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REJUVENATION OF RIVER GANGA (NAMAMI GANGE)

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

PUBLIC ACCOUNTS COMMITTEE
(2023-24)

ONE HUNDRED AND TWENTY FIFTH REPORT

SEVENTEENTH LOK SABHA

LOK SABHA SECRETARIAT
NEW DELHI

PAC NO. 2355

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Presented to Hon'ble Speaker, Lok Sabha on 23.02.2024

Presented to Lok Sabha on: ……

Laid in Rajya Sabha on: ……..

LOK SABHA SECRETARIAT
NEW DELHI

February 2024/ Phalguna 1945 (Saka)

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3. Shri Alok Mani Tripathi - Deputy Secretary

* Elected w.e.f. 19.08.2023 consequent upon retirement of Shri Sukhendu Sekhar Ray, MP on 18.08.2023.

INTRODUCTION

I, the Chairperson, Public Accounts Committee (2023-24) having been authorized by the Committee, do present this One Hundred and Twenty Fifth Report (Seventeenth Lok Sabha) on **"REJUVENATION OF RIVER GANGA (NAMAMI GANGE)"** based on Report no. 39 of 2017 relating to the MINISTRY OF JAL SHAKTI (DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION).

2. The Report of Comptroller and Auditor General of India was laid on the Table of the House on 19-12-2017.

3. The vast scope and the significance of the matter led the Public Accounts Committee (2022-23) to investigate the subject in detail. The Committee took oral evidence of the representatives of Ministry of Jal Shakti, (Department of Water Resources, River Development and Ganga Rejuvenation) and representatives of West Bengal on 12-08-2021 and 22-11-2021. On 14-06-2022, the Committee took oral evidence from representatives of the West Bengal State Government to examine the progress of the Namami Gange Programme's implementation. On 22-09-2022, the Committee took oral evidence from the representatives of the States of Uttrakhand, Uttar Pradesh, Bihar and West Bengal. The Committee considered and adopted this Report at their sitting held on 09-02-2024. The Minutes of the sittings of the Committee are appended to the Report.

4. For facility of reference and convenience, the Observations and Recommendations of the Committee have been printed in bold and form Part-II of the Report.

5. The Committee would like to express their thanks to the representatives of the Ministry of Jal Shakti (Department of Water Resources, River Development and Ganga Rejuvenation) for tendering evidence before them and furnishing the requisite information to the Committee in connection with the examination of the subject.

6. The Committee also place on record their appreciation of the assistance rendered to them in the matter by the Committee Secretariat and the Office of the Comptroller and Auditor General of India.

NEW DELHI **ADHIR RANJAN CHOWDHURY**

9 February 2024 **Chairperson,**

20 Magha 1945 (Saka) **Public Accounts Committee**

REPORT

PART-I

CHAPTER -I

INTRODUCTION

The Committee note that Ganga River Basin is the largest river basin in India, covering more than a quarter of country's land area, and hosting about 43% of her population. River Ganga has significant economic, environmental, cultural and religious value in India. In 2008, the Government of India declared River Ganga as a National River.

1.1 Initiatives of the Government

2. The Committee have learnt that Ganga Action Plan (GAP)[1] was constituted (April 1985) by Government of India with the objective of reducing pollution in river Ganga. Again, National Ganga River Basin Authority (NGRBA) was constituted (February 2009) for Comprehensive Planning and Management for abatement of pollution and conservation of river Ganga. Government of India (GoI) has given (November 2008) the status of National River to the Ganga and it launched (May 2015) NamamiGange Programme to be implemented by National Mission for Clean Ganga (NMCG). A vision of Nirmal and AviralDhara under "NamamiGange" Mission is to be achieved by ensuring management of municipal sewage, rural sewage, control of industrial discharges and other proposed plans for Ganga Rejuvenation including its all tributaries. It is an umbrella programme for all ongoing schemes as well as the new ones. The major activities to be carried out under NamamiGange are augmentation of existing STPs, creation of new STPs, complete sanitation coverage for gram panchayats, development of model cremation/dhobi ghats, creation of an IT based monitoring center. Consequently, the River Ganga (Rejuvenation, Protection and Management) Authorities Order (2016) was notified for rejuvenation, protection and management of river Ganga.

3. Outlining the mission objectives of the NamamiGange, the Ministry of Jal Shakti in their background report stated as under:

> "NamamiGange is not limited[2] to cleaning or piecemeal selected city interventions but follows river centric, basin-based approach for comprehensive rejuvenation. The main components of the NamamiGange Programme can be categorised in following manner-
>
> a) **Nirmal Dhara:** Creation of Sewerage Infrastructure, Solid waste Management,7 Industrial Pollution Abatement, Rural Sanitation, and Water Quality Monitoring for ensuring the "unpolluted flow" in the river.

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[1] *Report No 5 of 2000 Compliance Audit of Bihar PARA 3.1.2/Flag'g'*

[2] Flag D, Pages 4 and 5, Background Note by the Ministry of Jal Shakti

b) **AviralDhara:** Determine and maintain environmental flow' and take various supply and demand side measures to improve water quantity in river.
c) **River-Front Development:** Construction, modernization, and renovation of ghats and crematoria to ensure restricted entry of pollutants.
d) **Afforestation and Biodiversity Conservation**
e) **Sustainable Agriculture**
f) **Public participation**
g) **Policies, Research & Innovation- Urban River Management Plan, LIDAR Mapping of river, Ganga Knowledge Centre etc."**

4. "NamamiGange" was launchedwith the[3] aim of integrating previous andcurrently ongoing initiatives in holisticmanner with a basin approach. It has beenapproved as a Central Sector Scheme in2015 and includes diverse set ofinterventions such as pollutionabatement measures to tackle differentsources of pollution such as municipalsewage, industrial effluents, municipalsolid waste, non-point sources ofpollution and interventions for improvingecological flows, biodiversityconservation, afforestation, improvingamenities and sanitation at riverbanks,capacity building, research &monitoring,public awareness. The program was givena dedicated budget of Rs. 20,000 crorefor a period of 5 years. The program canbe placed into four categories***i.e. NirmalGanga, Aviral Ganga, Jan Ganga and GyanGanga.***

5. During the course of their examination of the subject, **the Committee was apprised of the subsequent addition of one more dimension of Arth Ganga to NamamiGange programme.[4]**

1.2 Mandate of the Audit

6. The CAG undertook Performance Audit of the Rejuvenation of River Ganga (NamamiGange)to assess the adequacy of estimation, availability and utilisation of funds, planning and implementation of various schemes/projects, adequacy of human resources and effectiveness of monitoring and evaluation mechanisms.

7. The C&AG Report is based on only 87 sampled projects (73 ongoing, 13 completed and one abandoned project) for audit scrutiny. The Audit exercise and resultant report was not only a follow up of the Public Accounts Committee Report No. 62 of Thirteenth Lok Sabha, but also as a consequences of the directions issued by the Honble High Court of Uttarakhand.

[3] Flag D, Page 4 , Background Note by the Ministry of Jal Shakti
[4] Page 29 Flag D, Background Note by the Ministry of Jal Shakti 22/09/2022

1.3 Findings of the Audit

8. The Committee have also learnt that Audit found several gaps in their performance audit. Audit found that huge amount remained unutilised and utilisation certificates were not submitted timely by the State Programme Management Groups. A corpus of Rs 198.14 crore (as of 31 March 2017) was available in the CGF. The National Mission for Clean Ganga did not have a river basin management plan even after a lapse of more than eight years of National Ganga River Basin Authority (NGRBA) notification leading to delay in initiation of long term intervention for Ganga Rejuvenation based on river basin approach. Solid and Liquid waste management activities were not taken up in any of the districts identified by the Audit in the states of Uttar Pradesh, Bihar, Jharkhand, and West Bengal. As per the target dates, award for the work of all the sewage treatment plants was to be completed by September 2016. However, detailed project reports (DPRs) for projects could not be finalised and approved even in August 2017.[5]

1.4 Examination of the subject by PAC

9. It is in these backdrop and the findings of the Committee during their Study Visit to Kolkata and Berhampore in West Bengal from **9th to 14th January 2021** that set the stage for examination of the subject and the Committee held discussion with the representatives of Ministry of Jal Shakti on **12.08.2021.** In view of the vastness of the subject the Committee again held discussion with the Ministry of Jal Shakti, National Mission for Clean Ganga (NMCG) and the representatives of the Government of West Bengal on **22.11.2021** to examine the impact of the initiatives taken for cleaning the river Ganga to her last stretch on the land. The Committee also undertook a follow up Study Visit from **3 to 8 January, 2022** to Kolkata and other places, and included the discussion with various stakeholders from ministry of Jal Shakti as well as the State Government representatives towards implementation of the NamamiGange Project in West Bengal. As a follow up, the Committee again took oral evidence of the representatives of the State Government of West Bengal on **14th June, 2022.** To have a comprehensive view of the implementation of the NamamiGange Programme, the Committee took a final oral evidence of the representatives of the State Governments of Uttarakhand, Uttar Pradesh, Bihar and West Bengal, i.e, the main riparian States on the stem of the River Ganga along with the representatives of the Ministry of Jal Shakti and NMCG on **22nd September, 2022.**

1.5 Authority implementing the Programme

10. NMCG was registered as a society on12.8.2011 under the Societies RegistrationAct, 1860.[6] It acted as implementation armof National Ganga River Basin Authority(NGRBA) which was constituted under theprovisions of the Environment ProtectionAct (EPA), 1986. NGRBA has since beendissolved with effect from 7.10.2016, consequent to the constitution of NationalCouncil for Rejuvenation, Protection andManagement of River Ganga (referred asNational Ganga Council) *vide*notificationno. S.O. 3187(E)

[5] Flag C, Page 6 and 7, Background Note by the Ministry of Jal Shakti 14th June 2022
[6] Flag B Annual Report 2021-22 of Min of Jal Shakti page 132

dated. 7-10-2016 underEPA, 1986. The Act envisages five tierstructure at national, state and districtlevel to take measures for prevention,control, and abatement of environmentalpollution in river Ganga and to ensurecontinuous adequate flow of water torejuvenate the river Ganga as below:

- National Ganga Council underchairmanship of Hon'ble PrimeMinister of India,
- Empowered Task Force (ETF) onriver Ganga under chairmanshipof Hon'ble Union Minister of Jal Shakti,
- NMCG,
- State Ganga Committees, and
- District Ganga Committees in everyspecified district abutting river Gangaand its tributaries in the States

11. NMCG has a two-tier managementstructure comprising of Governing Counciland Executive Committee which areheaded by Director General, NMCG.[7]

Executive Committee has been authorizedto accord approval for all projects upto Rs.1,000 crore. NMCG has signedMemorandum of Understanding (MoUs)with various Central Ministries such asMinistry of Human Resources Development,Ministry of Rural Development, Ministryof Railways, Ministry of Shipping, Ministryof Tourism, Ministry of Ayush, Ministryof Petroleum, Ministry of Youth Affairsand Sports, Ministry of Drinking Water &Sanitation and Ministry of Agriculture foreffective implementation and success of itsmulti-disciplinary programme.

12. Detailing the Departments of State Governments involved in NamamiGange Project, the Ministry further submitted:

"The various departments/ agencies[8] involved in implementation of various projects under NamamiGange are given in ANNEXURE-I.

1.6 Powers and Functions of NMCG

13. Detailing the powers and functions of NMCG, the Ministry ofJal Shakti in a written reply stated as under:

> "Although the National Mission for Clean Ganga (NMCG)[9] is constituted vide notification no. S.O. 3187 (E) dated 07.10.2016, namely the River Ganga (Rejuvenation, Protection and Management) Authorities order, 2016 issued under the Environment (Protection)Act, 1986, there are various other Acts and Rules, *viz.* Wildlife Protection Act, 1972, Water Act, 1974, Forest Act, 1980, Biodiversity Act etc which are attracted for regulating the activities being performed by the NMCG."

14. They further added that there is a proposal to bring out a specific legislation for Rejuvenation, Protection and Management of River Ganga. In

[7] Ibid page 132
[8] Page 31 flag F List of Points 12/08/2021
[9] Q No 10 flag G Reply to Lop 22/11/2021

this regard a bill, namely; National River Ganga (Rejuvenation, Protection & Management) Bill has been initiated.[10]

15. The Ministry in a written reply also submitted as under:

> "As per paragraph 8, 39, 41 and various other provisions of the River Ganga (Rejuvenation, Protection and Management) Authorities order, 2016, NMCG is vested with power to issue direction under section 5 of the E (P) Act, 1986[11] to the State Government concerned authority or local authority or other authorities or Board or Corporation or person and they shall be bound to comply with such directions."

CHAPTER-II

[10] Ibid q no 11
[11] Ibid q no 13

II. FINANCIAL MANAGEMENT

16. Audit has observed that only eight to 63 per cent of the funds allocated in the Revised Estimates were utilised during 2014-15 to 2016-17. Funds amounting to Rs. 2,133.76 crore, Rs. 422.13 crore and Rs.59.28 crore were lying un-utilised with National Mission for Clean Ganga, various State Programme Management Groups and Executing Agencies/ Central Public Sector Undertakings respectively as on 31 March 2017.[12]

17. Asked to furnish the reasonsfor the non-utilisation of funds, the Ministry of Jal Shakti in a written reply stated as under:

> "The first two years of NamamiGange 2015-17[13] were utilized in preparation of Detailed Project Reports, their scrutiny and Third Party Appraisal and also for putting in place a sound mechanism for implementing the program at various level.The infrastructure development projects and other projects of ecological and habitat protection started getting implemented from the year 2017 onwards and hence the utilization of funds also picked up with effect from 2017-18. The utilization of funds since 2017-18 till now is Rs. 8494.93 cr which is 81.17% of total utilization of Rs. 10466.02. The current utilization stands at around 50% of the total allocation of Rs. 20,000 crores."

18. Specifying further, the Ministry stated that the 346 projects have been sanctioned at an estimated cost of Rs. 30,253.23 crore as part of the allocation of Rs. 20,000 crore earmarked for the NamamiGange Program for a specified period and not in addition to it.[14]

19. When asked about the remedial actions proposed by National Mission for Clean Ganga (NMCG) to ensure timely utilization of funds released to it, the Ministry of Jal Shakti in a written reply submitted as under:

> "Funds for the projects under the Namami Gange Program are being disbursed to the State Program Management Groups (SPMGs) at quarterly intervals in advance based on the projected requirement of funds for the quarter for the projects being executed by the SPMGs. The funds requirements of SPMGs are determined on the basis of projections submitted by the SPMGs which are then critically examined by the technical and financial experts of NMCG. For monitoring of utilization of funds disbursed, for World Bank aided projects, SPMGs are required to submit Interim Unaudited Financial Reports (IUFRs) in the format prescribed by the World Bank at monthly intervals. For other projects, the SPMGs are required to submit Utilization Certificates (UCs) at quarterly intervals in accordance with the provisions in the General Financial Rules 2017 (GFR2017). Further, the Quarterly Physical Progress Reports (QPPR) are also obtained from SPMGs. Submissions of IUFRs, UCs and

[12] **Para 2.2.1 & 2.2.5 of Audit Report Flag A**
[13] Flag F Replies to LoP 12/08/2021
[14] Flag F, Q No 10

QPPRs are being closely followed up. A Digital Dash Board has also been created to monitor the progress of the projects on real time basis. Periodic meetings are held with Executing Agencies (EAs) in which physical and financial progress of the projects are critically examined. Such review meetings are from time to time chaired by the Director General, NMCG, Secretary Jal Shakti Ministry and Hon'ble Minister for Jal Shakti along with state authorities to monitor progress and addresses bottle necks and implementation of projects.

All these measures have helped in faster and optimum utilization of funds resulting in expeditious implementation of projects relating to Ganga rejuvenation.[15]"

20. The Ministry of Jal Shakti in their Background Note stated that the NamamiGange scheme is to be implemented up to March, 2021 with outlay of Rs. 20000 crores. For the rejuvenation of National River Ganga and its tributaries the budgetary outlay of Rs. 20,000/- for the period FY 2014-15 till 31/12/2020 out of which only Rs. 9788.38 crore has been spent under various components.[16]

Table: Funds received from Govt. of India and released / expended by NMCG under Namami Gange Mission

	FY	Funds released by Govt. of India (Rs. in crore)	Funds released/ utilized by NMCG (Rs. in crore)
Prior to Namami Gange	**NGRBA**		
	2011-12	192.58	53.44
	2012-13	191.52	135.25
	2013-14	303.95	266.20
	Sub Total (A)	**688.05**	**454.89**
Namami Gange I	**Namami Gange-I**		
	2014-15	326.00	170.99
	2015-16	1,632.00	602.60
	2016-17	1,675.00	1,062.81
	2017-18	1,423.12	1,625.01
	2018-19	2,307.50	2,626.54
	2019-20	1,553.40	2,673.09
	2020-21	1,300.00	1,339.97
	Sub Total (B): NG-I	**10,217.02**	**10,101.01**
Namami Gange II	**Namami Gange-II**		
	2021-22	1,892.70	1892.70
	2022-23	1,000*	848.83*
	Sub Total (C): NG-II	**2,892.70**	**2,741.53**

[15]Point No 13 Flag F replies to list of points 12/08/2021

[16]**Ibid** page 4, Point No 9

Grand Total (A+B+C)	**13,797.77**	**13,297.43**

*(*Upto 14.09.2022. BE for FY 2022-23 is Rs. 2800 crore)*

(i) Total approved outlay for Namami Gange-I was Rs.20,000 crore

(ii) An outlay Rs. 22,500 Cr has been provided for Namami Gange II

21. When asked about any comprehensive review of the Scheme with respect to the objectives achieved before further allocation for the scheme, the Ministry of Jal Shakti stated as under:

> "A comprehensive third party evaluation of the NamamiGange Mission was undertaken to assess the objectives achieved by the NamamiGange Program. The Administrative Staff College of India (ASCI), Hyderabad was commissioned to conduct the third-party evaluation exercise. ASCI commenced this study in June 2020 and concluded in November 2020.[17]
>
> The evaluation by ASCI is conducted as per the performance indicators outlined in output- outcome framework and as prescribed by Department of Expenditure(DoE)/National Institute for Transforming India (NITI) Aayog as well as using the criteria laid out by the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) for evaluating development projects, programmes and policies. The evaluation thus covers a wide range of issues such as the appropriateness of the programme design, the cost and efficiency of the programme, its impacts, unintended effects and how the experience gained can be used to improve the design in the future.
>
> In the absence of a Logical Framework Approach (LFA) to assess programme effectiveness, ASCI has constructed a LFA comprising impact statement, outcome statement, and eight output pillars. It also captures measurable indicators under each output as applicable for the impact assessment study now and for future relevance. To evaluate the overall performance under each of the outputs and to enable comparison across outputs, a numerical scale has been developed for assessment. The range of the scale spreads between 10 and 1 in a sliding order, 10 being graded as "top of the line performance" and 1 being graded as "bottom of the line performance".
>
> The Financial progress under NamamiGange- From an expenditure of approximately Rs 4,000 crores upto 2014 (since the beginning of 1984), the expenditure under NamamiGange Mission has climbed to Rs. 9,450 crores in just about 5 years which reflects the pace of grounding the projects of Ganga rejuvenation."

22. When asked to furnish the year-wise details of funds allocated, funds utilized and funds lying idle in all the five States at SPMG level for each of the last six years, the Ministry of Jal Shakti in a written reply stated as under:

[17] **Ibid** Page 5 Replies to List of points no 11

"Details of BE, RE, Releases by Government of India, Releases /Expenditure by National Mission for Clean Ganga (NMCG) during last six years and till 31/7/2021 are as under[18]:

Details of BE, RE, Releases by Government of India, Releases/Expenditure by National Mission for Clean Ganga during last six years and till 31 July 2021 in current financial year are as under: -

Financial Year	BE	RE	Expenditure by GoI	Expenditure by NMCG
	(Rupees in crore)			
2015-16	2,750.00	1,650.00	1,632.00	602.60
2016-17	2,500.00	1,675.00	1,675.00	1,062.81
2017-18	2,550.00	3,023.42	1,423.12	1,625.01
2018-19	3,070.00	2,370.00	2,307.50	2,626.54
2019-20	1,970.00	1,553.44	1,553.40	2,673.09
2020-21	1,640.02	1,300.00	1,300.00	1,339.97
2021-22*	1,450.00	-----	575.00	230.32
Total	15,930.02	10,071.86	10,466.02	10,160.34

(* up-to 31 July 2021)

The details of funds available with SPMGs at the end of each six financial years are as under:

Funds available with SPMGs at the end of financial year of last six financial years: -

[18]Point 12 List of Points Flag F

The SPMGs are the field units of the NMCG and responsible for

SPMG	Balance as on (Rs. in crore)					
	31 March'2016	31 March'2017	31 March'2018	31 March'2019	31 March'2020	31 March'2021
Uttarakhand	6.00	7.15	79.45	29.24	26.25	21.92
Jharkhand	67.58	103.94	80.62	116.23	97.24	89.03
Uttar Pradesh	17.38	42.83	102.96	361.38	526.48	444.93
Bihar	152.41	208.08	507.94	567.09	1,239.05	843.19
West Bengal	121.94	70.33	84.85	127.81	93.72	53.36
Total	**365.31**	**432.33**	**855.82**	**1,201.75**	**1,982.74**	**1,452.43**

ensuring smooth and timely implementation of the projects. It is imperative that sufficient funds are available at all times with the SPMGs to ensure timely payments to the concessionaires and developers and also for incidental expenditure for smooth grounding of program interventions. Hence funds are taken forward from one year to the other to ensure availability and to avoid any stalling of projects which may arise out of non-payments to the developers. The constant funding of the projects has in turn led to faster pace of physical progress of the projects. Moreover, the process of release of funds and the expenditure at the level of SPMGs is a dynamic process and the funds keep on getting utilized from time to time.

The non-utilization of funds during the early years after NMCG was set up was on account of delays in sanctioning of projects. Since then, vide the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 (Authorities Order), NMCG has been constituted into an Authority with effect from 7/10/2016. The Authorities' Order has also constituted an Executive Committee with required delegation empowering it to sanction through streamlined process which has expedited sanctioning of projects. This has resulted in quicker utilization of funds."

23. Asked to furnish the reasons for not following the advice of (DEA), Government of India and sanctioning of the project to multilateral agency without the clearance of Department of Economic Affairs, Ministry of Finance, the Minsitrty of Jal Shakti stated as under:-

"A project on "Rural Sanitation Initiatives" in Sahebganj district, Jharkhand was awarded to UNDP at an estimated cost of Rs. 100.72 crore in the month of April 2016 under the supervision of SPMG & Govt. of Jharkhand and with financial agreement between SPMG, UD&HD Govt. of Jharkhand and UNDP. The objective of the project

was to improve sustainable sanitation practices, where sustainability of the project would be linked with livelihood promotion.[19]

The issue of the UNDP project in Jharkhand was discussed in the 2nd sub- committee meeting of Empowered Task Force (ETF) on 18/08/2017 and it was decided to foreclose the project after completing the unfinished work, if any.

As per the ETF sub-committee decision, NMCG directed SPMG, Jharkhand to initiate the foreclosure process with the consent from Govt. of Jharkhand.

SPMG Jharkhand had formed a Committee under the chairmanship of Deputy Commissioner, Sahibganj for physical & financial verification of the work done by UNDP in Sahibganj, Jharkhand. After multiple meetings of the foreclosure committee, the project has been closed however, the financial settlement is underway. NMCG is regularly in touch with SPMG for final closure of the project."

24. When asked about the mechanism in various States to release fund to the projects related to Ganga rejuvenation, the Ministry in a written reply submitted as under:

> "SPMGs release funds for projects under the program in accordance with terms & conditions of the sanctions accorded by the Executive Committee of NMCG constituted under the Authorities Order. As SPMGs receive funds as grant-in-aid from NMCG, which is an agency of GOI, they do not require any approval from DEA for releasing fund to projects."[20]

2.1 Budget Review Committees (BRCs)

25. According to Project Financial Management Manual (2011), Budget Review Committees are needed to be constituted for reviewing various aspects of the budget and submit its quarterly observations to NMCG/SPMG. We found that NMCG did not constitute the BRC. SPMGs of Jharkhand, Uttar Pradesh, Uttarakhand, Bihar and West Bengal had also not constituted their BRCsduring 2014-15 to 2016-17. This has resulted in failure in monitoring of physical and expenditure targets and resulted in significant variation in Budget Estimates and Revised Estimates.[21]

26. This made the Committee to ask the number of quarterly reports received by NMCG/SPMG from BRC since 2017 till now. The Ministry of Jal Shakti in a written reply stated as under:-

> "NMCG has held 14 BRC meetings[22] since 2017 along with senior Finance functionaries of all the five SPMGs and the issues discussed along with decision of the competent authority are minutized and circulated to all concerned. The key observations in these BRC meetings are to emphasize on (a) Realistic assessment of funds required, (b) Expeditious execution of projects, (c) Optimum and timely utilization of funds and to avoid un-utilized balances, (d)Timely

[19] Point ANo 25 page 11/ Flag 'F'
[20] Para 5.3 of C&AG Report No 39 of 2017/ Flag 'A'
[21] Page 13 point 28/Flag 'F'
[22] Page 13 point 28/ Flag 'F'

completion of Internal, Statutory and CAG Audits, (e) Handling releases and accounting through online PFMS mode for greater transparency. BRC has aggressively followed up the agenda to bring all SPMGs and executing agencies on the online PFMS platform of GoI which ensures that all Financial activities are done through electronic mode and real time information is available to all concerned. All SPMGs are now on PFMS mode leading to faster releases and better accounting processes."

27. The Audit observed that NMCG had high amount of idle fund left unutilized from 2014 to 2017. Out of the funds which was released to SPMGs, West Bengal didn't utilize the funds and it was left idle.[23]

West Bengal Scenario of Idle Fund		
Year	**Idle Fund (in crores)**	**Percentage of total idle fund**
2015	**84.14**	**34.54%**
2016	**76.64**	**30.76%**
2017	**85.54**	**20.26%**

28. Explaining the above, the Ministry of Jal Shakti stated as under:

"Actual implementation of projects commenced from FY2017-18 as previous two years, *i. e.* FY2015-16 and FY2016-17 were utilized on preparing Detailed Projects Reports for various interventions as well as putting in place a robust institutional mechanism for execution of projects. With the constitution of NMCG as an authority vide Authorities Order and its operationalization, the pace of sanction of Sewage Treatment Plants (STPs), Interception & Diversion Works and associated projects, as also various other projects leading to asset creation have gained pace and are at different stages of implementation and execution on the ground. [24]

The overall pace of expenditure has now picked.This has been a result of proper planning, close monitoring and coordination with various state level agencies, other executing authorities and even with concessionaries which has led to faster implementation of projects at the ground level. The SPMGs at their level are also coordinating and working in close association with the State level authorities to ensure effective and timely completion of projects as also for most optimum utilization of funds. There have been no visible or reported lack or gaps either in coordination or in working in tandem with the executing agencies.

29. Asked about the remedial steps taken to ensure that funds earmarked for the National Mission for Clean Ganga (NMCG) are timely released and utilised, the ministry of Jal Shakti and NMCH in a written reply stated as under:

[23] **Ibid flag F** point no. 29
[24] Point 29/ Flag 'F'

"Funds for the projects under the NamamiGange Program are being disbursed to the State Program Management Groups (SPMGs) at quarterly intervals in advance based on the projected requirement of funds for the quarter for the projects being executed by the SPMGs. The funds requirements of SPMGs are determined on the basis of projections submitted by the SPMGs which are then critically examined by the technical and financial experts of NMCG. For monitoring of utilization of funds disbursed, for World Bank aided projects, SPMGs are required to submit Interim Unaudited Financial Reports (IUFRs) in the format prescribed by the World Bank at monthly intervals. For other projects, the SPMGs are required to submit Utilization Certificates (UCs) at quarterly intervals in accordance with the provisions in the General Financial Rules 2017 (GFR2017). Further, the Quarterly Physical Progress Reports (QPPR) are also obtained from SPMGs. Submissions of IUFRs, UCs and QPPRs are being closely followed up. A Digital Dash Board has also been created to monitor the progress of the projects on real time basis. Periodic meetings are held with Executing Agencies (EAs) in which physical and financial progresses of the projects are critically examined. Such review meetings are from time to time chaired by the Director General, NMCG, Secretary Jal Shakti Ministry and Hon'ble Minister for Jal Shakti along with state authorities to monitor progress and addresses bottle necks and implementation of projects.

All these measures have helped in faster and optimum utilization of funds resulting in expeditious implementation of projects relating to Ganga rejuvenation."

2.2 Internal Audit

30. Audit has observed that in case of SPMGs of Bihar and Uttarakhand, the internal Audit was not conducted at all and in case of SPMGs of Uttar Pradesh, West Bengal the internal audit was not conducted as per prescribed frequency. Asked whether Audit Committees have been formed at the NMCG and SPMG level and the steps are being taken to ensure regular internal audit, the Ministry of Jal Shakti in a written reply stated as under:

"The Budget Review Committee (BRC) and Audit Review Committee (ARC) have been formed both at in NMCG and SPMGs and regular meetings are being held. NMCG has held 14 meeting of ARC and BRC since 2017 regularly at quarterly intervals. Through close follow up, NMCG has been ensuring that SPMGs also hold their respective ARC and BRC meeting regularly. All out measures are taken to ensure that the internal audit is conducted as per laid down NGRBA provisions both at the NMCG and SPMG levels. The holding of internal audit is closely watched and audit reports thereof are also followed up."[25]

31. Elaborating their reply further, the Ministry stated as under:

"The internal audit of NMCG and SPMGs are carried out by firms of chartered accountants selected through a procurement process as prescribed in the World Bank Procurement Manual. Audit observations are circulated among all concerned departments and compliance to

[25] Q No 23/ Flag 'F'

the audit recommendations is ensured through close follow up with the concerned departments and organizations. Entry and Exit meetings are also held with the Auditors at appropriate levels to discuss the observations and to follow up on them."[26]

32. The Audit in their findings observed that 'Audit Committees were neither formed at NMCG nor at the SPMGs, as of March 2017'. Asked to furnish the Internal Audit Committees for SPMG in various states, the Ministry of Jal Shakti in a written reply stated as under:

> "Audit Review Committee and Budget Review Committee have been constituted in all the five Ganga basin states."

33. Elaborating their replies, in respect of the major observations made by the internal audit committees, they further stated as under:

Major Observations Made by Audit Review Committee:

(a) Ensuring timely [27]completion of Internal Audits, Statutory Audit, and Audit by the Office of CAG.
(b) Timely completion of Certification Audit by the Office of CAG and prompt submission thereafter of the Audit Certificate to the World Bank for ensuring continued availability of World Bank Funds for the World Bank aided projects.
(c) Prompt compliances with the observations of various audits.

Salient Observations of Internal Audit:

(a) Timely submission of IUFRs by SPMGs to be ensured
(b) Expeditious utilization of funds by SPMGs to be ensured
(c) Timely completion of Internal Audit at SPMGs to be ensured

2.3 Utilisation Certificates

34. Audit had observed considerable delays in submission of Utilization Certificates submitted to National Mission on Clean Ganga (NMCG) by State project management Group (SPMG). In response to a query on delay in utilization of Clean Ganga Certificates, it has been stated by the Ministry that the process has since been stabilized. Asked to furnish the stipulated rules for submission of utilisation certificates, the Ministry of Jal Shakti in a written reply stated as under:-

> "For World Bank aided projects, SPMGs are required to submit IUFRs in the format prescribed by the World Bank at monthly intervals. For monitoring of utilization of funds disbursed, the SPMGs are required to submit UCs at quarterly intervals in accordance with the provisions in GFR2017. Submissions of IUFRs & UCs are being closely followed up as a result of which the IUFRs have been received for the month of July 2021 and the UCs from SPMGs have been received up to June 2021."

[26]Q No 24/Flag 'F'
[27]page 15 Q 31/Flag 'F'

35. They further added:-

> "SPMGs are now regular in submitting UCs. All SPMGs have submitted UCs for the period up to 30/06/2021 as prescribed in GFR2017."[28]

36. Detailing the status of issue of work order, the Ministry of Jal Shakti stated that ason 31st August, 2021, a total of 347 projects have been sanctioned under NamamiGange Programme under various sectors of pollution abatement, biodiversity, afforestation, bioremediation, research &studies and various institutional development project. Out of which 167 projects have been completed and 145 projects are under process, 28 projects are under tendering stage and for 07 projects Administrative Approval & Expenditure Sanction have been issued. The 347 projects have been sanctioned at an estimated cost of Rs. 30,255.96 crores.[29] After issuance of Administration Approval and Expenditure Sanction, the Implementation agencies proceed for tendering of the project.

37. The Ministry further added in respect to submission of utilisation certificate that SPMGs SPMGs are now regular in submitting UCs. All SPMGs have submitted UCs for the period up to 30/6/2021 as prescribed by GFR2017. NamamiGange Program is a 'Central Sector Scheme'[30], and the Government of India (GOI) bears 100% of the project cost of the projects approved under the Program. Funds for the projects under the NamamiGange Program are being disbursed to SPMGs at quarterly intervals in advance based on the projected requirement of funds for the quarter for the projects being executed by the SPMGs. The funds requirements of SPMGs are determined on the basis of projections submitted by the SPMGs which are then critically examined by the technical and financial experts of NMCG. During the last 4 years, an overall increase in utilization is taking place.

38. Asked to furnish the reasons for low utilization of funds by Bihar, Jharkhand, Uttarakhand, Uttar Pradesh and West Bengal the Ministry of Jal Shakti replied as under:-

> "The projects and interventions under the NamamiGange program are at different stages of implementation and the funds are released/ utilized based on the physical progress of the projects. The grounding of the projects [31]gets affected by rains particularly in Bihar and West Bengal and in the year 2020 -21, the pace of physical progress got hampered by the Covid 19 pandemic. This in turn results in slower utilization of funds by the concerned states. However, all out efforts are made to ensure that the SPMGs utilize the funds timely and optimally through regular meetings at the appropriate levels.

