Pollution Control Board (CPCB) and State Pollution Control Board (SPCB). Various initiatives have also been taken at the State level such as ‘Mukhyamantri Jal Swavlamban Abhiyan’ in Rajasthan, ‘Jalyukt Shibar’ in Maharashtra, ‘Sujalam Sufalam Abhiyan’ in Gujarat, ‘Mission Kakatiya’ in Telangana, and 'Neeru Chettu’ in Andhra Pradesh to enable judicious use and conservation of Ground water. However, the actual results, till now, both in terms of regulating quantity and quality of Ground water have shown only marginal improvement since Ground water governance is widely scattered with Center, State, local bodies and civil groups, all having their role in it. The Committee 93 find that the regulatory role is strewn over the domain of many Ministries and State Governments making implementation of corrective steps/measures a tedious process. The Committee are of the opinion that water resource management being their primary jurisdiction, the Ministry of Jal Shakti should play a bigger role in coordinated implementation of programmes for Ground water conservation by way of not only providing inputs and suggesting appropriate measures but also monitoring their status and outcome. Keeping in view the diverse Ground water situation across the length and breadth of the country, the Committee are of the view that instead of standalone approach, scattered over the jurisdiction of multifarious agencies/departments under the administrative control of a number of Ministries, for addressing each dimension of the problem of diminishing reserves of Ground water and deterioration in their quality, focus should shift towards their holistic management by a Centralised body/agency under the aegis of the Ministry of Jal Shakti, since this is the nodal Ministry assigned with the responsibility to manage the overall water resources of the country. Formation of such an agency would, on the one hand, help deal with the issues with unified approach along with

the responsibility for lapses and on the other hand, enable taking of required timely measures to reddress the situation. They, therefore, recommend the Ministry of Jal Shakti to accordingly form a body with inter-ministerial representation as well as representation from State Government Departments, which would be entrusted with the responsibility to regulate Ground water in a cohesive and holistic manner.

REPLY OF THE GOVERNMENT

Ground Water Resource Assessment for the year 2022 for the entire country has been completed by the CGWB in collaboration with States/UTs. Comparison of information collected with assessment of 2017 indicates that the 'groundwater recharge 'has increased by 5.7 BCM and 'groundwater extraction' has reduced by 9.5 BCM. Further, percentage of'over exploited' assessment units decreased from 17 % in 2017 to reduced from 63.3 % (in 2017) to 60.08 % (in 2022).

CGWB monitors groundwater levels throughout the country on a regional scale, four times every year during the months of March to May, August, November and January. During the November 2022, about 67.2% of the wells monitored in the country have registered the water level upto 5 mbgl. Further, in order to assess the long term fluctuation in ground water level, the water level data collected by CGWB during November been compared with the decadal mean of November (2012-2021). Analysis of water level data indicates that about 61.1% of the wells monitored have registered rise in ground water level.

Further, water being a State subject, effective rainwater harvesting groundwater for increasing its levels in the country falls under States' mandate however, a number of steps have been taken by central government which can be accessed through web-link through web. Some of them are listed below:

i. Government of India is implementing Jal Shakti Abhiyan (JSA) in the country including urban areas. First JSA was launched in 2019 in water stressed blocks of 256 districts which continued during the year and 2022 2021 (across entire country both rural and urban areas) with the primary aim to effectively harvest the monsoon rainfall through creation of artificial recharge structures, watershed management, recharge and reuse structures, intensive afforestation and awareness generation etc. JSA for the year 2023 have been launched by Hon'ble President of India on 04 Mar 2023 with the theme "Source Sustainability for Drinking Water".

ii. Hon'ble Prime Minister has launched Amrit Sarovar Mission on 24th April 2 The Mission is aimed at developing and rejuvenating 75 water bodies in each district of the country as a part of celebration of Azadi ka Amrit Mahotsav.

iii. The Central Government is implementing Atal Bhujal Yojana with an outlay of Rs.6,000 crore, in collaboration with States, in certain water stressed areas of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The primary aim of the scheme is demand side management through scientific means involving the local communities at village levels leading to sustainable groundwater management in the targeted areas.

iv. Central Ground Water Authority (CGWA) has been constituted under section 3(3)of the 'Environment (Protection) Act, 1986'; for the purpose of regulation and control of ground water by industries, mining projects, infrastructure projects etc in the country. The latest guideline in this regard with pan-India applicability was notified by the Ministry on 24 September 2020 with certain amendments on 29 Mar2023. CGWA and States issue No Objection Certificate (NOC) for extraction of groundwater to various industries/project proponents as per their jurisdiction and as per the extant guidelines. Further, water being a State subject, the guideline advocates a participatory approach for sustainable ground water management in agriculture sector, including working towards crop rotation, diversification, reviewing free/subsidized electricity and other initiatives to reduce over-dependence on groundwater.

v. CGWB is implementing National Aquifer Mapping Program (NAQUIM) in the country and an area of 25.15 lakh sq km (the available mappable area) has been covered under the NAQUIM studies. The NAQUIM study report along-with management plans are shared with States/UTs for suit interventions.

vi. Master Plan for Artificial Recharge to Groundwater - 2020 has been prepared by the CGWB with States/UTs providing a broad outline of the project and investments. The Master Plan envisages construction of about 1.42 crore rain water harvesting and artificial recharge structures in the country to harness 185 B Cubic Metre (BCM) of water.The Master plan has been shared with States/UTs for suitable intervention

vii. Ministry of Housing & Urban Affairs (MoHUA) has formulated Model Building Bye Laws (MBBL), 2016 for the States/UTs, wherein adequate focus has been given on requirement of rainwater harvesting and water conservation measures. As per MBBL, all buildings having a plot size of 100 sq.m. or, more shall mandatorily include the complete proposal of rainwater harvesting. 35 States/ UTs, including Karnataka, have adopted the features of the Bye Laws.

viii. Further, this Department implemented the PMKSY-Groundwater irrigation scheme till Mar 2023 to utilize the surplus groundwater available in Safe assessment units (blocks/ Firkas / Mandals etc) for irrigation purposes. The extension of the scheme beyond 2023 is under active consideration. A committee in this regard under the chairmanship of Secretary (WR) comprising stake-holder Ministries/Departments/ Organisations and States is under formulation.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.2

Real time monitoring of Ground water resource

The Committee note that at present manual monitoring of Ground water level is done four times a year and water quality s les are collected once a year to obtain background information of Ground water quality change on regional scale. They further note that Ground water monitoring networks are being enhanced by Central and State implementing agencies across the country for improving real time monitoring of Ground water, for which Digital Water Level Recorder (DWLR) along with

GPRS/GSM based Telemetry system are being installed at representative piezometer locations across the country under National Hydrology Project (NHP) to enable collection of data on six hourly basis, with transmission once a day. However, the installation of DWLR is expected to be completed by March, 2024. The Committee are of the view that though the current estimates of Ground water has enabled us to give a picture of overall situation in the country, it is, at times, not clearly representative of actual condition, since Ground water regime shows wide variation depending upon the type of aquifers and specific local conditions. Therefore, collection of data and dissemination on real time basis will greatly help in formulation of appropriate strategy and adoption of measures by both the Government and user communities, suitable to the local requirements. The Committee, would therefore, recommend the Department to upgrade the required number of piezometers with latest technology and equipments and ensure simultaneous availability of real time data in public domain at the earliest.

REPLY OF THE GOVERNMENT

This Department has planned installation of around 31,000 DWLRs including telemetry system in the country by 2026 under NHP, GWMR and Aal Jal schemes.

Under National Hydrology Project (NHP) around 16,200 hydro-network monitoring stations are being established by the Ministry to monitor ground water levels with GPRS/GPM based telemetric system in collaboration with States/UTs and CGWB. The digital water level recorder (DWLR) along with GPRS/GSM latest technology based telemetric system with high frequency are being installed at representative piezometer locations or hydro-network monitoring stations across the country through States/UTs and CGWB to monitor ground water level on six hourly basis with transmission once in a day. The commissioning of all DWLR are under progress and is set to be completed by March,2024. CGWB, under NHP, has initiated the work for installation of 5,260 DWLRs with telemetry system in the existing monitoring stations; 2,000 DWLRs in this regard have already been installed and balance DWLRs installation are in progress.

In addition to above, CGWB has also been given approval for installation of 9,000 DWLRs with 9,000 piezometers under the Ground Water Management and Regulation Scheme through Public Investment Board (PIB) mode for which the tenders are under processing/ finalization. Real time data from these DWLR locations would be transmitted to centralized database as well as State level data centres and shall be accessible to general public through India-WRIS web-site. Further, around 6,200 DWLRs are being installed in certain water stressed areas in identified States under Atal Bhujal Yojana. In addition, various State Governments have taken up installation of DWLRs under their funding arrangement.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.3

Depleting Ground water in Urban areas – Monitoring of land use pattern in cities

The Committee note with utmost concern the findings of the pre monsoon 2020 analysis of 923 wells in 51 urban areas of the country showing dip in water level by more than 40 metres in 61

wells (7%), water level in the depth range of 20-40 m Below Ground Level (BGL) in 159 wells (17%) and water level in the depth range of 10-20 m BGL in 208 wells (23%). They further note that water level in major cities such as Delhi, Kolkata, Hyderabad, Ahmedabad, Gwalior, Ludhiana, Amritsar, Faridabad, Chandigarh, Coimbatore, Vijaywada, Vishakhapatnam, Vadodara, Jaipur, Jodhpur, Allahabad, Ghaziabad, Kanpur, Agra, Lucknow, Meerut, Varanasi and Dehradun has gone down by more than 20 metres BGL. As per the submission of the Ministry of Housing and Urban Affairs, reasons for the sharp drop in water level in the above cities are increasing population, urbanization, concretization (preventing water seepage in the ground and causing floods during rainy season) and lack of Surface water sources for drinking purposes. Increasing reliance on Ground water to meet water needs of the cities was reported by CGWB in the Report of the Ground Water Resource Estimation Committee, 2015 according to which 50% of urban water usage was sourced from Ground water. Use of Ground water has increased further in recent years as cities like Ludhiana, Amritsar and Faridabad are totally dependent on Ground water with 100 per cent of their water supply being met from Ground water sources. Cities like Ghaziabad and Dehradun are also on the verge of becoming totally Ground water dependent as 71% and 80% of their respective water needs are being met from Ground water. As brought out further in the recent assessment held in 2020, out of 67 urban assessment units, change has been observed only in 34 assessment units of Delhi where number of over Exploited category assessment units has come down from 20 to 17 while showing an increase 5 assessment units in critical category. In this regard, the Committee find that in spite of well established fact that changing land use pattern in cities and metros with increasing concretization has reduced potential to recharge Ground water and pose serious threat of floods during rainy season, so far no study has been conducted/ initiated by either the MoHUA or CGWB regarding the extent of change in land use in cities and their repercussion on water balance. Since encroachment of river beds and catchment areas of water bodies in cities is a big threat to sustainable water management, the Committee recommend the Ministry of Jal Shakti to study this aspect and devise suitable measures with penal provisions in consultation with State Governments and MoHUA to prevent further encroachments. The Committee believe that a Central body, entrusted with Ground water management and governance, as recommended by them, can very effectively ensure regular monitoring so that local water bodies are preserved and Surface and Ground Water resources are used harmoniously to meet growing water needs of expanding cities. The Committee would like to be appraised of the action taken in this regard within three months of presentation of this Report.

REPLY OF THE GOVERNMENT

CGWB has been entrusted with the responsibility of taking up the study in collaboration with Ministry of Housing & UA and submit a report in this regard. CGWB has taken up the studies in three cities viz. Ahmedabad, Guwahati and Bengaluru.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.4

Early implementation of Projects under Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

The Committee appreciate that several measures with desirable objectives have been taken by the MoHUA to reduce dependence on Ground water in urban areas. However, in their view, implementation mechanism needs to be refurbished for achievement of desirable goals. They find that Atal Mission for Rejuvenation and Urban Transformation (AMRUT), launched in 2015 in 500 selected cities across the country envisaged development of basic urban infrastructure in the sectors of Water Supply; Sewerage & Septage Management; Storm Water Drainage; Non-Motorised Public Transport and Permeable Green Spaces & Parks. However, the Mission is yet to complete and grounded projects are likely to be implemented by March 2023. Principal reasons for delay in accomplishment of Mission objectives are stated to be due to long gestation nature of water supply projects, monsoons and floods, delay in getting required clearances from other departments such as NHAI and Railways and national and local lockdowns imposed due to COVID-19 pandemic. Since, in view of the Committee, since majority of projects are still under implementation stage, no visible impact could be seen in water management in cities. From the submissions of the MoHUA, the Committee notice that besides 500 cities covered under AMRUT, there are other 3,878 ULBs approximately, which are in dire need of similar programme and are being covered under SBM(U). The Committee would therefore emphasise early implementation of water sector projects under AMRUT to realize the potential goal of judicious use of water in the cities and effective management of Ground water. They would further like to be apprised of the details of physical and financial progress of projects sanctioned under both AMRUT and SBM(U) along with targeted dates of their completion.

REPLY OF THE GOVERNMENT

AMRUT was launched on June 25, 2015, in 500 selected cities across the country covering around 60% of the Urban Population. AMRUT focuses on development of basic urban infrastructure in the selected cities in the sectors of Water Supply, Sewerage & Septage Management, Storm Water Drainage, Non- Motorised Urban Transport, and Permeable Green Spaces & Parks.

In Water Supply sector, ULBs/State may take up projects related to new/augmentation/rehabilitation of water supply system; rejuvenation of water bodies for water supply and recharge of ground water etc. So far 1,342 projects worth Rs 42,760.91 crore have been grounded including 963 completed projects worth Rs 18,749.57 crore. Through these projects & in convergence with other programmes, 137 lakh household water tap connections have been provided so far. Further, water treatment plants (WTP) worth 3,348 MLD capacity has been created &; another 3,385 MLD capacity of WTP are under development.

To reduce contamination of water resources, State/UTs have taken up sewerage projects including that of Sewage Treatment Plants (STPs) under AMRUT. Against the approved plan size of Rs 77,640 crore, a significant amount of Rs 32,456 crore (~42%) has been allocated for sewerage &

septage management, Against the allocation, 859 projects have been grounded with worth Rs 34,155 crore including

542 completed projects worth Rs 13,405 crore. Through these projects in convergence with other programmes, 104 lakh sewar connections/septage coverage have been provided so far. 2,840 MLD STP capacity created & ; another 3,468 MLD STP capacity is in progress.

Further, 809 storm water drainage projects worth Rs 3,016 crore have been grounded of which 691 projects worth Rs 1,426 crore have been completed, with 971 kms or drains constructed & ; 2,959 water-logging points eliminated preventing urban flooding. (Sector wise projects grounded &; completed in attached at **(Annexure-V)**. In order to fast track, the implementation of AMRUT, the progress is periodically reviewed and monitored through regular video conferences, webinars, workshops etc. by MoH&;UA with the States/UTs &; their ULBs. There is a dedicated AMRUT portal for tracking the progress of projects. States are required to update data on the portal on regular basis. Mission Directorate is also providing hand holding support to the States and their cities from time to time to resolve issues and eliminate bottlenecks for timely completion of projects. This has also resulted in capacity building of States/UTBs and thus achieved significant progress under the AMRUT Scheme.

For assessment and monitoring of work done in the States, dedicated Independent Review and Monitoring Agencies (IRMA) have been setup in all the Mission States/ UTs.

Similarly, the IRMA will do a half-yearly appraisal of reform implementation in the States. These is APEX committee at MoHUA which periodically conduct meetings to review/approve the projects under AMRUT and AMRUT 2.0 mission.

AMRUT 2.0:

To carry forward the momentum of AMRUT and saturate entire urban-scape having about 4,902 statutory towns of the country, to ensure universal coverage of water supply & make 4,902 statutory towns of the country, to ensure universal coverage of water supply & make cities ‘water secure’ AMRUT 2.0 was launched on 1st October 2021 for a period of five years. On-going AMRUT Mission-1.0 has been subsumed under AMRUT 2.0 So far, SWAPs have been approved by MoHUA comprising 6,527 projects worth Rs 1,29,636 crore (incl. O&M). These included water supply projects including water conservation, sewerage & septage management projects including recycle/reuse, water bodies rejuvenation & development of parks & green spaces. So far, 2,996 water supply projects worth Rs 87,896 crore, 447 Sewerage/Septage Management projects worth Rs37,636 crore & 982 Parks/ Green Spaces Development projects worth Rs 439 crore have been approved by Apex Committee at MOH&UA. 148 lakh new tap connections and 33.42 lakh new sewer connections are planned to be provided through these projects. Further, 8,435 MLD water treatment plant capacity & 2,795 MLD sewage treatment plant capacity is proposed to be added/augmented. To give impetus to ‘Amrit Sarovar’, under Azadi ka Amrit Mahotsav and to connect citizens to connect 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, 2,102 water bodies rejuvenation projects worth Rs 3,664 crore have been approved covering area of 205 sq. km.

AMRUT 2.0 is a paperless Mission and monitored on a robust technology-based monitoring & evaluation platform. The achievement of Mission objectives will be monitored through an online module. This module will directly be the precursor for availing funds. The progress reported on portal will be randomly verified through citizen/third party feedback, implementing agencies and community stakeholders who are required to access the portal and upload the progress and feedback.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.5

Need for effective strategies to deal with the climate change implications on water balance

The Committee observe that changing global climate with rise in temperature has serious implications on water availability due to associated spurt in natural calamities such as floods and droughts. Combined with rising population and urbanization, extreme climate events have already started having serious repercussion on water balance in the form of excessive rainfall within a short span of time causing floods and increasing runoff without enough water getting seeped into the ground causing fall in the water table beneath ground. Long spells of summer with rising temperature, on the other hand, leaves the land parched without enough water storage in the face of disappearing water bodies due to human encroachments. Another big threat looming large is the problem of melting Himalayan glaciers causing havoc in the form of heavy floods and landslides. In the face of such challenges, the Committee are apprehensive that the measures taken so far to deal with this problem may not be adequate. They find that it took almost 9 years for the Ministry to set up full fledged National Water Mission in 2020, which is still not well equipped with adequate funds and autonomy. The Mission still needs expertise as consultants and advisors are yet to be appointed in the NWM. Further, adequate studies are required to be undertaken to assess the impact of climate change on the total water availability to enable formulation of appropriate policies to handle their effects. The Committee would, therefore, recommend the Government to give required financial powers and autonomy to the Mission to enable it to fulfill their objective under National Action Plan on Climate Change. They also desire that NWM should be entrusted with the task of taking all the Ministries/Departments, State Governments on board for devising strategies for water management in a cohesive manner. They also recommend the Department to initiate a study to evaluate the role of climate change in aggravating the water scarcity and required changes in strategies to reduce their effects.

REPLY OF THE GOVERNMENT

National Action Plan on Climate Change (NAPCC) was approved by the Government of India and released by the Hon'ble Prime Minister of India on 30th June,2008. NAPCC laid down the principles and identified the approaches to be adopted to meet the challenges of the impact of climate change through institutionalization of 8 national missions, one of which was the "National

Water Mission" Functioning of National Water Mission has picked after the appointment of a full time Additional Secretary level Mission Director in 2019. Presently, apart from the Mission Director, Technical Advisor and officers have been posted including 5 Consultants/ Young Professionals and 2 Senior Software Developers have been appointed on contract basis.These human resources have contributed to the greater pace of activities. Further, process for engagement of more Consultants & ; Young Professionals is also going on.