2.4 Clean Ganga Fund

[28] Q no 18 page number 8 List of Points/Flag 'F'
[29] Q No 19 page no 9/Flag 'F'
[30] Q no 19 page no 9/Flag 'F'
[31] Q no 22 page no 9/Flag 'F'

39. Asked to furnish a detailed report on Clean Ganga Fund, the Ministry of Jal Shakti stated as under:-

> "The Clean Ganga Fund (CGF) has been set up by the Government of India on 21/1/2015 as a trust under the Indian Trusts Act, 1882 to mobilize resources from Resident Indians, Non – Resident Indians, Persons of Indian Origin, Other Foreign Nationals, Public Sector Undertakings, and Domestic & Overseas Corporates / Other Institutions. The source-wise breakup of cumulative accumulation of funds in CGF till 22/12/2021 is as tabulated here below:[32]

Sl. No.	Donor	Cumulative Contribution	As % of Total Contribution
1	Hon'ble Prime Minister of India	₹ 16,53,09,259.74	**3.42%**
2	Public Sector Undertakings	₹ 3,53,80,71,683.00	**73.21%**
3	Private Sector Corporates	₹ 1,03,29,99,553.49	**21.38%**
4	Resident Indians	₹ 5,61,26,304.70	**1.16%**
5	India Development Foundation - Overseas Indians	₹ 3,57,91,774.00	**0.74%**
6	Non - Resident Indians / Persons of Indian Origin / Other Foreign Nationals	₹ 43,85,727.13	**0.09%**
7	**Total Cumulative Contributions Received**	**₹ 4,83,26,84,302.06**	**100.00%**
8	Bank Interest	₹ 78,22,53,942.12	
9	Cumulative Accumulation	₹ 5,61,49,38,244.18	

40. In response to aquery raised during the Study Visit of the Committee, the Ministry have submitted that Clean Ganga Fund is innovative step to create an avenue for people and corporates to donate, take up specific projects for this national cause.

41. However, Audit had revealed that Audit of CGF was to be carried out by a qualified auditor or a Chartered Accountant/CAG every year. It was observed that no Audit was carried out till May 2017. It has also been noticed by Audit that the entire amount of Clean Ganga Fund was lying unspent. The Fixed Deposit was opened after nearly seven months of the decision taken in the Board of Directors resulting in loss of nearly 2 crores.[33]

42. When asked whether the audit of CGF is now being done, the representative of NMCG deposed as under:

> "Yes, the audit of Clean Ganga Fund (CGF) is now being carried-out as prescribed in the Trust Deed of CGF."

43. Asked about the total corpus fund of the Clean Ganga Fund, the Ministry as on 31/7/2021, Clean Ganga Fund has mobilized Rs.470.21

[32] Q no 23 Blist of points/Flag 'G'
[33] CAG report 39 of 2017 in Para 2.6.4/Flag 'A'

[34]crore, which includes bank interest. Of this, Rs.146.90 crore has been spent till 31/7/2021.

44. Asked to furnish comments on the Audit suggestion that CGF had to explore the possibility of setting up of funds in other jurisdictions/ countries of high donor interest, the Ministry of Jal Shakti in a written reply stated as under:-

> "The process for setting up a daughter fund the process of setting up a daughter fund of CGF in the United Kingdom is at an advanced stage. CGF is also in correspondence with High Commissions / Embassies of India in Australia, Singapore, Saudi Arabia[35], the United States and Canada to explore setting up of daughter funds of CGF in their respective jurisdictions. Till date, PIOs have not expressed any difficulties in sending money to a Trust registered in India. However, a PIO may not get any tax benefits on the contributions he may make to CGF as it is not registered in his country. This may act as a disincentive to contribute to CGF. CGF in the United Kingdom is an advanced stage. CGF is also in correspondence with High Commission /Embassies of India in Australia, Singapore, Saudi Arabia, of the CGF in their respective jurisdictions."

45. Detailing about the audit of the Clean Ganga Fund, the Ministry of Jal Shakti submitted as under:-

> "CGF has been appointing a firm of chartered accountants selected in accordance with the procedure prescribed in the General Financial Rules, 2017 for carrying out the statutory audit of the annual accounts of CGF. Statutory audits of annual accounts of CGF for the year up to FY2020-21 have been completed and the accounts have been duly certified by the statutory auditors. Further, C&AG has been carrying out annual audit of CGF as part of the annual audit of NMCG. The audits for the period up to FY2020-21 have been completed and the Final Audit Report has been received. C&AG had also carried out Performance Audit of CGF as part of the Performance Audit of NMCG for the period up to 31/3/2017[36]. There has been no subsequent Performance Audit of NMCG / CGF. C&AG has also carried out the Transaction Audit of CGF as part of the Transaction Audit of NMCG. The Transaction Audits of NMCG / CGF for the period up to FY2019-20 have been carried out by C&AG. Transaction Audit of NMCG / CGF for FY2020-21 is expected to commence early."

[34]Q o 15 page no 7/Flag 'F'
[35]Q no 16 page no 8/Flag 'F'
[36]Q no 23 B , list of points/Flag 'G'

CHAPTER-III

III. PLANNING& IMPLEMENTATION

A. PLANNING

46. Audit found that Ministry of Environment, Forest & Climate Change (MoEF&CC) signed a Memorandum of Agreement (MoA) with a consortium of seven Indian Institutes of Technology[37] in July 2010 and sanctioned the work for preparation of GRBMP with the objective of maintenance and restoration of wholesomeness of the Ganga system and improvement of its ecological health. GRBMP was to provide action plans with specific projects, policy interventions, and management actions along with financial implications. MoEF&CC sanctioned the work (August 2010) at a cost of Rs. 16 crore comprising of 37 deliverables to be completed within a period of 18 months from date of agreement i.e. by January 2012.

47. As per Audit findings, the NMCG granted extensions four times, as depicted below:

Extension granted for preparation of GRBMP

Number of extensions	Date of sanction	Period upto which the extension was given
1st extension	September 2012	December 2013
2nd extension	March 2014	June 2014
3rd extension	July 2014	December 2014
4th extension	March 2015	31 March 2016

NMCG received the first draft of the GRMBP (January 2015) which included extended summary, main plan document and seven mission reports after 54 months of Memorandum of Agreement.

48. However, NMCG neither circulated GRBMP to different Ministries/ Departments for consultation and seeking their opinion, nor finalised the GRBMP for initiating the long-term intervention on the Ganga.

49. NMCG could not finalise the long-term action plans even after more than six and a half years[38]of signing of agreement with the consortium. As a result, NMCG does not have a river basin management plan even after a lapse of more than eight years of NGRBA notification leading to delay in initiation of long-term intervention for Ganga Rejuvenation based on river basin approach.

50. MoWR,RD&GR signed another MoA with IIT Kanpur (March 2016) for providing continual scientific support in implementation and dynamic evolution of the GRBMP for an annual budget of Rs. 9.60 crore over a period

[37] IITs at Mumbai, Delhi, Guwahati, Kanpur, Kharagpur, Chennai and Roorkee

[38] Since signing of agreement in July 2010

of ten years. NMCG released an amount of Rs.9.60 crore as advance (October 2016) to IIT Kanpur. NMCG did not explore other options and ignored the delays in preparation of GRBMP by IIT consortium.

51. NMCG agreed(August 2017) that due action would be taken on GRBMP.

52. When asked about the reason for delay in finalizing a long term plans, the Ministry of Jal Shakti in their written reply stated that NMCG has been implementing various long term measures which are emerging from the recommendations of GRBMP.

> "A consortium of seven Indian Institutes of Technology (IITs), entrusted with developing a holistic Ganga River Basin Management Plan (GRBMP) brought forward the first version of plan during 2014-15 consolidating at one place a body of knowledge on different aspects of basin, identifying challenges and interventions required for its rejuvenation. The plan envisioned a rejuvenated Ganga, restored of its wholesomeness defined in terms of "Nirmal dhara - unpolluted flow", "Aviraldhara- continuous flow" and ensuring the ecological and geological integrity. Scientific studies combined with a critical analysis of past interventions helped in developing the contours of 'NamamiGange' as an integrated mission for conservation of Ganga and its tributaries. It was formally approved in June 2015 as a Central Sector Scheme with the aim of integrating previous and on-going initiatives in holistic manner following basin-based approach. Drawing upon the comprehensive GRBMP, the new approach moved from city centric to river centric and basin-based approach with sectoral and multi-agency interventions."

53. Before seeking funds from GOI, the participatory State Govt. was supposed to submit Annual Action Plan (AAP) to NMCG by quantifying specific tasks that needs to be undertaken and preparing the estimates. This AAP was supposed to be submitted by September every year for the next financial year. The Audit observed that NMCG has prepared budget without any AAP. Asked about the reasons for not framing Annual Action Plan and delay in preparation and submission at the State level as well as NMCG level, the Ministry in a written reply stated as under:-

> "NMCG has been in continuous discussion with the State Programme Management Groups, in turn with state Executing Agencies, in order to identify and finalize the projects. This is being done based on the sewage treatment capacity gap identified through Conditional Assessments and Feasibility Studies based on which Detailed Project Reports were prepared, which were taken up in the meeting of Executive Committee of NMCG for approval. So far as on July 2021, 158 sewage infrastructure projects worth Rs. 24,122 Cr. have been sanctioned out of Rs. 20,000 Cr. funds allotment for NMCG. These projects are estimated to be completed by year 2023. Annual Action Plan for the year 2018-19, pertaining to Sewage treatment plants, communication activities and institutional development has been prepared in consultation with the State Government and approved by the Competent Authority."

54. When asked to ensure preparation of Annual Action Plan and its incorporation along with budget, the Ministry of Jal Shakti in a written reply stated that the Annual Action Plan for the Financial Year 2018-19 for creation of capital infrastructure, communication activities and other interventions including for institutional development at various levels has been finalized, approved by the Competent Authority and conveyed to all concerned. Simultaneously, budgeting process in NMCG has also been strengthened. Budget estimates are prepared after seeking plan of expenditure and demand from various spending divisions of NMCG, from SPMGs as well as from CPSUs and other Executive Agencies engaged in NamamiGange Programme.

55. Audit had observed that about 840 days are being taken for examining the DPRs and finally returning it. It was stated by Ministry that the time taken in examining the Detailed Project Reports was mainly due to detailed study being conducted on the prevailing sewerage situation of the town. Audit had further mentioned that no record is maintained regarding DPR and it could not fully evaluate the scheme in this regard. This led to the query as to why NMCG did not maintain any record for dates of receipt and sanction of DPRs, because of which Audit could not fully evaluate the diligence with which NMCG followed the timeframe prescribed in the NGRBA framework.The Ministry of Jal Shakti in a written reply stated as under:-

> "The various DPRs pertaining to Sewage [39]Infrastructure projects submitted by the concerned SPMGs were not prioritized by the states. However, same were scrutinized thoroughly by NMCG as well as Third Party Appraisal taking into consideration the findings from related Condition Assessment and Feasibility Study (CA&FS) report. In the past, few DPRs submitted by the states were not taken up for approval as NMCG was finalizing the guidelines and priority for DPRs. Since October 2016, the approval of the DPRs follows the least stipulated time considering the various technicalities involved in the project.
>
> Systematic records are now maintained in NMCG. Further all files including DPRs are processed through e-office and details of receipt and disposal are captured automatically."

56. During the oral evidence on 12.08.2021, the representative of the Ministry of Jal Shakti was asked about the updated action taken by the Ministry in respect to delay in approval of DPR. The representative of the NMCG stated that they have sanctioned 23 projects in West Bengal and there are still a few which the State Government has proposed in the DPRs about the tributaries of Ganga. Elaborating further, the representative of NMCG stated as under:-

[39]Q no 52 page 34/Flag 'F'

"Sir, I will tell you very honestly, some of those DPRs are not really DPRs. This is almost like a kind of list of projects they want to do. They lack a lot of data and they lack a field survey. We have our own project monitoring engineers and they look at it. Then we also hire some third-party agencies, some IITs or some reputed universities. So, before sanction, we also vet these DPRs. The problem of the programme is that if the DPR is not good, then the execution also starts becoming very difficult. So, these 17 DPRs we have seen them in the visit. At our level there will not be delay. But these DPRs lack a lot of basic data."

57. Probed further, whether those DPRs have reached the Ministry and /or NMCG for approval, DG, NMCG stated as under:-

"They (DPRs) have reached and we have given our opinion. They will come to us again. We will also be sending some team. Earlier, the movement was not there. Now we will also send our team."

58. In response to the query during the Study Visit of the Committee on the reasons for not furnishing a plan even after lapse of more than eight years of National Ganga River Basin Authority notification, the Ministry has stated that the Authority notification dated 7.10.2016 has also incorporated most of the recommendations of the report of IIT consortium in the National Gange Programme of Government of India.

59. Detailing those recommendations, the Ministry in a written reply submitted as under:

"The recommendations of the IIT Consortium are given in form of Ganga River Basin Management Plan. The same is under implementation by NMCG.

A **consortium of seven Indian Institutes of Technology [40](IITs)**, entrusted with developing a holistic **Ganga River Basin Management Plan (GRBMP)** brought forward the first version of plan during 2014-15 consolidating at one place a body of knowledge on different aspects of basin, identifying challenges and interventions required for its rejuvenation. The plan envisioned a rejuvenated Ganga, restored of its wholesomeness defined in terms of "Nirmal dhara - unpolluted flow", "Aviraldhara-continuous flow" and ensuring the ecological and geological integrity. Scientific studies combined with a critical analysis of past interventions helped in developing the contours of 'NamamiGange' as an integrated mission for conservation of Ganga and its tributaries. It was formally approved in June 2015 as a Central Sector Scheme with the aim of integrating previous and on-going initiatives in holistic manner following basin-based approach. Drawing upon the comprehensive **GRBMP**, the new approach moved from city centric to river centric and basin-based approach with sectoral and multi-agency interventions. Details of

[40]List of points page 55 annexure 1/Flag 'F'

the actionable points from Consortium Report and implementation status as on January 2021 is given in **ANNEXURE-II.**

60. Asked whether the planning stage is over or various programmes under Namami Gange scheme continue to be in planning stage, the Ministry of Jal Shakti stated as under:

> "Under NamamiGangeProgramme, so far, a total of 353 projects have been sanctioned at an estimated cost of Rs. 30,458[41]Crore, out of which 178 projects have been completed and made operational. 157 sewerage infrastructure projects from among these have been taken up with a sanctioned cost of Rs. 24,249 Crore for creation & rehabilitation of 4952 MLD of STP capacity and laying of around 5212 KM sewerage network, out of which, 74 projects have been completed resulting in creation & rehabilitation of 1092 MLD of STP capacity and laying of 3752 KM sewerage network.
>
> On the Ganga main stem towns, projects have been taken up to create 3341 MLD sewage treatment capacity against the generation of 2953 MLD (in 2016). The sewage treatment capacity in main stem townshave increased from 1305 MLD (2014) to 2372 MLD (November 2021). 42 projects have been taken up in towns located along rivers Yamuna, Kali, Ramganga, Saryu, Gomti, Damodar, Banka, Rispana, Kharkai, Kosi and BurhiGandak.
>
> Development of Ghats & Crematoria works in select cities have been taken up. 61 projects (including one river front development project in Patna) were sanctioned for construction of 210 ghats and 57 crematoria. Out of these, 177 ghats and 46 crematoria have been completed."

3.1 Approval of Detailed Project Reports

61. Audit observed that about 840 days are being taken for examining the DPRs and finally returning it. It was stated by Ministry that the time taken in examining the Detailed Project Reports was mainly due to detailed study being conducted on the prevailing sewerage situation of the town**.**Audit has further mentioned that no record is maintained regarding DPR and it could not fully evaluate the scheme in this regard.

62. Asked to furnish their response to the Audit observation that NMCG did not maintain any record for dates of receipt and sanction of DPRs, the Ministry of Jal Shakti stated as under:-

> "The various DPRs pertaining to Sewage Infrastructure projects submitted by the concerned SPMGs were not prioritized by the states. However, same were scrutinized thoroughly by NMCG as well as Third Party Appraisal taking into consideration the findings from

[41]Page 1 q 1 Lop/Flag 'F'

related Condition Assessment and Feasibility Study (CA&FS) report. In the past, few DPRs submitted by the states were not taken up for approval as NMCG was finalizing the guidelines and priority for DPRs. Since October 2016, the approval of the DPRs follows the least stipulated time considering the various technicalities involved in the project.

Systematic records are now maintained in NMCG. Further all files including DPRs are processed through e-office and details of receipt and disposal are captured automatically."

3.2 Manpower Planning

63. Asked about the vacancy position in NMCG and SPMGs in States, the Ministry of Jal Shakti in a written reply furnished as under:[42]

> "The World Bank Organogram provides for 59 number of staff at various levels against which total 46 staff members including Contractual Employees, Research and Project Officers and Consultants/advisors are presently deployed for under taking various interventions under NamamiGange Programme. National Mission for Clean Ganga has also incepted the services of Project Management Consultancy (PMC), Procurement Management Services and hired staff for providing Technical, Managerial, Procurement and Administrative Functions. As such, the present strength of National Mission for Clean Ganga is able to carry out the mandated functions and responsibilities which have been conferred under the NamamiGange Programme efficiently.
>
> The State Project Management Groups (SPMGs) are field units of National Mission for Clean Ganga and are involved in day-to-day monitoring of projects, interventions and activities under NamamiGange Programme in respective states along Ganga. The staffing pattern for SPMGs has also been provided for in the World Bank Organogram. The position of staff in SPMGs is also satisfactory. Some of the States like SPMG Bihar have hired profession agencies for carrying out the function of SPMG's. The SPMGs are ably supported by Technical Experts, Monitoring and Management experts from various fields like Bio Diversity and Communication and other staff members, who play an active role in coordinating with various agencies on the ground for implementation of projects under NamamiGange Programme."

64. When asked about the reasons for staffing pattern in NMCG and SPMGs being on the pattern of World Bank Organogram, the Ministry of Jal Shakti in a written reply stated as under:[43]

> "National Mission for Clean Ganga (NMCG) was set up as a Registered Society in 2011.Its purpose was to act as an implementing agency for the National Ganga River Basin Authority (NGRBA) and it was in the nature of an SPV for National Ganga River Basin project (NGRBP) assisted by World Bank and any other project. Subsequently, 'NamamiGange' was launched in 2015 as an integrated

[42] Point 80 page 53 replies to LoP/Flag 'F'
[43] Point 26 (a)/Flag 'G'

conservation mission for Ganga and its tributaries. The mission took into account the learning from experiences of past programs and also the Ganga River Basin Management Plan developed by the Consortium of IITs.

The concept of formation of National Mission for Clean Ganga was in line with the loan agreement signed with World Bank and as per the NGRMA framework document. As per the NGRBA framework the Project Management Group (PMG) has been proposed at the centre which later named as NMCG and State Project Management Groups (SPMGs) were proposed in the 5 Ganga Main stem basin states.

At the time incorporation of NMCG in 2011, the mission was confined and envisaged to implement only the NGRBP and other no regret schemes of NRCD on Ganga main stem with a completion target within 2020 and therefore was largely envisaged to be project based in the specific areas of (i) Sewerage Infrastructure and Sewage Treatment Plants; (ii) Industrial Effluent Management; (iii) Solid Waste Management (iv) River Front Development Projects (v) Institutional Development and Capacity Building (vi) Communication and Public Outreach. Since the programme was considered mostly project based and required faster implementation of works therefore required highly skilled manpower from the market and a specific organogram was suggested in the NGRBA framework both at the NMCG and SPMG levels.

Accordingly, the Cabinet Committee of Economic Affairs (CCEA), while approving the constitution of Project Management Group (PMG) as a Registered Society to be called National Mission for Clean Ganga also approved in principle 59 positions of NMCG to implement NGRBA Programme effectively and efficiently. Provision for certain modifications has also been provided in the approval. Accordingly, staff strength at NMCG was developed with the support of contractual specialist employees."

65. Further specifying the reasons the Ministry of jal Shakti stated as under:[44]

"After the effective implementation of NGRBP from 2013 onwards, the Govt of India realized the requirement of a larger mission and accordingly the NamamiGangeprogramme was launched in 2015 with an overall financial outlay of Rs 20,000 cr. including the existing financial outlay of NGRBP.

Accordingly, NMCG was constituted as an Authority vide S.O. 6187 (E) dated 7th October, 2016. The 'Authority' order has given a very large mandate encompassing several sectors which are required for effective basin management. However, since the implementation target of NamamiGange was limited till 2020, therefore the organizational structure of NMCG has largely remained project-oriented and not a cadre-based organization. As per the 'Authority'

[44]Point 26 (b)

order the senior management of the organization has been strengthened with creation of the post of Director General as the head of the institution along with 5 posts of Executive Directors.

Need has been felt to develop an organization at all levels with a combination of experts and mix of personnel on contractual as well as on permanent basis.

Accordingly, NMCG is working towards developing a cadre based staffing pattern and accordingly have engaged Administrative Staff College of India (ASCI) to develop necessary plan. It has been targeted to finalize the staffing pattern after the approval of NamamiGange -2. The cabinet note for the NamamiGange (Phase-2) is under process. The EFC note is already approved."

B. IMPLEMENTATION OF NAMAMI GANGE PROGRAMME

66. Asked about the potential consequences on the public health due to the degradation of river water, the Ministry of Jal Shakti in a written reply stated as under:-

"A study was carried out by CSIR-NEERI [45]on Impact of Pollution Caused by Tannery Cluster at Jajmau, Kanpur on the Health of People Residing in the Vicinity, using secondary health data from PHCs and primary health data from epidemiological survey. Surface water and Groundwater were collected at various places of Jajmau, and analysed for heavy metals and other physico-chemical parameters. Health data suggests prevalence of diseases which may be caused by exposure to tannery wastes.

A case study "The Socio-economic Spillovers of Sanitation: Sewage Treatment Plants in Navi Mumbai, India"presenting the socioeconomic spill over effects and technical evaluation of the sanitation program at the Navi Mumbai Municipal Corporation (NMMC) area in Navi Mumbai,Maharashtra, India has been conducted by ADBI (Asian Development Bank Institute) . Data pertaining to sewage characteristics such as pH, temperature, biological oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), and dissolved oxygen (DO) was collected through the SCADA program to analyze the STPs' technical efficiency. To study the STPs' spillover effects, data pertaining to population statistics, public health by studying the number of people affected by waterborne diseases, land values, number of settlements, air quality, and other parameters were collected from various departments of the NMMC office. Study revealed positive effects such as improvements in public health, hygiene condition, and air quality; monetary benefits in the sale of treated sewage; and increase in the number of settlements near the STP areas. Overall, the socio-economic spillover effects of the NMMC's sanitation program are quantifiable and clearly visible in the area."

[45]Q 40 page 23 lop/Flag 'F'

67. When asked to furnish the reasons of the river becoming more polluted than before despite expenditure under NamamiGangeProgramme, the Ministry of Jal Shakti in a written reply stated as under:-

> "There is improvement in water quality of river Ganga observed due to various interventions underNamamiGangeprogramme. Water quality of river Ganga is assessed as per primary water quality standard for outdoor bathing notified by Ministry of Environment, Forest & Climate Change (MoEF&CC) in terms of (pH) (6.5-8.5), Dissolved Oxygen (DO) (≥5mg/L), Biochemical Oxygen Demand (BOD) (≤3mg/L) and Faecal Coliform (FC) (≤2500 MPN/100ml).
>
> Under the NamamiGange Programme, the monitoring of water quality of river Ganga is carried out by State Pollution Control Boards (SPCBs) in 5 Ganga main stem States at 97 Manual Water Quality stations and data is compiled by Central Pollution Control Board (CPCB). The data of year 2014 to 2020 (January to November) was analysed using statistical tool median which is a measure of central tendency.
>
> Based on the manual water quality assessment by CPCB in 5 Ganga main stem states of 2014 to 2020, the observed water quality indicates that Dissolved Oxygen which is an indicator of river healthand its assimilative capacity has been found to be(≥5mg/L),which suffice to support the ecosystem of river across all seasons and also for almost entire stretch of river Ganga.
>
> The water quality assessment of river Ganga in 2020 has shown improved water quality trends as compared to 2014. The Dissolved Oxygen (DO) levels have improved at 32 locations, Biochemical Oxygen Demand (BOD) levels and Faecal coliforms (FC) indicator have improved at 44 and 23 locations respectively.
>
> As per CPCB, in 2018, there were four polluted stretches on main stem of river Ganga (the pollution level in river Ganga had one stretch under priority lll, two stretches under priority IV and one stretch was under priority V, priority I being most polluted). As per data of 2020, no stretches fall in higher pollution level (priority I to IV) and there are only two stretches (Kannauj to Varanasi and Triveni to Diamond Harbour) under pollution priority V. Priority V is the least polluted criteria designed by CPCB.
>
> Further Cleaning of river Ganga is a continuous process and under the NamamiGange Programme, several initiatives have been taken by Government of India which includes abatement and control of pollution at the source of pollution by establishment/ upgradation of Wastewater Treatment Plants for the towns located on Ganga main stem and its tributaries, construction of crematoria, surface cleaning activities, solid waste management on the river banks and flood plains and arresting flow of trash from drains out falling into river Ganga by installation of trash racks at the mouth of drains. The outcome of these projects

havestarted yielding results and the water quality of river Ganga will further improve as more and more projects are operationalized."[46]

3.3 Delays in implementation of the programme

68. It has been observed by CAG in their report that there have been considerable delays in execution of projects in the States of Bihar, Uttarakhand and UP. When the Ministry was asked to look into these hurdles they replied as under:

"Under NamamiGange Programme, a total of 160 sewerage infrastructure projects have so far been sanctioned for development of sewerage infrastructure to provide a total treatment capacity of 5,024 MLD and laying of sewerage network of 5,227.29 km at an estimated cost of Rs. 24,567.82 [47]Cr. These projects are in Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Haryana, Delhi, Rajasthan, and Himachal Pradesh. The details of sewerage infrastructure projects in Uttarakhand, Uttar Pradesh and Bihar including their current status have been provided in the table below.

States	No of Projects	STP Capacity (MLD)	Sanction Cost (Rs in Cr)	STP Capacity to be created (In MLD)	Completed	Work-in-Progress	Under Tendering
Uttarakhand	36	194.8	1,373.19	194.8	32	4	-
Uttar Pradesh	53	1699.2	10563.17	1379.24	28	21	4
Bihar	30	648	5530.65	648	5	21	4

Most of the projects which are work in progress are expected to be completed in 2022 and 2023. During execution of these sewerage infrastructure projects the main bottlenecks include non-availability of land, legal issues, natural calamities like floods, etc., delay in receiving permission from local authorities and other agencies like NHAI & Railways for road and railways cutting/crossing, delay in receiving tree cutting permission from concerned authorities.

In order to ensure expedite implementation by overcoming the bottlenecks and timely completion of projects, the following measures are being taken:

- Engagement of Project Management Consultants and Project Engineers by NMCG and State Government respectively for regular monitoring of projects through regular interactions/ discussions/ site visits.
- Continuous coordination/ meetings/ follow up with SPMGs/ Executing Agencies.
- Resolving delay in road/railway crossing permissions by conducting high level inter-Ministerial meeting with Railways and NHAI

[46]Q 37 /Flag 'F'
[47]Lop Q 3/Flag 'F'

Regular review meetings are chaired by DG-NMCG with State agencies and project reviews are also carried out by the Hon'ble Jal Shakti Minister not only with various officers of NMCG and the State Governments but also with the respective Hon'ble Chief Ministers to remove bottlenecks and also for expediting the pace of projects being executed at various levels."

69. In response to the query asked during the Study Visit of the Committee, the Ministry in a written reply stated that National Mission to Clean Ganga (NMCG) has sanctioned **346** projects with a sanctioned cost of Rs 30235.23 Crores for various sector such as Sewerage Infrastructure, Ghats & Crematoria, river front development, ghat cleaning, river surface cleaning, biodiversity, afforestation, institutional development, rural sanitation, e-flow and public awareness and outreach. Out of these, **152** projects have been successfully completed.

70. Asked to furnish the reasons for show implementation of the project, the Ministry in a written reply stated as under:-

"A total of 164 out of 347 sanctioned projects under NamamiGange have been completed as on July 2021. The category wise project completion data is given below.

Project-wise completion status (as on July 2021)

Sr No	Projects Undertaken	No of Projects	No of Projects Completed
1	Sewage Infrastructure, including Modular STP	159	70
2	Industrial Pollution Abatement	15	0
3	Bioremediation	13	2
4	Rural Sanitation	1	0
5	Ghats & Crematoria Development	83	60
6	Ghats & River Surface Cleaning	4	1
7	Ganga Knowledge & Monitoring Center	8	2
8	Composite Ecological Task Force and Ganga Mitra	5	3
9	R&D, Public Outreach & Support to District Ganga Committee	23	5
10	Afforestation	27	15
11	Biodiversity Conservation	9	6
	Total	**347**	**164**

There has been substantial progress of projects during last 2 years and 58 projects (including 27 sewerage infrastructure projects) have been completed during the same period. Moreover, a substantial number (34%) of projects (117 projects) have been sanctioned in the last 3 years under NMCG, which shall duly get completed in the upcoming months. After initially taking up

Ganga main stem projects, since last 3 years, 27 new sewerage projects on Ganga tributaries have been sanctioned and the same are under progress.[48]

71. The Ministry further added:-

> "For expediting the various projects being implemented under the NamamiGange program, NMCG's approach has been to facilitate and provide hand holding support to the state agencies in improving upon the project execution and monitoring mechanism to bring them up to the desired level through constant interaction / discussions / site visits with state agencies and Project Management Consultant[49]."

72. Asked to furnish problems in implementation, the Ministry of Jal Shakti in a written reply stated as under:-

> "In addition to the regular interaction / discussions / site visits with state agencies and Project Management Consultant, to avoid delay in execution of the projects following mechanisms are in place:

- For effective grounding and implementation of projects, a multi-level monitoring mechanism is already existing, both at Central and State level. At the Central level, NMCG holds regular review meetings with all the concerned State Governments and their Authorities including implementing agencies like Jal Nigam, Jal Sansthan etc. to oversee the pace of implementation of infrastructure projects.

Regular review meetings are chaired by DG-NMCG with State agencies and project reviews are also carried out by the Hon'ble Jal Shakti Minister not only with various officers of NMCG and the State Governments but also with the respective Hon'ble Chief Ministers to remove bottlenecks and also for expediting the pace of projects being executed at various levels."[50]

73. The Committee note that Sewage Treatment Plants and Common Effluent Treatment Plants form the major portion of projects for intervention in the waste/effluents getting discharged into the River. Asked to furnish the details of STPs, the Ministry of Jal Shakti in a written reply submitted as under:-

> "NMCG monitors these STPs through CPCB as part of scheme being implemented under NamamiGange programme.

- 385 Sewage Treatment Plants (STPs) are inventoried by CPCB in consultation with state authorities in 5 Ganga front states on Ganga and its tributaries.
- 207 STPs are inventoried in January 2021 are in Ganga front towns of 05 states in different stages with 175 STPs in commissioned/under-trial/under construction or rejuvenation and 32 STPs are under tendering/proposed.

[48] Q 6 lop/Flag 'F'
[49] Q 7 lop/Flag 'F'
[50] Q 8 Lop/Flag 'F'

- Out of 175 STPs in Ganga front towns 128 STPs are commissioned (operational/non-operational) (upto inspections carried out till June 2021) in 51 Ganga front towns and being monitored under PIAS.

- Out of 128 monitored STPs following observations can be made based on latest reports received-

  - Installed Capacity of 128 STPs – 2247.8 MLD in 51 Ganga front towns
  - Operational STPs- 102
  - Operational capacity – 1890 MLD
  - Utilized Capacity (of operational) – 1400.1 MLD
  - Non-operational STPs – 26 (Uttarakhand- 03, Uttar Pradesh- 03, Bihar – 01, West Bengal – 19) having combined treatment capacity of 357.8 MLD

- Based on the quarterly inspections carried out 110 letters have been issued to the STP operating agencies.

- 05 Directions under Section 5 were issued for STPs in case STP was non-operational or bypass found. Besides, NMCG also undertakes surveillance of Sewage Treatment Plants jointly with concerned SPCBs in river Ganga basin to verify the environmental compliance and performance of STPs. The direction / show-cause notice under section 5 of the Environment (Protection) Act, 1986 is issued to non-functional/non-compliant/under-utilized STPs. Effective and immediate actions is taken under law against the Operator/ Occupier of defaulter STPs and erring officials/ Departments/ Institutions including assigning of liability to prevent such default in future. Concerned state regulatory is directed to take appropriate action against the defaulting STPs taking into consideration the provision of 'Environmental Compensation' which is already present in Hon'ble NGT Judgement vide its order dated 13th July 2017 in OA 200/2014 guidelines. Since 2018 onwards, total of 48 visits have been made for surveillance of 34 STPs. Twice the directions have been issued to 14 non-complying STPs.

  For expediting the various projects being implemented under the NamamiGange program, NMCG's approach has been to facilitate and providing hand holding support to the state agencies in improving upon the project execution and monitoring mechanism to bring them up to the desired level through constant interaction / discussions / site visits with state agencies and Project Management Consultant.

  In addition to the regular interaction / discussions / site visits with state agencies and Project Management Consultant, to avoid delay in execution of the projects following mechanisms are in place:

- For effective grounding and implementation of projects, a multi-level monitoring mechanism is already existing, both at Central and State level. At the Central level, NMCG holds regular review meetings with all the concerned State Governments and their Authorities including implementing agencies like Jal Nigam, Jal Sansthan etc. to oversee the pace of implementation of infrastructure projects.

- Regular review meetings are chaired by DG-NMCG with State agencies and project reviews are also carried out by the Hon'ble Jal Shakti Minister not only with various officers of NMCG and the State Governments but also with the respective Hon'ble Chief Ministers to remove bottlenecks and also for expediting the pace of projects being executed at various levels"[51]

74. Asked to furnish the list of STPs ongoing, under tendering, approved, proposed and capacity details in the ULBs in all the Ganga River adjoining States, the Ministry of Jal Shakti furnished the details as per **ANNEXURE-III**.

75. When asked about the details of CETPs presently installed and working, and in pipeline, the Ministry in a written reply stated as under:-

> "Based on the suggestions made by Member, Planning Commission during a presentation regarding CETPs by MoEFCC in November 2010, astudy was conducted by CPCB on *"Assessment of the Need for Common Effluent Treatment Plants".*
>
> It was found that that there is a total of 480 industrial clusters/estates located in the states of UP (273), Uttarakhand (81), Bihar (61), Jharkhand (19) and West Bengal (46). Further, 14 CETPs are located in the states of UP (8), Uttarakhand (4), Jharkhand (1) and West Bengal (1) that have a total treatment capacity of 124 MLD (Uttrakhand-34 MLD, UP-60 MLD, Jharkhand-10 MLD, West Bengal-20 MLD). Based on the findings, it was suggested that an additional capacity of about 52 MLD is required to effectively treat entire industrial effluent (Uttarakhand-4 MLD, UP-38 MLD and West Bengal-10 MLD).
>
> Among these 14 CETPs, 08 CETPs are presently installed and operating on main stem of River Ganga and its tributaries. They are being inspected on quarterly basis. Out of 08 CETPs, 03 CETPs are located in tannery clusters at Jajmau, Kanpur (36 MLD), Banthar, Unnao (4.5 MLD) and Site-II, Unnao (2.15 MLD) in Uttar Pradesh, 02 CETPs in textile clusters at Rooma, Kanpur (1.55 MLD) and Pilakhua, Hapur (2.1 MLD) in Uttar Pradesh and 03 CETPs in mixed industrial clusters at Pantnagar (4 MLD), Sitarganj (4 MLD) and Haridwar (4.5 MLD) in Uttarakhand. There is 01 CETP (20 MLD) is in pipeline for construction at Jajmau, Kanpur.
>
> Pre-feasibility studies were taken for Bhadohi, Rooma, Pilkuwa, Mathura and Farrukabad textile clusters. Based on the feasibility reports the project of up-gradation of 6.25 MLD CETP at Mathura and 1.5 MLD CETP at Farrukabad was considered. Besides, Government has carried out detailed studies of 97 Ganga towns for their condition assessment and feasibility as regards their existing/future pollution load and sewage treatment capacity.
>
> The following CETPs are under construction and under process of approval:

[51] Q 57 List of Points/Flag 'F'

i. Construction of 20 MLD CETP at Jajmau Tannery Cluster, Kanpur, Uttar Pradesh
ii. Upgradation of 4.5 MLD CETP at Banthar Tannery Cluster, Banthar, Unnao, Uttar Pradesh
iii. Upgradation of 2.65 MLD CETP at Unnao Tannery Cluster, Unnao, Uttar Pradesh
iv. Upgradation of 6.25 MLD CETP at Mathura Textile Cluster, Mathura, Uttar Pradesh
v. Construction of CETP at Gorakhpur Industrial Cluster, Gorakhpur, Uttar-Pradesh
vi. Construction of 1.5 MLD CETP at Farrukhabad Textile Cluster, Farrukhabad, Uttar-Pradesh (which is under process).
vii. A communication has been received from Bihar Industrial Area Development Authority (BIADA) at NMCG vide which financial support is requested for establishing the 6.0 MLD capacity at Hajipur Industrial Area in the stem of river Ganga, which is under process.

Most of the micro and small-scale industrial units are established as clusters and CETPs are installed for facilitation of treatment of effluent being generated from them. However, medium & large-scale industries have standalone effluent treatment plant (ETP) for their effluent treatment. Also, CETPs have higher operational/maintenance costs and they also produce heterogenous/complex treated effluents that cannot be put to reuse and recycle. Therefore, it is conducive that medium & large-scale industries have their individual ETPs so that the treated effluent could be reused/recycled. At present, there are more than thousands of industries that have adequate and functional ETPs or they are connected to CETPs. Therefore, CETPs are not required to tackle the entire industrial pollution across river Ganga.[52]

76. Asked about the proportion of the River water cleaned after spending Rs. 30235 crores and completion of 152 projects, the Ministry replied as under:-

"As on date a total of 357 projects have been sanctioned under NamamiGange programme at an estimated project cost of Rs. 30,780 Crores and the total expenditure under the NMCG program has been Rs. 12,423.73 Crores. Out of this for 160 sewerage infrastructure projects sanctioned at a cost of Rs. 24,567.82 Crores, the total expenditure has been Rs. 9,358.45 Crores. A total STP capacity of 1077.84 MLD has been created and 3777.72 Km of sewerage network has been laid as part of the projects.

All projects in Uttarakhand are complete and there is an immediate change in the water quality of Haridwar. Being a big city and considering the pollution load on river Gange from Haridwar, the

[52]Lop Q 29/Flag 'F'

water quality has become Class A (the highest grade of cleanliness). In Kanpur, Uttar Pradesh, there is a visible difference in water quality, which until a few years ago was deplorable.

As per CPCB Water Quality Median data for 2021(January to May), the observed water quality of river Ganga indicates that Dissolved Oxygen (DO) which is an indicator of river health has been found to be within acceptable limits of notified primary bathing water quality criteria across all 84 monitoring locations. Other important river health indicators i.e. Biochemical Oxygen Demand (BOD) and Faecal Coliform (FC) have also been found to be within acceptable limits of notified primary bathing water quality criteria across 68 monitoring locations (out of 84 locations) and 33 monitoring locations (out of 80 locations) respectively. As a result of multi sectoral interventions, the median values of these water quality parameters viz., Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD) and Faecal Coliform (FC) have improved at 40 locations, 41 locations and 21 locations respectively in 2021 (January-May) as compared to 2014.

As per the CPCB, in 2018, there were four polluted stretches on main stem of river Ganga (the pollution level in river Ganga had one stretch under priority III, two stretches under priority IV and one stretch was under priority V, priority I being most polluted). As per data of 2021, no stretches fall in higher pollution level (priority I to IV) and there are only two stretches (Kannauj to Varanasi and Triveni to Diamond Harbour) under pollution priority V.

The outputs of the projects have started yielding results and the water quality of river Ganga will further improve once all the projects are operationalized."[53]

77. Giving a detail about the projects sanctioned by NMCG, the Ministry furnished as under:-

"As on date a total of 357 projects have been sanctioned under NamamiGange programme (including the existing projects sanctioned under NGRBA programme) at an estimated project cost of Rs. 30,780 Crores. Out of 357 projects, 177 projects have been completed so far. These projects pertain to Sewerage Infrastructure, Rural Sanitation, pilot projects for in-situ treatment of wastewater in drains, industrial pollution abatement, modernization/development of Ghats and Crematoria, trash skimmers for river surface cleaning, biodiversity conservation and improvement of fisheries, Ghat cleaning, Afforestation and medicinal plantations, etc.

Among these a total of 160 sewerage infrastructure projects have so far been sanctioned for development of sewerage infrastructure to provide a total treatment capacity of 5,024 MLD and laying of sewerage network of 5,227.29 km at an estimated cost of Rs. 24,567.82 cr. These projects are in Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Haryana, Delhi, Rajasthan, and Himachal Pradesh. Out of these, 116 sewerage infrastructure projects (73%) have been sanctioned on the Ganga Main Stem with a total capacity

[53] Q 20 Lop/Flag 'G'

of 2226.5 MLD. A total of 64 projects have been completed, 46 projects are in progress and 6 projects are under tendering. Going forward more sewerage infrastructure projects have been planned on few pending Ganga Main stem towns in the state of West Bengal.

For holistic rejuvenation of the Ganga basin, additional projects are also being planned in the tributaries of Ganga such as Ramganga, Kali, Yamuna, Gomti, Ghagra, Gandak, Kosi, Sone, etc. A total of 44 sewerage infrastructure projects are being undertaken for tributaries with a total capacity of 5023.7 MLD. Of the 44 projects, 10 projects are completed, 25 are work in progress and 9 are under tendering. [54]

78. Asked whether the Ministry has developed/ adopted an effective system of sampling in comparison to the international practice, the Ministry of Jal Shakti furnished as under:-

"Faecal coliform bacteria are differentiated in the laboratory by their ability to ferment lactose, with production of acid and gas at 44.5ºC within 24 h. The water quality monitoring protocol for Faecal coliform parameter is standardized following Standard Methods for the Examination of Water and Wastewater developed by American Public Health Association (AWWA), American Water Works Association (APHA), Water Environment Federation (WEF). It's an internationally accepted reference for accurate, proven methodology for analyzing various parameters of water and wastewaters, since 1905.

The protocol includes collection of water sample in a sterile glass bottle that should be stored at 4ºC on the way back to laboratory. Thereafter, analysis for coliforms should be started within 24 h of collection of samples. If time is exceeded, it should be recorded with the result. They are analyzed via Most Probable Number (MPN) technique and reported as MPN/100ml."[55]

79. Explaining the steps taken to improve the faecal coliform level in different States the Ministry of Jal Shakti submitted as under:-

"STPs are being commissioned in all 97 towns [56]on main stem of Ganga and 46 projects on tributaries to ensure that treated water with standard Faecal Coliform (FC) count is released into the rivers. This will bring down the FC levels in the river. Further FC cannot be completely neutralised in rivers except by chlorination/ UV irradiation/ ozonation of entire flows, which is not required and impractical as well. Besides, it is to also mention that animal (bovine population) presence has also been associated with levels of faecal contamination. The contribution of faecal coliforms from bovine population as well as bird droppings can also be one of reasons contributing to high levels.

The concentration of coliform bacteria is variable under changing aquatic environment. The concentration of faecal coliform will also

[54]Q 20 LoP/Flag 'G'
[55]Q 59 lop/Flag 'F'
[56]Q 60 page 40/Flag 'F'

increase when the contamination is the result of non-point sources such as overland runoff carrying a high concentration of faecal coliform bacteria from many different sources.
Sewage treatment plants are commissioned/proposed in Ganga front towns and also on towns located on tributaries of river Ganga. In addition to other physicochemical parameters of treated sewage being discharged from STP, faecal coliform count in treated sewage is also analysed during regular quarterly monitoring of STPs.

NMCG has sanctioned a project titled 'GIS based mapping of microbial diversity of River Ganga', to CSIR-NEERI. In the first round of the sampling, NEERI has collected 189 samples and the analysis has started. Around 1.5 Terabyte data has been generated from the analyses of these samples. One of the objective of the study is to find the origin of the Coliform bacteria in thesamples.The samples collected from Bhagalpur have been analyzed for the origin of the coliform bacteria. It was found that only 40% of the coliform present in the samples have human origin.

CPCB has also issued directions to state authorities and STP operating agencies time to time to establish sewage treatment plants and to ensure no untreated sewage reaches the river. Important directions are as follows:

1. Directions issued dated **April 2015 under Section 18 (1) (b)** of the Water (Prevention and Control of Pollution) Act, 1974 to the State Pollution Control Boards (SPCBs) of the five Ganga main stem states (Uttarakhand, Uttar Pradesh, Bihar, Jharkhand & West Bengal) regarding treatment and utilization of sewage. The important points of directions were -
    - SPCB shall make mandatory for local/urban bodies to setup a sewerage system for sewage collection, underground conveyance, treatment and its disposal to cover the entire town/city alongwith enforcement of consent management.
2. Directions under **Section 5 of Environment (Protection) Act, 1986 issued in October 2015** to local Municipal authorities of 118 towns/cities located on Ganga front in five Ganga states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal to ensure –
    - Untreated sewage shall not be disposed into the river or recipient system.
    - Local bodies to setup STPs of adequate capacity and provide sewerage system to ensure complete treatment of sewage generated.
    - In case disposal of effluents on land, river or any water body including coastal water/creek or a drain treated effluent shall meet the standards.
    - Existing STPs shall be properly maintained to comply with standards and OCEMS shall be installed at inlet and outlet of STPs to monitor consented parameters.
    - The local bodies shall seek consent under Water (Prevention and Control of Pollution) Act, 1974 from the SPCB/Committee.

- The Municipal authorities shall manage the wastewater flowing in drain and to ensure that such wastewater shall be treated and disposed in accordance with standards.
- Municipal authorities shall submit time bound action plan to the effect for collection, treatment and disposal of sewage and shall be submitted to SPCBs.

3. **Directions issued dated 26th June 2020 under Section 18 (1) (b)** of the Water (Prevention and Control of Pollution) Act, 1974 to the State Pollution Control Boards (SPCBs) of the five Ganga main stem states (Uttarakhand, Uttar Pradesh, Bihar, Jharkhand & West Bengal) for "no authority shall allow a discharge of polluted sewage or polluted effluents directly into a water channel or stream in violation of the law even during monsoon season and they shall ensure that the standards for faecal coliform are duly maintained".

3.4 SEWAGE TREATMENT PLANTS (STPs)

80. Audit had in their findings observed as under:

> "As per the target dates approved by the Cabinet, the award of works for all the STPs was to be completed by September 2016. The treatment capacity gap in 106 towns was 2,109 MLD but STP projects having treatment capacity of 712 MLD were ongoing as of August 2017. The works in respect of 1,397 MLD were yet to be awarded."[57]

81. Asked to furnish the action taken by NMCG to address the capacity gaps of sewerages pertaining to all towns and villages comprehensively and plan sewage systems, STPs, Interception and Diversion works accordingly in a time bound manner, the Ministry of Jal Shakti in a written reply stated as under:-

> "National Mission for Clean Ganga (NMCG) has sanctioned 158 sewerage infrastructure projects at a cost of Rs. 24,122 crores which form the major chunk of the total projects sanctioned.
>
> Out of the 158 sewerage projects sanctioned, 61projects have been completed, 75projects are under progress and 22 projects are under tendering (as on 31 May 2021). A total of 893.33 MLD capacity have been created.

S. No.	Type of Project	Name of State	No of works Taken up	Total Cost of Project (Rs in Cr)	Completed Projects
1	Sewerage Projects	Uttarakhand	35	1,159.85	30
		Uttar Pradesh	52	10,523.5	20
		Bihar	30	5,487.76	3
		Jharkhand	3	217.17	1
		West Bengal	23	3,885.1	3
		Haryana	2	217.87	2
		Delhi	11	2,361.08	2

[57] Para 4.2.1 of C&AG Report 39 of 2017/Flag 'A'

	Himachal Pradesh	1	11.57	-
	Rajasthan	1	258.48	-
	Total	158	24,122.38	61
2	Industrial Pollution Abatement	15	1267.37	-
3	River front, Ghats and Crematoria	82	1,464.03	59
4	Afforestation and Biodiversity conservation	36	557.45	21
5	Rural Sanitation	1	1,421.26	0
6	Other Projects	54	1,402.74	11
	Grand Total[58]	**346**	**30235.23**	**152**

82. When asked whether the timelines prescribed under NamamiGange for STPs are revised, the Ministry of Jal Shakti stated that Projects are getting completed in a prescribed timeline. However, due to Covid-19, considerable time has been lost and NMCG/agencies are making all efforts to complete the projects in time.

83. Furnishing the details of the problems faced during implementation, the Ministry of Jal Shakti added:-

> "The Department faces multiple challenges during Planning, project preparation, procurement and execution stages of the projects. However, NMCG has been handholding[59] the state executing agencies in overcoming the challenges for timely sanctioning, tendering and execution of the projects. Various activities involved from planning to execution stage of projects and steps taken by NMCG to expedite the progress are given below:
>
> 1) **Planning Stage:** To achieve the objective of cleaning River Ganga, identification of the main towns and drains discharging wastewater to River Ganga was done by NMCG for 97 key towns on the Ganga Main Stem.
> 2) **Detailed Project Report preparation:** NMCG has been handholding the state executing agencies for preparation of DPRs. NMCG has issued "Guidelines for preparation of DPRs for works of Interception & Diversion of drains and STPs", to assist and guide state executing agencies. NMCG has further appointed Project Management Consultants to review the DPRs. Further Third Part Appraisal of DPRs is also undertaken by reputed institutes like IITs etc. The DPRs are reviewed techno-economically before sanctioning the project. Once the project is sanctioned NMCG issues AA&ES for the approved projects.
> 3) **Procurement:** Post sanction of the project, the state executing agency prepares the bid documents for the projects. NMCG provides necessary hand holding support in preparation and review of the Bid documents. NMCG has issued "Model Bidding Documents" for preparation of Bid Document for DBOT projects. In addition, for HAM projects, NMCG appoints Transaction Advisors for assisting the states until execution of agreement with private partner. NMCG regularly monitors the tendering process to reduce the delay in award of contract post sanction of the project.

[58] Study Visit of the Committee, the Ministry in a written reply in Point No 23/Flag 'E'

[59] Point 53 page 34 of List of points/Flag 'F'

4) **Execution Stage:** During execution stage bottlenecks like non-availability of land, legal issues, natural calamities like floods, etc., delay in receiving permission from local authorities and other agencies like NHAI & Railways for road and railways cutting/crossing, delay in receiving tree cutting permission from concerned authorities are noticed."

84. Asked to explain the mechanism of NMCG to address the capacity gaps of sewerages pertaining to all towns and villages comprehensively and plan sewage systems, STPs, Interception and Diversion works accordingly in a time bound manner, the Ministry of Jal Shakti in a written reply stated as under:-

> "The sewage generation for the 97 towns in the report has been calculated as per Central Public Health & Environmental Engineering Organisation (CPHEEO) norms[60]. It has been calculated based on the population projected for the year 2016 in these towns. Sewage generation data provided by the State Pollution Control Boards, Municipalities and Jal board may vary with the above provided data. NMCG is working in close co-ordination with the state authorities and the population projection and sewage generation estimates have been discussed and agreed with them time and again before approval of each project.
>
> Initially a total of 118 towns were prioritized for Sewage intervention. Out of which the towns contributing high pollution load to river Ganga were looked upon and approved. 70 sewerage infrastructure projects have already been completed as on 31 July 2021. 1,069.94 MLD STP capacity and 3,673.39 km sewer network have been constructed. The ongoing / under tendering projects (currently 88 Nos) are at different stage of construction/ tendering will create additional treatment capacity of 3,879 MLD, which will certainly bridge the treatment capacity gap in the different states."

85. Asked to furnish the updated status of the Sewerage Treatment Plants and theconstraints, if any, being faced in completion of sewerage projects, the Ministry of Jal Shakti submitted as below:-

> "Under NamamiGangeProgramme, a total of 160 sewerage infrastructure projects have so far been sanctioned for development of sewerage infrastructure to provide a total treatment capacity of 5,024 MLD and laying of sewerage network of 5,227.29 km [61]at an estimated cost of Rs. 24,567.82 cr. These projects are in Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Haryana, Delhi, Rajasthan, and Himachal Pradesh. Out of these, 74 projects have been completed. The detailed breakup of the projects are presented below:

[60]Point 54 page 35 of list of points/Flag 'F'
[61]Q no 20 (a) of list of points/Flag 'G'

Sewerage Infrastructure- Project Details						
Sl No	**States**	**No of Projects**	**Sanction Cost (Rs in Cr)**	**STP Capacity to be created (In MLD)**	**Creation of STP capacity through rehabilitation of Old STP in MLD**	**Sewer Network to be laid (in km)**
1	Uttarakhand	36	1,373.19	194.8	0	184.33
2	Uttar Pradesh	53	10563.17	1379.24	319.95	1,832.65
3	Bihar	30	5530.65	648	0	1754.42
4	Jharkhand	3	217.17	30.5	0	89.86
5	West Bengal	24	4099.88	652.13	254.64	1049.43
6	Haryana	2	217.87	70	75	41
7	Delhi	10	2295.84	976	386	127.32
8	Himachal Pradesh	1	11.57	1.72	0	0
9	Rajasthan	1	258.48	36	0	146
Grand Total		**160**	**24567.82**	**3988.39**	**1,035.59**	**5227.29**

These 160 projects are at various stages of execution. Details of the progress are presented below:

Sewerage Infrastructure- Projects Status						
Sl. No.	**State**	**Projects**	**STP Capacity (MLD)**	**Completed**	**Work-in-Progress**	**Under Tendering**
1	Uttarakhand	36	194.8	32	4	-
2	Uttar Pradesh	53	1699.2	28	21	4
3	Bihar	30	648	5	21	4
4	Jharkhand	3	30.5	2	-	1
5	West Bengal	24	906.8	3	15	6
6	Delhi	10	1362	2	8	0
7	Haryana	2	145	2	-	-
8	Himachal Pradesh	1	1.72	-	1	-
9	Rajasthan	1	36	-	1	-
Total		**160**	**5024**	**74**	**71**	**15**

During execution of the sewerage infrastructure projects the main bottlenecks include non-availability of land, legal issues, natural calamities like floods, etc., delay in receiving permission from local authorities and other agencies like NHAI & Railways for road and railways cutting/crossing, delay in receiving tree cutting permission from concerned authorities.

In order to ensure expedite implementation by overcoming the bottlenecks and timely completion of projects, the following measures are being taken:

- Engagement of Project Management Consultants and Project Engineers by NMCG and State Government respectively for regular monitoring of projects through regular interactions/ discussions/ site visits
- Continuous coordination/ meetings/ follow up with SPMGs/ Executing Agencies
- Resolving delay in road/railway crossing permissions by conducting high level inter-Ministerial meeting with Railways and NHAI
- Regular review meetings are chaired by DG-NMCG with State agencies and project reviews are also carried out by the Hon'ble Jal Shakti Minister not only with various officers of NMCG and the State Governments but also with the respective Hon'ble Chief Ministers to remove bottlenecks and also for expediting the pace of projects being executed at various levels

86. The Ministry of Jal Shakti has stated that the condition assessment and feasibility study (CA&FS) were undertaken to compile the sewerage generation and its management related information of the towns and its impact on the River Ganga. The study report has been utilized in developing sewerage projects for different towns and also to determine the sewerage management interventions required for the towns.

87. When asked to furnish the total number of places identified in the Study for Sewerage Management intervention, the Ministry of Jal Shakti in a written reply stated as under:-

> "Condition Assessment & Feasibility Study has been carried in the river stretches of Uttarakhand, UP, Bihar, Jharkhand and West Bengal by 5 central public sector units namely WAPCOS, EIL, NBCC, NPCC, EPIL respectively. A total of 106 pre-feasibility reports were submitted by the PSUs.
>
> Based on the Condition Assessment and Feasibility Studies (CA&FS), the list of 106 towns was revised to 97 towns along Ganga main stem.
>
> Under NamamiGangeProgramme, a total of 160 sewerage infrastructure projects have so far been sanctioned for development of sewerage infrastructure to provide a total treatment capacity of 5,024 MLD and laying of sewerage network of 5,227.29 km at an estimated cost of Rs. 24,567.82 Cr. These projects are in Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Haryana, Delhi, Rajasthan,

and Himachal Pradesh. Out of these, 74 projects have been completed. These 160 projects are at various stages of execution. Details of the progress of sewerage infrastructure projects for both Ganga main stem and tributary, have been presented below:

Projects Status						
Sl. No.	**State**	**Projects**	**STP Capacity (MLD)**	**Completed**	**Work-in-Progress**	**Under Tendering**
Main stem						
1	Uttarakhand	33	156	31	2	-
2	Uttar Pradesh	32	755.21	23	9	-
3	Bihar	28	618	5	20	3
4	Jharkhand	2	15.5	2	-	-
5	West Bengal	21	681.8	3	15	3
Sub Total		**116**	**2226.5**	**64**	**46**	**6**
Tributaries						
6	Uttarakhand	3	38.5	1	2	-
7	Haryana	2	145	2	-	-
8	Delhi	10	1362	2	8	0
9	Uttar Pradesh	21	943.98	5	12	4
10	Bihar	2	30	-	1	1
11	Jharkhand	1	15	-	-	1
12	West Bengal	3	225	-	-	3
13	Himachal Pradesh	1	1.72	-	1	-
14	Rajasthan	1	36	-	1	-
Sub Total		**44**	**2797.2**	**10**	**25**	**9**
Total		**160**	**5023.7**	**74**	**71**	**15**

Under the NamamiGangeProgramme, Central Pollution Control Board (CPCB) is presently monitoring 129 Sewage Treatment Plants (STPs) in 51 Ganga front towns located in five Ganga states. The monitoring status is as follows:

- The total installed capacity of 129 STPs is 2249.2 MLD, monitored in 51 Ganga front towns of 05 Ganga states.
- Out of 129 monitored STPs, 102 STPs were reported operational with capacity of operational STPs as 1903.9 MLD where the utilized capacity for treatment was approximately 1412.6MLD.
- 19 STPs were found complying and 83 were found non-complying with respect to Standards prescribed by Hon'ble National Green Tribunal in its order dated 30.4.2019 in OA No. 1069/2018.

- A total of 27 STPs in five Ganga states were reported non-operational with combined capacity of 345.2 MLD.

Status based on reports received till September 2021											
State	Approx. Sewage Generation in Ganga front	Towns covered by 129 STPs	Total STPs	Installed capacity	Operational	Complying	Non-complying	Operational	Utilized Capacity	Non-operational	Non-operational Capacity (MLD)
Uttarakhand	239.8	16	54	347.2	51	15	36	340.2	214.1	3	7.1
Uttar Pradesh	1255.2	11	32	1137.9	29	3	26	1130.8	930.11	3	7.0
Bihar	480.0	1	5	205.0	4	0	4	160.0	64.0	1	45.0
Jharkhand	12.0	1	2	12.0	2	0	2	12.0	7.0	0	0.0
West Bengal	1571.5	22	36	547.1	16	1	15	260.9	197.4	20	286.1
TOTAL	3558.5	51	129	2249.2	102	19	83	1903.9	1412.6	27	345.22

3.5 AVIRAL GANGA AND E -FLOW

88. The Committee intended to know about the reduced flow of water in River Ganga and details of Aviral Ganga, in response to which the Ministry of Jal Shakti submitted as under:-

> "Government *vide* gazette notification dated 09.10.2018 has notified environmental flow regime for River Ganga (from its origin to Unnao, UP).
>
> Supervision of implementation of notified environmental flow norms is being done by Central Water Commission. Hourly flow data is being monitored from the identified projects. As of now, 11 quarterly reports have been submitted by the CWC.
>
> The beta version of online portal for e-flows is currently under trial and same is being developed by Central Water Commission along with National Mission for Clean Ganga.

In addition, NIH has been awarded a study for assessment of environmental flow in river Yamuna (from Hatnikund[62] barrage to Okhla barrage). An interim report on said study has been submitted by NIH in June 2019 and is under consideration."

89. Asked whether any study is done to monitor of flow of river at different locations,the Ministry of Jal Shakti stated as under:-

"Discharge data is observed by CWC at 158 sites on river Ganga basin. The annual average flows of last 10 years do not indicate any increasing/decreasing trend in water availability at terminal site i.e.Farakka site. The Average annual flow for the last 10 years at Farakka site (from 2011 to 2020) is given below:

Average annual flow for the last 10 years at Farakka Site

Year	Average Annual Flow (cumecs)
2011	12300
2012	8967
2013	13076
2014	8218
2015	7163
2016	11342
2017	7666
2018	8321
2019	10394
2020	10947

3.6 POLLUTANTS ENTERING RIVER GANGA AND GROSSLY POLLUTING INDUSTRIES

90. The Committee note from the Audit reports that the main source of pollution in River Ganga is Industrial Pollutants as well as Sewage waste entering the River.

91. Asked whether the issue of industrial effluents is also being taken care of theMinistry of Jal Shakti in a written reply stated as under:[63]

"Stringent monitoring and regulation of industries and pollution sources is being undertaken. Inventorisation of Grossly Polluting Industries (GPIs) along river Ganga with annual inspection of all GPIs is carried out. Teams in association with third party technical institutions of repute, State Pollution Control Boards (SPCBs), State Mission for Clean Ganga (SMCGs) and District Ganga Committees (DGCs) have been carrying out annual inspections to assess the compliance status of GPIs for enforcing regulatory framework on the polluting industries.

[62] Q no 3 list of points/Flag 'G'
[63] Q no 62 page 42 list of points/Flag 'F'

Stringent action is taken by Central Pollution Control Board (CPCB)/SPCBs against the GPIs discharging into main stem of Ganga River & its tributaries which are non-complying with respect to the prescribed norms.

Charter, which is a voluntary program of upgradation of process technology and ETP system, were implemented in major industrial sectors like pulp and paper, textile, sugar and distillery resulting in reduction in fresh water consumption, waste water discharge and improvement in compliance.

CPCB has carried out inspection of GPIs since 2017 by engaging technical institutes. Inspection were made for 1109 GPIs in 2017, 961 in 2018, 1072 in 2019 and 2740 in 2020. In 2020, the GPIs having potential to discharge into river Yamuna and its tributaries (including Hindon) were also inventoried and inspected by technical institutes.
In 2020, 2740 GPIs (Ganga main stem-1080, Yamuna basin- 1277 and Hindon sub-basin- 383) in seven states (Uttarakhand-65, Haryana-832, Uttar Pradesh-1464, Delhi-267, Bihar- 53, Jharkhand-5 and West Bengal-54) were inspected. Out of 2740 GPIs, 2109 GPIs were operational, 410 were temporary closed and 221 GPIs were permanently closed. Out of 2109 operational GPIs, 1512 were complying and 597 GPIs were non-complying. Out of 597 non-compliant GPIs, show cause notices to 562 GPIs and closure direction to 35 GPIs were issued by concerned SPCBs/PCCs.

Dischargeof black liquor from agro based Pulp and paper industries and spent wash from distilleries have been completely stopped, which has resulted in no reported incident of coloured water and fish mortality in Ganga main stem since 2015.

Further, the industrial effluents treatment is being taken care under pollution abatements works of NamamiGange Programme. The proposals received from states and its status are provided as follows:

S.No	Name of the Proposal	Achievements / Pending projects
1	Construction of 20 MLD CETP at Jajmau Tannery Cluster, Kanpur, Uttar Pradesh	Project awarded to EPC contractor for upgradation of 20 MLD CETP, Jajmau. The expected date of project completion will be December 2022.
2	Upgradation of 4.5 MLD CETP at Banthar Tannery Cluster, Banthar, Unnao, Uttar Pradesh	Tender evaluation is under progress
3	Upgradation of 2.65 MLD CETP at Unnao Tannery Cluster, Unnao, Uttar Pradesh	Tendering is under progress
4	Up-gradation of 6.25 MLD CETP at Mathura Textile Cluster, Mathura, Uttar Pradesh	Project awarded to EPC contractor for upgradation of 6.25 MLD CETP, Mathura. The expected date of project completion will be March 2022.
5	Construction of 1.5 MLD CETP at	(Under process of sanctioning at

	Farrukhabad Textile Cluster, Farrukhabad, Uttar-Pradesh	NMCG)
6	Construction of Interception and Diversion work and setting up 7.5 MLD Common Effluent Treatment Plant (CETP) at GIDA-Gorakhpur, Uttar-Pradesh	Resubmission of DPR - Pending from GIDA, UP

92. When queried if there is any model wherein the Industrial and sewerage Effluents could be diverted away from the River instead of releasing the treated water inside the River,theMinistry of Jal Shakti in a written reply stated as under:[64]

"Reuse of treated water from STPs in various secondary uses and from industries for process requirements (ZLD or near ZLD) may be one option. Another option/ model can be graded charges for discharging treated water into river system some minimum if it is complying to environmental norms, and increasing telescopically also linking the quantity being discharged.

- Charter, which is a voluntary program of upgradation of process technology and Effluent Treatment Plant (ETP) system, were implemented in major industrial sectors like pulp and paper, textile, sugar and distillery resulting in reduction in fresh water consumption, waste water discharge and improvement in compliance.
  Some of the Sector specific interventions are as follows:

Distillery Sector

- To control pollution from distillery, CPCB issued direction dated 07.12.2015 under Water Act, 1974, to 07 State Pollution Control Boards to ensure that all molasses based distilleries including yeast manufacturing units are required to achieve Zero Liquid Discharge (ZLD) through bio-composting of concentrated spent wash with press mud or through concentration and incineration of spent wash or combination of both, wherein ZLD refers to installation of facilities and system which will enable industrial effluent for absolute recycling of or re-use in to industrial process and converting solute (dissolved organic and in-organic compounds / salts) into residue in solid form by adopting method of "concentration and evaporation".
- In Ganga main stem all molasses based distilleries are achieving Zero Liquid Discharge (ZLD) by opting either bio-composting route or incineration route. CPCB has also prepared standard operating procedures (SOPs) for bio-composting with covered Bio-compost yard. A charter is also formulated for upgradation of manufacturing process technology, ZLD System, adoption of best practices for implementation of the ZLD and waste minimization practices.

Sugar Sector

[64] Q no 17 list of points /Flag 'G'

- To enforce appropriate technologies for effluent treatment in sugar factories and to comply with the prescribed environmental norms, CPCB took initiative to assess the effluent treatment plant performance and achieving the prescribed norms by sugar factories. A charter for sugar mills is prepared where it is decided that all the sugar factories shall up-grade the effluent treatment facilities at their end and will get Effluent Treatment Plant (ETP) adequacy reports and up-gradation plan prepared from reputed institutions. The charter has been formulated in consultation with National Sugar Institute (NSI), Vasantdada Sugar Institute (VSI), Uttar Pradesh Sugar Mills Association (UPSMA), Indian Institute of Technology, Roorkee and Industry representatives.
- The charter has been developed based on the deliberations that took place during the several meetings of the Expert Committee, Dept. of Sugar Industries for Uttar Pradesh, Uttarakhand and Bihar, for implementation of the Charter by Sugar mills.

Pulp & Paper sector

- Central Pollution Control Board (CPCB) formulated the 'Charter for Water Recycling and Pollution Prevention in Pulp & Paper Industries (Specific to Ganga River Basin States)' in consultation with experts from Pulp & Paper industries, Central Pulp & Paper Research Institute (CPPRI), Saharanpur, Department of Paper Technology, IIT, Roorkee and various SPCBs in workshops held on July 23, 2014, August 5, 2014, August 6, 2014, September 23, 2014 and September 29, 2014. The aim of the charter was to minimize the use of fresh water and reducing the effluent pollution load by increasing the recycling/ reutilisation of wastewater, process modification and end of pipe treatments. Highlight of the Charter was bench marking for fresh water consumption & effluent generation, provision of section wise Bare Minimum Technology (BMT) and Extensive Monitoring Protocol (EMP).
- Enforcement of zero black liquor discharge through dismantling of -100 chemical pulping digesters from 33 pulp & paper mills & commissioning of 7 Chemical Recovery Plants catering 10 agro based pulp & paper mills for Black Liquor management. Multiple-effect, falling film evaporation plants (with surface condensers) capable of concentrating black liquor.