It is also informed that the Year-on-Year (YoY) budget of NWM has been increasing consistently commensurate to the rise in activities taken up by this Mission. A task force has been constituted to prepare the framework for implementation of the Bureau of Water Use Efficiency (BWUE). The task force will prepare a Vision Document with timelines for short & ; long term goals to fulfil the mandate of BWUE. In respect of recommendation to initiate a study to evaluate the role of climate change in aggravating the water scarcity, Research & Development (R&D) Division under the NWM has undertaken various studies to gauge the impact of the climate change on water. The status of research schemes on climate change funded under Research & ; Development Scheme of DoWR, RD & GR is at **Annexure-VI**.

In order to bring focus on water management with active participation of concerned Central Ministries/Departments and State Governments, National Water Mission has organized the 1st ever All India Annual State Ministers' Conference on Water at Bhopal on 5-6th January, 2023. The primary objective of the workshop was to seek and strengthen the partnership with the States and stakeholder Ministries and to achieve a shared vision in order to manage water as a precious resource in an integrated manner with holistic and inter disciplinary approach to water related issues. A total of 300+ delegates from 33 States/UTs participated in the Conference and 22 key recommendations emerged out of the conference. A task- force has been constituted under the chairpersonship of Special Secretary, DoWR, RD & GR for formulating an integrated and comprehensive strategy for implementation of the recommendations made during the above said conference.

Further, for climate change adaptation the Government is promoting augmentation of water resources through effective rainwater harvesting, strengthening/ rehabilitating the existing dams and taking demand side management like use of micro-irrigation techniques, mulching, crop rotation/ diversification etc. In addition, the Government has also passed Dam Safety Act in the Parliament, which shall help in ensuring utility and safety of reservoirs in view of extreme climatic conditions. Further, the NWM has initiated some of the important steps/strategies to help address the adverse effects of climate change on water resources and to promote sustainable water management. The other key initiatives undertaken by the NWM in the recent years are as follows:

(i) "Jal Shakti Abhiyan: Catch the Rain" c aign - Government of India is implementing Jal Shakti Abhiyan (JSA) in the country. First JSA was launched in 2019 in water stressed blocks of 256 districts which continued during the year 2021 (across entire country both rural and urban areas) also with the primary aim to effectively harvest the monsoon rainfall through creation of artificial recharge structures, watershed management, recharge and reuse structures, intensive afforestation and awareness generation etc. JSA for the year 2021 and 2022 were launched by Hon'ble Prime Minister and Hon'ble President on 22.03.2021 and 29.03.2022 respectively. Further, the JSA for the year 2023 has been launched by hon'ble President of India on 04th Mar

2023 with the theme ;Source Sustainability for Drinking Water The Abhiyan this year will have special focus on 150 Water Stressed Districts (WSDs) of the country, identified by Jal Jeevan Mission.

(ii) Setting up of Bureau of Water Use Efficiency (BWUE)To achieve the target of one of the goals of NWM i.e. improvement in WUE by 20%, a dedicated organization has been set up as Bureau of Water use Efficiency (BWUE) under National Water Mission during October, 2022 to work on mission mode. BWUE will act as a facilitator for promotion of improving water use efficiency across various sectors namely irrigation, drinking water supply, power generation, industries, etc. in the country, for promotion, regulation and control of efficient use of water in irrigation, industrial and domestic sectors.

(iii) Water Talks: A monthly 'WATER TALK' lecture series is an important activity undertaken by NWM with the aim to stimulate awareness, thinking, build capacities of stakeholders and encourage people to become active participants sustains life by saving water on earth. 'WATER TALK', the lecture series, wherein leading water experts are invited to present inspiring and broadening perspectives on current water issues in the country. NWM has organized 'Water-Talks' on the range of topics dominating the sector. So far, 46 Water Talks have been held.

(iv) Dialogue series with District Collectors/ District Magistrates/Commissioners A weekly dialogue series on "Catch the Rain" has also been started in which Collectors/District Magistrates/ Commissioners and water activists have been invited to share their commendable work in their districts to address water related issues. So far, 38 such webinars have been organized.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 6

Excessive use of Ground water in irrigation

The Committee notice that over extraction of Ground water for meeting irrigation needs is prevalent mainly in Northern States, particularly in Punjab, Haryana and Rajasthan which are extracting 97%, 90% and 86% of Ground water respectively for this purpose. Other States such as Karnataka, Tamil Nadu and Uttar Pradesh are also significant users of Ground water for irrigation as they are using approximately 89%, 92% and 90% respectively of their total Ground water extraction for agricultural purposes. They further note that percentage share of Ground water extraction for irrigation with respect to total Ground water extraction for all uses in 11 major States of Punjab, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Tamil Nadu, Karnataka, Andhra Pradesh and Telengana varies between 80% to 90% or more than 90%. Main reason for such over exploitation of Ground water is due to wide cultivation of water guzzler paddy and sugarcane crops which are heavily incentivized by way of highly subsidized pricing of water, power, fertilizers on one hand and assured markets for their outputs through procurement of rice in Punjab-Haryana belt and of sugarcane by sugar factories at Government determined prices. However, this has aggravated the problem and encouraged

inefficient agricultural practices with low water use efficiency in rice cultivation which is 1000 mm to 1200 mm in India as against 550 mm to 650 mm in Asia where China, India, Indonesia, Bangladesh and Vietnam are major producers. Similarly in case of Sugarcane, it is 1800 mm to 2400 mm in India *vis a vis* 1059 mm to 1640 mm in Brazil which is a major producer of sugarcane crop. While there is an urgent need to address the overuse of Ground water in agriculture, the Committee find that prevalence of a large number of Ground water abstraction structures of around 20.46 million in agriculture of which 87.86% of wells (as per minor irrigation census of 2013-14) are owned by marginal, small and semi-medium farmers, primarily growing food for their own sustenance, gives little scope for outright stopping of Ground water usein agriculture. However, they note that in accordance with CGWA Guidelines, Punjab and Haryana have come up with innovative schemes such as 'Pani Bachao Paisa Kamao' and 'Jal Hi Jeevan/Mera Pani Meri Virasat' etc. respectively to motivate farmers towards water conservation. The Committee further notice that DA&FW has taken a litany of measures to reduce Ground water consumption in agriculture, such as:PMKSY-Per Drop More Crop (PDMC), Mission for Integrated Development of Horticulture (MIDH), Cultivation of pulses and coarse cereals under National Food Security Mission (NFSM) and oilseeds under National Mission on Oilseeds and Oil Palm (NMOOP),latest crop production and protection techniques like System of Rice Intensification (SRI), Direct Seeded Rice (DSR), line Transplanting, stress/drought tolerant/ climate resilient varieties, bio-fortified varieties, Integrated Nutrient Management (INM),Integrated Pest Management (IPM) techniques, Crop Diversification Programme (CDP) is being implemented in original Green Revolution States of Punjab, Haryana and Western Uttar Pradesh to diversify cropping pattern away from water guzzling paddy However, the progress made in terms of bringing down the Ground water use is minimal. While accepting Ministry's submission that participation, involving consultations with farmers and other stakeholders through a bottom up approach instead of 'Command and Control Strategy' will be a better strategy in dealing with the problem of Ground water depletion in agriculture, the Committee do not concur with the Ministry's contention that it is only the responsibility of concerned State Departments (Agriculture/ Irrigation/ Water Resources) to undertake suitable demand and supply side measures to ensure sustainability of Ground water sources. Keeping in view the pivotal role of the Central Ministry and the need for a congruent approach in policy measures, the Committee recommend that a Central body (with representation from concerned Ministries and State Governments), as recommended by them earlier, should be entrusted with the responsibility to implement measures in a cohesive manner to wean away farmers from water intensive crops in areas with severe Ground water shortage and incentivize them in areas which have enough Ground water recharge with adequate annual replenishment to ensure sustainable use of Ground water. Further mass sensitisation at local level needs to be encouraged to ensure active community participation in decision making process at each level for better implementation of agricultural practices in accordance with water conservation measures. The Committee therefore, recommend, devising integrated measures for adoption in agriculture, to reduce dependence on Ground water in agriculture.

REPLY OF THE GOVERNMENT

A committee in this regard under the chairmanship of Secretary (WR) comprising stake-holder Ministries/Departments/Organisations and States is under formulation Atal Bhujal Yojana, a Central Sector Scheme with an outlay of Rs 6,000 crore (being implemented in certain water stressed areas of 7 States viz. Uttar Pradesh, Haryana, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh and Karnataka) is targeted at sustainable ground water management, mainly through strengthening of the capacity of States to manage their ground water on the one hand, while improving ground water management with community participation through convergence of various on-going schemes on the other. The scheme lays emphasis on reducing demand of ground water for various uses through appropriate means. Through wide-ranging awareness creation and capacity building initiatives, it also envisages to bring about behavioural changes in the long run towards more responsible use of ground water among various stakeholders.

Under Atal Bhujal Yojana, adoption of practices for efficient water use is one of 5 Disbursement Linked Indicators used to measure the progress made. This indicator incentivizes demand side measures that reduce water consumption. The fund allocated under this incentive is around 31% (Rs. 1,840 crore) of the total cost of the scheme. Micro-irrigation practices such as drip/sprinkler systems, crop diversification from high water consuming crops to low water consuming crops, piped distribution network and other water saving techniques in irrigation are encouraged in the scheme. A target to bring 4.5 lakh hectares of area under efficient water use practices has been set to be achieved by 2025 under this scheme. Atal Bhujal Yojana lays emphasis on behavioural change for taking up demand side interventions.

Further, groundwater regulation guidelines dated 24 Sep 2020 (with pan India applicability) advises States/UTs for crop rotation/ diversification, review of free/subsidized electricity policy and also to bring suitable water pricing policy to reduce over-use of groundwater in agriculture sector.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.7

Need for shift in focus from 'land productivity' to 'water productivity'

The Committee find that while there is an acceptance for the need to reduce water consumption in agriculture by discouraging unsuitable crops and change in cropping pattern, the commitment towards the same goal is yet not firm as reflected by continued cultivation of water intensive crops in water scarce areas. Therefore, they are of the view that there is an urgent need for a shift in policy stance encompassing changes, ranging from suitable cropping pattern, restricting free electricity, modification of incentive structure for crop production, spreading awareness

among farmers to reduce use of Ground water in irrigation and subsidizing micro irrigation methods etc. to realize the objective of judicious use of water resource which is becoming scarce day by day. The Committee, would therefore, recommendthe Ministry of Jal Shakti to work out a policy to ensure judicious water use not only to reduce dependence on Ground water but to reduce its footprint in agriculture. In this regard, the Committee would like to emphasise that in addition to land productivity, water productivity i.e. production per cubic meter of water should be a major criteria in decisions relating to crop production. They therefore recommend the DoWR, RD & GR to engage withthe DA&FW and emphasise this point to enable formulation of appropriate policy decisions relating to crop production in the country.

REPLY OF THE GOVERNMENT

Department of Agriculture & Farmers Welfare (DA&FW) is implementing National Food Security Mission (NFSM) in the country to enhance production & productivity of food grains. The following initiatives have been taken under NFSM to promote less water requiring crops and judicious use of water Fund allocation for water intensive crop viz., rice, sugarcane and wheat has been restricted to less than 10% of the total allocation whereas allocation towards rain fed crops viz., Pulses and Nutri – cereals has been kept at 85%. Demonstrations based on improved water saving cropping system such as System of Rice Intensification (SRI), Direct Seeded Rice (DSR), climate resilient varieties are already being promoted under NFSM.

Further, DA&FW is implementing Per Drop More Crop (PDMC) Scheme which is operational from 2015-16 in the Country. PDMC focuses on water use efficiency at farm level through micro irrigation, mainly drip and sprinkler irrigation system. In addition, under Atal Bhujal Yojana, the focus is on demand side management of the ground water and accordingly water saving interventions such as use of micro irrigation (drip/sprinkler system), shifting of cropping pattern from high water intensive crops to low water intensive crops, use of pipe in irrigation to reduce losses, mulching etc. are being encouraged and incentivised. The National level Steering Committee headed by Secretary, DoWR, RD & GR for reviewing implementation of Atal Bhujal Yojana has different Central Line Ministries as members including D/o Agriculture & FW and efforts are being made to converge the activities of various Departments in order to utilize water efficiently.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION No. 9

Opening the market for supply of drip irrigation machinery and need for further reduction in GST

The Committee notice that small and marginal farmers face a lot ofproblems such as need for high initial investment, lack of water storage, pumps and pipes, lack of awareness of the benefit and incentives of the micro-irrigation system, quality and after sales service of equipment, etc. in respect of installation of Drip and Sprinkler Irrigation system. The DA&FW has taken several

initiatives to address these problems which include:

Financial assistance @ 55% for small and marginal farmers and @ 45% for other farmers for installation of Drip and Sprinkler Irrigation systems

ii) 25% higher unit cost have been taken into calculation of subsidy for the North Eastern and Himalayan States and 15% higher for States with low penetration of Micro Irrigation for larger adoption of systems by the farmers

iii) Setting up of a dedicated Micro Irrigation Fund (MIF) with NABARD with objective to facilitate the States in mobilising the resources

iv) Micro level water storage or water conservation/management activities under PDMC scheme to ensure water supply

v) Publicity campaigns through press, print and digital media, publication of leaflets/booklets, organization of workshops, exhibitions, farmer fairs, information on State/Government of India web portals

vi Imparting of training to farmers by ICAR

vii Supply of only BIS marked systems/components with free after sales service to the beneficiary for a period of at least three years from the date of installation of the system with provision of penalty including de- registration with the approval of SLSC are provided.

Further the Committee note that GST rate on Micro irrigation equipments currently stands at 12%. While applauding the steps taken by the DA&FW to incentivize micro irrigation techniques, the Committee feel that existing system of supply of drip irrigation equipments by only registered companies have limited the access to good quality equipments, thereby discouraging farmers to adopt drip irrigation. They are of the opinion that micro irrigation techniques can be widely practiced if all companies engaged in manufacturing drip irrigation equipments are made eligible and given subsidy to supply equipments, as it would infuse competitive spirit and encourage supply of better equipments to farmers. They, therefore, recommend the DoWR, RD & GR to impress upon the Department of Agriculture & Farmers' Welfare, the need for opening the market for supply of subsidized micro irrigation equipments in order to propagate micro irrigation techniques which would help save water. Further, they would also urge the Department to take up the matter of further reducing GST levels on drip and sprinkler equipments with the Ministry of Agriculture & Farmers' Welfare as a further incentive to increase micro irrigation.

REPLY BY THE GOVERNMENT

DA&FW is implementing Per Drop More Crop Scheme. As per the scheme Guidelines, only BIS marked equipment is allowed for availing subsidy so that farmers get quality equipment. Further, farmers are free to choose any equipment supplier which is empanelled by State Govt. and the empanelment of equipment suppliers is open round the year to facilitate the farmers in availing competitive services. Besides, GST on micro-irrigation (MI) equipment was 18% earlier. With constant follow up and persuasion by Ministry of Agriculture & Farmers Welfare, this has been brought down to 12% by GST Council.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 10

Power supply in agriculture

The Committee note that as per the provisions of Electricity Act 2003, respective State Electricity Regulatory Commissions (SERCs) determine the electricity tariff for retail supply of electricity to end consumers including Agricultural consumers. Section 65 of the Electricity Act, 2003 provides that State Government can provide subsidy to any class of consumers in the tariff determined by the SERCs. States like Punjab, Haryana, Telangana and Tamil Nadu offer completely free power, while other States have provision for collection of token charges. They further observe that while accepting the fact that subsidized electricity provided by State Governments has led to the over-extraction of Ground water as farmers use it extensively to run pumps that draw up Ground water and restricting free electricity to the farmers will certainly reduce the misuse of Ground water, both the DoWR, RD & GR and DA &FW have expressed inability to persuade States to reduce/stop subsidy for power given in agriculture as Electricity is a concurrent subject and SERCs determine the electricity tariff for retail supply of electricity to end consumers under the extant provisions of Electricity Act, 2003. The Committee however note that Punjab introduced a scheme by way of which farmers were refunded money if they consumed less electricity. They further note that under Deendayal Upadhyay Gram Jyoti Yojana of Ministry of Power, separate component of agriculture and non-agriculture feeders have been created for facilitating judicious rostering of supply to agriculture & non- agriculture consumers in rural areas. However Ground water continues to be used excessively for catering to irrigation demands. Therefore, the Committee are of the view that use of electric pumps need to be further discouraged by way of devising such measures as introduction of pre-paid cards for power supply, restricting it for a few hours in the day, etc. They, therefore, recommend DoWR, RD & GR to take initiative by urging both the Ministry of Power and DA & FW along with State Governments to take steps on the suggested lines and apprise them about the details of action taken in this regard.

REPLY BY THE GOVERNMENT

Ministry of Power vide Resolution dated 28th January 2016 notified the Tariff Policy which stipulates that the Central Electricity Regulatory Commission and State Regulatory Commissions (SERCs) are to be guided by the provisions of the said Tariff Policy while discharging their functions including framing the regulations. Para 8.3 of the Tariff Policy clearly bring out that rational and economic pricing of electricity can be one of the major tools for energy conservation and sustainable use of groundwater resources. It states that while fixing tariff for agricultural use, the imperatives of the need of using ground water resources in a sustainable manner would also need to be kept in mind in addition to the average cost of supply. Tariff for agricultural use may be set at different levels for different parts of a State depending on the condition of the ground water table to prevent excessive depletion of ground water. It further states that a higher level of subsidy could be considered to support poorer farmers of the region where adverse ground water table

condition requires larger quantity of electricity for irrigation purposes subject to suitable restrictions to ensure maintenance of ground water levels and sustainable groundwater usage. It clearly states that extent of subsidy for different categories of consumers can be decided by the State Government keeping in view various relevant aspects, but provision of free electricity is not desirable as it encourages wasteful consumption of electricity. Besides in most cases, lowering of water table in turn creating avoidable problem of water shortage for irrigation and drinking water for later generations. The subsidized rates of electricity should be permitted only up to a pre-identified level of consumption beyond which tariffs reflecting efficient cost of service should be charged from consumers. It suggests that if the State Government wish to reimburse part of cost of electricity to poor category of consumers the amount can be paid in cash or any other suitable way. Use of prepaid meters has also been suggested which can facilitate the transfer of subsidy to poor consumers. This Department has issued the groundwater guidelines dated 24 Sep 2020 with pan India applicability which advises States to review the policy to free/subsidised electricity to farmers Matter is being pursued further with States/UTs to implement the provisions of Tariff Policy 2016 for better groundwater management for benefits to all.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.11

Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)

The Committee note that with a view to increase farmers' income, provide them with reliable source for irrigation and de-dieselise the farm sector, Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM- KUSUM) Scheme was launched. However, solar pumps under the scheme are preferably being provided in areas where micro irrigation is practiced. While encouraging solar pumps for micro irrigation in water scarce areas will help economic use of water, the Committee think that this policy may not be appropriate for areas with high water table since installation of solar pumps will facilitate extraction of water and use for cultivation of water intensive crops, which would, in turn, help in mitigating the intensity of floods. Therefore, in their view, the existing policy of encouraging installation of solar pumps only in areas practicing micro irrigation needs to be redesigned to promote use of solar pumps for drawal of water in water surplus areas as well without necessarily linking it to installation of micro irrigation methods. The Committee, therefore, recommend the DoWR, RD & GR to impress upon the need for revisiting the policy in this respect in consultation with the DA & FW and the Ministry of New and Renewable Energy and incentivize micro irrigation only in water stressed areas and delink use of solar pumps. They would like to be apprised of the action taken in this regard.