  Further, reuse of treated waste water generated from Industries and Sewage Treatment Plant (STPs) is a sustainable option wherein treated water in industries and irrigation purposes is being promoted to further reduce fresh water extraction from river and ground water resources. Various initiatives in collaboration with Ministries, State Government and Departments, are being taken to promoting reuse of

treated waste water in industries and irrigation purposes. These initiatives are listed below:

Reuse of Treated Water

Uttarakhand:

- 18 MLD at Jagjeetpur- distribution network 3.57 km exists -1 MLD being used for irrigation
- At. Jagjeetpur- 10 km canal with 90 MLD treated water capacity (Irrigation to be provided to 616 ha.) 6 km Canal Completed.
- At. Sarai- DPR for 8 km main and distribution canal with carrying capacity of 17.61 MLD to irrigate 480 ha. prepared.

Uttar Pradesh

- 20 MLD from Mathura for IoCL
- At. Prayagraj, (80 MLD Naini), At Kanpur (166 MLD Jajmau)
- At Varanasi (120 MLD Goitha, 9.8 MLD Bhagwanpur)being used for irrigation.
- At Kanpur (Bingawan STP) 120 MLD to be reused in Panki, MoU Signed.
- At Noida (115MLD) to be used in Dadri- MoU signed.

Delhi

- At 89 MGD/ 459 MGD being used for irrigation, horticulture construction activity, rejuvenation of water bodies.

Jharkhand: Treated Water to be used in railway junction, crusher activity, Agricultural, Industrial purpose, construction actively, rejuvenation of Kharki River in Ranchi

West Bengal

Policy is being developed.

Besides, under the India-EU Water Partnership (IEWP), under the thematic pillar of Safe Reuse of Treated Water (SRTW), a National framework on Safe Reuse of Treated Water is being finalised. The process of developing the framework included an extensive consultation process with the various National and State level agencies. The SRTW action plan has also been finalised including the deliverables, milestones and activities to be part of the action plan.

Details of industries discharging in River Ganga: Under the NamamiGangeprogramme, under “Pollution Inventorisation, Assessment and Surveillance on River Ganga (PIAS)” project, SPCB’s provided an updated inventory of Grossly Polluting industries (GPIs) which are water intensive industries located in River Ganga main stem states namely Uttar Pradesh, Uttarakhand, Bihar, Jharkhand and West Bengal to CPCB. During 2021-22, an inventory of 1051 GPIs having potential to discharge effluent into River Ganga and its tributaries was updated. State-wise status is as follows:

Sector	Bihar	Jharkhand	Uttar Pradesh	Uttarakhand	West Bengal	Total
CETP	0	0	6	3	0	9
Chemical	0	1	10	2	2	15
Distillery	10	1	58	3	3	75
Fertilizer	0	0	6	0	1	7
Food & Beverages	23	1	47	5	8	84
Oil & Refinery	1	0	0	0	1	2
Others	4	2	27	7	10	50
Pesticide	0	0	1	0	1	2
Petrochemical	0	0	0	0	3	3
Pharmaceutical	0	0	2	1	2	5
Pulp & Paper	6	0	42	30	19	97
Slaughter House	5	0	23	0	0	28
Sugar	11	0	101	5	2	119
Tannery	2	0	374	0	0	376
Textile	4	0	170	2	3	179
Total	**66**	**5**	**867**	**58**	**55**	**1051**

93. Furnishing details of unregistered and /or unregulated units of industries or factories reported to be operating in the vicinity of River Ganga which aredischarging treated and/or untreated wastes into the River, they further stated as under:[65]

> "At present the thrust is on Grossly Polluting Industries (GPIs). GPIs are industries discharging pollution load of BOD 100kg per day or more and/ or handling hazardous chemicals as specified in Manufacturing, Import, Storage of Hazardous Chemical Rules, 1989 and as amended.
>
> Under the NamamiGange programme, under the PIAS project, CPCB updates inventory of Grossly Polluting industries (GPIs) in consultation with concerned SPCBs of river Ganga main stem states namely Uttar Pradesh, Uttarakhand, Bihar, Jharkhand and West Bengal on annual basis. These GPIs have been registered by the respective SPCBs.

[65] Q no 18 list of points/Flag 'G'

It is obligatory on the part of industries to install effluent treatment plants (ETPs) to comply with the effluent discharge standards as notified under the Environment (Protection) Act, 1986 and the Rules framed, thereunder and also to meet the consent conditions granted by State Pollution Control Board (SPCBs) / Pollution Control Committees (PCCs).

No information is available on unregistered/unregulated GPIs. Unregistered industrial units are being closed immediately after such information is available.

However, a study was carried out in *Haridwar Industrial Area* in which a survey of 964 industrial units operating in Haridwar District was carried out during March 13-24, 2018 by joint teams of officials from Uttarakhand Pollution Control Board (UKPCB), District Administration, District India Centre (DIC) and CPCB. **During the survey, 366 industries were found operating without having valid CTO**.

UKPCB issued Show Cause Notices and closure under Section 33-A of Water (Prevention and Control of Pollution) Act, 1974 and 31 (A) of Air (Prevention and Control of Pollution) Act, 1981 to all 366 defaulter industries.

The following industrial areas of Haridwar and Roorkee were surveyed.

S. No.	Name of Industrial Area
1	SIDCUL (CETP area) Haridwar
2	Bahadarabad
3	Bahadarabad Industrial Area
4	Old Industrial Area, Haridwar
5	IIE Haridwar
6	IIDC Haridwar
7	Industrial Area IP-2 RawliMehdood, Haridwar
8	Industrial Area IP- IV, Begampur, Haridwar
9	Raipur Industrial Area, Roorkee
10	Bhagwanpur Industrial Area Roorkee
11	Lakeshwari Industrial Area, Roorkee
12	Shiv Ganga Industrial Estate, Roorkee

94. Asked to enlist major pollutants entering River Ganga the Ministry of Jal Shakti in a written reply stated as under:

"Major pollutants entering River Ganga: Water pollutants that are entering River Ganga are mostly organic pollutants (estimated via BOD, COD), inorganic pollutants (heavy metals, boron, potassium etc.), bacteriological pathogens (estimated via Total Coliforms, Faecal

Coliforms, Faecal Streptococci and E. coli), suspended solids, nutrients (such as nitrate, phosphate etc) and agriculture pollutants (pesticides). Organic and inorganic pollutants are mainly discharged from industrial effluents and sewage into the river water.

Under the NamamiGange programme, various interventions taken by the Governments to tackle the pollution of river Ganga and its tributaries.

- Cleaning of river is a continuous process and Government of India is supplementing the efforts of the State Government in addressing the challenges of pollution in river Ganga and its tributaries by providing financial and technical assistance under NamamiGangeProgramme. Under this programme, a diverse set of interventions for cleaning and rejuvenation of river Ganga has been taken up including waste water treatment, solid waste management, river front management (ghats and crematoria development), maintaining continuous flow, rural sanitation, afforestation, biodiversity conservation and Public Participation etc.
- After the launching of NamamiGangeProgramme in 2015, 353 such diverse set of interventions are taken up and out of this, 178 such interventions are completed and rest are at various stages of implementation.
- The polluted river stretches in the country are being rejuvenated through approved action plans to achieve the target of outdoor bathing criteria notified by Ministry of Environment, Forest & Climate Change (MoEF&CC). At present, State Governments are implementing Action Plans drawn by State River Rejuvenation Committees for restoration of water quality of the identified polluted river stretches. The implementation is being monitored regularly at State level by Chief Secretary of the respective State/UT and at Central level by the Central Monitoring Committee under the Chairmanship of Secretary, Ministry of Jal Shakti. To-date 11 meeting of Central Monitoring Committee have been held since January' 2020.
- Stringent monitoring, regulation and enforcement towards compliance of Grossly Polluting Industries against regulatory framework mandated under Consent mechanism issued in respect of provisions of Water (Prevention and Control of Pollution) Act, 1974 is undertaken through Central Pollution Control Board (CPCB), State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCC).
- Industry specific effluent/emission standards are notified by Ministry of Environment, Forest & Climate Change under Schedule-I: 'Standards for Emission or Discharge of Environmental Pollutants from Various Industries' of Environment Protection Act, 1986. State Pollution Control Boards and Pollution Control Committees in States and Union

Territories respectively are to ensure compliance of these standards. So far, 47 industry specific effluent standards and 63 industry specific emission standards have been notified.

- Charter based participatory approach has been introduced and implemented by CPCB in major industrial sectors namely pulp & paper, sugar, distillery and textile and their compliance is verified through regulatory monitoring through technical institutions. Also, prepared for Tannery Sector. The charter promotes holistic approach for adoption of cleaner technology and waste minimization practices. Effluent treatment plant has been upgraded from two stage treatment system to tertiary treatment system.
- The Online Continuous Effluent Monitoring Systems (OCEMS) are installed by 17- categories of industries and Grossly Polluting Industries (GPIs) being established on industrial units in the country through the directives issued by CPCB for getting real time information on the effluent quality.
- Further, the identification and assessment of quality and quantity of major drains joining river Ganga and its tributaries, establishment/upgradation of Wastewater Treatment Plants (STPs and CETPs) for the towns located on Ganga main stem and its tributaries, performance evaluation of those STPs and CETPs are undertaken.

95. The Committee during their sitting [66]posed the query about exactly how many industries have been finally closed. In a subsequent sitting they asked about Zero Liquid Discharge and queried about[67] the allegations of data fudging by CPCB.

96. The Chairman, CPCB replied as under:[68]

> "The CPCB issued directions on 9th of August, 2017 to 26 District Magistrates to physically check and verify the closure along with electricity disconnection of 358 units which had already been served closure notice by SPCB based on the inspection so carried out. In 2019, 29 District Magistrates were asked to physically check and verify the closure along with electricity disconnection of 325 units which were served closure notice. In 2020, 33 District Magistrates were asked to physically check and verify the closure of 131 units along with electricity disconnection. In 2021, we have issued notices to 50 District Magistrates to physically check and verify the closure along with electricity disconnection of 581 units which were served closure notice. So, this process is going on and we would like to assure that CPCB will make all-out effort to look into the quality of the effluent etc. being discharged through the independent and

[66] Verbatim proceeding of sitting held on 12.8. 2021/Flag 'J'
[67] Verbatim proceeding of sitting held on 22.11.2021/Flag 'L'
[68] Verbatim proceeding 22.11.2021 COMMITTEE ON PUBLIC ACCOUNTS page no. 63/Flag 'L'

transparent method of the technical institutes which have been nominated for this purpose through a system in which we take inputs from National Mission on Clean Ganga before hiring the institute. That is a very brief outline of the first part of the observation made by the hon. Member. We would also like to state here that the Action Taken Report and directions are on the CPCB website so far as the National Mission on Clean Ganga is concerned. One of the issues raised was whether the inspections have also resulted in upgradation of technology being used by different industries. The answer is 'yes'. Different types of industries have adopted methods over a period of time which have resulted in lowering of pollution level. One is the installation of chemical recovery plants in agro-based pulp and paper mills and that has led to enforcement of zero liquor discharge. Then, upgradation of ETP systems and processing technology such as fibre recovery system has led to reduction in pollution load by 36 per cent and effluent generation by 50 per cent through recycling. In the sugar industry, upgradation of ETP system up to tertiary level, recycling and reuse of spray pond and cooling tower overflow has led to a reduction in pollution load by 32 per cent. In textile sector, the ETP system and standardization of freshwater consumption has led to reduction of pollution load by 51 per cent. Then, in distilleries, the molasses-based distilleries have adopted the multi-effect evaporator system. This has led to a significant reduction in water usage. Then adoption of clean technology such as Fed-batch continuous fermentation etc. has to led to reduction in spent wash generation from 12 to 15 kilolitres on per kilolitre of alcohol production to 8 to 10 kilolitres on per kilolitre of alcohol production."

97. On 14th June, 2022, again on the same issue, the Member Secretary, CPCB stated as under:

> "We have 17 large categories across the nation and also the GPIs have been installed – online monitoring system. This data is available in real time basis to CPCB through server and also the States. Depending on the non-compliance, SMS alert is generated that goes to the industry so that they can take corrective measures then and there. It is not physical verification to get it rectified."

98. NGRBA launched (November 2010) Mission Clean Ganga with the objective of ensuring that by 2020 no untreated municipal or industrial effluents is discharged into the River Ganga. Under *NamamiGange*(May 2015) the scale and scope of various interventions forsewage treatment, Ghats and river front development andrural sanitation have been enhanced by involving multiple agencies, Ministries and Departments.

3.7 Ghats, Crematoria works and Conditional Assessment and Feasibility Study

99. The Ministry of Jal Shakti in a written background note furnished the status of Ghats and Crematoriums as under:

> "A total of 197 ghats and 49 crematoria have been completed. Some of the key projects recently completed include Rudraprayag Ghat, Chandi Ghat, Har Ki Pauri Haridwar, Atal Ghat at Kanpur, Ghats Prayagraj, Ghat improvement in Varanasi, Ghats and Crematoria at Mirzapur, Ghats in Sonepur, Ghats Chapra, Ghats in Sultanganj, Electric Crematoria at Garulia, Naihati and Bhatpara Municipal Towns."

GHATS & RIVER SURFACE CLEANING

Ghat cleaning activities have been undertaken under NamamiGange programme at 84 ghats in Varanasi, 20 in Kanpur, 19 in Bithoor, 27 in Mathura-Vrindavan, 72 in Haridwar, 21 in Prayagraj.

River Surface Cleaning project has been undertaken at 11 places namely Haridwar, Garhmukteshwar, Kanpur, Prayagraj, Varanasi, Mathura-Vrindavan, Patna, Sahibganj, Howrah, Nabadwip, and Delhi.

100. The Ministry in their written reply submitted the data of Ghats and Crematorium and River Surface Cleaning till July 2021 as under:

Projects Undertaken	No of Projects	No of Projects Completed
Ghats & Crematoria Development	83	60
Ghats & River Surface Cleaning	4	1

101. During the oral evidence, the Members of the Committee wanted to know about the updated status of the Ghats and Crematoriums which would aid in the alleviation of the pollutants entering the River Ganga. To this, the DG, NMCG replied as under:

> "There are some other components. We have also taken up improvement of ghats and crematoria and also constructed some new ghats. This is important to actually connect people and also improve sanitation and also cleaning of the river. So, out of 210 ghats, we have completed 173 ghats. So, this has been our work."

C. STATE SPECIFIC IMPLEMENTATION

3.8 Performance of State Programme Management Groups (SPMGs)

102. As part of their background note detailing the key achievements of the various State Governments in their performance to the outcome of the NamamiGangeMission so far, the Ministry has submitted the following details:-[69]

Key achievements under the program

SEWERAGE INFRASTRUCTURE

Under NamamiGange programme towards cleaning of river, out of 169 sanctioned projects 98 projects have been completed.

- **In Uttarakhand:**
    - A total of 40 projects, at an estimated cost of Rs. 1,500 crore has been sanctioned in Uttarakhand to create 208.14 MLD new STP capacity and laying of 188.83 Km sewer network. A total capacity of 161.8 MLD has been created and sewer network of 169.61 Km has been laid.
    - Out of these 40 projects, 37 projects have been sanctioned on towns along Ganga Mainstem and 3 projects sanctioned on towns along Ganga Tributaries. 33 projects have been completed and the rest are in different stages of execution.
    - NamamiGange interventions has increased the sewerage treatment capacity in the state from 61.5 MLD in the year 2014-15 to 214.5 MLD in 2020 (roughly 3.5x increase in treatment capacity in the state). Additionally, it has also resulted with the water quality of the River Ganga in Haridwar to reach class A, i.e., the highest quality category
    - Improved water quality of river Ganga in Haridwar to class A standard (i.e. highest quality category)
- **In Uttar Pradesh:**
    - A total of 55 projects, at an estimated cost of Rs. 11,433 crore has been sanctioned in Uttar Pradesh to create 1894.19 MLD new STP capacity and laying of 1862.22 Km sewer network. A total capacity of 621.76 MLD has been created and sewer network of 1796.30 Km has been laid.
    - 100-year-old Sisamau Nala (140 MLD wastewater generation) fully tapped and other sewerage project at Kanpur operationalized.

[69] Background note from Ministry of JAl Shakti 22/09/2022/Flag 'D'

- More than 80 major drains have been tapped.
- 50 MLD untreated sewage entering into river Ganga from Assi Nala right at the upstream of famous ghats at Varanasi has been intercepted and is treated at 50 MLD Ramana STP. Ramana STP is the 2nd STP successfully developed in Hybrid Annuity Mode under NamamiGange.
- Additionally, work has also been completed for the 140 MLD Dinapur STP and 120 MLD Goitha STP 10 MLD STP at Ramnagar completed in Varanasi.
- In Prayagraj, package 2 & package 3 of HAM project completed, thereby under One City One Operator concept all existing STPs have been rehabilitated and being operated in compliance to their discharge standards.
- The complete core area of Prayagraj Town has been covered with branch sewerage network connectivity.
- In Mathura, 67.30 MLD STP works of Rehabilitation/Renovation of Mathura sewerage scheme at Masani has been completed.
- In Moradabad, 58 MLD STP and 264.25 km Sewer Network has already been completed; Furthermore, I&D works with 25 MLD STP at Moradabad have been recently awarded under HAM model.

- **In Bihar:**
  - 10 times increase in treatment capacity sanctioned from 65 MLD to 669 MLD through NamamiGange.
  - A total of 32 sewerage infrastructure projects, at an estimated cost of Rs. 5684.39 crore has been sanctioned in the state to create 669 MLD STP capacity and laying of 1764.21 Km sewer network. A total capacity of 224.50 MLD has been created and sewer network of 1090.96 Km has been laid as part of 10 completed projects.

- **In Jharkhand**, 3 projects of Sewerage Infrastructure have been sanctioned at a cost of INR 217.17 Crores. 2 STPs of 12 MLD capacity have been completed in Sahibganj town as part of one project and 1 STP of 3.5 MLD capacity have been completed in Rajmahal town, while the other 1 project is under progress.
- **In West Bengal**, a total of 26 sewerage infrastructure projects, at an estimated cost of Rs. 4165.28 crore has been sanctioned in the state to create 923.22 MLD STP capacity and laying of 1030.43 Km sewer network. A total capacity of 256.07 MLD has been created and sewer network of 841.87 Km has been laid.

103. The outcome of the various discussions during the oral evidence and the queries replied to by the State Governments of Uttarakhand, Uttar Pradesh, Bihar and West Bengal in respect of the performance under NamamiGange Programme is detailed below:

3.9 STATE GOVERNMENT OF UTTARAKHAND

104. A brief outline of the performance made by the State Government of Uttarakhand as furnished in their background note is given below:[70]

> "As per the guidelines of NMCG, various directions and monitoring mechanisms have been issued/setup in the state of Uttarakhand to clean and rejuvenate river Ganga and its basin/ tributaries for -

a) Preventing discharge of industrial effluents in Ganga and its tributaries/drains by ensuring installation of proper functioning of ETPs/CETPs.
b) Utilization of treated sewage, use of sludge as a manure and septage management.
c) Demarcation of flood plain zones and preventing encroachments thereof.
d) Maintenance of e-flow.
e) Preventing dumping of solid and other waste in and around Ganga.
f) Clearing old legacy waste dump sites.
g) Preventing and regulating illegal sand mining.
h) Restoration of water bodies.
i) Monitoring and displaying of water quality.
j) Taking action against polluters by way of recovering compensation for restoration of the damage to the environment.
k) Closing, till compliance, all establishments near river banks being run without necessary STPs and compliance of environmental norms.
l) Public awareness and involvement for prevention and control of pollution of Ganga.
m) Regulating activities on and around river Ganga including ghats and other establishments.
n) Afforestation and setting up of biodiversity parks."

105. The State Government of Uttarakhand furnished their efforts at the monitoring of STPs as under:[71]

> "At present, 20 STPs are equipped with online continuous effluent monitoring system (OCEMS) for real-time monitoring of water quality parameters. The monitoring of all the STPs with online monitoring system is done through portal designed by NMCG, 'Ganga Tarang'.
>
> All the other operational STPs in State, without online monitoring system (OCEMS) are also to be integrated with 'Ganga Tarang' online monitoring portal, through mobile based application recently developed by NMCG by December 2022."

106. The State Administration furnished the following information to the Committee in respect of action taken against polluters:

[70] Page 1 of Uttarakhand Background Note 22/09/2022
[71] **Flag S** page 1 of Uttarakhand Background Note

"Action taken by Uttarakhand Environment Protection and Pollution Control Board:[72]

A total of 8921 Nos. of industries are in operation in the State of Uttarakhand. Out of 8921 industries, 5284 units are having valid Consolidated Consent to Operate and Authorization (CCA), while 751 CCA application is under consideration at various levels. Status of Action taken by UEPPCB during last 02 years is as follows:-

Year	No. of Show Cause Notices	No. of Closures
2020-21	139	102
2021-22	49	13

UKPCB has also recovered Rs 50.58 Lakhs as an amount of Environment Compensation from the defaulting industries during the year 2021-22.

A) Hotels and Dharmshalas- Action taken by Uttarakhand Pollution Control Board.

The UKPCB carried out regular inspection of hotel/dharamshala. Inspection of the RawaliMahmod area in Haridwar was also carried out. Hotel situated in the area have installed their individual treatment system. The wastewater generated from the Indralok colony is disposed through tankers to STP. Haridwar Development Authority has engaged Uttarakhand Jal Sansthan (Sewer), Haridwar for the same. Individual septic tank/soak pits have also made for disposal of sewage. Development of sewerage network is also proposed for Indralok Colony Phase-1 under KfW project.

B) Illegal Mining: Action taken by Mining department/competent authorities.

The enforcement work done to prevent illegal mining/illegal transportation/illegal storage in the last five financial year is as follows:-

Sl. no.	Financial Year	Illegal mining/storage/transportation	Penalty (In Rs. Crore)
		cases	
1	2015-2016	1324	12.27
2	2016-2017	1424	4.41
3	2017-2018	3231	9.44
4	2018-2019	2649	26.99
5	2019-2020	2502	9.62
6	2020-2021	2752	18.05
7	2021-2022 (Upto March 2022)	1818	13.17
Total		**15,700**	**93.95**

[72]Page 12 of UIttarakhand Background Note 22/09/2022/Flag 'S'

During this financial year 2021-22 in District Haridwar 552 cases of illegal transportation/illegal mining/storages have been reported and a sum of Rs. 3.02 crore has been recovered as penalty."

107. Asked about the CAG observation regarding revoking of notices to the polluting and defaulting industries in Uttarakhand, the Member Secretary, State pollution Control Board, Uttarakhand submitted before the Committee as under:

> "Out of 180 industries which were issued show cause notices, we have revoked 109 show cause notices after inspection. 12 Units are permanently closed"[73]

108. The Members of the Committee expressed doubts over the reports of closure of industries and asked whether the Uttarakhand Administration is sure of the closure of the industries, to which the Principal Secretary, State Government of Uttarakhand deposed as under:

> "Sir, there are two types of procedures. One is that we have Regional Officers located in that particular area and there is also a provision for a third-party inspection as well. If it is decided or the company represents that we are fulfilling the criteria and all, then, in that case, sometimes, third-party inspection is also done and based on the reports, the notices are revoked."

109. Giving further details of the credential of the third party the Principal Secretary, State Government of Uttarakhand submitted further:

> "Sir, we have agencies like IIT Roorkee and IIT Delhi. I would like to submit one more thing that environment compensation has been imposed to the tune of Rs. 40 crore though it has not been realised because of various platforms and all."[74]

110. Asked about the mechanism adopted to prevent and check illegal mining in the State, the Principal Secretary, State Government of Uttarakhand responded as under:

> "Sir, earlier, the cases were not reported properly. Now, every team has a proper QRT team."

111. To a query,whether in 2017-18, the cases were not reported properly, Principal Secretary, State Government of Uttarakhand replied in affirmation. Clarifying further, he went on to add that one or two districts might not have properly reported at that time.[75]

112. Asked whether any criminal proceedings have been initiated against the defaulters in illegal mining of the River in addition to the fines imposed,

[73]Verbatim proceeding 22/09/2022/Flag 'P'
[74]Verbatim proceeding 22/09/2022 page 26/Flag 'P'
[75]Verbatim proceeding 22/09/2022 page26/Flag 'P'

the Principal Secretary, State Government of Uttarakhand admitted to send replies subsequently.

113. When asked whether it is not a vicious circle, if fines are imposed and the polluting industries continue functioning unabated, the Principal Secretary, State Government of Uttarakhand stated as under:

> "Sir, it is a policy of the Government of India as well as that under several Acts, decriminalisation has to be done."

114. Explaining this, he went on to add:

> "With the permission of the Chair, I would like to submit that the decision which was made, based on the hon. High Court's Order, has been stayed by the hon. Supreme Court because of certain things which were not implementable at that time in the year 2017. It is pending adjudication before the hon. Supreme Court."[76]

115. When asked whether the State Government has tried to vacate the stay imposed by Hon Supreme Court of India, the Principal Secretary, State Government of Uttarakhand submitted as under:

> "Sir, Honble high Court of Uttarakhand has given this judgement in year 2016 and asked C&AG to conduct a special audit. Its Chapter 8 is dedicated accordingly. State Government is committed to cleaning and rejuvenating the RiverGangaa. But the judgement conained several such directions, which could not have been possibly achieved by us, and therefore the State Government approached the Supreme Court for the stay. (translated from Hindi)"

116. In a written reply subsequent to the oral evidence the State Government of Uttarakhand has submitted that in the year 2021-22, 69 GPIs (including 3 common Effluent Treatment Plants) have been identified.[77]

117. When asked about the action taken towards monitoring the Industrial Effluents by Grossly Polluting Industries in the State, the State Government Administration of Uttarakhand in a written reply submitted as under:

> "As per the direction of the Central Pollution Control Board, GPIs are to be inspected quarterly. Also, third party inspection by Expert Institutes of GPIs are being carried out every year (since 2017) with the support of CPCB, NMCG & State Pollution Control Board (SPCB)."[78]

118. Asked whether the GPIs in the State of Uttarakhand are linked with the Online Continuous Monitoring System, the State Government Administration of Uttarakhand in a written reply submitted as under:

> "Under Water (Prevention & Control of Pollution) Act, 1974, SPCB is authorized to issue show cause notices & closure directions under relevant sections. In case of non-compliance observed during inspection (either by SPCB or Expert Institutes) due action is taken as provided in the said Act.

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[76] Page 29 of verbatim proceeding 22/09/2022/Flag 'P'

[77] Replies to list of Points Uttrakhand **Flag U**, page 5 point no 4

[78] Replies to list of Points Uttrakhand **Flag U**, page 6 point no 6

As on date, all GPIs in the State are linked with OCEMS & connected with CPCB server." [79]

3.10 STATE GOVERNMENT OF UTTAR PRADESH

119. The Committee during the evidence held on 22.09.2022 intend to know the progress of the Namami Gange Programme in the State of Uttar Pradesh. The representative of the State Government of Uttar Pradesh was also accompanied by the DG,NMCG. NMCG while explaining the State-wise projects in all riparian States undertaken under NamamiGange Programme furnished the following tabulated information before the Committee:

			Sanctioned				Completed		
S. No.	Type of Project	Name of State	No of Projects	Capacity (MLD)	Network (km)	Cost (in Rs. Cr)	No of projects	MLD Created/ Rehabilitated	Net work (km)
1	Sewerage Projects	Uttarakhand	40	208.14	188.83	1500.09	33 (31)	160.7(134.7)	169.61 (153)
		Uttar Pradesh	55	1574.24	1862.22	11433.06	33 (28)	606.7 (479)	1796.30 (1764)
		Bihar	32	669.1	1764.21	5684.39	10 (4)	224.50(140)	1090.96 (806)
		Jharkhand	3	30.5	89.86	217.17	2(1)	15.50(12)	87.9 (87.3)
		West Bengal	26	684.18	1,049.43	4165.28	11 (3)	274(	841.9(83

[79] Replies to list of Points Uttrakhand **Flag U**, page 6 point no 7

								70.2)	9)
		Haryana	2	70	41	217.87	2 (2)	145(145)	51.62 (51.62)
		Delhi	9	882	37.32	1951.03	6 (3)	409 (0)	35.85(34.7)
		Himachal Pradesh	1	1.72	0	11.57	1 (1)	1.72(1.72)	-
		Rajasthan	1	36	146	258.48	0	30 (0)	105 (70.2)
		Total	169	5175.87	5159.84	25,221.07	98 (73)	1865 (973)	4179.14 (3806)
2	Modular STP Decentralized		1	-	410	-	-	-	
3	River front, Ghats and Crematoria		99	-	-	1680.18	71 (62)	-	-
4	Afforestation and Biodiversity conservation		45	-	-	644.86	33 (26)	-	-
5	Ghats Cleaning & River Surface Cleaning		5	-	-	85.16	1 (1)	-	-
6	Industrial Pollution Abatement		17	-	-	1427.10	2 (0)	-	-
7	Rural Sanitation		1	-	-	1,421.26	0	-	-
8	Other Projects		57	-	-	1555.48	15 (12)	-	-
	Grand Total		393	5,175.87	5,599.84	32,035.11	220 (174)	1865 (973)	4179.14

								(3806)

120. Asked to furnish the total number of water Quality monitoring system in the State of Uttar Pradesh, SPMG, Uttar Pradesh furnished the following:[80]

> "Uttar Pradesh Pollution Control Board has been monitoring water quality of River Ganga at 32 sampling points (30 NWMP &02 Boards's own Resources) in the stretch of Bijnor to Ghazipur. Apart from these 13 Real time water quality monitoring stations on River Ganga in the State of Uttar Pradeh has been installed and monitored by CPCB. To strength the water quality monitoring network of River Ganga, UPPCB has propose 11 new manual monitoring locations on River Ganga which has been considered in MoM of the meeting of CPCB held on 11.10.2022 regarding "Strengthening of manual water quality monitoring network on river Ganga and its tributaries".

121. Asked to furnish furnish the total number of Sewerage or nullah discharging into the River Ganga in the State, the State Administration of Uttar Pradesh furnished the following:

> "As per the record available, total number of 125 drains discharge into the river Ganga. Treated effluent sample from the outlet of STP are collected on weekly basis and analysed in UPPC Board's laboratories. In case of violation punitive actions are taken as per the Environmental rules."[81]

122. It has come to notice that the functioning of the effluent treatment plants set up by different authorities in the State of Uttar Pradesh is being supervised by the Jal Nigam, which does not have any expert team for water treatment, especially the sewerage effluent. Explaining their position, the SMCG UP stated as under:-

> "The State Mission for Clean Ganga Uttar Pradesh comprise of Multi-Disciplinary Team which is capable and eligible to undertake monitoring of functioning of STPs in the state. The executive agency of SMCG-UP i.e. UPJN ® is well versed with project formulation and implementation and operation and maintenance of STPs. Also Private agencies specializing in managing waste and its treatment has been engaged for operation and maintenance of various STPs on One City One Operator concept."

[80] Page 3 pointno 7 of replies to list of points by Uttar Pradesh **Flag X**
[81] Page 1 pointno 2 of replies to list of points by Uttar Pradesh **Flag X**

123. When asked to furnish the reasons regarding the undue delay in construction of ghat and crematoriums as per the findings of the Audit in the CAG Report No. 39 of 2017, the SMCG UP stated as under:

"The reasons for delay are enlisted as follows:[82]

1. Delay due to high water level in river during monsoon.
2. Delay in handing over of land by concerned authorities.
3. Projects were halted for some time due to prioritization exercise."

124. Sewage Treatment Infrastructure, being one of the main pillars of NamamiGange Programme, the State Administration of Uttar Pradesh was asked about the actions/initiatives that have been taken by the U.P. Government in creating adequate infrastructure for treatment of sewage in the State. To this, they replied as under:-[83]

"Status of 86 Drains in Phase-I, Segment-B (Bijnor to Kanpur)

Sl. No.	Description	No.	Remarks
1.	Drains do not require tapping	10	-
2.	Tapped Drains	39	-
3.	Partially Tapped & untapped Drains	37	-
3a.	Drains to be tapped in project under construction in NamamiGange/AMRUT programme	36	1. 12 Drains of Bulaneshahar by January-23 (After completion of sewer house connections, sewage will be addressed through sewer network and discharge in drains will reduce significantly) (AMRUT) 2. 01 drain of Kanpur by Dec- 22 (NamamiGange. 3. 03 drains of Bareilly by Aug-24 (NamamiGange)

3.12 STATE GOVERNMENT OF BIHAR

125. The Committee during the evidence intend to know the work relating to the Sewage Treatment under NamamiGange in the State of Bihar. In response to a query posed on the delays in implementation of various

[82]Page 4 point no 8 of replies to list of points by Uttar Pradesh **Flag X**
[83]Page 4 to 5 pointno 9 of replies to list of points by Uttar Pradesh **Flag X**

projects under NamamiGange Mission in the State of Bihar, the SPMG Bihar in a written reply stated as under:-[84]

> "The main deficiency in the project execution was due to untimely handover of lands and other clearances to contractor. Apart from this, some of the projects got delayed due to unwillingness of contractor to execute the work. Hence the agreement with agencies for Hajipur, Begusarai, Buxar and Munger were terminated. Apart from above, there are also many reasons due to which the progress of the project got hampered. The same areas under:

I. **Delay in tendering process has been one of the major causes for not meeting the project completion deadline**. The time taken for tendering, in majority of the cases, exceeds the time being considered for disposing of any tender as mentioned in the AA&ES. In tendering of sewerage projects, the situation of re-tendering occurs quite often on account of non-availability of qualified bidders from Bihar and lack of interest in bidders from other States. It results in considerable delays in receiving bids for the project. Some examples are given below:-

(a) Barh I&D and STP project was sanctioned in August 2017 and the tender had to be published three times to complete the tendering process. The first tender was published on 30th Dec, 2017. The tender could not be finalized on account of complaint filed against L1 bidder. Hence, it was decided to cancel the tender by the Tender Technical Committee of BUIDCo. The second time bid could not be finalized hence third time tender was published on 22nd June, 2018. **Hence, there was a delay of almost one year since issue of AA&ES in receiving final bids for the project** and execution of contract agreement with the bidder for the project.

(b) Hajipur Sewerage project was sanctioned in March 2018. The tender was published three times in the duration of 18 months after the sanction. The first tender was published on 21st June, 2018 which could not materialize. Again, no bidder participated in the second tender resulting in its cancellation. The third tender which was published on 22nd August, 2019, also had to be cancelled on account of inability of the bidders to meet the eligibility requirement related to use of technology and also in not making optimum utilization of the pre-existing infrastructure already present. The fourth time re-tender notice has been published on 20th August, 2020. **This has already led to a delay of more than 2.5 years in the bidding process**.

[84] Page no 1 point no1 of replies to list of points by Bihar State **Flag 'a'**

(c) Naugachia I&D and STP project was sanctioned in the month of August 2017. The tender had to be published four times to receive the eligible bids and completing the tendering process. The first tender was published on 22nd September, 2017 in which only one bidder participated. The second tender was published on 1st January, 2018 but a decision was taken to cancel the tender by the Tender Technical Committee BUIDCo on 21st June, 2018 on account of technical reasons. Third tender was published on 22nd June, 2018 which had to be cancelled on account of single bid participation. Fourth tender was published on 26th September, 2018. The Contract Agreement was executed on 22nd October, 2018. **It has caused a delay of more than one year in the tendering process.**

II. Many NMCG projects are funded by World Bank. The entire bidding process from preparation of bid document till award of contract need to undergo four layers of evaluation i.e; BUIDCo, SMCG, NMCG & World Bank. Only after approval from World Bank at each stage of bidding process, further action is done. Due to four layers of evaluation, the entire bidding process takes time.

III. Due to shortage of availability of lands in urban areas, sometimes it takes long period to get land NOC/permission for different work components.

IV. For many Sewerage projects, the work is being undertaken in areas **having very high population density** which makes the execution of the work very difficult. The delay in projects being executed in such areas happens on account of **constant plying of heavy traffic on the roads** and the **urban roads are usually very narrow in width**. Also, a lot of delay has happened in **getting NOC from IOCL, Railways, RCD and NHAI** to proceed with the excavation and construction work.

V. Due to Covid-19, first and 2nd wave. It has delayed entire work process. Due to lockdown during first wave, work was stopped whereas during the 2nd wave also, the work hampered.

VI. The projects also get delayed due to **very heavy rainfall** and **water stagnation** for three to four months in the project area during **every monsoon period in Bihar.** The work was severely hampered which caused considerable delay of the work during monsoon period in 2019 due to flood like situation in Patna and other project sites in Bihar.

VII. Work has hampered due to assembly election and Parliament election.

VIII. Difficult and time taking for laying deep sewers in a settled town like Patna. Lots of underground utilities encountered during excavation of trench.

Due to crisis of sand during in year 2020 as the sand mining was stopped restricted are as per order of Hon'ble NGT and Hon'ble

Supreme Court respectively, it had badly affected the progress of construction work."

126. Asked about the expected date of completion of various projects in the State of Bihar, the State Programme Management Group in a written reply furnished the information given in **ANNEXURE-IV**placed at the end of this report.[85]

127. When asked to furnish the response to the Audit findings in the Performance and Compliance Audit Report No. 5 of the year 2020 of CAG on State Government of Bihar on the Namami Gange Projects in the State of Bihar , the SPMG Bihar stated as under:-[86]

• *There was inadequate planning for sewage treatment of Patna town as the sanctioned capacities of STPs were only able to treat, half of the total present sewage discharge.*	●The DPR of STPs were prepared through various consultants. As per provision mentioned in CPHEEO manual, sewage generation is 80% of total water supply. While finalization of DPR provision mentioned in the CPHEEO manual have been adhered. After preparation of DPR it is then sent to NMCG through SPMG, where NMCG after inhouse scrutiny use to send these DPR to IIT/NIT for further scrutiny. IIT/NIT carryout detailed examination of DPR and thereafter only these projects have been sanctioned. STPs of total 350 MLD capacities have been sanctioned, which is more than the sewage generation capacity.
• *Further, the execution of different projects was inordinately delayed due to slow progress by the agencies, non-identification of land for SPSs, puncturing of effluent line of sewerage networks etc.*	● The reasons of delay in projects are already described above. The same may kindly be considered.
• *There were issues relating to injudicious award of work leading to extra expenditure, delay in obtaining NOC for execution of work from different departments/authorities,*	● All the bids have been evaluated as per tender condition. Approval of NMCG and World Bank have also been obtained in World Bank funded projects and many NMCG projects.

[85]Page no 3 point no2 of replies to list of points by Bihar State **Flag 'a'**
[86]Page no 6 point no3 of replies to list of points by Bihar State **Flag 'a'**

<table>
<tr><td>inadequate house connection with sewerage networks etc.</td><td></td></tr>
<tr><td>• Further, no plan has been prepared for re-use of treated water as the preparation of DPR for re-use of water is still in progress.</td><td>•It is to mention that NMCG has issued AA & ES with a condition that the responsibility of providing sewerage connection to each household would be the responsibility of state Government. Hence in the original agreement with agencies the house connection scope was not mentioned. Later on as per direction of UD &HD, a supplementary agreement was executed with sewerage network agencies during June-July 2019 as mentioned in the audit query. Currently house connection work from property chamber is under progress. Revised scope of house connection has been ascertained as per site survey. Current status of house connection done for Patna projects are as under;</td></tr>
<tr><td>• The qualities of works were found sub-standard and substantive funds were parked in bank accounts.</td><td>
<table>
<tr><td>Sr. no.</td><td>Name of scheme</td><td>Revised scope of house connection (No.)</td><td>House connection completed</td></tr>
<tr><td>1</td><td>Beur Sewerage Network</td><td>9000</td><td>8565</td></tr>
<tr><td>2</td><td>Saidpur Adjoining Network</td><td>5500</td><td>5500</td></tr>
<tr><td>3</td><td>Saidpur Sewerage Network &</td><td>7100</td><td>6719</td></tr>
<tr><td>4</td><td>Pahari Sewerage Network zone-IV</td><td>6724</td><td>6724</td></tr>
<tr><td>5</td><td>Pahari Sewerage Network zone-V</td><td>22855</td><td>13314</td></tr>
<tr><td>6</td><td>Karmalich akSewera</td><td>31568</td><td>31258</td></tr>
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	ge Network
• *The Bihar Urban Infrastructure Development Corporation (BUIDCO) **failed to adhere to the stipulated time line** for completion of works, as no STP along with sewerage network completed till date and the discharge of sewage in Ganga and its tributaries could not be stopped in Patna as desired. Monitoring mechanism in respect of ensuring timely completion as well as maintenance of proper quality in execution of works was inadequate.*	DPR for re-use of treated water is under preparation for 9 towns. DPR for 3 towns (Beur, Karmalichak and Naugachiya) were finalized and sent to UDHD for approval. UDHD has issued observations for Naugachiya. The same is under compliance.
• *there was inadequate planning for sewage treatment of Patna town as the sanctioned capacities of STPs were only able to treat, half of the total present sewage discharge.*	The leakages found in the STP structures of Beur STP have been rectified.
• *Further, the execution of different projects was inordinately delayed due to slow progress by the agencies, non-identification of land for SPSs, puncturing of effluent line of sewerage networks etc.*	As of now, 9 NMCG projects (8 STPs & 1 sewerage network) have been completed and necessary efforts are being applied to complete all projects within timeline.

128. Asked about the rise in fecal coliform level in River Ganga Water in Bihar, the SPMG Bihar in a written reply stated as under:-

> "8 STPs have been completed but only one associated network projects have been completed. Once associated network projects got completed, STPs will run as per its design capacity and definitely the coliform value will get decreased."[87]

[87] Page no 8 point no6 of replies to list of points by Bihar State **Flag 'a'**

Fund Transfer

129. Asked to furnish the reasons for the poor utilization of fund as against the sanctioned amount, the SPMG Bihar submitted as under:

> "Since many projects got delayed due to reasons mentioned above, funds have not been utilized as desired. But in last 9 months there have been better execution and accordingly expenditure has also increased."[88]

130. They also added further:

> "Earlier there were some coordination issues with other departments, RCD NOCs were not cleared, but now, issues are being tackled in a minimum time. Regular monitoring is being done at BUIDCO, SPMG and NMCG level.[89]

Misuse of money

131. Asked to account for inconsistencies in the decisions and also lack of coordination amongst different agencies in the State Government of Bihar resulting in delays, the SPMG, Bihar stated as under:

> "Projects have got delayed in obtaining NOCs from various departments. These delays are mainly due to procedural delays. However where the projects have got delayed attributable to contractor, LD, Penalty has been imposed against contractor."

132. Explaining the action taken to retrieve the said loss of publicmoney, they further stated as under:-

> "Action was taken to co-ordinate different departments, Corporation/authority of state government and Central Government to speed up in getting NOC through meetings of Chief Secretary, Bihar; Honorable Deputy Chief Minister, Bihar; Hon'ble Minister, Jal Shakti Ministry, Govt. of India.Projects have got delayed in obtaining NOCs from various departments. These delays are mainly due to procedural delays."

Construction of IHHLs

133. Asked to furnish whether IHHL coverage is indeed 100% in the stateof Bihar, the SPMG Bihar in a written reply stated as under:-[90]

> "i) 100% IHHL constructed in all Ganga towns of Bihar. All towns are also declared ODF by State Government.
>
> ii)The sewage generated from IHHL is to be treated before discharge on land or nearby water bodies. In this regard, several STPs have been constructed and are under construction."

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[88] Page no 8 point no8 of replies to list of points by Bihar State **Flag 'a'**

[89] Page no 8 point no9 of replies to list of points by Bihar State **Flag 'a'**

[90] Page no 8 pointno 14 of replies to list of points by Bihar State **Flag 'a'**

Projects sanctioned vis-a-viscompleted

134. Asked to furnish the reasons for completing just II projects as against 53 sanctioned projects, the SPMG Bihar furnished as under:-

> "As of now NMCG has assigned BUIDCO for 38 projects, out of which 33 projects are sewerage projects. As of now, 8 STPs and 1 network projects have been completed and necessary efforts are being applied to complete all projects within timeline.
> NMCG has assigned 15 projects of Ghats to NBCC out of which all are completed."[91]

Covid-19 and dumping of dead bodies in River Ganga in Bihar

135. Asked to furnish the detail information regarding number of COVID-19 related dead bodies estimated to have been dumped in theriver Ganga in Bihar, the SPMG Bihar in a written reply stated as under:[92]

> "In Buxar district, a total of 72 COVID-19 related dead bodies were washed away from the upper course of river Ganga at MahadevaGhat of Chausa block and 10 COVID-19 related dead bodies were trapped in the mahajal on the Gazipur-Buxar Ganga river border at Rani Ghat and 01 COVID-19 related dead body came out from the upstream side in Munger, i.e. cremation/disposal of 82 COVID-19 related dead bodies was done properly and respectfully.To prevent its recurrence, the District Magistrates of the districts situated on the banks of river Ganga and its tributaries were requested for continuous monitoring to ensure compliance of the directions of NMCG.
> Steps have been taken for construction of Ghats &Crematoria as follows:-

A. Under NamamiGange Project				
Sl.No	Item	BUIDCo	NBCC	Total
1.	Ghats Completed	17	25	42
2.	Crematoria Completed	01	03	04
3.	Ghats Under Construction	00	06	06
4.	Crematoria Under Construction	00	02	02
5.	Ghats Sanctioned	00	04	04
6.	Crematoria Sanctioned	01	02	03
B. Under other/State Head				
1.	Completed Crematoria & Running			08
2.	Sanctioned Crematoria			35

[91]Page no 11 point no19 of replies to list of points by Bihar State **Flag 'a'**
[92]Page no 10 point no15 of replies to list of points by Bihar State **Flag 'a'**

3.13 STATE GOVERNMENT OF WEST BENGAL

Planning

136. Audit in their report had reported that the State Governments at many places are unaware of the enormity of the problem at hand. It was audit which in this Para reported further identification of 65 drains discharging in River Ganga in 12 municipalities in West Bengal apart from the drains identified by West Bengal Pollution Control Board (WBPCB). Audit concluded that this indicated that the inventory of drains maintained by WBPCB was not comprehensive and updated. Audit has also reported that reply of the NMCG was silent about the inventory of drains.[93]

137. Asked to furnish the reasons behind callous attitude of the State Government the West Bengal towards implementation of the Namami Gange Project in State, the West Bengal Pollution Control Board (WBPCB) replied as under:

> "Based on the report of Central Pollution Control Board (CPCB), the Hon'ble National Green Tribunal has identified 56 drains discharging water into the river Ganga within West Bengal. The CPCB and the WBPCB jointly conducted survey to identify major drains having flow more than 1 MLD. Accordingly, fourteen (14) additional drains have been identified. The CPCB and the WBPCB have also started joint monitoring of water quality of these newly identified 14 drains."
>
> They have further added as under:
> "The CPCB and the WBPCB, Department of Environment, Government of West Bengal jointly monitor water quality of these drains during pre-monsoon and post-monsoon period. Moreover, the Kolkata Metropolitan Development Authority (KMDA) has already engaged two reputed institutes, namely Jadavpur University and the Indian Institute of Engineering, Science and Technology (IIEST), Shibpur to assess the water quality and flow of these seventy (70) drains."

Non-achievement of financial targets

138. Audit in Para 2.2.4 reported that NMCG could not utilize the Budget and in August 2017 had stated that towards the end of 2016 and in the year 2017 a number of projects have been sanctioned and process is on to take up all STP projects across 118 towns in Bihar, Jharkhand, Uttarakhand, Uttar Pradesh and West Bengal in the first phase. West Bengal State NGRBA Program Management Group (WBSPMG) commented on this observation of Audit as under:

> "Release of fund by the NMCG to WBSPMG in the last financial year i.e., in 2021-22 and its utilization till date.

[93] Para 4.2.2.1 of C&AG Report 39 of 2017/Flag 'A'

Sl. No.	Year	Scheme	Fund received from NMCG	Expenditure during Financial Year	Remarks
1	2021-2022	Non EAP	Nil	5.03 Cr.	Projects under O&M and Expenditure made out of Additional State Share)
2		EAP	30.25 Cr	23.48 Cr	Projects under O&M
3		National Ganga Plan (NGP)	65.25 Cr	63.27 Cr	Projects under progress.

Amount of unspent balance lying with SPMG, West Bengal as on 30-06-2022.

Unspent balance as on 30-06-2022 Rs. in Crore

Sl. No.	Name of Scheme	Funding Pattern	Unspent Balance as on date		
			Central	State	Total
1	Non EAP	CS : SS = 70 : 30	-	7.62	7.62
2	EAP	CS : SS = 70 : 30	3.99	2.13	6.12
3	NGP	CS = 100%	1.70	-	1.70
		Grand Total	**5.69**	**9.75**	**15.44**

In addition to this, assignment for a sum of Rs. 36 Cr has been given in the Treasury Single Account (TSA) maintained with RBI, New Delhi on 23.6.2022."

Delay in submission of Utilisation Certificate

139. Audit has found that as per conditions of Administrative Approval and Expenditure Sanction (AA&ES) accorded to projects, quarterly Utilisation Certificates (UCs) were to be furnished by SPMGs to NMCG.Audit noted delays in submission of Utilisation Certificates (UCs) in respect of West Bengal which submitted Utilisation Certificates of projects from 2014 to 2016 in December, 2016 to NMCG.Audit observed that delays in submission of UCs not only dilute the system of budgetary and financial control but also

makes the project monitoring difficult resulting in slippages in physical performance.[94]

However, the Committee noted the findings of Audit that as of August 2017, SPMG Bihar and SPMG West Bengal have no finance personnel. Due to this, Utilization Certificates were not furnished to NMCG in the initial years. This led the Committee to question if it was true that SPMG West Bengal had no financial personnel till 2017. To this, the Ministry of Jal Shakti replied as under:

> "The State Project Management Group of West Bengal had no financial personnel at lower level till 2017. However, the post of Director (Finance) was filled up and finance related issued were being looked after at that level. Therefore, the shortage of staff in Finance did not in any way hamper the progress of the project. Also, all the UCs were submitted on time by SPMG, West Bengal."

Grossly Polluting Industries in West Bengal

140. Asked about the criteria for putting a polluting industry under the list of Grossly Polluting Industry, the SPMG West Bengal stated as under:

> "Grossly Polluting Industries (GPIs) were identified as per the guidelines of CPCB. The industries which are discharging effluent into a water course and a) effluent having BOD load of 100 Kgs/ day or more, or b) handling hazardous substances or c) a combination of (a) and (b) are identified as GPI."

141. Elsewhere the WBPCB stated as under:[95]

> "There are 43 no. of Grossly Polluting Industries (GPIs) identified as per the guidelines of the Central Pollution Control Board (CPCB), which are discharging treated effluent into the Ganga River. All the GPIs have an Effluent Treatment Plant (ETP) in place. These GPIs are being monitored on a quarterly basis by the State Board for compliance verification. The GPIs are also being monitored by third party Technical Institute engaged by CPCB.Besides, other industries having water polluting potential are under consent administration of State Board. All these industries are having Effluent Treatment Plant (ETP) and are regularly being monitored by the State Board."

142. Asked about the action taken on the Grossly Polluting Industries in West Bengal the State Administration replied in June 2022 that 06 nos. GPIs have deposited the Environmental Compensation (EC) amount. [96]

143. Out of all 17 cases, only one case M/S Debjyoti Pulp and Paper, Asansol, WestBengal was not issued any challans and the Closure order issued to this unit in late August 2020 was suspended in September 2020. Asked the reasons behind this sudden revoking of closure notice to one of

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[94] **Flag A** -C&AG Report NO 39 of 2017 Para 2.2.6

[95] Page 5 q no 3 of replies to list of points **flag 'e'**

[96] Q 17 of West Bengal replies to list of points page 10 ,**flag 'd'**

the Grossly Polluting Unit in less than one month, the WBPCB/Environment Department replied as under:[97]

> "Closure order issued to **M/s. Debjyoti Pulp & Paper Ltd.**, Vill-Melakola, P.O-Sitarampur, P.S-Salanpur, District: PaschimBardhaman, Pin- 713359on 19.08.2020 due to non-compliance observed during inspection as well as non-submission of Bank Guarantee (BG) amounting to Rs.10,00,000/- which was imposed earlier by the WBPCB on 15.01.2020.
>
> Later, the unit has deposited the Bank Guarantee amount on 15.09.2020 and submitted an Action Taken Report. Accordingly, suspension of closure order was issued by WBPCB on 30.09.2020."

144. When asked in how many cases the bank guarantee was forfeited, the WBPCB/Environment Department replied as under:

> "Partial forfeiture (50%) of BG for **M/s. Kamarhatty Co. Ltd. (Paper Division)** 1. Graham Road. P.O. – Kamarhatty, Kolkata – 700058 was done by the WBPCB on 26.06.2020."[98]

145. As an alternative way if the Industrial andSewerage Effluents could be diverted away from the River instead of releasing the polluted water into the River, it would lead to zero waste water discharge. When asked about the work in this regard, the SPMG was not forthcoming in their reply and forwarded the Reply from Kolkata Metropolitan Development Authority as under:

- "Ithas issued Work Order to the Head of the Department, Civil Engineering Department, Indian Institute of Engineering Science and Technology for consultancy work for flow measurement and survey of water quality of 14 nos. outfall / drains falling on both side of River Ganga on 05-05-2022. Work is under progress.
- It has also issued Work Order to Industry Institute Partnership Cell, Jadavpur University for consultancy work for flow measurement and survey of water quality of 56 nos. outfall / drains in lower Ganga region (East and West Bank) on 12-04-2022. Till now, survey work in respect of 25 numbers of drains completed."[99]

146. Asked whether there are unregistered industries to be operating in the vicinity of River Ganga which are discharging treated and/or untreated wastes into the River, the WBPCB/Environment Department confirmed thatthere are no unregistered major water polluting industries to be operating in the vicinity of River Ganga.[100]

[97] Page 2 q no 1 of west Bengal replies to list of points 3/1/2022 Part (c)/Flag 'I'
[98] Page 2 q no 1 of west Bengal replies to list of points 3/1/2022 Part (d)/Flag 'I'
[99] Page 2 q no 2of west Bengal replies to list of points 3/1/2022/Flag 'I'
[100] Page 3 q no 4 of west Bengal replies to list of points 3/1/2022 /Flag 'I'

147. Asked to furnish reasons for delay in drafting Flood plain Zoning Act in West Bengal, the Irrigation & Waterways Department, West Bengal stated as under:[101]

> "Demarcation of Flood Plain in the context of very dense population adjacent to river banks or embankments which are also prone to flooding and drainage congestion and imposing ban on human activities thereon like construction, mining etc, is a very difficult proposition. However, the principles to demarcate the flood plain zone are being discussed with State Government to identify the Flood Plain of each and every river so as to ensure the domain and the right way of the river for different flood frequencies, depending on the nature of adjacent catchment i.e. rural areas, semi urban areas and urban areas and also to maintain the ecological flow of the river. Once there is a consensus regarding the principles to identify the flood plain among the stakeholder departments like Irrigation & Waterways Department, State Environment Department etc, the draft for Flood Plain Zoning will be prepared thereafter in line with the draft of Model Bill of Flood Plain Zoning-2021, supplied by the Central Government."

148. The West Bengal Environment Department has mentioned on 2nd June, 2022 in their written reply that there are 41 Grossly Polluting Industries (GPIs) in the State of West Bengal. Six GPIs have deposited the Environment Compensation (EC) amount.asked to furnish the reasons for the compensation amount not deposited by other GPIs, the West Bengal Pollution Control Board (WBPCB) replied as under:[102]

> "Environmental Compensation has been imposed by the West Bengal Pollution Control Board (WBPCB) against only non-complying Grossly Polluting industries (GPIs). Other GPIs are monitored regularly and complied with the specified standard.
>
> The data on Water Quality of River Ganga in year 2016 and year 2020 (latest) is available on CPCB portal https://cpcb.nic.in/, updated on 17 January 2022. The data on Water Quality of River Ganga at Berhampore in West Bengal may please be seen.
>
> The Dissolved Oxygen at (Station Code 1080) Berhampore in Year 2016 was Maximum 9.1 mg/l and Total Coliform level was Maximum 280000 MPN/100m1, whereas it increased in 2020 to Dissolved Oxygen 11.8 mg/L and Total Coliform level to 300000 MPN/100m1."

149. Finally, when the State Administration was asked to furnish comments on the media reports furnishing their findings regarding failure of the State Government machinery to implement the Ganga Rejuvenation Scheme,the SPMG WB replied as under:

> "Few media reports have indicated variance in figures of Water Quality in Ganga River at various places by different Government Organizations, State Governments, CPCB and data provided by NGOs."

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[101] Page 9 q no 9 West Bengal replies to list of points 3/1/2022/Flag 'I'

[102] Q no 17 page no 10 replies to list of points by west Bengal **flag 'e'**

Expert Committee Report on Flood Plain Development

150. The Irrigation and Waterways Department, West Bengal Government has informed the Committee on 2nd June, 2022 that they have submitted their views on the report of the Expert Committee relating to identification of Flood Plain to the State's Environment Department.

151. Asked to furnish the views of the Irrigation Department on the expert Committee report, the Irrigation & Waterways Department (I&W) and Department of Environment, Govt. of West Bengal in a written reply to the C ommittee submitted as under:

> "The Expert Committee has submitted a report which has been reviewed by the Irrigation Department and also by the Environment Department of Government of West Bengal.
>
> The Expert Committee was further requested to conduct Drone survey of selected stretches. The work is in progress and the said Committee is expected to submit its report by September 2022."

152. As the NamamiGangeMission is one of those missions in which the performance can be quantified and measured as per the Water Quality of the River, and the parameters of Water Quality in the State of West Bengal revealed gross pollution in the River water. When this was posed to the State Administration of West Bengal, they replied as under:

> "WBPCB monitors water quality of river Ganga at fourteen (14) stations [Khagra, Gorabazar, Baharampore, Nabadwip, Tribeni, Serampore, Palta, PaltaSilatala, Dakshineswar, Garden Reach, Howrah Shibpur, Uluberia, Patikhali and Diamond Harbour] on fortnightly basis under the National Water Monitoring Programme (NWMP) of the Central Pollution Control Board (CPCB). With effect from January 2022, such monitoring has been started at Farakka as well.
> The State Board monitors these river water samples for Twenty-Nine (29) parameters including the parameters for which the Govt. of India prescribed standards under "Primary Water Quality Criteria for Bathing Waters".

153. Asked if it can be proved that after the expenditure under the scheme the River Ganga has been cleaned throughout as well as in West Bengal over the years, theWBPCB/Environment Department replied as under:

"Water Quality of River Ganga in West Bengal during April 2022

Stations	BOD (mg/l)	DO (mg/l)	Fecal Coliform (MPN/ 100ml)	Fecal Streptococci (MPN/ 100ml)	pH

"Water Quality of River Ganga in West Bengal during April 2022

Stations	BOD (mg/l)	DO (mg/l)	Fecal Coliform (MPN/ 100ml)	Fecal Streptococci (MPN/ 100ml)	pH
Farakka	2.80	6.6	2300	49	7.89
Baharampore	2.45	6.6	**110000**	1300	7.88
Gorabazar	2.90	6.4	17000	790	7.81
Khagra	2.90	6.7	7900	340	7.87
Nabadwip	2.95	6.5	24000	330	8.16
Tribeni	2.80	6.4	7800	1700	8.00
Palta	1.50	6.0	49000	2400	8.23
PaltaShitalatala	3.10	5.8	**240000**	4600	8.18
Serampore	2.80	6.2	14000	490	8.18
Dakshineswar	2.00	5.0	46000	460	7.69
Garden Reach	2.95	5.3	49000	490	7.49
Howrah-Shibpur	2.35	5.2	46000	330	7.66
Uluberia	2.55	5.2	23000	230	7.53
Durgachak near Pathikhali	1.55	5.5	17000	330	8.30
Diamond Harbour	2.30	5.9	4500	20	7.98
Primary Water Quality Criteria for Bathing Water	3 mg/l or less	5 mg/l or more	500 (desirable) 2500 (Maximum Permissible)	100 (desirable) 500 (Maximum Permissible)	6.5-8.5

Water quality data of river Ganga during April 2022 indicates that Dissolved Oxygen levels at all stations are above the minimum criteria level of 5 mg/l. The Biochemical Oxygen Demand (BOD) levels are within maximum criteria level of 3 mg/l except at one station. The levels of Fecal Coliform are however above the maximum permissible level."

154. Various news articles reported that lockdown in wake of Covid -19 proved to be more effective in improving the water quality in River Ganges.So to ascertain this fact, the details of water quality during the lockdown was sought from the State Administration, which reply revealed that they have not initiated any kind of study to study the impact of lockdown which presented a unique one time phenomena. The WBPCB/Environment Department reiterated what was already replied to by CPCB as under:

> "CPCB has published a Report "Assessment of Impact of Lockdown on Water Quality of Major Rivers" wherein CPCB has made its observation on water quality of river Ganga comparing the data of pre-lockdown and

lockdown period.

Implementation of Programme in West Bengal

155. The Committee undertook two Study Visits in West Bengal and also held discussions with the representatives of the State Administration of West Bengal on **22.11.2021** (PAC-2021-22), **14.06.2022** and again on **22.09.2022** (both PAC-2022-23), to find out about the implementation of the Namami Gange Programme in West Bengal. In regard to the water quality, Audit had noted that during 2016-17, total coliform (TC) levels in all the cities of Uttar Pradesh, Bihar and West Bengal was very high ranging between six to 334 times higher than the prescribed levels. IN one of their replies, the West Bengal Government puts the latest figure of Fecal Coliform at Berhampore as 110000 MPN/100 ml. Asked to comment on the ever increasing pollution in River Ganga, the Kolkata Metropolitan Development Authority (KMDA), Department of Urban Development & Municipal Affairs, GoWB replied as under:[103]

> "Water quality data in respect of Dissolved Oxygen (DO) reveals that the DO Level is constantly above the minimum required level of 5mg/Ltr at Berhampore in River Ganga which indicates that the river water quality is good for aquatic species. However, the faecal coliform level is more than the maximum permissible limit for bathing standards.
>
> The State has taken up Integrated Solid & Liquid Waste Management in a time bound manner for Berhampore town and its vicinity, for improvement of the River water quality with a target to achieve the prescribed bathing standards. The specific schemes are as below:

Liquid Waste Management through construction of Sewage Treatment Plants

(STPs)

- Berhampore (3.5 MLD) (Expected time of commissioning: February 2023)
- Jangipur (8 MLD)(Expected time of commissioning: September 2022)
- Raghunathgunj (5 MLD)(Expected time of commissioning: October 2022)

Solid Waste & Legacy Waste Management

Bio-mining is in progress for scientific disposal of legacy waste of total quantity of 150005 MT both in Berhampore and Murshidabad. More than 92412 MT of legacy waste has already been disposed of. Estimated time for total disposal is 31/12/2022. Moreover, segregated solid waste collection from door-to-door has already been introduced at Berhampore& processing has already been started, in strict compliance with the Solid Waste Management Rule, 2016.

[103] Point 1 page 1**flag 'e'**

West Bengal State NGRBA Project Management Group is the monitoring agency for the NamamiGange Projects in the state under the technical and financial support of NMCG, Ministry of Jalshakti, Government of India.

It is pertinent to mention here that 15 Sewage Treatment Plants (STPs) under 5 projects have been completed and put into operation during the period Jan 2022-May 2022. The details are as follows:

List of 15 STPs Completed during Jan-2022 to May-22 and made Fully Functional

Hooghly District

- ✓ STP at Baidyabati – Capacity 6 MLD
- ✓ STP at Bhadreswar - Capacity 7.60 MLD
- ✓ STP at Bansberia - Capacity 0.30 MLD
- ✓ STP at Chandannagar- I – Capacity 18.16 MLD
- ✓ STP at Chandannagar- II - Capacity 4.50 MLD
- ✓ STP at Konnagar - Capacity 22.0 MLD

North 24 Parganas District

- ✓ STP at Halishar – Capacity 16 MLD
- ✓ STP at Barrackpore - Capacity 18 MLD
- ✓ STP at Naihati - Capacity - 11.56 MLD
- ✓ STP at Garulia - Capacity - 7.90 MLD
- ✓ STP at Titagarh - Capacity – 4.50 MLD
- ✓ STP at Titagarh - Capacity – 4.50 MLD
- ✓ STP at Panihati - Capacity – 12.00 MLD
- ✓ STP at Khardah – Capacity – 14.00 MLD

Nadia District

- ✓ STP at Nabadwip – Capacity 9.50 MLD

Overall Status of Sewage Generation in West Bengal in Ganga Towns

I	**Estimated Sewage Generation(based on estimated Urban Population of 3 Crores as on 2021)**	**1401 MLD**
II	Details of Sewage Treatment Plants:	
	Existing no. of operational STPs and treatment capacity (in MLD):	28 (348.41 MLD)
	No of STPs under construction	9 (204.00 MLD)
	No of STPs under renovation	10 (254.20 MLD)
	No of STPs under proposal/tendering stage	8 (179.81 MLD)
	Total treatment capacity	55 (986.42 MLD)
III	**Gap in treatment capacity**	**414.58 MLD**

To address the gap of 414.58 MLD, proposals for additional treatment capacity of 550 MLD (based on estimated population in 2036) by setting up of new STPs in 11 Ganga Towns and by capacity augmentation of existing STPs has been submitted to NMCG. The DPRs are under preparation and will be sent to NMCG in phases for consideration."

156. When asked the reasons of West Bengal SPMG going backwards in River Cleaning and Pollution abatement after spending money to the tune of Rs. 1007.30 crores till May, 2022 under NamamiGange Mission, the Kolkata

Metropolitan Development Authority (KMDA), Department of Urban Development & Municipal Affairs, GoWB replied as under:[104]

> "The water quality data for River Ganga from February '22 to May '22 reveals that the water quality of River Ganga is improving as the DO level at all locations always remain above the minimum specification / standard and BOD levels are below the maximum permissible limit, except at PaltaSitalatala, where the BOD level exceeds marginally. However, presence of Faecal Coliform in river Ganga is above the maximum permissible level. In order to reduce Fecal Coliform level, Department of UD & MA, GoWB has formulated an Integrated Faecal Sludge & Septage Management policy for the urban areas in the state of West Bengal to provide safe sanitation in all Urban local bodies (ULBs) & notified it on the website.

Implementation strategy of the above mentioned Policy will be as follows:

- In towns, where facility of STP will be available, the septage of the town will be co –treated in the STP.
- In other towns, facility for treatment of Faecal Sludge and Septage (FS &S) will be developed in a phased manner
- In some towns, if necessary, **cluster mode approach** will be taken up for construction of FSTP after assessing the proximity of ULBs, operational cost, transportation cost and overall management.

Present Status of FSTPs in West Bengal:

- 2 FSTPs on Ganga Basin of West Bengal at Promodnagar, North Dum Dum, of capacity 30 KLD each are functional. Faecal sludge and septage collected from (i) South Dum Dum, (ii) Dum Dum, (iii) North Dum Dum and (iv) Baranagar Municipalities, is now being treated here under a '**Cluster Mode Approach'.**
- Planning and designing of 2 pilot FSTPs at Kharagpur&Siliguri, under technical supervision of IIT, Kharagpur have been completed. The work order will be issued shortly.
- Minor repairing of the existing FSTP at Baidyabati Municipality with approximate capacity of 125 KLD has been planned for making it operational shortly.
- Administrative Approval & Expenditure Sanction (AA&ES) has recently been issued by NMCG for installation of 2 FSTPs at Burdwan Town with capacities of 50 KLD, with an estimated cost of Rs 6.41 crores for curbing pollution in the Banka River.

In order to reduce the Faecal Coliform Pollution at Berhampore construction of 8.00 MLD capacity STP at Jangipur, 5.00 MLD capacity at

[104]Point 2 page 3 replies to list of points west Bengal **flag 'e'**

Raghunathganj& 3.5 MLD capacity at Berhampore has already been taken up. In addition to this, preparation of DPR for STP as well as Fecal Sludge Treatment Plant (FSTP) at Murshidabad, Jiaganj&Dhulian Municipality is in progress."