REPLY BY THE GOVERNMENT

The primary objective of Component-B of PM KUSUM, under which stand- alone solar pumps are installed, is to de-dieselize agriculture sector by replacing existing diesel pumps with solar pumps. Farmers are already using diesel pumps of high capacity in arid/semi-arid areas. Diesel pumps not

only result in increased air pollution but are also one of the key reasons of over exploitation of the water resources. Monitoring and regulation of water resources is governed by the Central Ground Water Board (CGWB). As per the scheme, new pumps are not going to be installed in dark/ over-exploited areas notified by CGWB. In such areas only existing standalone diesel pumps, can be converted into standalone solar pumps provided they use micro irrigation techniques to save water. Under PM KUSUM Component B, individual farmers will be supported to install standalone solar agriculture pumps of capacity up to 7.5 HP for replacement of existing diesel agriculture pumps / irrigation systems in off-grid areas, where grid supply is not available. Installation of new pumps shall also be permitted under this scheme except in dark zone areas. New solar agriculture pumps would not be covered under this component in dark zones/black zones. However, existing standalone diesel pumps, can be converted into standalone solar pumps in these areas provided they use micro irrigation techniques to save water. The size of pump would be scientifically selected on the basis of water table in the area, land covered and quantity of water required for irrigation.

The criteria of prioritizing installation of solar pumps in micro irrigation covered area is to ensure that over drawal of water doesn't take place in water stressed areas. This condition of necessitating micro irrigation with solar pumps exists only in the dark zone/over- exploited areas to avoid rapid depletion of already stressed aquifers. However, in other areas, there is no necessary requirement of micro irrigation. The solar pumps are promoted in water surplus areas and farmers are free to install solar pumps without micro irrigation systems.

Further, various initiatives are being taken up for linking of solar water pumps under PM- KUSUM with MI under Per Drop More Crop for ensuring enhanced water use efficiency through micro irrigation system.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.12

Need for encouraging cultivation of crops in accordance with existing climatic conditions

The Committee observe the NABARD's finding that growing paddy and sugarcane is still preferred in States with Ground water scarcity which consumes 60 per cent of irrigation water in the country since these are lucrative crops due to high Minimum Support Price given by the Government. The policy of encouraging production of these crops till now, though, assured food security post Green Revolution, caused serious depletion of Ground water reserve as it continued despite fulfillment of objectives of Green Revolution. Now, the grim water situation in the States of Punjab, Haryana and Western Uttar Pradesh has urgently necessitated shifting of crops from high water intensive crops to low water intensive crops. Though several steps such as introduction of Direct Seeded Rice (DSR) and System of Rice Intensification (SRI) for judicious use of water in paddy cultivation, alternative crops demonstrations in an area of 5,01,257 hectare over the years from 2013-14 to 2019-20 and adoption of schemes like *Mera Pani Meri Virasat* in

Haryana, etc. have been taken to diversify crop production and cultivation of alternative crops with low water intake, farmers are yet to be properly discouraged from growing these crops as they continue to enjoy high MSP on these crops. The Committee would, therefore recommend the DoWR, RD & GR to engage more actively with the DA&FW and State Governments for taking appropriate steps for growing less water consuming crops especially in the Northern States where depleting Ground water has assumed alarming proportions.

REPLY OF THE GOVERNMENT

Department of Agriculture & Farmers Welfare (DA&FW) is implementing the Crop Diversification Programme (CDP) under Rashtriya Krishi Vikas Yojana (RKVY) scheme in the original green revolution States Haryana, Punjab & ; Western Uttar Pradesh since 2013-14 to divert the area of water intensive paddy crop to alternative crops, which require less water such as pulses, oilseeds, coarse cereals, nutri-cereals, cotton etc. The aim of the programme is to demonstrate and promote improved production technologies of alternate crops for diversion of paddy cultivation and to restore soil fertility through cultivation of leguminous crops that generate heavy biomass and consume lesser nutrients.

Under CDP, assistance is given for alternative crops demonstration, farm mechanization and value addition, site specific activities and contingency for awareness and capacity building. The allocation of Rs. 85 crore as Central Share for Original Green Revolution States has been made for implementation of the programme during 2023-24.

Besides, this Department is taking various other initiatives viz. Mission for Integrated Development of Horticulture (MIDH), National Food Security Mission (NFSM), Millets (Shree Anna) promotion activities, organic farming, promotion, etc with view to promote crop diversification.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.13

Ground water use in industries

The Committee notice that CGWA grants NOC/renews NOC for Ground water withdrawal for commercial purposes, after ensuring that recharge is done as per the quantity of Ground water drawn and stage of their development. Further, as per the direction of Hon'ble NGT *vide OA no. 176/2015* dated 11.09.2019, any industry drawing Ground water illegally is liable to pay Environmental Compensation to the respective State Pollution Control Boards. Also, CGWA, in their latest Guidelines issued in September 2020, has fixed Environmental compensation for Ground water withdrawal by industries, infrastructure units and mining projects without a valid NOC from appropriate authority. Environmental Compensation Rate (ECR_{GW}) has been based on the approved norms prescribed by CPCB. In addition, deterrent factor has also been introduced to compensate for the losses and environmental damages, based on the duration of illegal Ground water extraction. However, the Committee are surprised to note that a large number of industries are operating without taking the NOCs due to a lack of mandatory linkage between

the SPCBs/PCCs and CGWA, as pointed out by CAG. They further notice that though CGWA had imposed penalty of Rs. one lakh/industry under Section 15 of the Environment (Protection) Act 1986 for non-compliance of NOC conditions on 20 Industries, only 5 industries/companies have paid Environmental Compensation to CGWA/ District Magistrate. Also no compensation has been paid to projects using Ground water are issued Consent to establish and Consent to operate only after NOC is issued by CGWA. Further, vigilance capacity and inspections should be enhanced to ensure compliance with stipulated provisions which can act as an effective deterrent against misuse of Ground water. Keeping in view the fact that recycle and reuse of water is an essential CPCB/SPCBs as directed by NGT in their 11.9.2019 order. They also find that out of the 21 packaged drinking water units, located in 6 States, which were studied by CPCB, only 4 have obtained NOC from CGWA for abstraction of Ground water resources for manufacturing package drinking water. Further, only 10 out of 21 units have obtained Consent under Water (Prevention and Control of Pollution) Act, 1974 from respective State Pollution Control Boards. While the regulations are in place to ensure that Ground water is not extracted without adequate measures for recharge, the lack of effective implementation and supervision has made the regulations toothless. The Committee are, therefore, of the view that to stop unrestricted use of Ground water for commercial uses, strict enforcement of the Regulations/Guidelines is required along with stringent vigil and appropriate penalties. They, therefore, recommend the CGWA and CPCB to work in unison so that aspect in bringing down the water use, the Committee would like to be apprised of the details of total quantity of recycled/reused water used by different categories of industries in the country along with total number of industries flouting these norms and measures taken to remedy the situation.

REPLY BY THE GOVERNMENT

Central Ground Water Authority (CGWA) was constituted under sub- section (3) of section 3 of the Environment (Protection) Act, 1986 for the purposes of regulation and control of ground water management and development and has been regulating ground water development and management by way of issuing “No Objection certificate (NOC)” for ground water extraction to industries or infrastructure projects or mining projects etc. and framed guidelines in this connection from time to time in 19 States &UTs, where ground water development is not being regulated by the State Government,UT administration concerned.

Ministry of Jal Shakti, CGWA notification dated 20.09.2020 has empowered DistrictCollectors/Deputy Commissioners (DCs) /District Magistrates (DMs) to take enforcement measures like sealing of unauthorized ground water abstraction structures, disconnection of electricity, launching of prosecution against those violating the No Objection Certificate conditions and taking action for imposition of environmental compensation.

It is further submitted that some of the SPCBs/PCCs are issuing Consent to Establishment/Operate to the industry after verifying the NOC issued by CGWA. Also, some SPCBs are issuing consent to establishment / operate with a condition to obtain NOC from CGWA/SGWA. Further, CPCB has intimated that they are not maintaining the details of total quantity of effluent generated / treated / recycled and reused by different categories of industries.

However, CPCB monitors the compliance of 17 categories highly polluting industries, common facilities etc., on real time basis through Online Continuous Effluent Monitoring Systems (OCEMS) and in case of exceedance to standards, SMS alerts are generated and sent to industries and SPCBs/PCCs for appropriate follow-up action for the compliance of discharge norms.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.14

Collection of data on Ground water pollution and contamination

The Committee notice that Ground water contamination occurs through both natural and anthropogenic sources. Contamination through various sources such as salinity, fluoride, nitrate, arsenic, iron, etc. have been reported from a large number of partly affected districts in Assam, Bihar, Karanataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Odisha and Uttar Pradesh with other remaining States also having a few affected districts. Central Ground Water Board (CGWB) is monitoring Ground water levels through a network of 22,730 observation wells, four times a year and the information is disseminated to the concerned State agencies in the form of reports and maps. Ground water quality is also monitored by CGWB at regional level once every year through their network of about 15000 observation wells located all over the country. Further Ground water management studies, Ground water exploration, Industrial/ pollution cluster studies, etc. is also undertaken to find out the extent of contamination. However, they note that CPCB along with SPCBs and PCCs, also monitors Ground water quality at 1231 locations throughout the country under National Water Quality Monitoring Programme (NWMP) except Andaman & Nicobar Islands, Arunachal Pradesh and Sikkim on a half yearly frequency. Under NWMP, Ground water quality monitoring stations are selected considering the criteria such as Drinking water sources located in sanitary conditions and prone to sewage contamination, preferably in shallow aquifer in the vicinity of septic tanks; sewage treatment plant; oxidation pond, cess pools, garbage dump sites, tube-wells, hand pumps or dug-wells located in industrial areas prone to contamination and are in use as well as Ground water sources in residential areas. The Committee are not able to comprehend the rationale for collection of data on Ground water pollution and contamination

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REPLY BY THE GOVERNMENT

National Water Informatics Centre (NWIC) has developed the Water Information Management System (WIMS), which is an online database for water related data including groundwater quality data. There is provision in WIMS for entering ground water quality data of State and Central Agencies including CPCB and CGWB. The WIMS application has been recently rolled out for CGWB. CGWB is updating the data in WIMS portal. This integrated database will be available for use by all the concerned agencies. India-WRIS is a platform to share data in public domain, which is developed by NWIC.Letter from CGWB to CPCB and Department of Drinking Water & Sanitation has been sent for integrating the groundwater quality data.

CPCB under National Water Quality Programme (NWMP) is monitoring groundwater quality with a limited number of 1,235 locations, based on the criteria stipulated for selection of locations to regulate contamination due to industrial discharges. The generated data from the year 2012 to 2021 is shared with NWIC for integration on India-WRIS portal, developed by MoJS. Further, a common format is being developed by the CGWB and shall be shared with CPCB/States/NWIC for convergence and ease of uploading in the NWIC server for use by various stake-holders.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.15

Early Implementation of water supply schemes in areas affected with Ground water contamination

Early Implementation of water supply schemes in areas affected with Ground water contamination .They further note that many cities and metros such as Agartala, Ahmedabad,

Bhubaneshwar, Guwahati, Hyderabad, Jaipur, Delhi, Lucknow, Nagpur, Patna, Ranchi, Shillong, Srinagar, etc. have reported high amount of geogenic contamination while Ahmedabad, Bengaluru, Chennai, Lucknow, Nagpur, Delhi, Dehradun, Guwahati, Hyderabad, Jaipur, Kolkata, Patna, Panaji, Pondicherry and Trivandrum suffer from anthropogenic contamination of Ground water. Having noted that contamination problem is almost everywhere in the country with as many as 249 districts in 18 States affected with high salinity problem, 370 districts in 23 States having Fluoride contamination beyond permissible limit, 423 districts in 23 States suffering from Nitrate , 152 districts in 21 States having Arsenic problem, 341 districts in 27 States having Iron in excess quantity, 92 districts in 14 States having Lead, 24 districts in 9 States having Cadmium and 29 districts in 10 States reporting Chromium in their Ground water, the Committee believe that measures taken by the Government so far have not been able to producedesired results. The anthropogenic causes, such as excessive use of fertilizers and pesticides and emission of effluents from industries have contributed in aggravating the problem to a large extent. Punjab has got the sobriquet of 'Cancer capital of India' due to excessive use of chemical fertilizer and pesticides. The Committee, particularly note the high level of uranium found in few pockets of Rajasthan and Bihar where Ground water is used for drinking purposes. They observe that under Jal Jeevan Mission (JJM) 10 percent weightage has been given to the population residing in habitations affected by chemical contaminants while allocating the funds to States/UTs. Keeping in view the widespread problem of Ground water contamination in the country which is an important source of drinking water and thus posing health hazard, the Committee desire that alternative arrangements should be made to provide safe drinking water in areas affected with contamination. The Committee recommend the CGWB to urge both the Department of Drinking water and Sanitation and State Governments to take urgent steps for utilising funds under JJM in all the areas affected with chemical/metals/ions/radioactive elements/organic contaminants. They would like to be apprised of the details of such areas, (State wise) and allocation of funds under JJM in such areas along with the water supply schemes implemented /proposed to be implemented for provision of safe drinking water.

REPLY BY THE GOVERNMENT

Government of India is implementing Jal Jeevan Mission (JJM) – Har Ghar Jal, since August, 2019, in partnership with States, to make provision of potable tap water supply in adequate quantity, of prescribed quality and on regular &long- term basis to every rural households.

In 2019-20, a sum of Rs. 10,000.66 crore was allocated for the mission and the entire amount was utilized. Similarly, in 2020-21, Rs. 11,000 crore was allocated and utilized. In 2021-22, out of allocation of Rs. 45,011 crore, 40,125.64 crore has been utilized for implementation of the mission. In 2022-23, an amount of Rs.55,000 crore was allocated and Rs. 54,839.79 crore was utilized. Further, in 2023-24 an amount of Rs. 70,000 crore has been allocated for implementation of JJM. Details are at **Annexure-VII.**

At the time of announcement of JJM on 15th August 2019, out of total 18.93 crore rural households, 3.23 crore rural households (17%) of the country had tap water connections. Since then, around 8.61 crore (44%) families living in rural areas have been provided with tap water

connections in their homes. Now, out of total 19.44 crore rural households, around 11.84 crore (60.9%) rural families of the country have assured potable tap water supply in their homes, improving their quality of life and enhancing 'ease of living'. Details are at **Annexure-VIII**.

Providing potable drinking water to quality-affected habitations is one of the priorities under Jal Jeevan Mission. States/UTs have been advised to plan and implement piped water supply schemes of bulk water transfer based on safe water sources such as surface water sources or alternative safe ground water sources for the villages with water quality issues. All States/UTs have been advised to ensure expeditious implementation of piped water supply projects to provide potable tap water to every household in all quality-affected habitations.

As reported by States, the number of habitations having water quality issues in drinking water sources during last four years and current year is as under:

Year	Number of affected habitations
As on 01.04.2019	57,539
As on 01.04.2020	54,166
As on 01.04.2021	30,704
As on 01.04.2022	23,711
As on 01.04.2023	19,915
As on 27.04.2023	19,613

As reported by the States/ UTs, as on 27.04.2023, 19,613 rural habitations are quality-affected in the country. Contaminant-wise number of these habitations is as follows:-

S.No.	Major Contaminants	Habitations as on date
1	Fluoride*	428
2	Arsenic*	600
3	Iron	9,043
4	Salinity	8,973
5	Nitrate	483
6	HeavyMetal	86

All Arsenic and Fluoride affected habitations are covered with Community Water Purification Plants. State-wise number of quality- affected rural habitations is at **Annexure-IX**. As reported by States, as on date, provision of potable drinking water for cooking and drinking requirements has been made in all the 600 Arsenic- affected and 428 Fluoride-affected habitations.

Other measures taken by the Department under JJM to provide safe drinking water in quality affected rural habitations in the country:

a. In March 2017, to provide potable drinking water to identified 27,544 Arsenic/ Fluoride- affected habitations in the country, National Water Quality Sub- Mission(NWQSM) was launched as part of

National Rural Drinking Water Programme (NRDWP) which was subsequently subsumed under JJM. The NWQSM has been closed on 31st March, 2022. As reported by States, safe drinking water has become available in all these identified 27,544 Arsenic / Fluoride-affected habitations.

b. While allocating the funds to States/ UTs in a particular financial year, 10% weightage is given to the population residing in habitations affected by chemical contaminants as on 31st March of the preceding financial year. Besides, the coverage fund provided to the States/ UTs can be utilized for taking up schemes in water quality-affected areas on priority.

c. Under Jal Jeevan Missions, as per existing guidelines, Bureau of India Standards' BIS:10500 standards is to be adopted for ensuring safe drinking water supply. States/UTs have been advised to carry out testing of water quality on a periodic basis, i.e. once in a years for chemical and Physical parameters, to ensure that the water supplied to households is of prescribed quality.

d. In consultation with various stakeholders, 'Handbook on Drinking Water Treatment Technologies' has been released for guidance of officials of States/UTs presenting therein consolidated details about various technologies available in market for treating different type of contaminations to provide safe drinking water to rural households. This is only suggestive in nature and may serve as a field reference manual. The States may take up appropriate water treatment technology depending upon techno-economic feasibility.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.19

Strengthening of CPCB and SPCBs

The Committee observe that CPCB and SPCBs which were formed with an important mandate of monitoring and controlling water pollution under the Water (Prevention and Control of Pollution) Act, 1974 have inadequate manpower at their disposal to carry out their activities. The need for recruiting 207 more officials in CPCB was recommended by Indian Institute of Public Administration (IIPA) way back in 2016, however, still, the Board is struggling to execute their functions with lesser manpower. They notice that manpower in CPCB has not increased since last two decades despite manifold increase in work load, as submitted by CPCB. Similar situation is noticed in case of SPCBs as well, whereby monitoring activities under National Water Quality Monitoring (NWMP) / State Water Quality Monitoring (SWMP) / Real Time Water Quality Monitoring (RTWQM) and Ground Water (GW) have been outsourced in many States/UTs such as Andaman and Nicobar islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chandigarh, Chattisgarh, Daman & Diu and Dadra & Nagar Haveli, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Lakshadweep, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Puducherry, Punjab, Rajasthan, Sikkim and Tripura. Besides manpower, financial resource crunch is also a major problem faced by CPCB, crippling their power further to implement their programmes. Keeping in view the increasing deterioration of environment in general and water in particular, the Committee

recommend that immediate measures be taken to address the shortage of manpower and resource crunch in both CPCB and SPCB. The Ministry of Jal Shakti, being the nodal Ministry for management of water resource, the Committee recommend the Ministry to take initiative and urge the MoEF &CC to take necessary action for strengthening both CPCB and SPCBs at the earliest and furnish the details of measures taken within three months of presentation of this Report.