157. Asked about the number of industries that have encroached onto the bank of river and the details of inspection to find out cases of encroachment along the river coast the reply from West Bengal Pollution Control Board (WBPCB) surprised the Committee more than it satisfied the query as under:[105]

> "The Shyama Prasad Mookherjee Port Trust / Kolkata Port Trust (KoPT) is the custodian of land on shore within 45.7 mtr of High Water Spring Tide Line and are the competent authority for the stretch of River Hooghly from Farakka to Diamond Harbour.
>
> The KoPT has been requested to inform the State Board regarding industrieslocated on both banks of River Hooghly within their jurisdiction."

Seriousness to the cause

158. The National Green Tribunal (NGT) has imposed a penalty of Rs 25 lakh each on the States of Bihar, Jharkhand and West Bengal for not taking adequate steps to curb pollution in the river Ganga.

159. A Bench headed by NGT Chairperson Justice Adarsh Kumar Goel observed that while in Bihar there was no progress in terms of completion of sewage treatment infrastructure projects, in West Bengal only three out of the 22 projects had been completed. NGT had observed the absence of Chief Secretaries of all States to come together at one place in a meeting.[106]

160. Asked to account for such apathy and non-serious attitude of the State Government over matter of national concern, the Kolkata Metropolitan Development Authority (KMDA), Department of Urban Development & Municipal Affairs, Govt. of West Bengal replied as under:

> "Kolkata Metropolitan Development Authority (KMDA), under Department of Urban Development and Municipal Affairs, Government of West Bengal is executing 22 projects.
>
> Status of sanctioned STP projects under NMCG for Govt. of West Bengal is given below:[107]

[105] **Flag 'd'** Replies to list of points west Bengal state Point no 4 page no 6
[106] Page 12 point no 19 replies tolist of points **flag 'e'**
[107] **Ibid flag 'e'** point 20

SL No.	STP Projects sanctioned with AA & ES	No. of STP	Expected Completion Time
1	**Kalyani Municipal Town [New]**	**2**	**Completed**
2	**Gayeshpur Municipal Town [New]**	**1**	
3	**Bhatpara Municipal Town [New]**	**4**	
4	**Halisahar Municipal Town [New]**	**1**	
5	**Budge-Budge Municipal Town [New]**	**1**	
6	**Barrackpore I & D (Lock gate in Sewerage System at Barrackpore)**	It is connected with Barrackpore 18 MLD STP	
7	**Barrackpore Municipal Town [New]**	**2**	
8	**Nabadwip [New]**	**1**	
9	**North 24 Parganas District - Naihati(2), Garulia, Titagarh (2), Panihati, Bandipur (Khardah) [Rejuvenation]**	**7**	Completed & under Trial run
10	**Hooghly District - Chandannagar (2), Baidyabati, Bhadreswar, Bansberia, Uttarpara – Kotrung and Konnagar [Rejuvenation]**	**6**	Completed & under Trial run
11	**Howrah**	**1**	March, 2023
12	**Bally**	**1**	March, 2023
13	**Baranagar& Kamarhati**	**1**	March, 2023
14	**I&D and STP works at Kanchrapara**	**1**	June, 2022. It will be put under Trial run shortly
15	**Berhampore**	**1**	February, 2023
16	**Jangipur and Raghunathganj**	**2**	

17	**Hooghly Chinsurah**	**1**	July, 2023
18	**Pollution Abatement Works for river Ganga at Maheshtala**	**1**	May, 2024
19	**North Barrackpore**	**2**	Technical Bid Opened on 29.06.2022. Technical Bid Evaluation is in progress.
20	**Pollution abatement of river Banka in Burdwan Town**	**1**	AA & ES issued on 20.06.2022
21	**I&D with STP for Durgapur town**		Original DPR was submitted to NMCG on 23.7.2021.NMCG made some observations. KMDA is now revising the DPR.
22	**I&D with STP for Asansol town**		

Thus a total of 10 (Ten) Projects out of 22 Projects comprising of 25 (Twenty Five) STPs and 1 (One) I&D structure have already been completed in West Bengal & the remaining Projects are progressing as per schedule.

Progress with respect to Polluted Drains:-

KMDA has engaged Jadavpur University (for 56 nos. drains) and IIEST, Shibpur (for 14 nos. drains) on 12.04.2022 and 05.05.2022 respectively to conduct a study on quality and discharge of 70 nos. Central Pollution Control Board (CPCB)- identified drains, from Tribeni to Maheshtalsa, so that they can be tapped with the nearby STPs. Quantitative and qualitative assessment of 25 nos. drains has already been completed."

Water Quality of River Ganga in West Bengal

161. The Environment Department of West Bengal has informed on 2nd June, 2022 through their written reply that the levels of Fecal Coliform (FC) are above the maximum permissible level in West Bengal. Though the permissible level is 25800 MPN/100 ML at places like PattaSithaltala and Baherampur, it is 2,40,000 MPN/100 ml and 1,10,000 MPL/100 ml respectively. Dissolved oxygen (DO) and Fecal Streptococci (FS) level in many places are higher than the desired levels.[108]

162. Asked about the pollution abatement projects and its results ,theWest Bengal Pollution Control Board (WBPCB) and Department of Environment, Govt. of West Bengal replied as under:[109]

> "West Bengal Pollution Control Board (WBPCB) is monitoring the water quality of river Ganga at fourteen (14) locations on a fortnightly basis. With effect from January 2022, WBPCB has also started monitoring water quality at Farakka. Water quality data of river Ganga reveals that the Dissolved Oxygen levels at all locations are more than the minimum required level of 5 mg/l indicating that the river water

[108]Pages 10 to 11 q no 11 table of water quality breplies to list of points west Bengal 3/1/2022**Flag 'I'**
[109]Page 9 q no 15 to 16 replies to list of points west Bengal **flag 'd'**

quality is good for aquatic species. However, the Fecal Coliform level and Fecal Streptococci levels in river Ganga are higher than the maximum permissible limit for bathing water.

The Department of Urban Development and Municipal Affairs, Government of West Bengal, through its parastatal agencies, has already taken up different schemes for abatement of pollution of river Ganga and to improve the water quality so as to comply with the bathing water quality standards. The entire work is being done under the supervision of the West Bengal State Project Management Group (WB-SPMG), with both technical and financial support from the National Mission for Clean Ganga (NMCG) of Ministry of Jal Shakti, Government of India. Once all the actions are completed, it is expected that water quality of the river will be improved so as to comply with the "Primary Water Quality Criteria for Bathing Waters" notified by the Ministry of Environment, Forest and Climate Change, Government of India."

Issues raised during the two Study Visits of Public Accounts Committee in West Bengal

163. During the Study visit in West Bengal, in January 2021, the Members noted heaps of legacy wastes lying in the city of Behrampore and Kolkata. They also noted the poor condition of the crematoria especially in Khagra and Behrampore and recommended for the renovation of the same. The Members were assured that the same will be taken care of, but a repeat Study visit of the Committee to West Bengal in January 2022 hugely disappointed the Committee, which witnessed little change on ground.

164. The Committee during the evidence held on 14th June 2022 again raised the issue of Khagraand Gora Bazar and other crematoriums where there was encroachment as well as requirement of renovation and were again assured that SPMG West Bengal will attend to it.

165. During one of the sitting the representative of the State Administration of West Bengal stated as under:[110]

> "Hon. Committee, this is regarding status of solid waste management in Ganga Towns. Sir, 100 per cent scientific management of municipal solid waste management is done in the Ganga Towns. We have nine waste processing plants at different locations in different ULBs at Baidyabati, Rishra, Srerampore, Konnagar, Uttarpara, Kotrang, Champdany, Haldia, Kolkata Municipal Corporation and also in Krishnanagar including one RWMC which is the regional waste management centre. For waste processing unit and O&M, we have floated tender for 30 ULBs, agency have been engaged for three ULBs. The other things are under process. For legacy waste removal

[110]Verbatim proceeding 14/06/2022 west Bengal /Flag 'M'/pg 18

through bio mining, you must be appreciating that bio mining is a long process, out of 37 dumpsites at 31 ULBs, action has been taken at all dumpsites....Sir, ballistic separation has been started and as per instruction of the hon. NGT and SWM rules, 2016, the waste is separate and segregated into different grading. Some of them are coming out as good earth that is used as compost."

166. The Members of the Committee during the sitting recalled that they had visited the Berhampore Municipality and added as under:

> "We had visited this Berhampore Municipality during last January, about this solid waste management. There was a huge dumpsite.[111]

167. Confessing to the huge amount of legacy waste in West Bengal Berhampore, the representative of the State Government Administration of West Bengal stated as under:

> "Sir, we need to set up the machineries over there. The dump sites are already there for a long period. So, dumping is going on. Putting machinery over there takes time."[112]

168. Asked whether it amounts to confession of the State Administration of the huge amount of legacy wastes and the inaction to remove those legacy waste, the representative of the State Administration of West Bengal stated as under:

> "At present, about the sites you are referring to, the total quantity processed was up to 92,412.45 Metric Tonnes."

169. When asked to furnish the status of crematoriums during the sitting of the Committee on 14.06.2022, the representatives of the State Administration of West Bengal replied as under:

> "माननीयचेयरमैनसाहबनेउससमयदूसरीबातपूछीथीकिवहाँपरनदीपरदोक्रिमेटोरियम्स हैं,
> उनकेरिपेयरकेबारेमेंक्याकियागयाहै।उसकेबारेमेंलेटेस्टसिचुएशनयहहैकिवहाँपरएक खागड़ाघाटहै,
> उसकोराज्यसरकारनेपूरीतरहसेमॉडर्नाइजकरकेरिनोवेटकियाहैऔरवहइससमयफुली फंक्शनलहै।दूसराइलेक्ट्रिकक्रिमेटोरियमहै, वहगोराबाजारबर्निंगघाटपरहै, वहअभीअंडररिपेयरहै, इसलिएअभीवहबंदहै। But the renovation and repair work is going on."

170. The Committee again held oral evidence with the representatives of the West Bengal Government and enquired about the updated staus of electric crematorium in Berhampore. The excerpt of the said concern raised during the sitting is as under:

> "I am constraint to say it because before coming for today's meeting I enquired about the status of the electric crematorium in my city Baharampur. I got the information that for the last

[111] Ibid page number 19.
[112] Ibid page number 20.

seven to eight months the Gorabazar Electric Crematorium has not been working. The poor common people are forced to carry the mortals of their dear ones to distant places. You can countercheck it from your officials also. I am not deceiving anybody but I just wish to draw your attention to it because I think you are being misled. I thought it prudent to sensitize you, and nothing else...

The issue with regard to garbage, that has been the bone of contention during our discussions at Murshidabad, Baharampur, Kolkata, and Delhi, has not been resolved yet. Years have elapsed but the issue has remained as it is.... I am constrained to flag your attention, to your like or dislike, and compelled to say that there are some grey areas where your performance is not up to the mark....

River Front Development is an integral part of the Namami Gange Project. You may visit ...historical city Baharampur. Along the bank of the river Ganga, Harappan and Mohenjo-Daro civilization was excavated by Rakhaldas Bandyopadhyay, who hailed from Baharampur. The entire riverfront is being encroached. One-after-another construction is being built up. There are restaurants, car parking, etc...."

171. To this, the representative of the SPMG, West Bengal replied as under:

> "Sir, whatever you are saying is perfectly correct. Firstly, you talked about the Gorabazar Crematorium. In fact, I was reviewing it.Forthe last three months there has been no work. Only Chimney has been installed,but the other structure has not been done….I have got the letter where I have ordered a show cause notice to the concerned executive officer asking him why legal action should notbe taken against him because he is playing havoc with the river Ganga. It isjuston the bank of the RiverGanga."

172. The Members of the Committee witnessed a videograph footage of the River Front Encroachment in Behrampore Municipality, Murshidabad and the huge piles of Garbage lying over the City roads in several places in Murshidabad, Behrampore and elsewhere in West Bengal near River Ganga. When asked whether the river front is being encroached and the action taken by the concerned authority to remove the encroachment, the representative of the State Government of West Bengal replied as under:

> "For the last three months, the work was stopped and the machine was taken from there to Azimganj.For that also we have issued atermination notice against the contractor and also issued a show cause noticeto the executive officer asking why it was not informed to us.[113]Thirdly, the Chief Secretary himself called me one day and said that onthe riverfront there are complaints of encroachment and construction on the riverbank which is affecting the flow of the

[113] 22.09.2022 V erbatim Proceedings page 54/Flag 'R'

riverandaccess of the public. On thatday only I told the District Magistrate,the Chief Secretary also told him, topersonally go and visit the place.The DM has visited the place and has alsoformed a high-powered Committee, which include departments of rejuvenation,UD, and ADM,to review the encroachments. We are waiting for the report."

The representative of the West Bengal Administration further added as under:

"Sir, as per the complaint received, riverfrontdevelopment was going on. There was a Ganga Heritage Park whichwasconstructed in 2009. As per the report submitted, it was in adilapidatedcondition. They started doing some construction there."

173. Subsequently, a report[114] from DM Murshidabad was forwarded to the Committee stating that the said River Front was being developed by the tourism department, West Bengal and that the said Ganga Heritage Park was now handed over to the District Administration seeking suggestions and proposals for further development.

RURAL SANITATION

174. Audit reported its findings that as against the total funds of Rs. 951.11 crore released by National Mission for Clean Ganga and State Governments for activities relating to construction of Individual Household Latrines, Information, Education and Communication and Solid Liquid Waste Management, the five States namely Bihar, Jharkhand, Uttarkhand, Uttar Pradesh and West Bengal could utilise a sum of 490.15 crore only. [115]

175. Audit also observed that State Government of Uttarakhand did not release its own share of Rs. 2.78 crore to District Implementing Agency, as of 31 March 2017. Further, two States made a short release of Rs.50.44 crore against their committed shares, to their District Implementing Agencies. Uttarakhand could utilise only 30 per cent of the Central Share available with it, as of March 2017. Further, Uttar Pradesh and Bihar could not utilise even the 50 per cent of the funds available with them, as of March 2017.[116]

Swachh Bharat Mission

176. Asked to furnish the details of amount sanctioned and spent State-wise for the construction of toilets in Uttarakhand, UP, Bihar, Jharkhand and West Bengal, the Ministry of Jal Shakti stated as under:

"A sum of Rs.953.00 Cr has been sanctioned by NMCG since FY 2014-15 to 2021-22 (Upto 31.8.2021) under NamamiGange Project, in 5 Ganga River States and its utilization thereof, is as detailed below:[117]

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[114] **Flag @** Report dated 14/09 2022 from DM, Murshidabad
[115] Page vii C&AG report /Flag 'A'
[116] Page 52 para 5.3 C&AG report No 39 of 2017/Flag 'A'
[117] Q no 64 page 44 list of points /Flag 'F'

States	Fund released for IHHLs (2014-15 to 2021-22 Upto 31.8.2021)	Fund Released for SLWM (2014-15 to 2021-22 Upto 31.8.2021)	Total fund released till date	Fund Utilized (% in bracket)	Remaining unutilized fund
Bihar	194.68	62.08	256.76	133.37 (51.94)	123.39
Jharkhand	27.83	0	27.83	20.85 (74.92)	6.98
Uttar Pradesh	388.35	20	408.35	355.22 (86.99)	53.13
Uttarakhand	23.76	0	23.76	17.30 (72.82)	6.46
West Bengal	194.42	41.88	236.3	110.32 (46.68)	84.1
Total	**829.04**	**123.96**	**953**	**637.06 (66.85)**	**274.06**

Under Swachh Bharat Mission, no amount has been specifically sanctioned for NamamiGange etc. The only source of funding for the NamamiGange States (5 States), for the works as per the guidelines, is sanctioned by NMCG. The details of funds sanctioned by NMCG for 5 Ganga States for the sanctioned activities in last 5 years is furnished in the Table below:

Fund sanctioned by NMCG in last 5 Years (In Cr.)	
FY 2016-17	315
FY 2017-18	225
FY 2018-19	150
FY 2019-20	0
FY 2020-21	0
Total in Last 5 FY	**690**

177. Asked about the toilets that have been constructed in each State from this fund, the Ministry of Jal Shakti stated as under:

"A sum of Rs.953.00 Cr sanctioned by NMCG since FY 2014-15 to 2021-22 (Upto 31.8.2021), in 5 Ganga River States has been utilized for activities under NamamIGange Project. In this context the following is furnished as per the updated data on IMIS of SBMG:[118]

SN	Name of State	Total No of IHHLs Reported in IMIS (FY 2014-15 to 2021-22 (Upto 31.8.2021)
1	Bihar	277256

[118]Point 67 page 45 replies to list of points /Flag 'F'

2	Jharkhand	23224
3	Uttar Pradesh	411548
4	Uttarakhand	9971
5	West Bengal	516076
	Total	**1238075**

178. Asked whether the Ministry has observed any hindrances in implementation of SBM, the Ministry of Jal Shakti stated as under:[119]

"As per the components under the NamamiGange Project the following challenges are observed during the implementation:

1. Work progress in West Bengal is very slow and the IMIS is not being updated regularly, hence monitoring of SLWM works is quite a challenge.
2. DPR approval and implementation is quite slow in all States. Further as per the new funding norms the DPRs would be required to be revisited. DPR would also need to incorporate the details regarding retrofitting and faecal sludge management, in view of SBM Phase 2 Guidelines.
3. The component with respect to Renovation of Village Ponds, need to be expedited with standardized implementation plan for the respective States along with regular monitoring of work progress."

179. Elaborating the important targets under Solid Liquid Waste Management, they further stated as under:

"Construction of Individual Household Latrine (IHHL) for ODF and Solid Waste Management (SLWM) in rural India is mandate of Department of Drinking Water & Sanitation (DoDWS) under Swatch Bharat Mission Gramin (SBM-G) programme. NMCG has supported the Department of Drinking Water & Sanitation for construction of IHHL for ODF and Solid Liquid Waste Management in Ganga bank villages on priority, for which NMCG has released Rs. 829.00 crore for construction of IHHL and Rs. 124.00 crore for SLWM in identified Ganga Bank villages. As per the information shared by DoDWS, a total of 12,38,075 IHHL have been constructed in 4,465 Ganga bank villages and declared all the villages Open Defecation Free (ODF). The implementation of SLWM in 4,465 Ganga villages is still in progress."[120]

180. Elaborating further, the Ministry of Jal Shakti in a written reply stated as under:-

For time bound implementation of the SLWM targets, NMCG has supported the Department of Drinking Water & Sanitation to enable the department to facilitate and provide hand holding support to the state agencies in improving the project execution and monitoring

[119] Point 69 page 46 replies to list of points/Flag 'F'

[120] Q 73 page 49 replies to list of points/Flag 'F'

mechanism to bring them up to the desired level through constant interaction / discussions / site visits with state agencies."

181. Adding to the reply in respect of efforts made to reduce waste generated by the urban areas, the Ministry of Jal Shakti in a written reply stated as under:-[121]

"The following actions may be taken to reduce the solid waste generated by the urban area:

- Promoting use of reusable bags instead of single-use plastic bags
- Implementing strong IEC campaign to promote reduction of waste generation (e.g. "purchase wisely and recycle")
- Segregating solid waste (e.g. dry waste, wet waste, etc.) at the generation point
- Recovery of reusable components of solid waste to reduce volume of landfill disposal

The Govt. has already taken the below steps in this line of thought:

- The Ministry of Housing and Urban Affairs (MoHUA) through Swachh Bharat Mission (Urban) has taken steps for reducing and managing solid waste in urban areas. Under the mission, the ministry has taken a set of activities related to waste segregation at source, primary collection, secondary storage, resource recovery, processing, treatment and final disposal of waste
- The MoHUA has implemented IEC and public awareness activities for behavioral change towards solid waste management
- The Govt. has notified Plastic Waste Management Amendment Rules, 2021 banning the manufacture, sale, and use of identified single-use plastic items like plates, cups, straws, trays, and polystyrene from Jul 1, 2022."

182. The Ministry of Jal Shakti in a written reply furnished the financial provision for the rural sanitation under the NamamiGange Programme as under:[122]

"Out of the total allocated fund of Rs. 20,000 crore under the NamamiGange program, NMCG had kept the provision of Rs. 1750 crore for rural sanitation as per the cabinet decision. Further, it was reduced to Rs. 1421.26 crore, due to the change in the cost-sharing pattern between the Centre and State."

183. Asked about the reasons for not releasing any funds towards rural sanitation, since FY 2019-20 for NamamiGange that have been sanctioned by NMCG to five Ganga States, the Ministry of Jal Shakti explained as under:[123]

[121] Q 76 page 49 replies to list of points/Flag 'F'

[122] Q 25 (a) replies to list of points/Flag 'G'

[123] Q 25 (b) replies to list of points/Flag 'G'

"As the lead implementing agency of the rural sanitation program is the Ministry of Drinking Water and Sanitation (Now-Department of Drinking Water & Sanitation (DoDWS)) under the Swatch Bharat Mission, accordingly, all the funds were released to the state through the Ministry of Drinking Water and Sanitation. From the year 2019-20, DoDWS has not raised any fund demand for the program to NMCG, that's why NMCG has not released any fund to DoDWS."

184. Explaining the reasons for the poor performance of some of the States in the Swachh Bharat Mission, they added further:[124]

"The monitoring & evaluation of the rural sanitation program is being done by the Ministry of Drinking Water and Sanitation (Now-Department of Drinking Water & Sanitation (DoDWS)) under the Swachh Bharat Mission (Grameen) program. As the Ministry of Drinking Water and Sanitation is the lead implementing agency of Swatch Bharat Mission (Grameen).

- DoDWS has informed that, under Swachh Bharat Mission (Grameen) (SBM-G) 12,38,075 Individual House Hold Latrines (IHHLs) have been constructed in 4507 villages on the banks of river Ganga, as per the data reported by the states on the online Integrated Management Information System of SBM (G). All the villages have declared themselves Open Defecation Free (ODF).
- They have an integrated monitoring & management system of the SBM-G program."

OPEN DEFACATION FREESTATUS (ODF)

185. Audit had observed that authenticity of Open Defecation Free (ODF) status of various States could not be verified. Asked about the percentage of photographs of toilets constructed in five Ganga River States that have been uploaded on the website of Swachh Bharat Mission, the Ministry of Jal Shakti in a written reply stated as under:[125]

"88.10% of photographs of total toilets (IHHL) constructed in these five Ganga River States have been uploaded, as upto 31-08-2021, on website of Swachh Bharat Mission. The State-wise details are furnished below:

SN	Name of State	Total No of IHHLs Reported in IMIS (FY 2014-15 to 2021-22 (Upto 31.8.2021)	Photographs Uploaded	%age of Photographs Uploaded	Remarks
1	Bihar	277256	200575	72.34	
2	Jharkhand	23224	23146	99.66	
3	Uttar Pradesh	411548	392569	95.39	

[124] Q 25 (c) replies to list of points/Flag 'G'
[125] Q 63 page 44 replies to list of points/Flag 'F'

4	Uttarakhand	9971	9650	96.78	Updation ongoing
5	West Bengal	516076	464762	90.06	
	Total	1238075	1090702	88.10	

186. During the oral evidence the Members of the Committee raised the issue of incorrect declaration of ODF in UP as pointed out by the Audit. The representative of the State Government of Uttar Pradesh replied as under:-[126]

> "Sir, the State of Uttar Pradesh has a rural area of around 1140 kms near to River Ganga stretching from Bijnore to Ballia. Out of this, there are 27 Districts, 32 Urban Local Bodies 1030 Gram Panchayats and 1636 River Villages. In total we in Uttar Pradesh have constructed 4 lakhs 80 thousands 202 IHHLs in these villages during Phase -I of the Swachh Bharat Mission."

187. On this reply, the Members of the Committee queried that these are the figures for IHHLs in rural areas in Uttar Pradesh, but the verification rate is nearly less than 10 percent when the Audit prepared this report in 2017. The Members wanted to know as to whether there has been any study or review as to ow many of these IHHLs are still functioning on the ground and is the discharge not going in the River Ganga due to these IHHLs.[127]

188. Replying to this, the representative of the State Government of Uttar Pradesh deposed before the Committee as under:

> "Sir, this was closed finally two years ago under Swachh Bharat Mission, when the entire State was declared SBM on verification of all Gram Panchayats in it"[128]

[126]Verbatim proceeding 22/09/2022 UP SPMG page 54 flag'R'
[127]Ibid page number 55
[128]Ibid page number 55

CHAPTER IV

IV. ENVIRONMENT AND ECOLOGY

4.1 Forestry Intervention-Afforestation Projects

189. Audit has noted their findings that Central Inland Fisheries Research Institute (CIFRI), Kolkata has utilized only 17% of funds allotted for assessment of fish and fisheries of the River Ganga system for developing suitable conservation and restoration plan. West Bengal State Forest Department has 48% savings on the fund released for afforestation programs, when a comparatively less amount is allotted for this purpose. The Ministry in response to a query about the reasons for under-utilization of funds on conservation of flora and fauna as well as afforestation programs, stated as under:[129]

Afforestation projects:

Under the afforestation programme of NamamiGange, a total of 28 projects have been sanctioned from 2016-17 to 2020-21, of which 22 projects have been completed so far and 6 projects are ongoing.

Out of the 22 completed projects, 20 projects relate to APOs (Annual Plan of Operation) sanctioned each year from 2016-17 to 2019-20 to the State Forest Departments of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand & West Bengal (1 project/state/year for 4 years) at a cost of Rs. 269.76 crore. One project was sanctioned to Forest Research Institute (FRI), Dehradun for the preparation of DPR for "Forestry Interventions for Ganga" at a cost of Rs. 1.18 crore, which was completed in 2016. One project sanctioned under the Ganga Gram scheme to the respective State Forest Departments of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand & West Bengal for plantation in the Ganga bank villages at a cost of ` 67.44 crore in year 2018 has also been completed.

Out of the 6 ongoing projects, 5 projects (1 APO each for the State Forest Departments of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand & West Bengal for year 2020-21) were sanctioned at a total cost of Rs. 86.00 crore on 24th September, 2020 and are scheduled for completion by 24th September, 2021. The balance one project has been sanctioned to IIFM, Bhopal for mid-term evaluation of forestry plantations funded by NMCG at a cost of Rs. 1.12 crore in February, 2021 for 10 months which is scheduled for completion by December, 2021.

[129] Q 77 page 50 replies to list of points /Flag 'F'

The total sanctioned cost of 28 projects (completed & ongoing) is Rs. 425.5 crore, against which expenditure of Rs. 329 crore has been incurred (77.29% utilisation). On the other hand, against a physical target of 33557 ha., afforestation in 29335 ha. has been completed till date (87.42% achievement). Thus, it can be seen that the achievement of targets in physical terms is much higher than fund utilised, which is indicative of good progress."

190. Audit has found that NMCG approved six projects in 2015-16 for conservation of flora, fauna, maintenance of ecological flow and assessment of special properties of the River Ganga with sanctioned cost of Rs 37.58 crores. Audit found that the extent of utilization of fund was low in case of projects executed by WII and CIFRI which was 19 per cent and 17 per cent respectively.Audit had observed the following in implementation of components executed by NMCG:

Non-establishment of National Project Facilitation Unit

The project awarded to FRI also envisaged setting up of a National Project Facilitation Unit (NPFU) to act as National Level Partner Organisation for strengthening knowledge management and capacity building for conservation of riverscapes. However, NPFU was not set up despite proposal made by FRI. NMCG was yet to confirm and communicate its stand in respect of the proposal as of July 2017.

NMCG (August 2017) did not furnish specific reply to the audit observation.

Non-replication of scheme on other tributaries of the Ganga

The scheme (FIG) was to be replicated on the tributaries of the Ganga from the end of third year of execution of the implementation plan. However, NMCG did not initiate any plan for replication and scaling up of planned efforts in additional sites/States. Although NMCG requested FRI to submit a proposal to prepare the DPR of "Forestry Interventions of Yamuna (FIY)" (July 2015), NMCG did not award the work to FRI.

NMCG stated (May 2017) that due to non-availability of funds; it could not implement the programme and requested MoEF&CC to allot funds through Compensatory Afforestation Fund Management and Planning Authority. However, no funds were allocated by MoEF&CC as of August 2017.

Audit recorded that surplus funds were available with NMCG at the end of 2015-16 and 2016-17.

Role of Project Steering Committee

NMCG constituted Project Steering Committee (PSC) at National level (August 2016) for monitoring and steering the implementation of the DPR. However, details of meeting were not furnished to Audit.

Regarding the inadequate coverage of the DPR, non-establishment of National Project Facilitation Unit, non-replication of scheme on other tributaries of the Ganga, role of Project Steering Committee, NMCG stated (August 2017) that it was due to non-availability of appropriate funds in the approved biodiversity component.

Afforestation projects by States

As per the DPR of FIG, forestry interventions, were to be carried out by the States Forest Departments (SFDs) of five States namely Bihar, Jharkhand, Uttarakhand, Uttar Pradesh and West Bengal.

Audit observed the following:

Non-utilization of fund and slow progress of work

NMCG sanctioned (July and September 2016) Rs. 50.63 crore (2.21 per cent of estimated cost) to the five States and up to March 2017 an expenditure of Rs. 30.79 crore (61 per cent) was incurred leaving a balance of Rs. 9.71 crore (24 per cent unutilized) due to delay in sanctioning of the projects by NMCG. State-wise savings ranged from 11 per cent (Jharkhand) to 48 per cent (West Bengal). In Bihar there was an excess expenditure of Rs. 1.21 crore.

As per project schedule para 19 (DPR, Volume-I), States Forest Departments (SFDs) were to ensure initiation of preparatory and actual plantation activities in the ensuing monsoon season for successful plantation work. As per the DPR, Forestry Intervention for Ganga (FIG) (Phase I) were to be implemented at an estimated cost of Rs. 2,293.73 crore.

Audit reported State-wise observations as under:

a. All States except Bihar, reported non-completion of advance works and shortfall in plantation.

b. In Jharkhand, 49 per cent of the advance work (174 out of 355 hectares) was completed.

c. In Uttar Pradesh (Allahabad), the progress of plantation work was only 67per cent.

d. In Uttarakhand, no plantation was carried out and progress of advanced work was 97 per cent.

Due to delay in sanction (during monsoon season), States Forest Departments (SFDs) could not complete the work of plantation of trees in the same year since the advance works like digging of pits were not completed before monsoon season to enable timely plantation.

Inadequate coverage

As per the DPR, FIG comprised (i) Natural, (ii) Agriculture and (iii) Urban Landscapes and (iv) Conservation activities. The States were to plant medicinal and other local/appropriate species in the identified districts/divisions. State-wise observations are as follows:

a. There was no plan of conservation, interventions for FIG in nine divisions of Uttarakhand.

b. In Bihar and Jharkhand, interventions for Agriculture and Urban Landscape were not undertaken.

c. In Bihar, conservation and support activities were not undertaken.

d. In Uttarakhand, shortfall under natural landscape, agricultural landscape, urban landscape and conservation interventions were 57 per cent

(12 out of 21 divisions), 54 per cent (seven out of 13 divisions), 71 per cent (10 out of 14 divisions) and 42per cent (five out of 12 divisions) respectively.

e. In Uttar Pradesh, at Allahabad only five (out of 21 planted) species and in Varanasi only two (out of eight planted) species were planted as per the species specified (12 numbers) in the DPR.

Audit found that short achievement of targets was actually a result of delayed release of funds to the divisions.

4.2 Biodiversity Conservation Projects

191. NMCG sanctioned two projects for"Biodiversity conservation and Ganga Rejuvenation'' at a total cost of `24.84 crore to Wild Life Institute of India (WII), Dehradun in June 2016 and September 2016 respectively for three years each, to develop a science based aquatic species restoration plan for the River Ganga by involving multiple stakeholders having various components.

192. Audit noticed that there was delay in designing the training syllabus for spearhead team by WII and it did not validate and implement the syllabus within first half of the first year. We also observed that no training was organised in other places except Lucknow and Meerut.WII stated (April 2017) that the process of training would be initiated, with effect from June-July 2017.

193. NMCG stated (August 2017) that the spearhead team to carry forward the project activities in future has been formed for the States of Uttar Pradesh and West Bengal. Once communications are received from other States, a combined training programme for the spearhead team will be initiated post-monsoon.

194. The Ministry has further submitted as under:

> "Under the NMCG Biodiversity conservation programme, a total of 9 projects have been sanctioned so far from 2016-17 to 2020-21, out of which 6 projects have been completed and 3 projects are ongoing.
>
> The total sanctioned cost of 6 completed projects is Rs. 33.44 crore, against which the fund utilisation is Rs. 32.64 crore (97.61 % utilisation).
>
> Out of the 3 ongoing projects, 1 project "Planning and management for aquatic species conservation and maintenance of ecosystem services in the Ganga river basin for a clean Ganga" sanctioned for Rs. 113.99 crore to Wildlife Institute of India (WII), Dehradun is scheduled to be completed in year 2024, 1 project "Fish stock enhancement including Hilsa and livelihood improvement for sustainable fisheries and conservation in river Ganga" sanctioned for Rs. 13.51 crore to Central Inland Fisheries Research Institute (CIFRI), Kolkata is scheduled to be completed in the year 2023 and the balance project "Expanding conservation breeding program of freshwater turtles and Gharial at Kukrail Gharial Rehabilitation Centre, Lucknow" sanctioned for Rs. 3.13 crore to State Forest Department Uttar Pradesh is scheduled to be completed in year 2022.

These are ongoing projects, implementation on which has been started in the last 2 years, and are likely to be completed within their respective time schedules as indicated by the implementing agencies."

4.3 Status of River Conservation Zone

195. MoWR,RD&GR issued (October 2016) a notification, for constitution of authorities at Central, State and District levels to take measures for prevention, control and abatement of pollution in the Ganga and to ensure continuous and adequate flow of water so as to rejuvenate the river to its natural and pristine condition. Under this notification, the bank and flood plain of the River Ganga should be kept free from construction activitiesto reduce pollution sources, pressures and to maintain its natural ground water recharge functions.

196. Audit reported their findings that River Conservation Zone were not identified in the States of Uttar Pradesh, Bihar, Jharkhand and West Bengal, till May 2017. In Uttarakhand, it was under progress.They also reported that NMCG accepted (August 2017) the audit observation.