REPLY GIVEN BY THE GOVERNMENT

The staff strength of Central Pollution Control Board (CPCB) is 601 where Group A: 217, Group B: 177 and Group C:207 Nos. CPCB is in the process of recruiting 163 posts i.e. Group A – 62; Group B – 29; Group C - 72.

S.No.	Board/Committee	Number of Posts			
		Sanctioned	Filled	Vacant	Deemed Abolished
1.	CPCB	601	384	191	26
2	SPCBs/PCCs	9,438	5,096	4,342	-

The data in respect to CPCB is as on 30.01.2023, whereas the data provided for SPCBs/PCCs is based on the Performance Audit of SPCBs/ PCCs carried out by CPCB during 2019-20. The details of sanctioned &; Vacant position of SPCBs/ PCCs as per Performance Audit report is attached as **Annexure X**. MoEF&CC is being advised to direct States to fill up the existing vacancies on priority.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.20

National Aquifer Mapping and Management Programme (NAQUIM)

The Committee note that under the NAQUIM launched in 2012, CGWB had identified 24.8 lakh sq km area of the Country for aquifer mapping. However, up to December 2020, only 14.78 lakh sq km area was covered under Aquifer Mapping. Remaining area is envisaged to be covered by 2022-23. However, the Committee are apprehensive that the target of covering remaining area of 10.02 lakh sq. km will be accomplished within a span of next few years as the implementation of this programme has been very slow paced since it was launched in the year 2012. Although the factors causing initial delays are stated to have been addressed now successfully, the Committee, taking cognizance of CAG's apprehension too in this regard, concur that the Department should adopt a time bound approach to finish mapping of aquifers within the targeted period. The Committee would, therefore, recommend the Department to prepare a time bound strategy for completing aquifer mapping by the stipulated period so as to

initiate measures for their management at the earliest. They would also like to be apprised of the details of aquifers (which have been mapped so far) showing Ground water depletion and measures taken to arrest the depletion and recharge them, both at the Centre and State level.

REPLY GIVEN BY THE GOVERNMENT

As per the target, the entire 25.15 lakh sq km area identified for aquifer mapping (mappable area) in the country, has been covered. Aquifer mapping studies have revealed horizontal and vertical extents of aquifers in all the States and UTs. The mapped aquifers are grouped into 42 major categories comprising 14,000 aquifer units. Based on the properties of aquifers and existing status of ground water resources, management plans have been prepared. Disposition of aquifers, characteristics of aquifers and management plans are detailed in the reports. The reports are available on the website of CGWB. The findings are also being shared with the District Authorities.

Further, the findings of NAQUIM studies are being used for planning and implementation of ground water management interventions by the States and Central Govt Agencies through MGNREGA, PMKSY-WDC and relevant State Govt . schemes.

Some of the specific uses for recharge/groundwater management and extraction in water surplus areas undertaken by the CGWB are listed below.

Interventions as per recommendation based on NAQUIM studies	**State**
Artificial Recharge Interventions • Demonstrative Projects in Aspirational Districts • Artificial Recharge in convergence with MGNREGS • Construction of Bridge cum Bhandara	Andhra Pradesh, Maharashtra, Telangana, Haryana, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu
Rejuvenation of RajgirHotsprings	Bihar
Regulation of ground water draft in coastal areas to contain sea water ingress	Tamil Nadu
Arsenic safe well construction for supply of safe drinking water	Uttar Pradesh, West Bengal
New areas with ground water potential for irrigation under PMKSY-HKKP-GW	Assam, Arunachal Pradesh, Manipur, Mizoram, Nagaland, Tripura, Gujarat, Tamil Nadu, Uttar Pradesh, Uttarakhand
Water security Plan (WSP) preparation under Atal Bhujal Yojana	Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.21

Need for extending the coverage of the Atal Bhujal Yojana (ATAL JAL)Scheme

The Committee observe that Atal Bhujal Yojana (ATAL JAL), being implemented from 1.04.2020 for a period of 5 years, is the only scheme of the Government of India which has been launched with a view to augment Ground water by managing their demand side. The Scheme is being implemented on pilot basis in 80 districts of seven States, viz. Haryana, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh with an outlay of Rs 6000 crore. Selection of States was done on the basis of the criticality of Ground water situation, willingness and degree of preparedness. The Committee, however, notice that several States with acute Ground water shortage such as Himachal Pradesh, Punjab, Delhi and Tamil Nadu have not been included in the pilot scheme. They, therefore, desire to be apprised of the reasons for excluding these States where Ground water situation is equally critical. The Committee have been given to understand that the feasibility of up scaling the Scheme to other parts of the Country will be considered only after five years, based on the lessons learnt from implementation of the Scheme and their efficacy/outcome in improving the long-term sustainability of Ground water resources in the selected 80 districts under the pilot scheme. However, keeping in view the urgency for implementation of such scheme in States having large number of over exploited blocks, the Committee would recommend that Scheme should be extended in all States which are suffering from Ground water scarcity and have substantial number of over exploited and critical blocks.

REPLY GIVEN BY THE GOVERNMENT

Atal Jal was started as Pilot Program in certain identified water stressed areas of 7 States viz. Uttar Pradesh, Madhya Pradesh, Gujarat, Rajasthan, Karnataka, Haryana and Maharashtra with an aim to demonstrate the community led ground water management so that later on all the States can take up this approach further to remaining areas. A proposal for extension of Atal Bhujal Yojana to certain other water stressed States has been initiated.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.22

Artificial recharge to Ground water

The Committee note that to facilitate artificial recharge to Ground water, CGWB prepared Master Plan for artificial Recharge to Ground water in the year 2013 which has been revised in 2020 based on inputs from the State agencies. They are happy to note that States have given due consideration to Master Plan, 2013 besides identifying other areas for artificial recharge under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). They also observe that artificial recharge to Ground water is supported through MGNREGS and Pradhan Mantri Krishi Sinchayee Yojana – Watershed Development Component (PMKSY-WDC). They find that the Ministry of Rural Development (MoRD) in consultation and agreement with the DoWR,

RD & GR and the Ministry of Agriculture & Farmers' Welfare has developed an actionable framework for Natural Resources Management (NRM), titled "Mission Water Conservation" to ensure gainful utilization of funds by ensuring synergy in MGNREGS, PMKSY, Integrated Watershed Management Programme (IWMP) and Command Area Development & Water Management (CAD&WM), given their common objectives. They note that as on 30.09.2020, 5,90,638 Water harvesting structures (WHS) were created/rejuvenated under PMKSY-(WDC) during the period from 2015-16 to 2020-21. However they think that instead of construction of new artificial recharge structures, focus should be given on revival of existing village ponds/lakes/water bodies under MGNREGA which will, on the one hand ensure employment and on the other hand ensure maintenance of the WHS created so far with less capital expenditure than needed for constructing new structures. This will also encourage mass participation in upkeep and maintenance of WHS crucial for fast recharge of Ground water. The Committee would, therefore, recommend the DoWR, RD & GR to accordingly advice MoRD for more emphasis on rejuvenation and revival of water harvesting structures under MGNREGA. Further, the Committee recommend that the DoWR, RD & GR should play a more proactive role by ensuring coordination in implementation of programmes and monitor the outcome of works to achieve multiple goals simultaneously and effectively. In this regard, the Committee would like to know the steps taken by the Department for sharing of information available under their National Aquifer Management Programme with District and Block administration entrusted with execution of works under MGNREGA and how effective they have been in facilitating conservation and recharge of Ground water.

REPLY GIVEN BY THE GOVERNMENT

A multi-tiered approach is followed for sharing of the outputs of aquifer mapping studies. The findings of NAQUIM are shared with the State Governments through Ground Water Coordination Committees. At district level, findings are shared with District Authorities (DM/DC). So far reports in respect of 551 districts have been shared.

Further, findings of National Aquifer mapping studies are disseminated through Public Interaction Programs (PIP) at grassroots level, which is a continuous process. So far 1,347 public interaction programmes in which nearly 1,18,000 persons have participated. Regional Workshops were also organised in 6 different cities across the country for sharing of the NAQUIM studies. In addition to above, NAQUIM reports are also placed on CGWB website for wider dissemination and access by stake-holders.

Further, CGWB are continuously interacting with State government officials including district administration to convey the findings of NAQUIM studies for their gainful utilization in recharge related activities/demand side management etc. In addition, the Department of Rural Development (MGNREGA) have been approached to utilise the information created through NAQUIM reports for use in their scheme.

Further to mention here that this Department is implementing the Jal Shakti Abhiyan under which the water harvesting/recharge activities, repair/rejuvenation of water bodies and other similar

activities are being monitored very closely. The deliverables under MGNREGA, PMKSY-WDC schemes related to water harvesting/recharge are also being monitored closely through a team of Central Nodal Officers and Technical Officers. Further, this Department reviews the progress periodically under Jal Shakti Abhiyan at the level of Mission Director, National Water Mission and Secretary, DoWR, RD & GR.

In addition to this, the States/UTsincluding district administration are being regularly pursued at the level of Regional Directors/CGWB HQs to implement the recommendations of NAQUIM findings.

As informed by Department of Rural Development, Mahatma Gandhi National Rural Employment Guarantee Scheme (Mahatma Gandhi NREGS) is a demand driven wage employment Scheme, with an objective to provide not less than one hundred days of unskilled manual work as a guaranteed employment in every financial year to every household in rural areas as per demand, resulting in creation of productive assets of prescribed quality and durability.

As per Schedule I of Mahatma Gandhi NREGA, Section 4 (3), Para 4 (1), I. Category: A Public works relating to Natural Resource Management: (i) Water Conservation and water harvesting structures to augment and improve ground water like underground dykes , earthen dams, stop dams, check dams and roof top rain water harvesting structures in Government or Panchayat buildings with special focus on recharging ground water including drinking water sources; and (iv) Renovation of traditional water bodies including desilting of irrigation tanks and other water bodies and conservation of old step well/baolis are permissible activities.

MGNREGA is also giving due attention for renovation of traditional water bodies apart from other activities as per scheme guidelines. Since inception of the Scheme, the following are the details of works completed, works taken up and expenditure made on Water Conservation and water harvesting and Renovation of traditional water bodies works under Mahatma Gandhi NREGS so far is given below:

Name of the work category	Number of works Completed	Number of works Ongoing	Total Expenditure (in Rs.crore)
Water Conservation and water harvesting	55,18,509	10,55,698	1,37,858.12
Renovation of traditional water bodies	16,75,505	1,95,629	59,003.34

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.23

Ground water recharge measures in Urban areas

The Committee note that in Urban areas, Ground water recharge is being taken up mainly through Roof Top Rainwater Harvesting Structures. They note that 106.14 lakh Roof Top Rainwater Harvesting Structures for an estimated cost of Rs 36,794.23 crore is proposed to be implemented through existing scheme only. Further under AMRUT scheme, 9 States/ UTs have

taken up 773 storm water drainage projects worth ₹2,845 crore in 101 cities to address the problem of flooding, out of which 498 projects worth ₹738 crore have been completed and 492 water logging points have been eliminated from these projects. However among major cities, Storm water drainage projects have been taken up only in Delhi (South Delhi Municipal Corporation) and Patna. While descending Ground water table along with floods and water logging in monsoons have become a recurrent feature in major cities and metros, no significant progress have been noticed in channelizing and harvesting excess rainwater. They are concerned to find that storm water drainage projects are yet to be taken up in metro cities like Mumbai and Chennai where shortage of water supply and water logging in monsoons are a regular feature. Further such projects taken up in cities like Delhi are also under construction stage. Since mere taking up of projects without proper execution and maintenance will not result in actual benefit, the Committee believe that such projects need to be speeded up to actually see their effects transformed into results. In their view, absence of a nodal body at the Central level and lack of a coordinated approach has hindered the fast execution of projects delaying achievement of objectives. They, therefore, recommend the Ministry of Jal Shakti to take urgent steps to dovetail all the measures taken by different agencies/Departments/Ministries to complete the works so as to better manage Ground water and at the same time reducing flood/waterlogging in cities like Mumbai and Chennai as an additional benefit. The Committee would also like to be apprised of the details of the cities where storm water drainage projects have been installed along with the total number of cities where such projects are yet to be taken up and time period by which such projects are likely to be installed in all the metro cities.

REPLY GIVEN BY THE GOVERNMENT

Under AMRUT mission, 809 storm water drainage projects worth 3,016 crore have been grounded of which 691 projects worth 1,426 crore have been completed with 971 km of drains constructed and 2,959 water logging points eliminated preventing urban flooding. The details of storm water drainage projects in AMRUT cities can be seen at **Annexure V**.

In order to fast track, the implementation of AMRUT, the progress is periodically reviewed and monitored through regular video conferences, webinars, workshops etc. by MoH& UA with the States/UTs & ; their ULBs. There is a dedicated AMRUT portal for tracking the progress of projects. States are required to update data on the portal on regular basis. Mission Directorate is also providing hand holding support to the States and their cities from time to time to resolve issues and eliminate bottlenecks for timely completion of projects. This has also resulted in capacity building of States/UTBs and thus achieved significant progress under the AMRUT Scheme.

For assessment and monitoring of work done in the States, dedicated Independent Review and Monitoring Agencies (IRMA) have been setup in all the Mission States/ UTs. Similarly, the IRMA will do a half-yearly appraisal of Reform implementation in the States.

These is APEX committee at MoH&UA which periodically conduct meetings to review/approve the projects under AMRUT and AMRUT 2.0 mission.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 24

Physical verification of works completed under MGNREGA

The Committee observe that rejuvenation of water bodies (crucial for Ground water recharge and alternative water source) is being done under the Repair, Renovation and Restoration (RRR) of Water Bodies Scheme component of PMKSY, covering rural water bodies having minimum water spread area of 5.0 hectare and urban water bodies having water spread area from 2.0 hectare to 10.0 hectare. Further, water bodies are also being rejuvenated/created by the Ministry of Rural Development through MGNREGA. They notice that all assets, created under Mahatma Gandhi NREGA are being geo-tagged along with 2 photographs each in Geo Mahatma Gandhi NREGA which includes water conservation works/ structures/ assets also. So far, around 4.22 Cr. assets created under Mahatma Gandhi NREGS are geo-tagged. Further, under Geo Mahatma Gandhi NREGA Phase II, launched on 1st November 2017, the works under MGNREGA are now geo-tagged along with 2 photographs each in three stages: (i) Before start of the work (ii) During the work, (iii) On completion of the work. However, keeping in view the instances wherein repetitive works have been undertaken under MGNREGA, the Committee would emphasise physical verification of MGNREGA works by the Central Government officials. They, therefore, recommend the DoWR, RD & GR to impress upon the Ministry of Rural Development, the need for physical inspection of works in the final stage for better upkeep of assets created and judicious use of MGNREGA funds.

REPLY GIVEN BY THE GOVERNMENT

Ministry of Rural Development (MoRD) has intimated that 5.19 crore assets have been geo tagged so far under Mahatma Gandhi NREGS. The observation of the Committee has been noted by them for compliance.

However, MoRD, Government of India has taken various steps for strengthening of Mahatma Gandhi NREGS. The important elements of the above framework are listed below:

i . The Ministry regularly reviews the performance of the implementation of Mahatma Gandhi NREGS in States/UTs through various fora viz., Mid-Term Review, Labour Budget determination and Labour Budget revision meetings, and Programme Review meetings. Central Employment Guarantee Council and State Employment Guarantee Councils also periodically monitor the implementation of the Scheme.

ii. National Level Monitors, Common Review Missions and Officers of the Ministry visit States/UTs at regular intervals to review the implementation of the scheme. After the field visits, the findings/shortcomings and recommendations are shared with the States/UTs for appropriate action at their end.

iii. Auditing Standards for Social Audit have been issued and States/UTs have been advised to establish independent Social Audit Units, conduct Social Audit as per Audit of Scheme Rules,

2011 and training of village resource persons for conducting Social Audit etc. As per the Audit of the Scheme Rules, the audit of the works in a Gram Panchayat has been made mandatory. Internal Audit Teams of the Department also conduct regular audits.

iv. Steps have been taken to strengthen transparency and accountability which include geo-tagging of assets, Direct Benefit Transfer (DBT), National electronic Fund Management System (NeFMS), Aadhar Based Payment System (ABPS), Software for Estimate Calculation using rural rates for Employment (SECURE) and appointment of Ombudsperson in every districts of States/UTs.

v. Steps have been taken for establishment of State Technical Cell at various levels for qualitative monitoring and supervision of works under Mahatma Gandhi NREGS.In order to ensure a higher level of monitoring and oversight, National Mobile Monitoring System (NMMS) App and Area Officer App have been introduced. In the former, attendance of workers on all work sites (except individual beneficiary works) is taken daily along with a geo-tagged & time-stamped photograph of theirs. The latter has been designed to ensure that field officials conduct inspections in the requisite numbers and look into all the relevant aspects of the scheme.

vi. Transparency and accountability measures like an Ombudsperson for each district, an independent Director for the Social Audit Unit, and timely compliance of Internal Audit Paras are some of the conditions for the funds release.

vii. NMMS Whats app groups have been created at every Gram Panchayat for dissemination of real-time attendance to Public Representatives for vigilant monitoring.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 26

Legislation for management of Ground Water

The Committee note that a model Bill was circulated to States and Union Territories to enable them to enact suitable law for management of Ground water in 1970 which was subsequently revised in 1992, 1996 and 2005 to give effect to proper regulation of development and management of Ground water. However only 19 States have enacted legislation on Ground water, based on model Bill. Further, the Committee note that CAG, in its report has observed that lack of clear guidelines from the Department impacted the legislations implemented by the States. Taking into account the delay in enacting a law in the States, the Committee are of the view that urgent action need to be taken by States by enacting laws to prevent misuse of Ground water and their extraction beyond recharge. They find that as of December 2019, the Model Bill was under review as per the suggestions ofNITI Aayog. Since specific instructions/guidelines need to be spelled out for implementation of Model Bills in States to enable them to enact suitable legislation in accordance with their local requirements, the Committee recommend that urgent action need to be taken by the Department for the same. In this regard, the Committee would like to be apprised of the outcome of the review by NITI Aayog. They would also like to be

apprised of the main problems/challenges being faced by the State Governments which are coming in the way of effective management of Ground water and steps taken to address them both at the Central and State levels.

REPLY GIVEN BY THE GOVERNEMENT

As of now 21 States have enacted legislation on Ground water, based on model Bill. Further, to tackle all water related matters in a holistic and unified manner a draft model bill i.e. “Model State Integrated Water Resource Management Bill 2023” incorporating all the major provisions of six water related model bills including model ground water (sustainable management) bill is under finalization in Ministry of Jal Shakti.