4.2 Flood Plain Zoning Bill

197. Asked to furnish the current status of draft Flood Plain Zoning Bill, 2020 the Ministry of Jal Shakti stated as under:[130]

"A draft Flood Plain Zoning Bill, 2020 was prepared by Central Water Commission in June 2020 for maintenance of environment and ecology of the fragile river system and to minimize damages due to floods. The Bill provides for Flood Plain Zoning Authority to be constituted by State governments with a Governing Body under Chairmanship of Chief Minister of respective States which will delineate flood plain zones and other measures for keeping flood plains encroachment free. Further, it has provision for 'No Development Zone', 'Controlled Development Zones' and 'Development Zones' which are to be notified.Vide MOJS, DOWR, RD & GR Order No. 5/03/2016-FM/1776-1784 dated 4th Aug, 20, a Committee has been constituted to review the model Flood Plain Zoning Bill, 2020.

In this regard, the committee has finalized theDraft model Bill for Flood Plain Zoning Bill, 2020 and submitted to DoWR, RD & GR vide letter No.T-38076/11/2020-MORPH-CC dated 09.09.2020.

The States have to notify such legislation as per model Bill prepared by CWC. Earlier similar model bill was circulated by CWC in 1974 but

[130]Point 48 page 30 replies to LoP/Flag 'F'

could be adopted by only a few States viz., Rajasthan, Manipur, Uttrakhand.

Pending notification of such legislation, it has been stressed upon the States that the NGT vide its order/judgment, dated 10.12.2015, in OA No 200 of 2014- M.C. Mehta vs Union of India and ors. has inter-alia directed that as an interim measure at least 100m from middle of the river would be treated and dealt with as 'Eco sensitive and prohibited zone'. No activity whether permanent or temporary in nature will be permitted to be carried on in this zone including camping.
The area beyond 100 meters and less than 300 meters would be treated as regulatory zone in the hilly terrain, for which the State will comply with the above directions. The area upto 200 meters shall be the prohibited area in the plain terrain and more than 200 meters and less than 500 meters would be treated as regulatory zone.

Further on 13.07.2017 the NGT directed that till the identification and demarcation of the flood plains of river Ganga in Segment B of Phase-I(i.e. Haridwar to Unnao, Kanpur) is completed, 100 meters from the edge of the river would be designated as no development /construction Zone in Segment B Phase-I. Accordingly, as an interim measure, flood plain demarcation/ river conservation zones have already been earmarked and further action for their notification is to be taken by respective State governments.

Besides, the National Mission for Clean Ganga (NMCG) has time to time advised all states in Ganga basin for demarcation, delineation and notification of river flood plains and removal of encroachment from river bed/floodplain of the river Ganga and its tributaries in adherence to the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 notified vide Gazette Notification S.O.3187(E) dated 07.10.2016.

State of West Bengal has submitted that A Report regarding demarcation of flood plain has been prepared by Department of Geography, University of Calcutta and Both the Environment Department and Urban Development & Municipal Affairs Department (received the report on 28.06.2021) of the State are going through the Report, post which appropriate actions will be taken. "

198. Asked whether the Ministry taken into consideration the havoc caused due to heavy rain/flash floods in upper Ganga areas, the Ministry of Jal Shakti stated as under:[131]

"As per constitutional provisions, Flood Management being a State Subject, the responsibility of planning, executing and operating the flood management primarily rests with the State Govt. concerned. The assistance rendered by Central Govt. is technical, catalytic and advisory in nature.

[131]Point 71 page 48 replies to LoP/Flag 'F'

CWC is issuing level forecasts at identified locations and inflow forecasts for identified Dams/ Reservoirs/ Barrages for providing advance information about the flow into these structures based on the request from the respective State Government. Hence, based on request from Govt. of Uttarakhand, at present there are only 6 flood forecasting stations (2 Inflow Forecast Stations + 4 Level Forecast Stations) in the State of Uttarakhand. Depending on the request from Govt. of Uttarakhand, CWC can further expand its flood forecasting network in the state.

The rivers in Uttarakhand are flashy in nature and swell up pretty quickly. The steep slopes of rivers give very less response time to issue a conventional gauge-to-gauge statistical-correlation based (level) forecast for any station and hence, effective level based forecast is very difficult to make. For flood forecasting by rainfall-runoff mathematical modelling, sufficiently representative areal and temporal distribution of real-time rainfall would be required from IMD. Thus, in Uttarakhand, constraints of terrain and short time of concentration are a limitation for a worthwhile forecast by conventional system and in case of mathematical model based flood forecasting, the non-availability of real time rainfall data for sufficient number of locations have been major limitations."

199. Explaining further about the Flood Plain Zoning Bill, the Ministry of Jal Shakti stated as under:-[132]

"Central Water Commission prepared a Model Bill on Flood Plain Zoning and circulated it to all the states in the year 1975 for guidance of states for enactment of legislation in this regard. The Model Bill provides model clauses about flood zoning authorities, surveys and delineation of flood plain area, notification of limits of flood plains, prohibition or restriction of the use of the flood plains, compensation, power to remove obstruction after prohibition. The guidelines on flood plain regulations have been appended in the Model Bill.

Status of implementation of Flood Plain Zoning Bill is as follows:

1. Manipur has enacted the bill in 1978, but Demarcation of flood zones is yet to be done.
2. Rajasthan enacted the bill in 1997, but enforcement thereof is yet to be done.
3. Erstwhile Jammu & Kashmir enacted the bill in 2005.
4. State Govt. of Uttarakhand vide notification dated 28.02.2017 has notified Uttarakhand flood plain zoning Act 2012. Notification has been done for Haridwar District's ChandiGhat bridge to village Kalsia; Uttarkashi District's Gangori to BadethiChungi stretch; Gangotri to Devprayag, Bhilangana river, Badrinath to Devprayag, Mandakini river. The process has been initiated for flood plain zoning of Susva Gola and Kosi river, about 295 km, and proposal has been sent for approval. Further scope of flood plain zoning in 1st phase 13 rivers about 955 km and in 2nd phase 9 rivers about 1151 km have been identified.

5. The State of Uttar Pradesh has submitted that for Phase –I (Segment B) of river Ganga, the notification for identification of flood

[132] Point 24 (a)

plain zones as per the final report furnished by the Special Committee has been done. Flood plain has been notified as being either 100 m or 50 m from firm banks of river presently. In urban areas, this zone corresponds to 50 return period flood. The flood plain zone is to be physically demarcated and notified. Budget has been allocated for permanent demarcation of flood plain zones by fixing of stone pillars in Segment B of Phase–I. For Phase-II of River Ganga, identification of flood plain zone by Central Water Commission is under process. Additionally, demarcation of flood plain for Yamuna, Hindon, Kali-East, Varuna, Gomti, Ramganga, Betwa, Ghagra, Rapti, Sai, Saryu and regulation of construction/ development activities are to be notified by the State Government.

6. It is to be apprised that the State Govt. of Bihar requested for modification in the definition of flood plain as described in the Gazette Notification S. O. 3187(E) dated 07.10.2016. The State Govt. of Bihar has submitted study report vide letter of even number dated 10.08.2021 wherein it has been concluded that flood demarcation in Bihar is not feasible. In this regard, as per direction of Hon'ble NGT, a joint committee has been constituted vide O.M dated 18.10.2021 to look into issues pertaining to demarcation and protection of floodplains in State of Bihar and examination of submitted study report of State Govt. of Bihar.

7. The State of Jharkhand has submitted that demarcation of flood plain zones necessitates earmarking in the vicinity of its existing water bodies which in turn requires regulation to ascertain flood plain zones for which the Water Resources Department (WRD), Government of Jharkhand has appointed Consultant. Further, for accurate assessment of the food pain zone, hydrology of the rivers is also required. That the Government of India sponsored National Hydrology Project in underway and is likely to provide the requisite data by the end of March 2024. Hence, the demarcation of the flood plains of the rivers in Jharkhand will be done during 2024-2025.Under National Hydrology Project, Central Water Commission is working on developing advance flood warning monitoring system. Demarcation of flood plain zone along river Ganga as per available data has been completed.

8. The State of West Bengal in its report has submitted that a report regarding demarcation of flood plain has been prepared by Department of Geography, University of Calcutta and Both the Environment Department and Urban Development & Municipal Affairs Department (received the report on 28.06.2021) of the State are going through the Report, post which appropriate actions will be taken. The State has undertaken some protection works in Norh24 Parganas, South24 Parganas, Howrah.

Further Follow up Actions taken

1. Erstwhile MoWR made request in January, 2014 to various State Governments / UTs to take necessary action for enactment of suitable legislation.

2. The then Minister of Water Resources, RD & GR made further request in February, 2017 to the State Governments / UTs for enactment of suitable legislation in the line of Model Bill.

3. Again Secretary, DoWR, RD & GR, MoJS requested various State Governments / UTs for enactment of suitable legislation.

Model Bill on Flood Plain Zoning 2020

1. *Vide* O.M. No.5/03/2016-FM/1776-1784 dated: 04 August, 2020 DoWR, RD & GR, MoJS constituted a Committee to Review Model Flood Plain Zoning Bill under Chairmanship of Member (RM), CWC.

2. The model Bill has been modified by the Committee and model Bill for Flood Plain Zoning, 2020 has been submitted to MoJS.

The encroachments in the Flood Plan Zone, are however being regulated as per the power vested with the NMCG under River Ganga (Rejuvenation, Protection and Management) Authorities order, 2016 and the orders/directions passed by the Court of law including NGT.

CHAPTER- V

V.MONITORING AND EVALUATION

200. Audit has found that monitoring bodies/Committees such as Governing body, High Level Task Force, Empowered Task Force and Governing Council did not meet as per required frequency. They also found that the mandate of the establishment of the Ganga Monitoring Centre was still under conceptualisation and planning phase at NMCG as of July 2017. Further, Audit has reported that there was slow implementation of the Bhuvan Ganga Web-portal to enable planning, execution and monitoring of investment projects as well as providing platform for Central repository of all data through GIS mapping.

201. A very surprising revelation of the Audit was that as against 5016 complaince verifications required to be conducted by Cedntral Pollution Control Board (CPCB) in respect of 988 Grossly Polluting Industries, only 3613 compliance verifications were conducted during 2011-17. Out of 120 mandatory adequacy assessment required to be conducted in respect of five identified Common Effluient Treatment Plants only 17 were carried out as of August 2017. Similarly, Audit foung very less inspections of 67 STPs as against mandatory inspections of 560 till August 2017.

202. The Committee was apprised that National Ganga Council has held only one meeting in the year 2019 and the latest sitting of the NGC was held as late as 30th December, 2022.

Further, 7 meetings of Empowered Task Force (ETF) has been held, with the following details of meeting of Empowered Task Force (ETF) held:

Sl.No.	Meeting	Date of meeting
1	1st meeting of ETF	08.02.2017
2	2nd meeting of ETF	03.08.2017
3	3rd meeting of ETF	26.12.2018
4	4th meeting of ETF	22.07.2019
5	5th meeting of ETF	10.02.2020
6	6th meeting of ETF	25.09.2020
7	7th meeting of ETF	19-03-2021

203. When asked about the reasons for not conducting meetings as per, the Ministry of Jal Shakti in a written reply stated as under:-[133]

"The ETF was formed under The River Ganga Authorities Order of 7th October 2016, wherein NMCG was empowered to discharge its functions, including the regulatory ones, with powers of Section 5 of Environment Protection Act 1986.

- **ETF constituted for:**

✓ Co-ordinate and advise on matters relating to rejuvenation, protection and management of River Ganga and its tributaries.

✓ Ensuring that the Ministries, Departments and State Governments concerned should prepare an action plan with specific activities

✓ co-ordination amongst the Ministries and Departments and State Governments;

✓ to monitor the implementation process, address bottlenecks, suggest and take decisions to ensure speedy implementation.

- The ETF meetings are being conducted every year. As of now, 7 meetings of ETF have been held. The last meeting of ETF was held on 19th March, 2021.
- After every ETF meeting, concerned Ministries/ Departments/ States have also been asked to submit the action taken note on the decisions taken in the ETF meeting.
- Meetings are being organized at the level of Hon'ble Minister for coordinating and monitoring the progress and other components of progress**.** Hence, non-holding of ETF has not affected the performance of the mission in anyway."

204. Audit has recorded its finding that with a view to promote more holistic approach based on river basin as the unit of planning and institutional redesign for the implementation of schemes/ programmes for Rejuvenation of River Ganga, Government of India created the National Ganga River Basin Authority (NGRBA) in February 2009. Government of India dissolved NGRBA with its order of October 2016 and created National Ganga Council as apex body at the Central level for overall planning and superintendence. National Mission for Clean Ganga (NMCG), which was created in August 2011, continued to be the implementing agency for Ganga Rejuvenation.

Integrated Ganga Conservation Mission '**NamamiGange**' aims to promote comprehensive and coordinated interventions. Its implementation is as per the NGRBA Programme Framework, suitably amended from time to time.

205. The Committee during one of their deliberations asked the reasons for the National Ganga Council not being able to hold its annual meetings, which could not be replied to by DG, NMCG. The Members of the Committee raised the need of the National Ganga Council, when it

[133] Q 35 page 16 replies to LoP/Flag 'F'

could not hold its annual meeting. To a query as to the need of national Ganga Council, the DG, NMCG replied as under:

"Sir, the last meeting was held in December, 2019."[134]

206. When asked the reasons of not holding the meeting even after a lapse of so many years of the establishment of the National Ganga Council, and whether it shows the non-serious attitude, the DG, NMCG replied as under:

"We are in touch with the Prime Minister's office to get the date. In a month, we will have the next meeting."

207. The Committee came to know that the latest sitting of the NGC was held on 30th December, 2022.

5.1 Water Quality and its (a) Parameters and (b) Monitoring System

208. The Background note of the Ministry of Jal Shakti provided a brief mechanism of the attempt to use technology for monitoring of river water quality, online industrial effluent monitoring, performance of STPs and monitoring of projects have been made to develop and improve overall monitoring system in collaboration with several expert institutions.[135]

Water quality monitoring of River Ganga is carried out manually as well as using sensors based real time system.

Manual water quality monitoring: 97 locations by *Central Pollution Control Board (CPCB)* through respective *State Pollution Control Boards (SPCBs)* and collected data is compiled at CPCB.

Comparison of 2014 & 2022 (Jan to June) River water quality data of the entire stretch of River has been conducted for parameters such as Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD) and Faecal Coliform (FC).

- River water quality is assessed for outdoor primary water quality criteria for bathing in terms of DO (≥5mg/L), BOD (≤3mg/L) and FC (≤2500 MPN/100ml).
- The analysis of data for the year 2022 (Jan to June) indicates that the DO (median) is meeting the primary water quality criteria for bathing at 97 (out of 97 locations) locations of River Ganga. Dissolved Oxygen levels have improved at 42 locations.
- BOD (Median) is meeting the primary water quality criteria for bathing (≤3mg/L) at 81 locations (out of 97). BOD has improved at 42 locations.

[134]Verbatim proceedings 22/09/2022 page 20/Flag 'R'
[135]Background note 22/09/2022/Flag 'D'

- FC (≤2500 MPN/100ml) is meeting the primary water quality criteria for bathing at 42 locations (out of 93). FC has been improved at 27 locations.

Biomonitoring: Biomonitoring of river Ganga has been carried out in the stretch from Haridwar (Uttarakhand) to Garden reach (West Bengal) at 34 locations to assess the biological water quality using benthic macro-invertebrates. Besides, mainstream of river Ganga. Additionally, it has also been carried out at 08 locations of 07 tributaries excluding Yamuna River. For river Yamuna this study has been carried out at 12 locations in the stretch from Panipat (Haryana) to Prayagraj (Uttar Pradesh).

It has been observed that water quality of river Ganga supports diversified macroinvertebrates community and studied river stretch reflects Good to Moderate level of biological water quality with respect to Biological Water Quality Criteria (BWQC) which is recommended by CPCB and based on range of saprobic score.

- Thirteen round of Biomonitoring study has been completed for river Ganga and its tributaries (excluding Yamuna River) till pre-monsoon phase of 2022-23 and total 483 sampling events have been undertaken till date 31-08-2022.
- For river Yamuna, total 70 sampling events have been undertaken till date 31-08-2022.
- Around 160 number of benthic macroinvertebrate families have been observed till date during various rounds of study.

Real Time Water Quality Monitoring Stations (RTWQMS)

a) Setting Up RTWQM Stations on River Ganga: 36 Real Time Water Quality Monitoring Stations (RTWQMS) are installed on main stem of River Ganga, tributaries and drains since March 2017. Data from these stations is collated and displayed at different locations of significance. In addition to the existing 36 RTWQM stations, additional 40 RTWQM stations have been setup installed, for which, the contract has been awarded to the eligible bidder on 28.07.2020for five year duration. Data provided by Data Service Provider (DSP) for 40 stations is under examination by Data Qualification Service Consultant (DQSC). DSP started calibration of 40 RTWQM stations as per the quarterly schedule.

Of the 36 RTWQM Stations, 18 stations are on River Ganga, 9 stations on tributaries and 9 stations are on drains. Up to 17 parameters are monitored by RTWQM Stations 24 x 7, and data is provided to CPCB every hour. State-wise distribution of 36 RTWQM stations is as follows.

State wise distribution of RTWQMS

State	No. of RTWQM Stations
Uttarakhand	01
Uttar Pradesh	21
Bihar	4
West Bengal	10

Grand Total	36

State wise distribution of 40 RTWQM Stations

S. No	State	Total No of RT Stations
1	Uttarakhand	05
2	Uttar Pradesh	15
3	Bihar	10
4	Jharkhand	03
5	West Bengal	06
6	Haryana	01
Total		**40**

Of the 40 RTWQM stations, 17 stations are being set up on River Ganga (17) and the remaining 23 stations are on the tributaries such as Yamuna (06), Damodar (04), Kali-East (02), Hindon (02) and one station each at river Kosi, Ramganga, Ghaghra, Gandak, Koshi, Punpun, BurhiGandak, Sone and Sai River.

b) Engagement of Data Qualification Consultant for 76 RTWQM stations: CPCB awarded the contract of Data Qualification Consultant to the eligible bidder and signed the contract in December 2021 for five years' duration.

c) Assessment of water quality of River Ganga through Real Time Water Quality Monitoring for the year 2022 (Jan to Aug 2022)

The data provided by RTWQM stations are observed and analyzed in CPCB for important parameters such as pH, Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD)etc. The RTWQM data helps in assessment of trend analysis of important parameters which in turn indicates the status of river health.

RTWQMS compliance status in terms of bathing criteria for DO, BOD

a) **Dissolved Oxygen (Primary water quality criteria for bathing: DO ≥ 5 mg/l)** Dissolved Oxygen was found complying with respect to primary water quality for bathing at all 18 locations based on the data (i.e. till August 2022).

b) **Biochemical Oxygen Demand (Primary water quality criteria for bathing: BOD ≤ 3mg/l)**. BOD was found meeting the criteria for bathing at 15 stations and found non-complying at 03 stations i.e. Asnibridge ,Fatehpur, Belgharia Kolkata and at Howrah bridge, West Bengal.

c) **pH (Primary water quality criteria for bathing 6.5 to 8.5).** pH was found complying in all 17 RTWQM stations located on main stem of River Ganga. Data is not available for Behrampore (D/s) station.

209. Audit carried out test in selected towns revealed that Total Coliform levels in all the cities are high. In case of West Bengal, it was very high ranging between six to 334 times higher than the prescribed levels. West Bengal cities also shown a decline in dissolved oxygen levels from 2012-13 levels. This means that the water quality has fallen short of bathing standards and it should be advised to avoid drinking it. Asked to furnish details of the role of State Governments in maintaining and monitoring water quality, the Ministry of Jal Shakti in a written reply stated as under:[136]

"Under NamamiGange programme, CPCB in association with State Pollution Control Boards (SPCBs) of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and, West Bengal monitors water quality of River Ganga at 97 locations. SPCBs are conducting monitoring as per guidelines for Water Quality Monitoring (GWQM, 2017). The water quality data is compared with the primary water quality criteria for outdoor bathing notified under Environment (Protection) Act, 1986.

Water samples are analysed for 07 field parameters, 11 core parameters, 19 general parameters, 09 trace metals & 01 toxic substance, 03 biomonitoring and set of pesticides (15 parameters).

Among 97 stations, monitoring is conducted on fortnightly basis for 90 stations, 06 stations of Uttarakhand on quarterly basis and one station of Bhagirathi, at Gangotri on yearly basis.

Real-time Water Quality Monitoring:
CPCB has been mandated with the responsibility of undertaking continuous Real Time Water Quality Monitoring (RTWQM) of river Ganga and during first phase, 36 RTWQM stations were commissioned w.e.f. 11.03.2017 under World Bank supported WQM-project. These real time stations measure water quality of river Ganga for 17 parameters i.e. Bio-chemical Oxygen Demand, Dissolved Oxygen, Conductivity, pH, Temperature, Ammonia, Chloride, Chemical Oxygen Demand, Total Suspended Solids, Turbidity, Color, Fluoride, Nitrate, Potassium, BTX, Total Organic Carbon and Water level.

In addition to 36 Real Time Water Quality Monitoring Stations, installation of 40 new RTWQM stations is under process.

Bio-monitoring:
Bio-monitoring of river Ganga at various locations (Haridwar to Diamond Harbour in West Bengal) has been carried out to study the Benthic Macro Invertebrates, which reflects the biological health of river. It has been observed that water quality of river Ganga supports diversified macro invertebrate's community and studied river stretch reflects Good to Moderate level of biological water quality with respect to Biological Water Quality Criteria (BWQC) which is recommended by CPCB and based on range of saprobic score.

Eleventh round of Biomonitoring study has been completed for river Ganga and its tributaries till Pre-monsoon phase of 2021 and total 423

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sampling events have been undertaken till date. For river Yamuna, total 51 sampling events have been undertaken till date.

The measures taken by the Government to improve the water quality and biological health of the river Ganga are:

- Financial assistance is being provided to States for setting up of sewage infrastructure and other pollution abatement activities under NamamiGange and National River Conservation Plan (NRCP) of ministry of Jal Shakti as well as AMRUT & Smart Cities Mission of Ministry of housing & Urban Affairs.
- State Government have formulated river action plans to restore water quality of polluted river stretches for intercepting, diverting and treatment of municipal wastewater from urban centres.
- Govt. of India enacted the Water (Prevention and Control of Pollution) Act, 1974 and various provisions under Environment (Protection) Act, 1986 for protection of water bodies.
- Regulation of industrial Pollution is implemented through various provisions of Water (Prevention and Control of Pollution) Act, 1974 under Consent mechanism by the respective State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs).
- Industries are facilitated through Charter based participatory approach for reduction in water consumption, effluent generation and pollution load by adoption of cleaner technologies & waste minimization practices. Sector specific Charters have been implemented in Pulp & Paper, Sugar, Textile and Distillery sectors.
- Stringent monitoring and regulation of industries and pollution sources is being undertaken. Inventorisation of Grossly Polluting Industries (GPIs) along river Ganga with annual inspection of all GPIs is carried out. Teams in association with third party technical institutions of repute, State Pollution Control Boards (SPCBs), State Mission for Clean Ganga (SMCGs) and District Ganga Committees (DGCs) have been carrying out annual inspections to assess the compliance status of GPIs for enforcing regulatory framework on the polluting industries. Stringent action is taken by Central Pollution Control Board (CPCB)/SPCBs against the GPIs discharging into main stem of Ganga River & its tributaries which are non-complying with respect to the prescribed norms.
- The Online Continuous Effluent Monitoring Systems (OCEMS) are installed by 17- categories of industries and Grossly Polluting Industries (GPIs) being established on industrial units in the country through the directives issued by CPCB for getting real time information on the effluent quality.
- Government of India stipulated General discharge standards and industry specific effluent discharge standards under Environment (Protection) Rules, 1986 with an aim to prevent pollution in the water bodies."

210. An important suggestion from CAG after identifying the gaps in monitoring was setting up of Ganga Monitoring Centers expeditiously as envisaged in River Ganga Rejuvenation, Protection and Management Authorities Order (2016). Asked to furnish the details of

the same , the Ministry of Jal Shakti in a written reply stated as under:[137]

"Ganga Monitoring Centre (GMC)

As per the Gazette of India, S.O. 3187(E), dated 7th October, 2016, Section 40, for setting up Ganga Monitoring Centre (GMC) National Mission for Clean Ganga (NMCG) is mandated to identify place in river Ganga Basin and establish at such places / designate any existing laboratory / station / institute as Centres for monitoring amongst other things, continuous flow of water and pollution levels, with immediate reporting to NMCG for taking remedial actions. Such centres are to be termed as Ganga Monitoring Centres (GMCs).

There are three (3) categories of GMCs viz. Category A, B and C on the basis of infrastructure, expertise and human resource of the organizations / institutions involved, optimum inter GMC distance and water quality / quantity monitoring parameters. The administrative, financial, operational and sustainability aspects of such monitoring centres have also been conceptualized. First Meeting on GMC for Comprehensive Qualitative &Quantitative Study on Drains Discharging Wastewater in River Ganga / Tributaries and their Impact on Water Quality was held on April 24, 2019 in NMCG. The proposals received earlier have been revised for allocation of work related to monitoring of major sources of pollution like drains, STPs, ETPs, CETPs and their impact on water quality of river Ganga.

For identification, designation and allocation of work at GMC-A level, fresh proposals received from Aligarh Muslim University (AMU), Wildlife Institute of India (WII), Central Inland Fisheries Research Institute (CISR-CIFRI), National Environmental Engineering Research Institute (CSIR-NEERI), Pollution Control Research Institute-BHEL (PCRI) and Indian Institute of Toxicology Research (CSIR-IITR) were processed for awarding the work and subsequently signing MoU to facilitate the beginning of activities of Class A GMC.. Draft MoU, highlighting agreement terms on role & responsibilities; physical / financial scope; work allocation plan; methodological aspects of monitoring and its frequency; guidelines for data generation & submission; fund flow arrangement etc. has been shared with the aspirant institutes under consideration for GMC-A category.

In consideration with the suggestion of Financial Unit, NMCG to standardize the institutional charges and resolving the selection of GMCs by the members of TEC, proposal to re-constitute the Technical Expert Committee (TEC) that shall have a technical advisory role for all matters pertaining to GMC is under process. Due to administrative reasons coupled with COVID-19 Pandemic, certain delay has occurred in taking the action to approve / formalize the TEC. NMCG shall take cognizance of the matter so that the purpose of GMC towards monitoring of river pollution and its effective abatement will be materialized.

In addition to formal tie-up with identified institutions, the objective of GMC is being met by having an organizational tie-up with following

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institutions who have mandate for collection of various kind of data on river Ganga and its tributaries:

1. Central and State level regulatory authorities viz. Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs) in respect of water quality monitoring. *Under NamamiGange programme and under NWMP, water quality of river Ganga through a network of 429 manuals and 36 Real Time Water Quality Monitoring (RTWQM) stations spread in the entire basin is being monitored.* Under NamamiGange, as far as the manual monitoring frequency of 97 locations on the main stem of river Ganga and its tributaries is concerned, 90 stations are being monitored on monthly basis, 06 stations of Uttarakhand on quarterly basis and one station of Bhagirathi at Gangotri on yearly basis. Monthly frequency has however been increased to fortnightly since August'2020. Additional 40 RTWQM stations are being set up on the main stem as well as on tributaries including River Yamuna.All the stations have been mapped in GIS and meta-data details (coordinates, station unique code, monitored parameters) are available. Data for long historical periods since 1986 is available on NMCG Dashboard especially for trend analysis with respect to the water quality characteristics like DO, BOD, pH and Temperature. 97 locations are manually monitored by the State Pollution Control Boards (SPCBs) and data compiled by CPCB.
2. Central Water Commission (CWC) in respect of hydrological data (discharge, water level, water quality and sediment etc*.).In Ganga basin, CWC has 559 number of HO stations out of which at 160 stations water quality is being monitored along with discharge. On main stem of River Ganga, CWC is monitors water quality at 24 sites. The data is available as monitoring tool and forms part of Water Resources Information System.*
3. Central Inland Fishery Research Institute (CIFIRI) in respect of fish biodiversity. *Restoration of the fish biodiversity is linked with the environmental quality of the river and has high potential in fulfilling the vision of Art Ganga under the NamamiGange Programme.*
4. Central Ground Water Board (CGWB) in respect of Ground Water Quality Monitoring. *CGWB carries out monitoring of subsurface water and also monitors and manages the groundwater withdrawal for industrial and domestic use in the Ganga basin.*

The objective of Ganga Monitoring Centre was to have credible data flow at institutional level for its use for remediation. This objective is being met through the tie-up as brought out above. The institutional arrangement will be further strengthened by involving other levels of Monitoring Centers also."

5.2 Bhuvan Ganga App

211. CAG proposed NMCG to use technological interventions such as geo-spatial data of National Remote Sensing Centre for better monitoring.

Elaborating the details of the use of technology in effective monitoring, the Ministry of Jal Shakti in a written reply stated as under:[138]

> "Bhuvan Ganga Geoportal provides platforms to manage, access, visualize, share and analyze geo spatial data, non-spatial data products and services towards spatial mashups to support NMCG objectives of environmental and ecological improvement within the Ganga River basin.
>
> The information collected from Bhuvan app is suitably mapped on GIS enabled platform and is being utilized in monitoring of drain, STP and other assets created, status of solid waste dumping on flood plains, SwacchtaPakhwada, planning level for new interventions, afforestation monitoring etc. This has enabled overall improvement in services and products of NMCG."

212. Audit has recorded their finding about Bhuvan Ganga App in their Report, Audit had observed that ISRO had developed Bhuvan Ganga App to enable public to collect and report information on various pollution sources, and that NMCG had not developed any mechanism to take appropriate remedial action on the information shared by public, hindering the public participation in Ganga rejuvenation programme. Ministry has in their written reply stated that there are a total of 904 geotagging in this app with defined classes like industrial waste water, natural drain/nallas, open defecation sewage, semi urban/rural sewage, solid wastePlease furnish data (if available) regarding public participation through this app. When asked if such a small number of public participation and geo tagging is encouraging, the Ministry of Jal Shakti in a written reply stated as under:[139]

> "Bhuvan Ganga Geoportal provides platforms to manage, access, visualize, share and analyze geo spatial data, non-spatial data products and services towards spatial mash ups to support NMCG objectives of environmental and ecological improvement within the Ganga River basin. Bhuvan Ganga mobile app is a user-friendly application to enable user/public to collect and report information on various pollution sources that affect water quality of River Ganga. Bhuvan Ganga mobile application has provision to collect information regarding urban sewage, semi-urban/rural sewage, natural drains/nallas, industrial waste water, solid waste disposal or any other pollution source. Total no. of geotagging is 3066 as on date with defined classes like industrial waste water, natural drain/nallas, open defecation sewage, semi urban/rural sewage, solid waste disposal, urban sewage, plantation and other. The information shared by general public is very useful in preparing the DPR of the polluted stretch. Bhuvan app is widely using by NMCG in drain monitoring. NMCG is taking help of social media (Facebook, twitter, you tube, e-news, monthly newsletter, seminar, webinar, conference and campaign/stall of NMCG) to popularize the Bhuvan Ganga."

[138] Q no 43 page 26 replies to list of points/Flag 'F'
[139] Q no 31 LoP/Flag 'G'

213. Furnishing the mechanism of water quality monitoring in the River Ganga, the Ministry of Jal Shakti in a written reply stated as under:[140]

> "Under the NamamiGangeprogramme, water pollution of river Ganga is measured / assessed via manual monitoring of its water quality at 97 locations by 5 State Pollution Control Boards (Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal) in association with Central Pollution Control Board (CPCB). Water Quality is monitored for core parameters, general parameters, biological parameters and a set of metals and pesticides.
> Besides 36 Real Time Water Quality Monitoring Stations (RTWQMS) on river Ganga and its tributaries are set up w.e.f. March, 2017 of which 18 Stations are on main stem of River Ganga, 09 on its tributaries and 09 on drains. These real time stations measure water quality of river Ganga for 17 parameters i.e. Bio-chemical Oxygen Demand, Dissolved Oxygen, Conductivity, pH, Temperature, Ammonia, Chloride, Chemical Oxygen Demand, Total Suspended Solids, Turbidity, Color, Fluoride, Nitrate, Potassium, BTX, Total Organic Carbon and Water level.
>
> In addition to these 36 RTWQMS, installation of 40 new RTWQM stations is under progress. Both manual and real-time monitoring of rivers provide river water quality which is compared to outdoor bathing criteria notified by MoEF&CC."

214. Audit in their Performance Audit Report (pages 102-103) have reported that out of a total of 113 sites identified by CPCB for installation of Automatic Water Quality Monitoring System (AWQMS), CPCB hired data service provider who had to bear the cost of AWQMS and its installation, operation and maintenance. However, only 36 AWQMS were installed by March 2017. Asked to furnish the total number of Automatic Water Quality Monitoring System (AWQMS) installed, the ministry of Jal Shakti submitted as under:[141]

> "Under NamamiGange Programme, 36 RTWQM stations were installed by in March 2017 by Central Pollution Control Board (CPCB) and operating at present. Besides, the contract for setting up 40 RTWQM stations was awarded through International bidding to the eligible firm in July 2020. The 40 RTWQM stations are likely to be commissioned in December 2021. Therefore, there will be 76 Automatic Water Quality Monitoring systems by the end of December 2021."

215. When asked the reasons for CPCB to go in for hire purchase model, when the very basis of this programme lies on the water quality issue of River Ganga, they furnished the reply as under:

[140] Q no 4 also q no 39 in list of points/Flag 'G'
[141] Q 21 (a) Lop/Flag 'G'

"Central Pollution Control Board (CPCB) installed 10 Real Time Water Quality Monitoring Stations (RTWQMS) for the first time in 2012 on River Ganga and its tributary – Yamuna. Of 10 RTWQM Stations, 08 stations were installed on River Ganga and 02 stations were installed on River Yamuna for monitoring of in-situ river water quality parameters. The total cost of the project of CPCB at 10 locations was Rs. 5.61 crore excluding taxes. However, the project could not be taken forward due to high operation and maintenance cost of RTWQM stations. The project also resulted in huge data gaps and the objective of continuous data availability could not be achieved. The technology of sensor based real time water quality stations is fast changing globally. These sensors are continuously being upgraded and re-invented towards increasing fidelity of data and making them more robust. One time acquisition of these sensors incapacitates the Department to upgrade them regularly. Even maintenance of these old sensors becomes an issue as their spares are slowly pushed put of market due to increased cost of their maintenance orproduction of old model spares. Besides most of these real time stations are remotely located and often are prone to theft and vandalism. Departmental management of data acquisition network often leads to very low up-time of stations and difficulty in arranging the spares when the station is down. Data Purchase mode was thus taken up, in view of this and, a network of 36 RTWQM stations was set up on River Ganga basin and operationalized with effect from 11 March 2017.[142]

216. They further added about the selection of 113 RTWQM stations that it was based on initial study of baseline, trend and impact stations. The stations were also set up to capture confluence of tributaries and drains on River Ganga.