Further, India is a vast country with a large number of distinct hydro-geological settings.The occurrence and movement of ground water in various aquifer systems are highly complex due to the occurrence of diversified geological formations with considerable litho-logical and chronological variations, complex tectonic framework, climate-logical dissimilarities and various hydro-chemical conditions. Considerable variations in rainfall both temporally and spatially have been observed which has compounded the water problem. In addition, in some of the States the groundwater subject is not being dealt by a dedicated Department and also some States are facing the deficiency of manpower to handle the groundwater matters. Inspite of these limitations, both Central and State Governments are taking all out efforts for sustainable groundwater management and constantly working in this direction through various schemes and policy initiatives. Further, States are also being actively pursued to create dedicated groundwater departments and fill up the existing vacancies.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 27

Amendment to India Easement Act, 1882

While there is an urgent need to prevent Ground water depletion to an alarming level, the Committee find that archaic law of 1882 relating to extraction of Ground water by owner of the land is still in place. This aberration was highlighted by the Committee in their 23rd Report (16 LS) and 15th Report (17 LS) and the Department had submitted in their reply that the issue was being referred to the concerned Ministry for appropriate action. The Committee would, therefore, recommend the Department to take steps to bring amendment to the said Act, so as to make Ground water, a 'community resource'.

REPLY GIVEN BY THE GOVERNMENT

Water being a State subject, taking suitable initiatives to augment groundwater resources for its sustainable management fall under the purview of the States/UTs. Further, the savings clause of the India Easement Act, 1882 is mentioned below:

"2. Savings.—Nothing herein contained shall be deemed to affect any law not hereby expressly repealed; or to derogate from—

(a) any right of the [Government] to regulate the collection, retention and distribution of the water of rivers and streams flowing in natural channels, and of natural lakes and ponds, or of the water flowing, collected, retained or distributed in or by any channel or other work constructed at the public expense for irrigation;"

Hence, it is submitted that section 2 (Savings) in the Easement Act 1882 adequately empowers Government to appropriately regulate the groundwater extraction through Acts/Gazette notifications etc in the country for its sustainable management. Further, the rights under section 7 of the Act are subject to any law for the time being in force.In view of the above, it is felt that there appears no compelling necessity to amend the para 7(b)(g) of the said Act.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 28

Shortage of manpower at CGWB and CGWA

The Committee note the issue of staff crunch at CGWB, which has become more pronounced due to additional burden of carrying out activitiesof CGWA. The shortage of both technical and non-technical personnel incapacitate CGWB and CGWA in discharging their respective mandates. The Committee would, therefore, recommend taking up urgent measures for filling up the vacancies. They would also recommend filling up of vacancies in CGWA separately to enable it to carry out their regulatory role more effectively.

REPLY GIVEN BY THE GOVERNMENT

A comprehensive cadre review proposal for the first time has been prepared for CGWB considering the evolving responsibilities and challenges. Various defunct posts have been abolished simultaneously additional posts have been created as per requirement. The Cadre Review Proposal is being finalized in consultation with DOP&T. Further, Recruitment Rules are being further streamlined for various categories of posts to improve the career prospects of officers and also to fill up certain posts without expeditiously. Recruitment in Mission Mode has also been taken up to fill up the existing vacancies. In the meantime, suitable number of Young Professionals and Consultants have been engaged on a temporary basis to fulfill the immediate requirements of CGWB and CGWA.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 29

Separation of CGWB and CGWA

The Committee further note that CGWB has been entrusted with the task of assessment, augmentation, management and regulation of country's Ground water resources by way of scientific studies, exploration aided bydrilling and monitoring of Ground water regime while Central Ground Water Authority (CGWA) has been constituted under Section 3 (3) of the Environment (Protection) Act, 1986 to regulate and control development and management of Ground water resources in the country. Thus, development and management of Ground water resources is primarily under the jurisdiction of CGWB whereas CGWA's main role is regulation and control. However, the Committee find that CGWB and CGWA are not functioning as separate entities and there is no distinct division of mandate with regard to regulation of Ground water. They further find that despite highlighting this fact in the Committee's Report on Demands for Grants in 2017, the issue still lingers on and is yet to be approved by the Competent Authority. Since overlapping of operations cannot do justice in the matters of development of Ground water on the one hand and their control on the other, the Committee recommend the Government to take immediate steps to separate the two with clear jurisdiction and administration to oversee the management of Ground water in a better way.

REPLY GIVEN BY THE GOVERNMENT

A proposal for delinking CGWA from CGWB and creating additional manpower for CGWA with separate verticals has already been submitted in Department of Expenditure for their consideration.

Further, Water being a State subject States are being pursued to directly undertake the regulation of the groundwater in their jurisdiction themselves. With active persuasion of this Department as on now 17 States/UTs are now regulating groundwater on their own, others are being constantly reminded to place in position their own ground water regulation system.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.30

Need for strengthening Ground water departments at State level

They further find that although policy framework, guidelines and manuals, etc. of the Central Government and the findings of various technical studies and pilot studies of CGWB are circulated to all States and UTs for their consideration/implementation but ineffective/lack of implementation in States/UTs have led to the reckless use of Ground water. In this regard, the Committee's attention has been drawn to the fact that 'Water' being a State subject, initiatives on water management including preventing the misuse/overuse of Ground water in the Country is

primarily States' responsibility which has not been very well carried out, due to less effective functioning of Ground water departments in the States. As submitted by the Department itself, strengthening of Ground water departments in the States at various levels appears to be one of the pre-requisites for attaining better regulation and management of Ground water resources. While agreeing that State Governments need to play a decisive role in addressing the problem of severe depletion of Ground water, as the subject of 'Water' primarily falls into their domain, in view of the Committee, State Governments need to be supported by the Central Government in the endeavour to take appropriate measures for effective monitoring and regulation of Ground water extraction. They would also like to be apprised of the State wise details of manpower available in respective State Ground Water Boards including total number of Staff at various levels, their technical competency, adequacy, etc. and measures taken to address the same within three months of presentation of the Report.

REPLY GIVEN BY THE GOVERNMENT

As per the information collected, 16 States/ UTs (5 regulated by CGWA and 11 by States/ UTs themselves) have Ground Water Department. 20 States/ UTs (14 regulated by CGWA and 6 by States/ UTs themselves) do not have Ground Water Department. In these States/ UTs groundwater related matters are looked after by WRD/ PHED/ PWD/ MI departments. Ministry of Jal Shakti has been pursuing with the States for strengthening of the ground water organisations. Ministry of Jal Shakti is also helping the State governments in capacity building of ground water professionals in the States through training through Rajiv Gandhi National Ground Water Training and Research Institute.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 31

Role of Communities in sustainable development of Ground water resources

As observed in previous paragraphs, management and development of Groundwater in India is at present scattered with many Departments/ Ministries dealing with different aspects of their management. However, the Committee are pleased to note that equally important role is being played by the communities/civil society organisations in both rural and urban areas in saving and conserving this precious resource. The Committee observe that many commendable local efforts have been made by groups/communities to conserve Ground water in various States/Districts and utilize it in self sustainable manner. But as the problem of depletion and contamination of aquifers is spreading almost all over the country, a participatory approach in management of Ground water will go a long way in ensuring their sustainable utilization. While creation of a centralised body/agency in the Ministry of Jal Shakti, as recommended earlier, will help fill the institutional vacuum, close cooperation with the user groups and communities is the key to better management of Ground water. In view of the Committee, participation of user groups is necessary to make Government's efforts to conserve, augment and manage Ground water resources successful.

Further aquifer based management of Ground water is the need of the hour with focus on recycling and reuse of Ground water and participatory recharge and demand- management. The Committee believe that participatory Ground water management should be integrated in agriculture, watershed development and employment generation activities such as MGNREGA to make it successful. Not only conservation efforts but also maintenance and monitoring of water storage structures could be assigned to user groups/ beneficiaries who are best suited to the purpose. Accordingly, Ground water management practices should be adopted as guiding principle for all the works under taken by local administration in both urban and rural areas. The Committee would, therefore, recommend the Department to take appropriate measures in this regard and apprise them of the actions taken within three months of presentation of this Report. They would further recommend the Department to adopt such measures as to replicate the successful models in Ground water management in remaining States/ areas of the country by encouraging the local communities and providing them with institutional support to use best practices for water management on a wider scale.

REPLY GIVEN BY THE GOVERNMENT

This Department is issuing advisories to States/UTS periodically for implementation of participatory groundwater management in the country by involving the communities at village level. The groundwater regulation notification dated 24 Sep 2020 talks about implementation of participatory groundwater management. Further, Atal Bhujal Yojana (Atal Jal) is being implemented by the Ministry for sustainable management of ground water resources in collaboration with 07 States/UTs in participatory mode by involving communities at village level. The scheme is implemented in select areas that include 80 districts, 229 administrative blocks and 8,220 water stressed Gram Panchayats of seven States, viz. Haryana, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh from 01.04.2020 for a period of 5 years. Further, the process of extension of the scheme in some other water stressed states of the country is under consideration of this Department. Under the scheme, the focus is on active involvement of communities and through their participation implementation of demand side measures including water saving interventions such as use of micro irrigation, shifting of cropping patter from high water intensive crops to low water intensive crops, use of pipe in irrigation, mulching etc are being implemented. The water security plan at Gram Panchayat levels are prepared and discussed and after detailed deliberations with the members of communities the plan is finalised and are implemented through convergence by various line departments.

In addition, Mahatma Gandhi NREGS is a demand driven wage employment scheme with bottom-up planning. The works are identified, approved and prioritized out of shelf of work by the Gram Panchayat, recommended by Gram Sabha in each State/UT as per the provision of the Act. Accordingly, the works are approved and taken up by Panchayat as per the demand. The planning of works is done as per the estimated person days to be generated for the work in a financial year at the time of assessment of Labour Budget.

The Ministry of Rural Development has undertaken implementation of Geographic Information System (GIS) & Remote Sensing (RS) based planning of works since FY 2018-19 under Mahatma

Gandhi NREGS. Advances in GIS and supporting technologies have led the preparation of Gram Panchayat (GP) development plan following ridge to valley approach in a saturation mode for creation of assets with enhanced impact on ground. It has also provided the scientific input to the community based participatory planning process at the grass root level.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

CHAPTER –III

OBSERVATIONS/RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

NIL

CHAPTER –IV

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH THE REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

RECOMMENDATION NO.8

Water use efficiency in agriculture – Funding pattern under PMKSY- Per Drop More Crop (PDMC)

The Committee note that micro irrigation is being promoted by the Department of Agriculture & Farmers' Welfare through their PMKSY-Per Drop More Crop (PDMC) scheme, using Drip and Sprinkler Irrigation system. The scheme also supports micro level water storage or water conservation/management activities to supplement Micro Irrigation. The Committee note that financial assistance under PMKSY-Per Drop More Crop (PDMC) is being provided by the Centre on 60: 40 basis to States based on their demand, submitted through States' Annual Action Plans (AAP) except the States in the North Eastern parts and Himalayan States, in whose case the funding pattern is 90:10 while it is 100% in case of Union Territories. However, in view of the Committee, this has created contradiction since States such as Punjab and Haryana which have severe Ground water crisis have been allocated meager amount of funds for implementing micro irrigation system. Since funding pattern for micro irrigation should be on the basis of water deficiency in the area rather than on the basis of principles of Centrally Sponsored Schemes, the Committee are of the considered view that more Central assistance should be given for micro irrigation in those areas which are water starved and have Ground water depletion. The logic of North Eastern States requiring more Central support (90:10) due to topographical and socio-economic conditions which hampers utilization of full potential of the rain fall and Ground water resource and hence requiring micro irrigation for increasing the water use efficiency at farm level to enhance the production & productivity of the crops and increase the income of the farmers does not hold good in case of assistance for micro irrigation as these States have abundant water supply and actual problem is to harness it so as to reduce the flood menace. The Committee therefore think that the existing policy of giving more financial assistance to such States appears to be in contradiction with the objectives. They, therefore, recommend the Ministry of Jal Shakti to take up this matter with the Ministry of Finance in consultation with the DA&FW and impress upon the need to change the funding pattern in the ratio of 90:10 for States suffering from water shortage and 60: 40 for water abundant States. Although the allocation under the scheme is based on the principle of inclusivity and are released on the basis of demand, the Committee are of the view that the Department of Agriculture & Farmers' Welfare has to play a more proactive role. The DoWR, RD & GR should impress upon the Department of Agriculture & Farmers' Welfare to strive to release funds under the scheme to those States which cultivate water intensive crops but have not been actively implementing micro irrigation methods, the need for utilizing funds under PDMC on the basis of approved AAP and clear previous unspent balances, so as to reduce dependence on Ground water.

REPLY OF THE GOVERNMENT

Per Drop More Crop Scheme which is operational from 2015-16 which mainly focuses on enhancing water use efficiency at farm level through precision/micro irrigation (Drip and Sprinkler Irrigation) is providing more focus in Himalayan and North-Eastern region since there is substantial shortages of water during winter and summer seasons due to topographical reasons though they encounter high rainfall during monsoon.In this regard, it is further mentioned that:

One of the objectives of PDMC is to increase area of coverage of micro irrigation in water intensive crops. The Department is taking various initiatives for increasing coverage of area under micro irrigation in water intensive crop to increase water use efficiency. So far, 77.90 lakh ha. area has been covered under micro irrigation in the country since 2015-16 till now. Out of this, area under water intensive crops i.e. cotton, sugarcane, banana etc. is 7.33 lakh ha. Besides, Union Finance Minister in the Union Budget 2017-18 announced setting up of a dedicated Micro Irrigation Fund (MIF) to be instituted with NABARD with an initial corpus of Rs. 5,000 crore. The objective of the fund is to facilitate the States in mobilizing resources for expanding coverage of micro irrigation by taking up special and innovative projects and also for incentivising micro irrigation beyond the provisions available under PDMC to encourage farmers to install micro irrigation systems. MIF has to be augmented by additional amount of Rs. 5,000 crore.

Further, the funding pattern under Centrally Sponsored Schemes is largely guided by NITI Aayog vide its O.M No. 011013/02/2015-CSS & ; CMC dated 17th August, 2016 which has been issued based on the recommendations of the Sub-Group of Chief Ministers and in consultation with various Ministries/ Departments and other Stakeholders, with the approval of the Cabinet. The arrangements in these OMs are in force since 2016-17. In lieu of the Jammu & Kashmir Reorganization Act, 2019, clause 4 and 11 of the NITI Aayog's OM were modified and were communicated vide NITI Aayog's OM dated 26.10.2019. In addition to above the scheme under reference in PMKSY-Per drop more crop was approved by the Cabinet/Competent authority which also included the fund sharing pattern.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 16

Ground Water pollution by industries – Need for a unified approach

The Committee note that CGWB has found contaminated Ground water in most of the 88 industrial clusters identified by CPCB. Further, 38 industrial clusters have been identified by CPCB as Critically Polluted Areas (CPAs) with Comprehensive Environmental Pollution Index (CEPI), [which is a rational number (ranging from 0 to 100) to characterize environmental quality at a given industrial areas following algorithm of pollution source, pathway and receptor], score of 70 and above and 31 industrial clusters have been identified as Severely Polluted Areas (SPAs) in the CPCB's assessment of CEPI scores in 2018 at 100 identified industrial clusters (including 88 industrial clusters above) in 21 States across the country. They are particularly concerned to note that out of 72,314 industries requiring Effluent Treatment Plants (ETPs), only 70,555

industries have functional ETPs, of which 1040 industries do not comply with environmental standards. The Committee observe that CPCB has taken following measures for preventing industrial pollution of Ground water :

Industry Specific Standards and General Standards for discharge of effluents notified under the Environment (Protection) Act, 1986,Time-Targeted Action Programme under Corporate Responsibility on Environment Protection (CREP),Establishment of Common Effluent Treatment Plants (CETPs) for cluster of Small Scale Industries,Installation of Online Continuous Effluent / Emission Monitoring System (OCEMS) with real time data connectivity to CPCB, and Zero Liquid Discharge (ZLD) to protect the water quality in view of lean flow situation in rivers and streams in a larger non monsoon period.However, they note that little progress seems to be made in reducing Ground water pollution, a fact, admitted by the CPCB itself attributing it tounabated growth of population and resultant waste water generation along with uncontrolled abstraction of Surface and Ground water causing reduction in recharge potential. In this regard they note the submission made by the MoEF &CC that (i) absence of a policy on water pollution, (ii) preponderanceof State Government agencies in implementation of policy as Water is a State subject, (iii) difficulty in implementation of policy due to sharing of aquifersby a number of States and (iv) involvement of multiple agencies at Central and State level has further compounded the problem. Further, Lack of proper monitoring of NOC conditions while permitting abstraction of Ground water under The Water (Prevention and Control of Pollution) Act, 1974, no data on water consumption by the municipalities, local bodies and industrial units post repeal of Water Cess Act, etc. reflect the dire state of affairs in policy implementation regarding Ground water. The Committee are therefore of the opinion that water being most important resource for survival of life, its governance cannot be left scattered over multiple jurisdictions. Further, there is an imperative need for chalking out a Scheme/Programme specifically to control Ground water pollution. Therefore, in addition to the need for urgent measures for setting up a nodal agency/Centralised body, the Committee further recommend that immediate steps should be taken to formulate programme to prevent Ground water pollution. Besides, monitoring of compliance by the industries needs to be done scrupulously to reduce violations. Also, quarterly physical inspections of all the functional ETPs are prerequisite to ensure that untreated water is not discharged. Accordingly, the Committee recommend the Department to take appropriate measures and apprise them about their details within three months of presentation of this Report.

REPLY OF THE GOVERNMENT

For strengthening monitoring mechanism and effective compliance through self- regulatory mechanism, CPCB directed all 17 categories of highly polluting industries, GPIs of Ganga basin, CETPs, biomedical waste management facilities and common hazardous waste facilities to install Online Continuous Effluent/ Emission Monitoring Systems (OCEMS) for constant vigil on pollution levels. From these OCEMS, real-time values of environmental pollutants of trade effluent and emissions, discharged from industrial units are transmitted online to CPCB and concerned SPCB/PCC on 24x7 basis.Central software processes the data and in case of value of pollutant parameter exceeds prescribed environmental norms, an automatic SMS alert is generated and

sent toindustrial unit, SPCB and CPCB, so that corrective measures can be taken by the industry immediately and appropriate action can be taken by concerned SPCB/PCC.

Industrial pollution (Compliance of discharge / emission norms) of about 6,500 industries including about 950 Grossly Polluting Industries in catchment of river Ganga is monitored on real time basis through Online Continuous Effluent Monitoring Systems (OCEMS).

In addition to above, the steps / measures taken for the compliance of norms are:

i. The Ministry of Environment Forest and Climate Change (MoEF & CC), Government of India notifies industry specific discharge standards under Schedule-

I: 'Standards for Emission or Discharge of Environmental Pollutants from various Industries' of Environment Protection Act, 1986. So far, industry specific environmental standards, for 81 industrial sectors (including effluent standards for 47 sectors), have been notified. Industrial sectors, for which specific standards are not available, general standards as notified under Schedule-VI of Environment Protection Rules, 1986 shall be applicable. In order to ensure conservation of water, load-based standards have also been prescribed for water consumption and wastewater generation for about 15 water-intensive industries, namely, thermal power plant, jute processing industry, integrated iron and steel, sugar, pulp and paper, fermentation, caustic soda, man-made fibre, starch, dairy, fertilizer, natural rubber processing, coal washeries, edible oil and vanaspati, tanneries, petroleum oil refinery and paint industry. Industries must meet these prescribed environmental standards. The State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) issue consent to establish/ consent to operate and authorization to the industries in the States. SPCBs/PCCs monitor the compliance of industrial emissions/effluent according to the prescribed standards. In case of non- compliance, action against industry is taken under provisions of Water Act, 1974, Air Act, 1981 and Environment (Protection) Act, 1986

Industrial Category	Potential of Pollution	Pollution Index (PI)	No of Sectors Categorized by CPCB	CTO validity period recommended CPCB	Minimum Environmental Surveillce Frequency
Red	High	≥60	61	5 years	6months
Red	High	≥60	61	5 years	6months
Orange	Moderate	41 to59	90	10 years	1year
Green	Low	21 to40	65	15 years	2 years
White	Nil	≤20	38	Not required*	-

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO.17

Amendment to the Water Pollution and Prevention Act, 1974 empowering SPCBs for imposition of penalties

The Committee note that Grossly Polluting Industries on the main stem of Ganga and Yamuna are being monitored through Third Party verification since 2017 and violators are being issued closure orders by SPCBs and also levied environmental compensation. The Committee further note that

CPCB is mainly concerned with framing of Guidelines without any role in their enforcement as most of these powers are vested with the SPCBs under the Water Pollution and Prevention Act, 1974 except the authority to impose fines, for which Courts have to be approached. Therefore, direction for closure is more convenient option for SPCBs to enforce violators to abide by the Guidelines. Admitting the existing gap in enforcement powers, the Secretary, MoEF & CC informed that the Act will be amended to bridge the gap. While agreeing to the need for enforcement of the environmental norms/standards for ensuring industrial development in a sustainable way, the Committee, however, do not approve of closure notices as a widely used option. Since industrial development is also a necessity for employment generation and prosperity, the Committee are of the considered view that a balanced approach needs to be adopted. While strict penalties need to be imposed for flouting environmental norms, direction for closure should be resorted to as a last option. Further, there should be a mechanism to check that the 'Consent of establishment and Consent to operate' granted to industries, are in accordance with the norms fixed and in case of any change/revision in existing norms, after Consent to establish is issued, closure notices on grounds of non compliance with changed norms should be avoided. The Committee desire that such cases should be studied and appropriate time frame should be fixed to ensure compliance with the new norms. Also, the SPCBs need to be vested with power to impose monetary penalties to help them take appropriate action for minor violations without straightaway going for closing the violating industrial unit. They, therefore, recommend the DoWR, RD & GR to urge the MoEF & CC to bring the necessary amendments to Water Pollution and Prevention Act, 1974 urgently to sufficiently empower SPCBs to impose fines for violations of minor nature.

REPLY OF THE GOVERNMENT

Central Pollution Control Board (CPCB), State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) performing its duties mentioned in Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986 and its Rules from time to time and taking action against defaulters responsible for increase in all types of pollution (non-compliance to the effluent / emission norms, waste management etc.). Also based on the 'Polluter Pays Principle' the defaulters are impounded upon Environmental Compensation (EC) for contaminating/ damaging the environment.

S.No.	Actions	Under the provisions of Acts & Policies
1.	Issuing of directions for correction/remedial / closure Depending upon severity of the case.	Under Section5 of the Environment (Protection) Act,1986
2.	Issuing of directions towards Construction projects for correction/remedial/closure depending upon severity of the case.	Under Section 31A of the (Prevention & Control of Pollution)Act,1981
3.	Imposing of Environmental Compensations on the construction projects.	Methodology developed for Assessing Environmental Compensation and Action Plan to Utilize the Fund by CPCB as per Hon'ble NGT order.

CPCB has initiated penal action in the form of imposing EC and has evolved a methodology for levying such EC against the industries /facilities not- complying the norms. Accordingly, action being taken against the violators are:

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 18

Real time monitoring of effluent discharge by industries

The Committee observe that CPCB has directed all the 17 category of highly polluting industries to install Online Continuous Effluent / Emission Monitoring System (OCEMS) with real time data connectivity to CPCB which conducts regular inspection and takes action on exceedance alerts of OCEMS or offline OCEMS. Although industry Specific Standards and General Standards for discharge of effluents have been notified under the Environment (Protection) Rules, 1986, the Committee observe that MoJS also, is in the process of finalizing policy by bringing out standards/limit for treated or used water to utilize/recycle in various sectors including agriculture wherein use of untreated water for irrigation purposes has emerged as a big issue, especially in cities posing health risk for city dwellers. Further, they observe that CPCB is monitoring ETPs regarding discharge of treated water on the basis of computer generated SMS alerts received on violation of effluent and emission standards and recorded in OCEMS. Having noted that despite all the above measures, industrial pollution of Ground water remains a burning problem, the Committee are of the view that stricter vigil of ETPs is required to ensure that untreated water does not get discharged in any way into water bodies, especially by the industries operating on the banks of rivers and canals. In their view, besides inspection of industries, study of water quality of rivers and canals having industries on their banks should also be conducted to find out how effectively the Effluent Treatment Plants are working. They, therefore, recommend the DoWR, RD & GR to conduct such a study in coordination with CPCBs and SPCBs and furnish the details of number of industries situated on the banks of rivers, number of such industries with functional ETPs, volume of water treated by the ETPs before discharge, number of violators and action taken against violators during the last 5 years**.**

REPLY OF THE GOVERNMENT

Inspection of all Grossly Polluting Industries (GPIs) located in five Ganga main stem states i.e. Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal is being carried-out by CPCB authorised third party technical institutes since 2017 to verify the effectiveness of effluent treatment plant and compliance vis-à-vis effluent discharge standards and ascertain specific fresh water consumption, waste water discharge and pollution load etc. Since 2020, the GPIs located in Yamuna main stem states i.e. Uttarakhand, Uttar Pradesh, Haryana, Delhi, Bihar, Jharkhand and West Bengal are also considered for inspection. The Year-wise inventory of GPIs, sector-wise waste water discharge and compliance status in Ganga and Yamuna main stems states is given in **Annexure-IV**.

(OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023)

RECOMMENDATION NO. 25

Rejuvenation of water bodies in urban areas

The Committee notice that 63 water bodies in cities have been taken up for rejuvenation under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and 151 under Smart Cities Mission (SCM), while rest of the water bodies will be taken up under Jal Jeevan Mission (Urban) of the Ministry of Housing and Urban Affairs (MoHUA). However, no specific information has been provided about water bodies in major cities of Delhi, Mumbai, Chennai and Bengaluru where encroachment and pollution of water bodies is a big issue. They further note that in cities and urban areas, Urban Local Bodies (ULBs) are primarily responsible for maintenance of water bodies. However, they are concerned to note that ULBs are unable to ensure proper maintenance of water bodies as these are severely starved of funds both at State and local level. The Committee therefore recommend that the DoWR, RD & GR should urge the MoHUA and State Governments to take steps for strengthening ULBs. They would also like to be apprised of the measures taken in this regard within three months of presentation of this report. Further, they desire that total number of water bodies in urban areas along with the details of the status of encroachment, extinct, etc. along with measures taken/contemplated to restore the water bodies especially in metro cities like Delhi, Chennai, Mumbai, Hyderabad, Kolkata and Bengaluru be furnished to them within three months of presentation of this report.

REPLY OF THE GOVERNMENT

Under AMARUT mission, ULBs/States may take up projects related to new/augmentation/rehabilitation of water supply system; rejuvenation of water bodies for water supply including in Metro cities and recharge of ground water etc. So far 1,342 projects worth Rs 42,760.91 crore have been grounded including 963 completed projects worth Rs 18,749.57 crore. As per first Census report 2023 on water bodies, total number of water bodies in Urban areas falling in 33 States are 69,485. Total number of encroached water bodies in these States are 1,760. The information collected through the Census are being shared with States/UTs for taking corrective action as per extant guidelines through relevant Central/State schemes.

As far as sharing of the information collected in census with States/UTs is concerned, it is informed that letters from Secretary, D/o Water Resources, RD & GR have been sent to the States/UTs for taking measures to remove the encroachment and revival of defunct water bodies.

[OM No. T-12019/3/2023/-GW Section-MOWR dated 19/6/2023 and V-52012/1/2022-MI (Stat) dated 03/11/2023]

CHAPTER –V

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH FINAL REPLIES OF THE GOVERNMENT ARE STILL AWATED

NIL

NEW DELHI
06 December, 2023
15 Agrahayana,1945(Saka)

Shri Parbatbhai Savabhai Patel
Chairperson,
Standing Committee on Water Resources

ANNEXURE

[Vide Para 4 of the Introduction]

ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE RECOMMENDATIONS/ OBSERVATIONS CONTAINED IN THE TWENTY SECOND REPORT (SEVENTEENTH LOK SABHA) OF THE COMMITTEE

(i) Total number of Recommendations/Observations
31

(ii) Recommendation/Observations which have been accepted by the Government

Recommendation Sl. Nos. 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30 and 31

Total - **26**

*Percentage -**83.87%***

(iii) Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies

Recommendation Sl. Nos. NIL

Total - **NIL**

*Percentage- **0%***

(iv) Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee

Recommendation Sl. Nos. 8, 16, 17, 18 and 25

Total – **05**

*Percentage - **16.13 %***

(v) Recommendation/Observation in respect of which final reply of the Government is still awaited

Recommendation Sl. Nos. NIL

*Total - **NIL***

*Percentage - **0%***

Compliance status of 17 category of industries

Sl. No.	SPCB/PCC	Total no. of industries	No. of industries closed by their own	No. of industries operational	No. of industries complying with environmental standards	No. of industries non-complying with environmental standards	No. of industries against which action is taken for non-complying with environmental standards			
							Show cause notice issued	Closure directions issued	Legal cases filed	Action under process
1	Andaman & Nicobar	0	0	0	0	0	0	0	0	0
2	Andhra Pradesh	299	35	264	246	18	8	4	1	5
3	Arunachal Pradesh	5	0	5	5	0	0	0	0	0
4	Assam	51	11	40	36	4	2	2	0	0
5	Bihar	43	26	17	17	0	0	0	0	0
6	Chandigarh	0	0	0	0	0	0	0	0	0
7	Chhattisgarh	163	20	143	137	6	5	1	0	0
8	Daman & Diu	3	0	3	3	0	0	0	0	0
9	Delhi	3	0	3	3	0	0	0	0	0
10	Goa	10	2	8	8	0	0	0	0	0
11	Gujarat	502	78	424	325	99	87	7	0	5
12	Haryana	101	7	94	92	2	0	2	0	0
13	Himachal Pradesh	22	3	19	18	1	1	0	0	0
14	Jammu and Kashmir	55	0	55	52	3	3	0	0	0
15	Jharkhand	81	2	79	54	25	13	1	0	11
16	Karnataka	296	66	230	207	23	18	3	2	0
17	Kerala	25	5	20	20	0	0	0	0	0
18	Lakshadweep	0	0	0	0	0	0	0	0	0
19	Madhya Pradesh	96	5	91	88	3	1	0	1	1
20	Maharashtra	668	52	616	475	141	76	27	3	35
21	Manipur	0	0	0	0	0	0	0	0	0
22	Meghalaya	24	1	23	23	0	0	0	0	0
23	Mizoram	2	2	0	0	0	0	0	0	0
24	Nagaland	0	0	0	0	0	0	0	0	0
25	Odisha	187	31	156	126	30	28	2	0	0
26	Puducherry	7	3	4	4	0	0	0	0	0
27	Punjab	88	8	80	69	11	11	0	0	0
28	Rajasthan	224	13	211	205	6	5	1	0	0
29	Sikkim	0	0	0	0	0	0	0	0	0
30	Tamil Nadu	233	43	190	181	9	8	1	0	0
31	Telangana	347	48	299	270	29	24	3	0	2
32	Tripura	5	1	4	4	0	0	0	0	0
33	Uttar Pradesh	855	196	659	646	13	6	5	0	2
34	Uttarakhand	46	0	46	42	4	4	0	0	0
35	West Bengal	131	34	97	73	24	15	9	0	0
	Total	**4572**	**692**	**3880**	**3429**	**451**	**315**	**68**	**7**	**61**

SECTOR-WISE WASTE WATER DISCHARGE AND COMPLIANCE STATUS IN GANGA AND YAMUNA MAIN STEMS STATES

- During 2017, total 1109 GPIs were inventoried in river Ganga main stem states, 961 GPIs in 2018, 1072 GPIs in 2019, 1080 GPIs in 2020, 1051 GPIs in 2021 and 1231 GPIs in 2022 were inventoried in consultation with concerned SPCBs. Year-wise and state-wise number of GPIs in river Ganga main stem states is as follows:

State	2017	2018	2019	2020	2021	2022
Uttarakhand	68	57	54	55	58	56
Uttar Pradesh	955	812	908	913	867	1036
Bihar	40	48	56	53	66	78
Jharkhand	0	0	6	5	5	5
West Bengal	46	44	48	54	55	56
Total	**1109**	**961**	**1072**	**1080**	**1051**	**1231**

- GPIs in river Yamuna main stem were included for inspection during year 2020. During 2020, 1660 GPIs, during 2021, 1655 GPIs and during 2022, 1963 GPIs were inventoried. Year-wise and state-wise number of GPIs is as follows:

State	2020	2021	2022
Delhi	267	210	196
Haryana	832	924	1145
Uttar Pradesh	551	510	611
Uttarakhand	10	11	11
Total	**1660**	**1655**	**1963**

- All the industries have installed effluent treatment plant for treatment of waste water generated during the industrial processes.

- During 2017, the discharge of about 349.13 MLD waste water after appropriate treatment was estimated from 888 operational GPIs (out of 1109 GPIs) in Ganga main stem states. During 2018, around 314.86 MLD waste water discharged by 683 operational GPIs (out of 961 GPIs); during 2019, around 302 MLD waste water discharged by 595 operational GPIs (out of 1072 GPIs); during 2020, about 281.7 MLD waste water discharged by 890 GPIs (out of 1080 GPIs); during 2021, about 266.85 MLD waste water discharged by 879 operational GPIs (out of 1051 GPIs). Sector-wise wastewater discharge are as follows:

S. No	Sectors	Wastewater discharge, MLD				
		2017	2018	2019	2020	2021
1.	Sugar	65.72	63.18	71.73	86.1	91.4
2.	Paper	92.9	101.8	84.8	75.8	81.17
3.	Food, dairy & Beverage	21.4	14.68	19.6	17.95	20.75
4.	Textile	5.18	10.19	12	15.07	10.36
5.	Tannery	13.45	10.77	17	5.71	10.49
6.	Chemicals*	116	53	57.13	35.3	35.5
7.	Others#	27	55.57	34.58	42.35	13.64
8.	Slaughter house	7.48	5.67	4.9	3.42	3.54
9.	Distillery	ZLD	ZLD	ZLD	ZLD	ZLD
Total		**349.13**	**314.86**	**302**	**281.7**	**266.85**

**Chemicals include, Oil & refinery, Pesticide, Petrochemicals, Pharmaceuticals, Fertilizer and chemical. # Others include Automobile, Electroplating, Galvanized Iron structure, Hair Oil Manufacture, Manufacturing & Repair of aircraft, Paint, Telephone sets, Diesel locomotive units. ** including 09 CETPs, ZLD: Zero liquid discharge; MLD: million liter per day*

- During 2020, the discharge of about 104.07 MLD waste water after appropriate treatment was estimated from 1219 operational GPIs (out of 1660 GPIs) in Yamuna main stem states and during 2021, 144.4 MLD waste water was discharged by 1319 operational GPIs (out of 1655 GPIs). Sector-wise wastewater discharge are as follows:

S. No	Sectors	Wastewater discharge, MLD	
		2020	2021
1.	Sugar	15.28	18.05
2.	Paper	23.67	23.52
3.	Food, dairy & Beverage	8.29	13.7
4.	Textile	29.66	46.76
5.	Tannery	0.26	0.73
.	Chemicals*	15.98	27.86
7.	Others#	7.34	9.2
8.	Slaughter house	3.59	4.58
9.	Distillery	ZLD	ZLD
Total		**104.07**	**144.4**

Chemicals include, Oil & refinery, Pesticide, Petrochemicals, Pharmaceuticals, Fertilizer and chemical, including 33 CETPs,,# Others include Automobile, Electroplating, Galvanized Iron structure, Hair Oil Manufacture, Manufacturing & Repair of aircraft, Paint, Telephone sets, Diesel locomotive units. ZLD: Zero liquid discharge; MLD: million liter per day*

- Concerned SPCBs/PCC take necessary action on the basis of inspection reports provided by third party technical institutes by issuing either closure direction or show cause notices along with environmental compensation as deemed-fit. Year-wise compliance status and action taken against the non-complying GPIs are depicted below:

Year-wise compliance status of GPIs in river Ganga:

Year	No. GPIs	Complying GPIs	Non-Complied GPIs		Self-Closed GPIs
			Show Cause Notice issued	Closure directions issued	
2017	1109	350	180	358	221
2018	960	474	96	113	278
2019	726	487	99	9	131
2020	1080	722	159	9	190
2021	1051	692	174	13	172

Year-wise compliance status of GPIs in river Yamuna:

Year	No. GPIs	Complying GPIs	Non-Complied GPIs		Self-Closed GPIs
			Show Cause Notice issued	Closure directions issued	
2020	1660	787	406	26	441
2021	1655	965	323	31	336

- As per the information received from SPCBs/PCC, the details of environmental compensation (EC) levied by SPCBs/PCC based on annual inspections are as follows:

S. No.	Component	2020-21	2021-22
1	Number of units on which environmental compensation (EC) levied	222	265
2	Amount of environmental compensation imposed (Rs.)	39,30,00,800/-	94,52,72,400/-
3	Amount of environmental compensation deposited (Rs.)	14,59,62,875/-	9,53,52,000/-
4	Number of units for which bank guarantee imposed/forfeited and amount	49 units for total amount Rs. 2,35,00,000/-	07 units for total amount Rs. 72,00,000/-
5	Bank Guarantee (BG) forfeited	2 units for total amount Rs. 20,00,000/-	1 unit for total amount Rs. 10,00,000/-

State wise details are as follows:

Annual inspections (2020-21)

S. No.	Component	Uttarakhand	Uttar Pradesh	Bihar	West Bengal	Delhi	Haryana	Total
1	Number of units on which environmental compensation (EC) levied	2	198	1	9	1	11	222
2	Amount of environmental compensation imposed (Rs.)	2,68,800	34,11,00,000	22,72,500	77,00,000	2,80,000	4,13,79,500	39,30,00,800
3	Amount of environmental compensation deposited (Rs.)	24,000	11,40,00,000	22,72,500	47,00,000	2,80,000	2,46,86,375	14,59,62,875
4	Number of units for which bank guarantee imposed and amount	02 units. BG of Rs. 5 lacs from each unit	0	0	15 units for total amount Rs. 2,09,00,000/-	0	32 units for Rs. 16,00,000/-	49 units for total amount Rs. 2,35,00,000/-
5	Bank Guarantee (BG) forfeited and amount	0	0	0	2 units for total amount Rs. 20,00,000/-	0	0	2 units for total amount Rs. 20,00,000/-

*Jharkhand did not levy any EC

Annual inspections (2021-22)

S.No	Component	Uttarakhand	Uttar Pradesh	Bihar	West Bengal	Delhi	Total
1	Number of units on which environmental compensation (EC) levied	1	259	3	0	2	265
2	Amount of environmental compensation imposed (Rs)	3,90,400	93,33,00,000	1,03,82,000	0	12,00,000	94,52,72,400
3	Amount of environmental compensation deposited (Rs)	0	9,33,00,000	8,52,000	0	12,00,000	9,53,52,000

4	Number of units for which bank guarantee imposed and amount	0	0	0	07 units for total amount 72,00,000	0	07 units for total amount 72,00,000
5	Bank Guarantee (BG) forfeited and amount	0	0	0	1 unit for total amount Rs 1000000	0	1 unit for total amount Rs 10,00,000/-

*Jharkhand & Haryana did not levy any EC

- Inspection of all Grossly Polluting Industries (GPIs) located in five Ganga main stem states i.e. Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal is being carried-out by CPCB authorised third party technical institutes since 2017 to verify the effectiveness of effluent treatment plant and compliance w.r.t. effluent discharge standards and ascertain specific fresh water consumption, waste water discharge and pollution load etc. Since 2020, the GPIs located in Yamuna main stem states i.e. Uttarakhand, Uttar Pradesh, Haryana, Delhi, Bihar, Jharkhand and West Bengal are also considered for inspection.

- During 2017, total 1109 GPIs were inventoried in river Ganga main stem states, 961 GPIs in 2018, 1072 GPIs in 2019, 1080 GPIs in 2020, 1051 GPIs in 2021 and 1231 GPIs in 2022 were inventoried in consultation with concerned SPCBs. Year-wise and state-wise number of GPIs in river Ganga main stem states is as follows:

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3.	Food, dairy & Beverage	21.4	14.68	19.6	17.95	20.75
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9.	Distillery	ZLD	ZLD	ZLD	ZLD	ZLD
Total		**349.13**	**314.86**	**302**	**281.7**	**266.85**

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4.	Textile	29.66	46.76
5.	Tannery	0.26	0.73
6.	Chemicals*	15.98	27.86
7.	Others#	7.34	9.2
8.	Slaughter house	3.59	4.58
9.	Distillery	ZLD	ZLD
Total		**104.07**	**144.4**

*Chemicals include, Oil & refinery, Pesticide, Petrochemicals, Pharmaceuticals, Fertilizer and chemical. ** including 33 CETPs, # Others include Automobile, Electroplating, Galvanized Iron structure, Hair Oil Manufacture, Manufacturing & Repair of aircraft, Paint, Telephone sets, Diesel locomotive units. ZLD: Zero liquid discharge; MLD: million liter per day

- Concerned SPCBs/PCC take necessary action on the basis of inspection reports provided by third party technical institutes by issuing either closure direction or show cause notices along with environmental compensation as deemed-fit. Year-wise compliance status and action taken against the non-complying GPIs are depicted below:

Year-wise compliance status of GPIs in river Ganga:

Year	**No. GPIs**	**Complying GPIs**	**Non-Complied GPIs**		**Self-Closed GPIs**
			Show Cause Notice issued	**Closure directions issued**	
2017	1109	350	180	358	221
2018	960	474	96	113	278
2019	726	487	99	9	131
2020	1080	722	159	9	190
2021	1051	692	174	13	172

Year-wise compliance status of GPIs in river Yamuna:

Year	No. GPIs	Complying GPIs	Non-Complied GPIs		Self-Closed GPIs
			Show Cause Notice issued	Closure directions issued	
2020	1660	787	406	26	441
2021	1655	965	323	31	336

- As per the information received from SPCBs/PCC, the details of environmental compensation (EC) levied by SPCBs/PCC based on annual inspections are as follows:

S. No.	Component	2020-21	2021-22
1	Number of units on which environmental compensation (EC) levied	222	265
2	Amount of environmental compensation imposed (Rs.)	39,30,00,800/-	94,52,72,400/-
3	Amount of environmental compensation deposited (Rs.)	14,59,62,875/-	9,53,52,000/-
4	Number of units for which bank guarantee imposed/forfeited and amount	49 units for total amount Rs. 2,35,00,000/-	07 units for total amount Rs. 72,00,000/-
5	Bank Guarantee (BG) forfeited	2 units for total amount Rs. 20,00,000/-	1 unit for total amount Rs. 10,00,000/-

State wise details are as follows:

Annual inspections (2020-21):

S. No.	Component	Uttarakhand	Uttar Pradesh	Bihar	West Bengal	Delhi	Haryana	Total
1	Number of units on which environmental compensation (EC) levied	2	198	1	9	1	11	222
2	Amount of environmental compensation imposed (Rs.)	2,68,800	34,11,00,000	22,72,500	77,00,000	2,80,000	4,13,79,500	39,30,00,800
3	Amount of environmental compensation deposited (Rs.)	24,000	11,40,00,000	22,72,500	47,00,000	2,80,000	2,46,86,375	14,59,62,875
4	Number of units for which bank guarantee imposed and amount	02 units. BG of Rs. 5 lacs from each unit	0	0	15 units for total amount Rs. 2,09,00,000/-	0	32 units for Rs. 16,00,000/-	49 units for total amount Rs. 2,35,00,000/-
5	Bank Guarantee (BG) forfeited and amount	0	0	0	2 units for total amount Rs. 20,00,000/-	0	0	2 units for total amount Rs. 20,00,000/-

*Jharkhand did not levy any EC

Annual inspections (2021-22)

S.No	Component	Uttarakhand	Uttar Pradesh	Bihar	West Bengal	Delhi	Total
1	Number of units on which environmental compensation (EC) levied	1	259	3	0	2	265
2	Amount of environmental compensation imposed (Rs)	3,90,400	93,33,00,000	1,03,82,000	0	12,00,000	94,52,72,400
3	Amount of environmental compensation deposited (Rs)	0	9,33,00,000	8,52,000	0	12,00,000	9,53,52,000
4	Number of units for which bank guarantee imposed and amount	0	0	0	07 units for total amount 72,00,000	0	07 units for total amount 72,00,000
5	Bank Guarantee (BG) forfeited and amount	0	0	0	1 unit for total amount Rs 1000000	0	1 unit for total amount Rs 10,00,000/-

*Jharkhand & Haryana did not levy any EC

Annexure - V

Details of Storm Water drainage projects in AMRUT Cities

S. No.	States/UTs	AMRUT Cities	Grounded Projects		Details of Completed Projects			
			No.	Cost (in Cr)	No.	Cost (in Cr)	Length of Drainage Constructed (in Kms)	No. of Water logging points eliminated
1	Andaman and Nicobar Islands	Post Blair	8	4.02	8	4.02	2.96	11
2	Andhra Pradesh	Anantapur	2	21.37				
3		Kakinada	2	88.62	2	88.62	56.50	-
4		Machilipatnam	2	19.02				
5		Nellore	2	82.02				
6		Rajahmundry	2	80.67				
7		Srikakulam	2	38.83				
8		Tirupati	2	12.19				
9	Arunachal Pradesh	Itanagar	3	40.37	1	13.12	6.70	2
10	Bihar	Bhagalpur	1	32.66				
11		Muzaffarpur	1	158.78				
12		Patna	1	46.55				
13	Delhi	South DMC	3	5.38	3	5.38	7.01	17
14	Gujarat	Amreli	1	7.26	1	7.26	12.94	11
15		Anand	2	27.06				
16		Bharuch	1	2.81	1	2.81	2.00	4
17		Bhavnagar	4	8.86	4	8.86	4.55	13
18		Bhuj	2	3.12	2	3.12	2.42	10
19		Botad	1	4.53				
20		Deesa	1	9.26	1	9.26	5.17	13
21		Dwarka	1	4.89				
22		Gandhidham	1	12.43	1	12.43	13.64	9
23		Gandhinagar	1	6.26	1	6.26	-	51
24		Godhra	1	1.40	1	1.40	1.26	2
25		Gondal	2	6.64	1	4.28	2.56	5
26		Kalol	1	6.30				
27		Mahesana	1	4.10	1	4.10	1.56	3
28		Morvi	1	4.25				
29		Nadiad	1	15.62	1	15.62	9.45	2
30		Navsari	3	29.71	1	9.68	9.49	23
31		Palanpur	1	3.00	1	3.00	2.99	3
32		Patan	1	3.76	1	3.76	8.30	12
33		Prbandar	2	11.41	1	6.83	8.71	2
34		Rajkot	3	11.68	3	11.68	7.20	23
35		Surendranagar	1	3.67	1	3.67	6.50	6
36		Vadodara	2	36.63	2	36.63	4.45	5
37		Valsad	1	3.29	1	3.09	3.13	3
38		Vapi	1	6.48	1	6.48	2.40	6
39		Veraval	1	4.48				
40	Haryana	Ambala	2	44.92	1	5.00	5.00	25
41		Bhiwani	2	54.67	1	23.00	11.48	15
42		Faridabad	2	21.68	2	21.68	2.26	25
43		Jind	2	24.62	2	24.62	8.01	20
44		Kaithal	1	11.26	1	11.26	5.60	15
45		Karnal	2	92.47	1	17.00	3.96	20
46		Sirsa	2	9.87	1	6.00	2.43	15
47		Sonipat	2	149.11	1	20.00	5.62	15
48		Thanesar	2	30.42	2	30.42	18.88	27
49		Yamunanagar	2	13.35	2	13.35	4.50	11
50	Himachal Pradesh	Kullu	3	11.27				
51		Shimla	7	20.64	7	20.64	56.42	244

52	Jammu and Kashmir	Anantnag	5	11.05	5	11.05	4.68	4
53		Jammu	22	96.89	20	80.37	26.97	57
54		Srinagar	9	76.79	8	65.22	24.34	64
55	Karnataka	Badami	4	2.54	4	2.54	1.11	4
56		Bagalkot	5	4.06	5	4.06	4.99	20
57		Bhadravati	2	35.18	2	35.18	13.41	10
58		Chikmagalur	5	9.98	4	6.68	3.36	7
59		Chitradurga	7	19.39	7	19.39	5.72	5
60		Gadag-Betigeri	1	9.25				
61		Gangawati	5	19.86	4	9.34	2.98	-
62		Hospet	5	6.87	5	6.87	4.24	22
63		Kolar	19	37.85	16	27.72	14.39	-
64		Mangalore	1	3.66	1	3.66	0.66	4
65		Robertson Pet	11	20.58	11	20.58	8.73	-
66		Shimoga	15	68.46	11	32.38	25.06	31
67		Tumkur	4	5.70	4	5.70	3.35	9
68	Kerala	Alppuzha	145	48.41	137	41.87	45.02	161
69		Guruvayur	12	13.85	10	1.22	3.50	29
70		Kannur	12	39.35	4	3.09	15.70	5
71		Kochi	49	53.86	48	37.86	36.69	103
72		Kollam	21	29.94	18	22.99	16.32	27
73		Kozhikode	10	42.20	9	31.53	15.99	17
74		Plakkad	83	35.44	76	32.66	33.20	186
75		Thiruvananthapuram	103	40.35	100	36.93	55.34	552
76		Thrissur	67	37.25	58	31.79	29.38	50
77	Madhya Pradesh	Bhopal	15	146.08	15	146.08	131.70	154
78		Damoh	1	8.66	1	8.66	7.31	4
79		Dewas	1	2.49	1	2.49	4.95	5
80		Gwalior	1	21.44				
81		Hoshangabad	1	11.17				
82		Mandsaur	1	6.38	1	3.38	2.95	7
83		Ratlam	1	13.53	1	13.53	4.55	4
84		Rewa	1	20.78				
85		Satna	1	17.79	1	17.79	7.50	5
86	Maharashtra	Mira Bhayandar	1	94.06				
87	Mizoram	Aizawl	3	57.20	2	34.53	26.91	-
88	Nagaland	Dimapur	4	37.58				
89		Kohima	4	42.17	2	18.35	6.92	-
90	Rajasthan	Baran	1	1.00	1	1.00	0.90	3
91		Churu	1	4.58	1	4.58	2.09	1
92		Jhunjhunun	1	6.99	1	6.99	5.00	3
93		Jodhpur	2	39.00				
94		Udipur	1	11.50	1	11.50	2.25	6
95	Sikkim	Gangtok	25	14.90	21	7.14	4.79	643
96	Uttarakhand	Dehradun	7	13.96	7	13.96	9.58	57
97		Hardwar	5	10.49	2	4.19	2.94	6
98		Nainital	2	7.03				
99		Rudrapur	2	3.43	2	3.43	3.70	4
100	West Bengal	Baharampur	1	24.00				
101		Bhatpara	1	72.50				
102		Halisahar	2	125.60	1	60.00	30.00	12
103		Madhyamgram	1	24.99				
104		Panihati	1	29.99	1	29.99	15.50	10
105		Sanipur	1	24.42				
		Total	**809**	**3,015.93**	**691**	**1,425.60**	**971.14**	**2,959**

STATUS OF RESEARCH SCHEMES ON CLIMATE CHANGE FUNDED UNDER RESEARCH & DEVELOPMENT SCHEME OF DOWR, RD & GR

Name of the Scheme	Status
Impact Assessment of Climate Change on Hydro-meteorological processes and Water Resources of Mahanadi River Basin	Completed
Climate change impact studies for Rajasthan Area of inland drainage and Mahi basin	Completed
Impact of Climate Change on Water Resources of Tapi Basin	Completed
Effects of Climate Change and land arse/land cover changes on spatial and temporal water availability in Subarnarekha Basin	Completed
Impact of Climate Change on Water Resources of Sabarmati Basin	Completed
Impact of Climate Change on Water Resources in River Basins from Tadri to Kanyakumari	Completed
Statistical Downscaling for Hydro-climatic Projections with CMIP5 Simulations to Assess Impact of Climate Change	Completed
Dynamic Downscaling to study Climate Change Impacts on Water Resource in India	Partially Completed
Hydrogeological Assessment and Socio-Economic Implications of Depleting Water Resources in tourist towns of Uttarakhand	Ongoing
Irrigation Efficiency Improvement throw On–farm Water Management	Ongoing

Annexure - VII

Jal Jeevan Mission: Central fund allocated, drawn by the State and reported utilization in 2019-20

(Amount in Rs. Crore)

S. No.	State/ UT	Central share					Expenditure under State share
		Opening Balance	Fund allocated	Fund drawn by the State	Available fund	Reported utilization	
1.	A & N Islands	0.00	1.78	0.50	0.50	NR	NR
2.	Andhra Pradesh	25.74	372.64	372.64	398.38	121.62	54.80
3.	Arunachal Pradesh	6.22	132.55	177.47	183.69	126.14	13.35
4.	Assam	359.35	694.95	442.36	811.32	358.87	29.01
5.	Bihar	313.16	787.31	417.35	730.51	473.33	150.34
6.	Chhattisgarh	31.58	208.04	65.82	97.40	39.23	37.55
7.	Goa	0.00	7.57	3.08	3.08	3.08	6.17
8.	Gujarat	0.00	390.31	390.31	390.31	384.61	394.74
9.	Haryana	10.13	149.95	149.95	160.08	69.29	73.80
10.	Himachal Pradesh	0.00	148.67	205.83	205.83	197.87	15.46
11.	Jammu & Kashmir	27.14	322.03	322.03	349.17	200.25	24.01
12.	Jharkhand	75.79	267.69	291.19	382.97	114.58	119.71
13.	Karnataka	26.61	546.06	546.06	572.67	492.24	297.87
14.	Kerala	2.58	248.76	101.29	103.87	62.69	57.23
15.	Ladakh	8.10	166.65	67.86	75.96	NR	0.65
16.	Madhya Pradesh	1.26	571.60	571.60	572.86	326.65	288.75
17.	Maharashtra	248.12	847.97	345.28	593.40	308.04	428.14
18.	Manipur	0.00	67.69	91.17	91.17	28.20	6.60
19.	Meghalaya	0.80	86.02	43.01	43.81	26.35	0.77
20.	Mizoram	0.14	39.87	68.05	68.19	37.41	1.81
21.	Nagaland	0.00	56.49	56.49	58.44	23.54	4.67
22.	Odisha	0.78	364.74	364.74	365.52	275.02	255.02
23.	Puducherry	1.27	2.50	0.00	1.27	0.97	NR
24.	Punjab	102.91	227.46	227.46	330.37	73.27	78.20
25.	Rajasthan	313.67	1,301.71	1,301.71	1,615.38	620.31	698.54
26.	Sikkim	0.84	15.41	26.15	27.02	14.71	1.48
27.	Tamil Nadu	1.49	373.87	373.10	378.67	114.58	99.14
28.	Telangana	4.48	259.14	105.52	119.43	88.33	74.46
29.	Tripura	48.94	107.64	145.37	195.90	59.45	6.46
30.	Uttar Pradesh	58.33	1,206.28	1,513.14	1,571.47	639.32	380.10
31.	Uttarakhand	6.12	170.53	170.53	176.65	110.04	23.02
32.	West Bengal	760.82	995.33	994.75	1,755.57	609.00	445.03

Source: JJM - IMIS ND: Not Drawn NR: Not Reported

Jal Jeevan Mission: Central fund allocated, drawn by the State and reported utilization in 2020-21

(Amount in Rs. Crore)

S. No.	State/ UT	Central share					Expenditure under State share
		Opening Balance	Fund allocated	Fund drawn by the State	Available fund	Reported utilization	
1.	A & N Islands	0.50	2.93	1.46	1.96	1.45	NR
2.	Andhra Pradesh	276.76	790.48	297.62	574.38	427.73	180.97
3.	Arunachal Pradesh	57.56	254.85	344.85	402.41	392.43	32.05
4.	Assam	452.45	1,608.51	551.77	1,004.22	880.44	90.02
5.	Bihar	257.18	1,839.16	353.60	610.78	551.82	374.42
6.	Chhattisgarh	58.17	445.52	334.14	392.31	223.80	221.10
7.	Goa	0.00	12.41	6.20	6.20	2.99	13.49
8.	Gujarat	5.70	883.08	983.08	988.78	838.50	883.43
9.	Haryana	90.80	289.52	72.38	163.18	130.94	120.17
10.	Himachal Pradesh	7.95	326.20	547.48	555.43	329.01	42.25
11.	Jammu & Kashmir	148.92	681.77	53.72	202.64	88.69	5.17
12.	Jharkhand	268.39	572.24	143.06	411.45	286.62	177.73
13.	Karnataka	80.42	1,189.40	446.36	526.78	349.62	416.38
14.	Kerala	41.18	404.24	303.18	344.36	304.29	311.25
15.	Ladakh	75.96	352.09	ND	75.96	9.43	NR
16.	Madhya Pradesh	246.21	1,280.13	960.09	1,206.30	1,014.70	875.99
17.	Maharashtra	285.35	1,828.92	457.23	742.58	473.59	324.16
18.	Manipur	62.96	131.80	141.80	204.76	189.14	18.52
19.	Meghalaya	17.46	174.92	184.92	202.48	188.30	20.44
20.	Mizoram	30.77	79.30	104.30	135.07	107.90	10.13
21.	Nagaland	34.90	114.09	85.57	120.47	91.95	10.00
22.	Odisha	90.50	812.15	609.11	699.61	688.69	673.00
23.	Puducherry	0.30	4.64	1.06	1.38	0.20	1.00
24.	Punjab	257.10	362.79	ND	257.10	146.74	104.95
25.	Rajasthan	995.07	2,522.03	630.51	1,625.58	762.04	789.05
26.	Sikkim	12.30	31.36	39.36	51.66	43.43	3.75
27.	Tamil Nadu	264.09	921.99	690.36	954.45	576.97	399.57
28.	Telangana	31.10	412.19	82.71	116.32	61.17	133.98
29.	Tripura	136.46	156.61	117.46	256.52	195.00	22.26
30.	Uttar Pradesh	932.16	2,570.94	1,295.47	2,227.63	1,761.06	886.94
31.	Uttarakhand	66.60	362.58	271.93	338.53	227.32	20.02
32.	West Bengal	1,146.58	1,614.18	807.08	1,953.66	1,196.07	641.17

Source: JJM - IMIS ND: Not Drawn NR: Not Reported

Jal Jeevan Mission: Central fund allocated, drawn by the State and reported utilization in 2021-22

(Amount in Rs. Crore)

S. No.	State/ UT	Central share					Expenditure under State share
		Opening Balance	Fund allocated	Fund drawn by the State	Available fund	Reported utilization	
1.	A & N Islands	0.52	8.26	2.06	2.58	1.05	NR
2.	Andhra	146.65	3,182.88	791.06	937.71	234.76	235.39
3.	Arunachal	9.98	1,013.53	1,555.53	1,565.51	1,114.29	106.62
4.	Assam	123.78	5,601.16	4,200.87	4,324.65	2,505.44	312.89
5.	Bihar	58.95	6,608.25	ND	58.95	4.00	340.45
6.	Chhattisgarh	168.52	1,908.96	477.24	645.76	498.69	488.63
7.	Goa	3.21	45.53	22.77	25.98	14.03	17.98
8.	Gujarat	150.28	3,410.61	2,557.96	2,708.24	2,124.85	2,226.25
9.	Haryana	32.24	1,119.95	559.98	592.22	434.74	431.27
10.	Himachal	226.42	1,262.78	2,012.78	2,239.20	1,420.94	146.73
11.	Jammu &	113.96	2,747.17	604.18	718.14	112.43	8.31
12.	Jharkhand	124.83	2,479.88	512.22	637.05	437.21	510.99
13.	Karnataka	177.16	5,008.80	2,504.40	2,681.56	1,418.56	1,557.92
14.	Kerala	40.07	1,804.59	1,353.44	1,393.51	957.44	1,059.57
15.	Ladakh	66.52	1,429.96	340.68	407.20	144.96	NR
16.	Madhya	191.61	5,116.79	3,837.59	4,029.20	2,262.78	2,479.33
17.	Maharashtra	268.99	7,064.41	1,666.64	1,935.63	377.98	477.98
18.	Manipur	15.62	481.19	601.19	616.81	474.78	52.80
19.	Meghalaya	14.18	678.39	1,078.39	1,092.57	672.05	76.55
20.	Mizoram	27.17	303.89	303.89	331.06	250.98	32.31
21.	Nagaland	28.52	444.81	333.61	362.13	345.14	27.88
22.	Odisha	10.93	3,323.42	2,492.56	2,503.49	1,306.20	1,289.71
23.	Puducherry	1.18	30.22	7.47	8.66	2.32	0.10
24.	Punjab	110.36	1,656.39	402.24	512.60	247.83	175.81
25.	Rajasthan	863.53	10,180.50	2,345.08	3,208.61	1,920.16	1,664.02
26.	Sikkim	8.23	124.79	194.79	203.02	90.12	11.57
27.	Tamil Nadu	377.48	3,691.21	614.35	991.83	457.55	496.23
28.	Telangana	55.15	1,653.09	ND	55.15	17.70	68.88
29.	Tripura	61.51	614.09	714.09	775.60	599.82	65.13
30.	Uttar Pradesh	466.56	10,870.50	5,435.25	5,901.81	2,930.07	3,525.40
31.	Uttarakhand	111.22	1,443.80	1,082.85	1,194.07	597.97	67.40
32.	West Bengal	757.58	6,998.97	1,404.61	2,162.19	1,547.52	725.77

Source: JJM- IMIS ND: Not Drawn NR: Not Reported

Jal Jeevan Mission: Central fund allocated, drawn by the State and reported utilization in 2022-23

(Amount in Rs. Crore)

S. No.	State/ UT	Central share					Expenditure under State share
		Opening Balance	Fund allocated	Fund drawn by the State	Available fund	Reported utilization	
1.	A & N Islands	1.53	9.15	2.16	3.69	0.60	NR
2.	Andhra Pradesh	702.95	3,458.20	ND	702.95	305.08	98.75
3.	Arunachal Pradesh	451.21	1,116.35	1,116.35	1,567.56	1,278.44	153.40
4.	Assam	1,819.21	6,117.61	4,588.21	6,407.42	3,959.31	442.58
5.	Bihar	54.95	4,766.90	ND	54.95	NR	35.02
6.	Chhattisgarh	147.06	2,223.98	2,223.98	2,371.04	2,082.53	2,065.56
7.	Goa	11.95	49.98	ND	11.95	11.04	20.14
8.	Gujarat	583.39	3,590.16	3,590.16	4,173.55	3,074.37	3,261.30
9.	Haryana	157.47	1,157.44	463.00	620.47	519.76	447.45
10.	Himachal Pradesh	818.27	1,344.94	1,344.94	2,163.21	1,613.73	179.96
11.	Jammu & Kashmir	605.71	3,039.11	1,439.50	2,045.21	1,142.08	153.81
12.	Jharkhand	199.83	2,825.52	2,119.14	2,318.97	1,758.89	1,585.64
13.	Karnataka	1,263.00	5,451.85	2,725.93	3,988.93	2,718.57	3,129.60
14.	Kerala	436.08	2,206.54	2,206.54	2,642.62	1,741.93	1,741.68
15.	Ladakh	262.25	1,555.77	382.76	645.01	364.32	NR
16.	Lakshadweep	-	36.99	9.25	9.25	NR	NR
17.	Madhya Pradesh	1,766.42	5,641.02	2,820.51	4,586.93	3,516.09	3,506.72
18.	Maharashtra	1,557.65	7,831.25	3,915.62	5,473.27	3,093.82	2,960.59
19.	Manipur	142.03	512.05	256.03	398.06	231.53	25.63
20.	Meghalaya	420.52	747.76	1,047.00	1,467.52	1,098.04	122.85
21.	Mizoram	80.08	333.91	448.58	528.66	407.40	45.74
22.	Nagaland	17.00	484.28	484.28	501.28	481.71	52.71
23.	Odisha	1,197.29	3,608.62	1,768.73	2,966.02	2,165.71	2,149.28
24.	Puducherry	6.34	17.83	ND	6.34	0.90	0.21
25.	Punjab	264.78	2,403.46	ND	264.78	264.54	208.74
26.	Rajasthan	1,288.46	13,328.60	6,081.80	7,370.26	3,889.92	3,993.96
27.	Sikkim	112.90	136.17	188.92	301.82	222.53	20.63
28.	Tamil Nadu	534.29	4,015.00	872.96	1,407.25	594.61	665.19
29.	Telangana	37.44	1,657.56	ND	37.44	11.39	13.52
30.	Tripura	175.78	666.97	849.91	1,025.69	798.67	82.64
31.	Uttar Pradesh	2,971.74	12,662.05	9,496.54	12,468.28	9,990.16	9,444.81
32.	Uttarakhand	596.09	1,612.50	1,209.38	1,805.47	1,502.63	156.34
33.	West Bengal	614.67	6,180.25	3,090.12	3,704.79	1,953.71	3,203.48

Source: JJM- IMIS ND: Not Drawn NR: Not Reported

Annexure - VIII

State/ UT-wise status of tap water connections in rural households
(as on 27.04.2023)

(Number in lakhs)

S. No.	State/ UT	Total rural HHs as on 15.08.2019	Rural HHs with tap water connection as on 15.8.2019		Total rural HHs as on date	Rural HHs given tap water connections							Rural HHs with tap water supply	
			No.	In %		19-20	20-21	21-22	22-23	23-24	Total	In %	No.	In%
1.	A & N Islands	0.65	0.29	43.92	0.62	-	0.33	-	-	-	0.33	53.98	0.62	100.00
2.	Andhra Pradesh	95.66	30.74	32.14	95.55	1.19	12.77	9.59	12.12	0.15	35.82	37.49	66.56	69.66
3.	Arunachal	2.18	0.23	10.46	2.30	0.13	0.65	0.42	0.34	0.00	1.55	67.11	1.77	77.01
4.	Assam	63.35	1.11	1.76	67.70	0.49	5.07	16.52	8.79	0.52	31.39	46.37	32.51	48.02
5.	Bihar	1,83.54	3.16	1.72	166.30	28.97	103.46	19.86	3.63	0.16	156.07	93.85	159.24	95.75
6.	Chhattisgarh	45.48	3.20	7.03	50.09	0.96	1.51	4.45	10.81	0.88	18.62	37.17	21.81	43.55
7.	DNH and D&D	0.6	0.00	0.00	0.85	-	0.25	0.61	-	-	0.85	100.00	0.85	100.00
8.	Goa	2.63	1.99	75.70	2.63	0.31	0.33	-	-	-	0.64	24.30	2.63	100.00
9.	Gujarat	93.03	65.16	70.04	91.18	1.06	10.95	8.99	5.03	-	26.02	28.54	91.18	100.00
10.	Haryana	28.94	17.66	61.04	30.41	1.35	7.91	3.49	-	-	12.75	41.92	30.41	100.00
11.	Himachal Pradesh	17.04	7.63	44.76	17.09	1.59	3.79	2.87	0.93	0.00	9.17	53.69	16.80	98.33
12.	J&K	18.17	5.75	31.67	18.68	2.07	2.16	0.58	0.40	0.17	5.38	28.81	11.13	59.62
13.	Jharkhand	54.09	3.45	6.38	61.20	0.95	3.00	4.19	8.77	0.57	17.48	28.56	20.93	34.20
14.	Karnataka	89.61	24.51	27.35	101.17	0.21	3.43	18.70	20.57	0.97	43.89	43.38	68.40	67.61
15.	Kerala	67.15	16.64	24.78	70.72	0.85	4.04	6.64	5.29	0.29	17.12	24.20	33.76	47.73
16.	Ladakh	0.44	0.01	3.21	0.43	0.01	0.02	0.09	0.18	0.00	0.29	68.86	0.31	72.19
17.	Lakshadweep	-	-	-	0.13	-	-	-	-	-	-	-	-	-
18.	Madhya Pradesh	1,21.24	13.53	11.16	119.88	4.19	19.87	10.89	9.07	0.48	44.50	37.12	58.03	48.41
19.	Maharashtra	1,42.36	48.44	34.03	146.73	5.45	37.09	10.66	8.22	0.88	62.29	42.45	110.73	75.46
20.	Manipur	4.52	0.26	5.73	4.52	0.04	1.96	0.70	0.49	0.00	3.20	70.78	3.46	76.52
21.	Meghalaya	5.9	0.05	0.77	6.52	0.02	0.87	1.34	0.80	0.04	3.07	47.07	3.11	47.76
22.	Mizoram	1.27	0.09	7.24	1.33	0.16	0.34	0.21	0.30	0.03	1.04	78.11	1.13	85.03

S. No.	State/ UT	Total rural HHs as on 15.08.2019	Rural HHs with tap water connection as on 15.8.2019		Total rural HHs as on date	Rural HHs given tap water connections							Rural HHs with tap water supply	
			No.	In %		19-20	20-21	21-22	22-23	23-24	Total	In %	No.	In%
23.	Nagaland	3.86	0.14	3.60	3.70	0.02	0.48	0.92	0.87	0.03	2.32	62.61	2.45	66.36
24.	Odisha	83.06	3.11	3.74	88.59	4.37	15.47	17.47	12.22	0.39	49.93	56.36	53.04	59.86
25.	Puducherry	1.15	0.94	81.31	1.15	0.06	0.08	0.07	0.00	-	0.21	18.67	1.15	100.00
26.	Punjab	35.07	16.79	47.86	34.26	0.76	8.18	8.40	0.13	-	17.47	51.00	34.26	100.00
27.	Rajasthan	1,01.32	11.74	11.59	107.91	1.02	6.81	5.38	14.13	1.40	28.74	26.64	40.49	37.52
28.	Sikkim	1.05	0.70	67.00	1.32	-	0.10	0.08	0.19	0.01	0.39	29.50	1.09	82.84
29.	Tamil Nadu	1,26.89	21.76	17.15	125.53	0.17	16.13	14.90	26.52	1.27	58.99	46.99	80.75	64.33
30.	Telangana	54.38	15.68	28.84	53.98	20.18	18.20	-0.19	0.11	-	38.30	70.95	53.98	100.00
31.	Tripura	8.01	0.25	3.06	7.42	0.46	1.42	1.65	0.81	0.03	4.37	58.94	4.62	62.24
32.	Uttar Pradesh	2,63.39	5.16	1.96	265.67	4.66	19.16	5.81	60.33	10.52	100.48	37.82	105.64	39.76
33.	Uttarakhand	14.62	1.30	8.91	14.94	0.87	4.32	2.75	2.24	0.04	10.22	68.37	11.52	77.09
34.	West Bengal	1,63.26	2.15	1.31	183.71	0.05	12.48	23.31	20.77	1.28	57.88	31.51	60.03	32.68
	Total	**18,93.91**	**3,23.62**	**17.07**	**19,44.20**	**82.62**	**3,22.62**	**2,01.34**	**2,34.07**	**20.12**	**8,60.77**	**44.27**	**11,84.40**	**60.92**

Source: JJM – IMIS HH: Household

Annexure-IX

State-wise number of quality–affected rural habitations (as on 27.04.2023)

S. No.	State	Number of quality–affected habitations									Total quality-affected habitations
		Fluoride		Arsenic		Iron	Salinity	Nitrate	Heavy Metal		
		Total	Covered with short term measures/ CWPP	Total	Covered with short term measures/ CWPP				Total	Covered with short term measures/ CWPP	
1.	Arunachal Pradesh	-	-	-	-	46	-	-	-	-	46
2.	Assam	-	-	-	-	6,951	-	-	-	-	6,951
3.	Bihar	-	-	-	-	66	-	-	-	-	66
4.	Chhattisgarh	-	-	-	-	2	-	-	-	-	2
5.	Jharkhand	2	2	-	-	3	-	-	-	-	5
6.	Kerala	4	4	-	-	58	17	8	-	-	87
7.	Lakshadweep	-	-	-	-	-	10	-	-	-	10
8.	Madhya Pradesh	-	-	-	-	-	0	-	-	-	0
9.	Maharashtra	-	-	-	-	6	29	5	-	-	40
10.	Odisha	28	28	-	-	1,332	16	6	-	-	1,382
11.	Punjab	176	176	428	428	3	-	17	86	58	710
12.	Rajasthan	151	151	-	-	4	8,840	436	-	-	9,431
13.	Tripura	-	-	-	-	334	-	-	-	-	334
14.	Uttar Pradesh	27	27	89	89	233	61	10	-	-	420
15.	Uttarakhand	-	-	-	-	2	-	1	-	-	3
16.	West Bengal	40	40	83	83	3	-	-	-	-	126
Total		**428**	**428**	**600**	**600**	**9,043**	**8,973**	**483**	**86**	**58**	**19,613**

Source: JJM-IMIS

Annexure X

Group wise sanctioned and Vacancy post details of SPCBs/PCCs

	Group A			Group B			Group C			Total		
Name of the SPCBs / PCCs	**Sanctioned**	**In Place**	**Vacancy**	**Sanctioned**	**In Place**	**Vacancy**	**Sanctioned**	**In Place**	**Vacancy**	**Sanctioned**	**In Place**	**Vacancy**
Andaman & Nicobar	1	1	0	3	3	0	1	1	0	5	5	0
Andhra Pradesh	23	20	3	125	78	47	141	21	120	289	119	170
Arunachal Pradesh	5	5	0	2	2	0	49	49	0	56	56	0
Assam	102	80	22	35	24	11	74	53	21	211	157	54
Bihar	23	7	16	56	30	26	119	30	89	198	67	131
Chandigarh	2	1	1	0	0	0	7	6	1	9	7	2
Chhattisgarh	31	18	13	37	25	12	181	80	101	249	123	126
D,D&DH	2	2	0	2	2	0	6	6	0	10	10	0
Delhi	96	29	67	114	11	103	133	65	68	343	105	238
Goa	12	6	6	24	20	4	75	72	3	11	98	13
Gujarat	65	45	20	248	219	29	160	131	29	473	395	78
Haryana	35	15	20	80	66	14	136	49	87	251	130	121
Himachal Pradesh	61	30	31	25	11	14	241	159	82	327	200	127
Jammu & Kashmir	2	2	0	1	1	0	7	6	1	10	9	1
Jharkhand	11	0	11	24	6	18	178	34	144	213	40	173
Karnataka	147	104	43	217	75	142	318	118	200	682	297	385
Kerala	33	32	1	149	32	117	201	24	177	283	88	295
Lakshadweep	0	0	0	0	0	0	5	1	4	5	1	4
Madhya Pradesh	314	108	206	115	52	63	899	340	559	1,328	500	828
Maharashtra	103	83	20	250	189	61	372	226	146	725	498	227
Manipur	6	3	3	7	5	2	82	42	40	95	50	45
Meghalaya	24	15	9	9	6	3	50	33	17	83	54	29
Mizoram	3	3	0	0	0	0	8	8	0	11	11	0
Nagaland	2	2	0	2	2	0	10	10	0	14	14	0
Odisha	82	49	33	114	80	34	58	39	19	254	168	86
Puducherry	1	0	1	5	3	2	6	6	0	12	9	3
Punjab	165	124	41	126	80	46	211	100	111	502	304	198
Rajasthan	89	63	26	123	101	22	155	82	73	367	246	121
Sikkim	2	2	0	4	4	0	13	13	0	19	19	0
Tamil Nadu	87	77	10	425	244	181	407	191	216	919	512	407
Telangana	20	13	7	107	81	26	103	48	55	230	142	88
Tripura	6	5	1	10	7	3	6	5	1	22	17	5
Uttar Pradesh	55	46	9	106	69	37	525	355	170	686	470	216
Uttarakhand	12	6	6	17	12	5	56	7	49	85	25	60
West Bengal	127	96	31	67	51	16	67	3	64	261	150	111
Total	**1,749**	**1,092**	**657**	**2,629**	**1,591**	**1,038**	**5,060**	**2,413**	**2,647**	**9,438**	**5,096**	**4,342**