217. Asked about the money that has been spent on the Water Quality Monitoring System for River Ganga since inception of NMCG, the Ministry in a written reply stated as under:

"NMCG sanctioned two projects to CPCB for water quality monitoring – Water Quality Monitoring (WQM) Project and, the Strengthening of Regulators (SER) Project under National Ganga River Basin Project (NGRBP). Under WQM Project (Phase-I), 36 stations were set up in March 2017 and in WQM (Phase-II), 40 RTWQM stations are likely to be commissioned by December 2021.

An amount of Rs. 31.45 crore has been spent till 21.12.2021 under Water Quality monitoring Project since year 2013.Under SER Project, manual water quality monitoring is carried out by 5 State Pollution Control Boards (SPCBs) in association with CPCB. An amount of Rs. 2.51 crore has been spent on manual water quality monitoring since September 2017."[143]

[142]Q no 21 (b) /Flag 'G'
[143]Q no 21 (d) /Flag 'G'

218. The Ministry of Jal Shakti has furnished the criteria for water quality monitoring. When asked whether manual monitoring of water quality falls in the best international practices, they replied as under:[144]

> "Manual Water Quality Monitoring carried out for River Ganga is a well-accepted best practise as it involves direct methods for measurement of criteria pollutants via protocols as well as methods mentioned in Standard methods for the examination of water and wastewater, American Public Health Association (APHA)."

219. Asked to furnish reasons as to why CPCB has not resorted to automated water quality monitoring system, the ministry of Jal Shakti replied as under:[145]

> "Automated water quality monitoring systems such as RTWQMS are based on indirect method of parameters estimation such as spectroscopy via sensor probe that uses various algorithms to detect the concentrations of desired parameters. Development of such algorithms are still underway. Further, RTWQMS has high capital installation cost, high operation cost, it requires skilled/trained manpower and has designated software requirements that limits its preference over manual water quality monitoring. Also, RTWQM Project is based on data purchase model. The project has its own challenges such as floods, low water level, theft & vandalism, sensor replacement cost, requirement of skilled manpower for operation and data validation etc. The experience of low water and flood conditions results in non-operational of RTWQM stations for several days. As of now, CPCB has decided to limit the number of RTWQM stations at 76. However, the experience of second phase i.e. 40 RTWQM projects which are being installed will help in deciding the expansion of RTWQM network. Therefore, as of now the manual and real-time water quality monitoring complements each other in data generation.An amount of Rs. 31.45 crore has been spent till 21.12.2021 for Real Time Water Quality Monitoring Project at 36 locations since year 2013, while an amount of Rs 2.51 crore has been spent on providing payments to SPCBs for manual water quality monitoring since September 2017 to 21.12.2021.Entire cost of Real Time Water Quality is borne by CPCB through NGRBA Project while for manual monitoring by SPCBs, CPCB provides 70 % of the qualified payment to the SPCBs of U.P., Bihar and West Bengal and, 100 % to the Uttarakhand and Jharkhand SPCBs.RTWQM system has many advantages over the conventional manual water quality monitoring like the system facilitates in continuous and remote monitoring, optimizes human resource requirement and provides quick data access and high monitoring frequency. RTWQM serves to improve the understanding of natural river processes and conditions through high frequency measurements that capture also the natural

[144] Q 22 (a) /Flag 'G'
[145] Q 22 (b)/Flag 'G'

variability. Use of such an advanced technique provides opportunity to improve the understanding of natural river processes and conditions through high frequency measurements that capture also the natural variability. RTWQM may better suit to advise long-term decisions. The standardization of the monitoring system can widen its scope in environmental regulatory purpose and necessary statutory action. At present under Indian conditions biotic viz. biological and microbiological parameters which form one of the vital ecological components in determining the actual health (ecological integrity) of the dynamic lotic ecosystem like river Ganga do not come under the scope of the existing RTWQM setup. The system needs further upgradation for enhancing parameter diversity and analytical reliability of certain parameters of significance."

220. The Ministry has replied to a query that the fecal coliform levels are based on one time grab sampling at a particular point of time. Asked to furnish whether there are any continuous monitoring system installed at point of high anthropogenic activities and suspected pollutants entering the River Ganga, the Ministry in affirmation as under:[146]

"Yes, the RTWQM stations have been installed at locations of high anthropogenic activities and entry points of suspected pollutants. Further, there are areas of importance in different regions, specially the tributaries and storm water drains carrying sewage / industrial effluents, which need to be monitored. ....At present, with respect to bacteriological parameters including Faecal coliforms, due to unavailability of technology, there is no provision for continuous monitoring via RTWQMS*(sic)".*

5.3 Legislation

221. Detailing the present status of National River Ganga (Rejuvenation, Protection and Management Bill, 2019 and/or current status of separate legislation bill for Rejuvenation of River Ganga, the Ministry of Jal Shakti in a written reply stated as under:

"A Cabinet note for enactment of the National River Ganga (Rejuvenation, Protection and Management) Bill, 2019 duly approved by Legislative Department and approved by the Hon'ble Minister of Jal Shakti was forwarded to Cabinet Secretariat on 19.11.2019 for necessary action *vide* Ref. No. T-14/2015-16/1256/NMCG-GEN-PART file dated 19.11.2019 Ministry of Jal Shakti. The decision on the cabinet note is under consideration of government."

222. Asked to furnish whether NMCG has utilized the benefit of various judgements of courts of law / tribunals to deliver the performance of the Mission thereby soliciting the cooperation of officials from Centre and State Government, the Ministry of Jal Shakti in a written reply stated as under:[147]

[146] Q 34 LoP/Flag 'G'

[147] Q no 16 LoP/Flag 'G'

"Yes, the NMCG has been benefited by various judgments of courts of law including NGT in furtherance of the performance of the functions of NMCG.

Hon'ble NGT vide order dated 06.12.2019 in the Matter OA No. 673 of 2018 constituted a Central Monitoring Committee (CMC) under the Chairmanship of Secretary,DoWR, RD&GR, Ministry of Jal Shakti for monitoring the implementation of Action Plan for 'Restoration and Rejuvenation of 351 Polluted River Stretches' identified in 31 States/ UT of India. The aim is to achieve bathing quality standards in these 351 polluted river stretches. With regular monitoring through Central Monitoring Committee meetings, it is seen that a number of sewerage infrastructure projects have been completed in a time bound manner in the year 2020 and 2021, works on a number of projects have initiated and a number of projects have been sanctioned or are under sanctioning. There is improvement in water quality of the rivers as being reported by many of the States. Further, Hon'ble NGT in the matter O. A. No. 325/2015 vide its order dated 18.11.2020, directed CMC to monitor periodically the progress of States/UTs in preparation of Action Plan for restoration of water bodies and its implementation.

Hon'ble NGT in the Matter OA No 06 of 2012 constituted Principal Committee under the Chairmanship of Secretary,DoWR, RD&GR, Ministry of Jal Shakti, with Experts in the field and State departments as members of the Committee,for overseeing the works of Maily Se Nirmal Yamuna Revitalization Project and for compliance monitoring of the directions in the judgement dated 13.01.2015. Meetings of the Committee are being held to review the progress made by the States/ Departments and appropriate suggestions/ recommendations are being provided for compliance.

Hon'ble Tribunal in the matter of O. A. No. 200/2014 - M.C Mehta Vs. Union of India & Others have directed the concerned States of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal as well as NMCG/SPCBs/CPCB have been mandated to submit quarterly progress report(s) on progress of compliance of directions on the subject of preventing and remedying the pollution of River Ganga. Further, directed NMCG to convene meeting of the concerned Chief Secretaries after clearly identifying action points needing focus under relevant heads. Regular meetings and submissions are being made as per the directions of NGT."

5.4 Irregularities in Advertisement

223. Audit in Para 2.5 of their report revealed that there has been avoidable expenditure on agency commission and service tax thereon, due to NMCG hiring the private agencies instead of DAVP for print advertisements in violation of Government policy. Asked to furnish the reasons for hiring Private advertising Agencies instead of DAVP, the ministry of Jal Shakti in a written reply:[148]

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"As per clause No. 03 of the 'Print Media and Advertisement Policy of GoI-2016' PSUs, Autonomous Bodies & Societies of Government of India may issue all advertisements directly at DAVP rates to empanelled newspapers. The prior policy guidelines also had also the similar provision. NMCG being an autonomous Authority eligible for releasing advertisements directly to newspapers as per the policy guidelines mentioned above.

Advertisements were released to DAVP in (2014-15) as per the "New Advertisement Policy of 2nd October 2007. Advertisements were released through DAVP empaneled agencies in 2016 as per New Media Policy 2016. Discount in the form of designing of advertisements and other artworks were done and not charged separately."

224. When asked about the breakup of the cost incurred in the advertisement since last 6 years on the scheme and the portion given to DAVP vs. Private advertisers, the Ministry furnished the cost separately as under:

"From 2014 onwards NMCG has released advertisement through DAVP empaneled agencies and DAVP as per details given below:

DAVP Empaneled[149]agencies: Rs. 3,98,59,923/-

DAVP: Rs. 8,92,62,690/-."

5.5 International best practices

225. When asked about successful river cleaning projects from other parts of the world, the Ministry of Jal Shakti stated as under:-[150]

"The Ministry of Jal Shakti (earlier Ministry of Water Resources, Development and Ganga Rejuvenation) formulated NamamiGange Programme based on scientific studies for preparing the Ganga River Basin Management Plan (2015) carried out by the Consortium of 7 IITs (IITC, now Centre for Ganga River Basin and Studies (cGanga) fully supported by the NMCG, Ministry of Jal Shakti). IITC submitted Ganga River Basin Management Plan with many thematic reports including studies on world experiences in River Cleanup. Subsequently cGanga continues to serve as Knowledge partner to NMCG and has been carrying out several studies and prepared a number of reports in collaboration with many national and international organizations. Following responses are based on compilation of reports by the IITC and Centre for Ganga River Basin Management and Studies (cGanga):

a. There is no authentic report available regarding ranking of rivers in terms of their health status or in terms of pollution. Neither is any scientific criteria for overall pollution status available to compare one river with another as each river has its own bio-physical setting (which is also dynamic on temporal and spatial scales) which is different from each river. However, some reports are available in news media that compare various rivers of the world, mostly based on visible appearance in certain stretches of

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the rivers (i.e. based on perception) rather than any acceptable scientific basis. In a few cases such comparison is also made based on pollution status, again mostly based on visual evidences or some scattered measurements of some pollution parameters, such as BOD, COD and or coliform levels / loads.

b. Earlier River Thames, River Rhine, River Danube, River Mississippi, etc. were also ranked as among the most polluted rivers. However, the status of these rivers has now improved after significant investments for restricting discharge of untreated sewage and industrial effluents by installing and operating treatment facilities (for partial or full treatment) after continuous efforts on ground for more than 3-4 decades with expenditure of over 100 billion Dollars annually (i.e., over approximately 7 lakhs 50 thousand crore rupees, compared with INR 20,000 crores allocated for similar such efforts for River Ganga through NamamiGangeProgramme over 5 years).
c. In some news reports River Ganga is also referred as amongst world's most polluted rivers, again mostly based on perception and some sporadic measurements, rather than any acceptable scientific basis.
d. The River Ganga supports diverse biological profile, including Ganga Dolphins, in more than 90% of her journey from Gaumukh to Ganga Sagar and through Sundarbans and deltaic region to Bay of Bengal. Only some 200 – 250 Kms length of River Ganga out of over 2500 Kms in some scattered segments was marginally poor.
e. This has now been remediated substantially by controlling discharge of sewage and industrial effluents through installation of sewage and effluent treatment plants. Particularly pollution status has significantly improved in the upper segment in Uttarakhand State, and in and around towns like Garhmukteshwar, Kanpur, Prayagraj, Varanasi, Patna, Bhagalpur etc. Much needs to be done in terms of tributaries like Hindon, Kali, Ramganga, Gomati, Assi, Varuna and several small drains, to improve the pollution status of River Ganga, particularly during the non-monsoon period, that bring untreated or partially treated sewage and industrial effluents."

226. Asked to furnish the lessons learnt from other countries, the Ministry of Jal Shakti in a written reply submitted as under:-[151]

"Pollution in Rivers like Rhine (in Europe), Thames (U.K.), Danube (Europe), Mississippi (USA), Singapore has been brought under control effectively after several decades of continuous studies, exhaustive monitoring, substantial capital investments for creating sewerage infrastructure, solid and liquid waste management systems for domestic and industrial sectors. In addition, substantial expenditure is also incurred annually on operation and maintenance of such infrastructure and systems along with high energy footprint.

[151] Q no 6 LoP/Flag 'G'

Ministry took advantage of experiences of such river cleanup programmes by organizing workshops, conferences, roundtables, partnerships, visits in association with cGanga and several other specialized organizations/ institutions. Ganga River Rejuvenation programme namely, NamamiGange was formulated after compiling knowledge gathered from all over world. However, such knowledge and international practices had to be adopted under Indian conditions. The costs incurred are an order of magnitude lower in India (in terms of capital expenditure as well as O&M). NMCG and cGanga have also developed Environmental Technology Verification (ETV) programme to adopt Novel & Noble solutions for River Restoration and Conservation in the areas of Decentralised Systems (Municipal wastewater treatment, Industrial effluents treatment, Bio-remediation systems, Drinking water supply systems), Data and Information (Data Generation – remote sensing, sensors etc, Data management and handling, Data analytics – AI, ML etc) and Ancillary Services (Solid Waste Management, Sustainable Agriculture, Sustainable Hydropower, Energy Recovery / Hydrogen, Water Resource Management etc, Inland waterways).

Further the German International Cooperation (GIZ), an implementing agency, is a key partner in the Ganga rejuvenation project. The Project “Support to Ganga Rejuvenation, Phase II (SGR II)” including the “Development and Implementation Support to the India-EU Water Partnership, Phase II (IEWP Action, Phase II)” is implemented by GIZ on behalf of German Federal Ministry of Economic Cooperation and Development (BMZ) and the EU Delegation to India (EUD) Responsible actors at national level and in selected states and districts apply integrated approaches to river basin management, taking European experience into account.

The India –EU Water Partnership is co-financed by the European Union (EU) and the German Federal Ministry of Economic Cooperation and Development (BMZ) since 2017, Implementation by GIZ in conjunction with the Indo-German Cooperation projectSupport to Ganga Rejuvenation - SGR.
Thematic Areas of the IEWP Action Phase 2

- River Basin Management in Tapi Basin and together with SGR in the Ramganga Basin
- Irrigation and Efficient Water Reuse.
- Environmental Flows Assessment together with SGR in the Ramganga Basin towards measures
- Safe Reuse of Treated Water (SRTW).

NMCG in 2019 signed an implementation agreement with PTB (Physikalisch-TechnischeBundesanstalt), the national metrology institute of Germany for the Project, “Strengthening Quality Infrastructure for Water Monitoring of the River Ganga”.

Both sides agreed to continue the cooperation to strengthen quality infrastructure services (e.g. conformity assessment, metrology, standardization and accreditation) in the field of water monitoring. The project focuses on local implementation with the State Pollution Control Boards in Uttarakhand and Uttar Pradesh.The main objective

of the ongoing project is to improve the quality of data used to monitor the River Ganga through improved sampling and analysis of the water samples based on recognized quality assurance measures as well as an improved coordination between all competent bodies. Various target areas covered under programme include brining awareness through Workshops /Seminars/Webinars on various technical aspects; imparting trainings on quality control and quality assurance (QA/QC), general requirements for (Laboratory Quality System & Internal Audit) the competence of testing & calibration and on sampling at the field site; conducting background study on "Existing Water Quality Monitoring System and Ganga River"

The joint venture underscores the implementation of certain recommendations based on the laboratory assessment for gap analysis conducted in the laboratories of State Pollution Control Boards.Learnings from the ongoing project may also be extended to laboratories of other State Pollution Control Boards for environmental monitoring.

"A Joint Working Group (JWG) with Netherlands has been constituted under the chairmanship of DG, NMCG from Indian side and the respective counterpart. In the meetings of JWG, both the countries have identified 4 nos. of projects, which are under formulation and would be put-up for approvals in subsequent meeting. A sub group of the SJG has also been constituted, which convenes the meetings at a higher frequency and to fine tune the project proposals."

227. Asked to furnish further details, the Ministry of Jal Shakti in a written submission before the Committee, explained the difference between the river cleaning in India and in other party of world as under:-[152]

"Thames River Cleanup programme essentially involved creating sewerage infrastructure, regulating industrial waste discharges and managing solid waste.

It is to be noted that an expenditure to the tune of 40% of the cost mentioned below has been incurred so far and no appreciable improvement in terms of water quality or visible pollution is observed, at least in the more polluted and one of the important stretches, namely Kannauj U/S to Kanpur D/S. Also, 15 years have passed since the inception of GAP in 1985 as against the 13 years period mentioned in Table below:-

Comparison of Ganga River with other Rivers in terms of Cost and Time Taken for completion of cleaning project.

	THAMES	RHINE	DANUBE	GANGA
Length (in km)	245	1320	2857	2525

[152]Q no 7 LoP/Flag 'G'

Population (in million)	--	50	86	500
Restoration Time (in years)	30	50	13+	13+
Restoration Cost (in Rs. billion)	5.0	1940.0	125.0	11.2

The aforementioned analysis suggests that the river cleaning project in the India may not be comparable with other international river cleaning project and a different approach is necessary for the success of river cleaning projects in India. Further,(i) the objectives and criteria of GAP may have to be re-casted considering the public perception of clean river and (ii) the water quality criteria for assessing the impact may have to be redefined. Some of the issues, which need to be re-examined and analysed with respect to River Action Plan in general and GAP in particular, may be stated as follow:

- Goals and objectives of River Action Plans
- Criteria for assessing the impact of action plan schemes
- Intervention methodologies and phasing of schemes.

228. Asked to furnish the experiences of other countries regarding the construction,maintenance and operation of Sewerage Treatment plants, the Ministry submitted as under:-[153]

"The experience regarding the construction, maintenance and operation of STP varies across geographies as well as based on economic conditions. The Joint Monitoring Programme (JMP) for Water Supply and Sanitation by WHO and UNICEF report in 2021 indicates that 82% of people with sewer connections are connected to sewage treatment plants providing at least secondary treatment. However, this value varies widely between regions. For example, in Europe and Northern America, 22 countries had universal (>99%) wastewater treatment, but in Albania, Bermuda, North Macedonia and Serbia less than 50% of sewered wastewater received secondary or better treatment. In Northern Africa and Western Asia, nine countries had universal wastewater treatment, but in Algeria, Lebanon and Libya less than 20% of sewered wastewater was treated. The report also found that globally, 594 million people have sewer connections that don't receive sufficient treatment. Many more are connected to wastewater treatment plants that do not provide effective treatment or comply with effluent requirements.

Select case studies and best practices related to sewerage treatment across high income and middle income countries have been given below.

[153]Q No 8 LoP/Flag 'G'

High income countries (Source: Manual on Sewerage and Sewage Treatment Systems – 2013)

I. Advanced Water Purification Facility (AWPF) in Orange County California for reclamation of water - The treatment plant used a multi-barrier process involving microfiltration (MF), RO and UV and hydrogen peroxide disinfection, and produced up to 265,000 m3 /d of near-distilled quality water. Of this, approximately 132,500 m3 /d is pumped into injection wells to create a seawater intrusion barrier. Remaining 132,500 m3 /d is pumped into percolation basins where the water naturally filters through sand and gravel to the deep aquifers of the groundwater basin.
II. Jebel Ali Sewage Treatment Plant - The plant has been designed to produce effluent suitable for reuse to suit Dubai Municipality standards for irrigation. In phase one the design involved providing preliminary treatment and use of two additional treatments, sand filtration and UV disinfection. The residual biological solids was planned to be converted into a dried pellet product suitable for use as large scale fertilizer.
III. NEWater in Singapore - Singapore suffers from serious issues of water scarcity, as Singapore's domestic resources only meet about 50% of its needs and purchases water from nearby Malaysia. water recycling is part of the government's "Four Taps Strategy" to ensure a sustainable water supply by diversifying its water resources: imported Malaysian water, seawater desalination, collection and treatment of local surface run-off and water reuse. In 2001, PUB officially named "NEWater" the recycled water produced by the reclamation plants. In 2003, potable and non-potable production of NEWater was officially opened with direct supply from three NEWater plants. At present there are five NEWater plants supply up to 40% of Singapore's current water needs.

Upper-middle-income countries (Source: https://washmatters.wateraid.org/)

There are many examples of WWTPs in upper-middle-income countries, particularly in Central and South America. However, in Latin America, only about a third of wastewater is treated, the proportion varying from 4% in Costa Rica to 99% in Chile. Although less frequent, there are examples in upper-middle income countries of poorly maintained and non-operational WWTPs.

I. In Mexico, despite the national water programme including 100% treatment goals for municipal wastewater by 2030, there are many

accounts of poorly maintained and nonoperational WWTPs. The Special Rapporteur on the Human Rights to Water and Sanitation, after a visit to the states of Chiapas and Mexico in 2017, reported that expensive WWTPs were standing useless as a result of lack of maintenance. Only 12 out of 194 plants in Chiapas were functioning; in its capital, a tourism hub, San Cristobal de las Casas, wastewater flows untreated into water sources.

II. South Africa has also taken steps to monitor the state of the nation's wastewater infrastructure; the South African Institute of Civil Engineers reports in 2017 that 30% of the country's water treatment and wastewater treatment works are in critical condition, discharging increasing quantities of untreated waste into streams. 66% of all WWTPs require short- to medium-term intervention, 35% require capacity upgrades and 56% require additional skilled O&M staff.

III. Jordan currently has 28 WWTPs treating 98% of collected water. The Jordanian National Strategic Wastewater Master Plan of 2014 calls for all cities and small towns in Jordan to have adequate wastewater collection and treatment facilities by 2035.

Lower Middle-Income countries (Source: https://washmatters.wateraid.org/)

I. There are more examples of WWTPs in stable lower-middle-income countries, either in their capital city or main cities. Nevertheless, issues with functionality are common, such as insufficient sewerage systems, non-functioning pumping stations, and under loading or overloading the capacity of the plant. A 2012 report stated that of the 388 cities of Pakistan, 42 only eight had wastewater treatment facilities and very little wastewater was treated. Lahore, the second biggest city, has never provided any treatment for municipal wastewater.

II. Bangladesh, like Pakistan, has very little wastewater treatment services. The Pagla Treatment Plant, the only WWTP in Dhaka, comprises of sedimentation tanks and waste stabilisation ponds. It was designed to treat sewage from the southern part of the capital city – although its restricted drainage area, limited capacity and inadequate maintenance has meant that only an estimated 2% of human excreta in Dhaka is effectively treated.

III. In Vietnam, less than 10% of the wastewater in the country is treated, according to a 2013 review. There were 17 centralized WWTPs in six cities, with total capacity of 565,000m3 /day, many of which were funded by the World Bank."

229. Asked whether costs involved in various river development programme in thesecountries is comparable with the programme and cost in India, the Ministry of Jal Shakti replied as under:

"Indian costs under NamamiGange programme are much lower than those incurred under various river development programme in other countries."

5.6 Creation of Ganga Knowledge Centre

230. Audit had recorded that Cabinet Committee on Economic Affairs approved in April 2011, the setting up of Ganga Knowledge Centre (GKC) at NMCG to be completed up to March 2013. GKC was to be a State-of-art centre to provide knowledge and technical analysis support services to achieve the aims of the NGRBA.

231. Audit has found a huge gap between sanction of funds and its actual expenditure on ground. Audit in their report recorded that NMCG sanctioned the proposal of setting up of GKC in two phases in (September 2013 and March 2014) at an estimated cost of Rs.48.54 crore.GKC was proposed to be set up at Central level in Delhi which was to be linked with five thematic sub-centres in the States. The scope of work in GKCincluded developing ahigh quality web portal for the River Ganga, an integrated information base (MIS) on projects, a state-of-the-art e-library, a comprehensive Geographical Information System (GIS)-based mapping system of the Ganga basin, processes for supporting research, pilots and new ideas and processes for engaging stakeholders through forums, events, publications, interactive models.[154]

232. Audit summarised their findings as under:-[155]

- Out of Rs. 48.54 crore sanctioned by NMCG towards setting up of GKC, only Rs. 1.43 crore (which was three *per cent* of the amount sanctioned) had been spent as of 31 March 2017.
- Various activities under GKC i.e. framework for data collection and management within NMCG, setting up of e-library, high quality GIS-based web portal with integrated MIS, comprehensive mapping of the Ganga Basin, etc. were yet to be taken up.
- The recruitment of 13 key personnel positions for GKC was to be completed in a period of two years (by September 2015). However, only four personnel were working in GKC (April 2017).
- NMCG had signed MoUs with University of Dundee (UK), The Energy and Resources Institute, The Nature Conservancy (TNC), World Wildlife Fund-India and VA-Tech Wabag Ltd. to conduct collaborative research on various themes of interest to NMCG but it was yet to identify and finalize areas of research as of date.
- NMCG had also not constituted a Research Advisory Committee (RAC) for recommending proposals for research and send them to

[154]Para 3.5.1 of C&AG Report/Flag 'A'
[155]Page 25 of C&AG Report/Flag 'A'

Empowered Steering Committee for approval.

- The activities of the GKC were to be regularly monitored by the Mission Directorate, NMCG. However, only one meeting (April 2017) was convened by NMCG to take stock of the activities initiated in respect of establishment of GKC.

Thus, Audit concluded their findings that the physical and financial progress was very slow which reflected the tardy progress of the work.

5.7 Non-achievement of the objectives of the project 'Ganga GyanDhara' under GKC

233. One of the main activities envisaged under the GKC was to compile and collect legacy data[156] on the River Ganga. NMCG engaged (April 2014) Indian Institute of Public Administration (IIPA) for 'Collection and Computerization of Legacy data on the River Ganga' with a fee of Rs. 87.18 lakh for a project duration of 12 months. IIPA was to collate all the existing information on the Ganga, screen the information for relevance and quality, organize and store the data to make it easily retrievable. The tasks assigned to IIPA included (a) searching and collecting implicit/ tacit knowledge with various stakeholders, individuals, institutions; (b) data codification, documentation and digitization; (c) transfer of data/ information to NMCG, etc.

234. IIPA submitted the completion report (July 2015) without obtaining responses from 33 out of 41 Universities from whom information were sought. IIPA also did not download 77,700 number of reference items that were collected by it. Further, IIPA was to transfer data/information to NMCG in phases, as and when it was complete. Books/ journals readily available had to be transferred once they were codified/ digitized instantaneously and other data sets were to be transferred after the whole process was complete. However, the same was not done by IIPA**.** NMCG in its reply (July 2017) stated that digitization of some journals/research papers could not be done due to copyright matters. However, the reply was silent about the quantum of data/ information transferred to NMCG.[157]

235. NMCG had not placed the information and reports submitted by the IIPA in the public domain even after two years of their submission. The website 'Ganga GyanDhara' was under maintenance (April 2017). Thus, the objective to organize and store the data to make it easily retrievable remained unachieved.

236. Asked to furnish a detailed note on the audit findings regarding GKC and the steps taken by NMCG to expedite the implementation of various activities envisaged under Ganga Gyan Dhara, the Ministry of Jal Shakti

[156] C&AG report no 39 of 2017 page 25/Flag 'A'
[157] Page 26 of C&AG Report no 39 of 2017/Flag 'A'

stated that NMCG has procured the extra cloud space from NIC to host the Ganga Knowledge Portal. The data collected during the project of IIPA i.e. Ganga Gyan Dhara will be hosted on the Ganga Knowledge Portal. Presently, data refining is going on at IIPA before hosting the content.

237. The Ministry of Jal Shakti in their written reply also informed that works related to setting up of GKC at NMCG Office, Delhi is underway. The prototype of Water Quality Portal of Ganga River has been developed for putting up in public domain. Also, development of Ganga knowledge Web portal has been initiated. A MIS has been developed for monitoring of various projects of NMCG. Further, It has already been explained that an expert Committee exists for consideration of Research based projects as well as their screening. Besides, GKC has also been established for meeting the research needs of NMCG including aid and advise.

238. The various works and projects of GKC are being funded under the non EAP component of the NamamiGange Programme. However, the expenditure under the EAP Component has not been done. The Annual Action Plan for CY 2021 to utilize the funds available in the World Bank funded support to NGRBA has already been sent to World Bank for their consideration. The R& D projects which are being taken up by NMCG are diverse in nature and there exists project specific research Monitoring and Evaluation Committees which have been made a part of the projects itself. NMCG has constituted an Environment Technology Verification (ETV) panel. The ETV has scope of inviting expert members from specific fields of the study/project areas.

239. When asked about the reasons that the website of the Ganga Gyan Dhara is still not available on the internet, the Ministry of Jal Shakti replies as under:

> "'Ganga GyanDhara' an initiative of National Mission for Clean Ganga (NMCG) to create a comprehensive database of all organizations, institutions, urban local bodies and everyone directly connected to or serving River Ganga all along the stretch is embedded in NMCG's website.Some of the initiative taken under Ganga GyanDharaare details as below.
>
> The mapping of River Ganga is being done – Light Detection and Ranging (LiDAR) based studies, Metagenomics- (study of microbes in their natural living environment), socio-cultural aspects, spring mapping, paleo channel mapping etc. is available on NMCG sever for public dissemination. Gyan Ganga lecture series under Ganga Knowledge (GKC) with VigyanPrasar, DST is organized in the end of every month, all archive lecture are also hosted on NMCG website."

5.8 Pandemic

240. Wide reports in the media about the unfortunate Covid-19 Pandemic and the subsequent lockdown imposed by the Government of India on the entire nation, generated a different dimension of interest of the Committee to know the state of the River Water in Ganga during the lockdown period. Not only this, the Committee was perturbed with the media reports of dead bodies floating in the River Ganga especially during the later phase of Covid-19 pandemic.

241. When asked about the fact that the Dissolved Oxygen Level quoted in the Ministry's written response is mainly due to the Lockdown imposed in wake of Covid-19 Pandemic, and whether the Ministry has analyzed data during the lockdown period indicating better water quality, the Ministry of Jal Shakti in written reply submitted as under:[158]

> "In the year 2020, based on water quality monitoring of river Ganga being carried out for pre as well as post lockdown period and studies conducted by various agencies such as Central Pollution Control Board and State Pollution Control Boards (SPCBs) and other agencies to assess the impact of lockdown on the water quality of river Ganga and its tributaries, it has been observed that no definite trend exists in different water quality parameters observed for various stretches of river Ganga and its tributaries. However, varying degrees of improvement in a few water quality parameters have been observed as per CPCB and SPCB reports along the various stretches of river Ganga and its tributaries which may be attributed to various factors such as increased availability of fresh water due to rainfall in the river catchment, no industrial effluent discharge and reduced human activity such as restriction on bathing, ritual disposal, restricted tourism, solid waste, mass washing of clothes etc.
>
> The reports are available on CPCB website on link https://cpcb.nic.in/reports-3/ (Impact of lockdown on water quality of River Ganga April 2020 and A Report on Assessment of Impact of Lockdown on Water Quality of Major Rivers). The outcome of these reports are summarized under:

To evaluate the impact of lockdown on water quality of river Ganga, the water quality of river Ganga was assessed during pre-lockdown and lockdown periods using the water quality data from manual as well as real time water quality station network.

DO concentrations remain above the bathing water criteria norms (5 mg/l or more) generallythroughout the river Ganga stretch. During lockdown only, slight changes in DO level was observed.
A comparative assessment of pollution levels during pre-lockdown period (March 15- 21, 2020) and lockdown period (March 22 - April 15, 2020) was made through analysis of data generated from 36 Real Time Water Quality Motoring Systems and following observation were made;

[158] Q no 36 page 17 of list of points/Flag 'F'

- *DO concentrations remain above the bathing water criteria norms (5 mg/l or more) at all locations prior to and during COVID-19 lockdown period, however there has been marginal increment in DO in 2nd week onwards in most stations and significant improvement in few monitoring stations.*
- *Reduction in BOD concentration has been less significant. Further, there is gradual increase in BOD levels towards downstream stretches of the river, with the maximum values in WB stretch.*
- *Reduction in COD concentration has also been less significant. Few locations show increase in the COD values, while in remaining stations reduction in COD levels was not significant.*
- *This marginal reduction can be attributed to due to stoppage of industrial activities.*
- *A decreasing trend in nitrate levels can be seen however such trend was not significant in lower stretches of River towards West Bengal State. Ammonia-nitrogen concentration has increased in almost all monitoring stations.*

CPCB also carried out assessment of impact of nation-wide lockdown on water quality of 19 major rivers of the country (viz., Beas, Brahmaputra, Baitarani &Brahmani, Cauvery, Chambal, Ganga, Ghaggar, Godavari, Krishna, Mahanadi, Mahi, Narmada,Pennar,Sabarmati, Sutlej, Swarnarekha, Tapi, Yamuna) at the existing monitoring locations under National Water Quality Monitoring Programme.

Overall Observations on 19 Major Rivers Monitored during Pre-lockdown (March 2020) and Lockdown Period (April 2020): -[159]

1) *In case of river Ganga, during pre-lockdown, 42 out of 65 monitored locations (64.6 %) and during lockdown, 25 out of 54 monitored locations (46.3 %) were found to be within the desirable limits of Primary water quality criteria for outdoor bathing. Also overall moderate improvement in water quality of river Ganga was observed with respect to the parameters i.e. DO, BOD and FC.*
2) *Four rivers viz., Baitarni, Mahanadi, Narmada and Pennar showed 100 % compliance with the Primary Water Quality Criteria for Outdoor Bathing during Pre-lockdown and lockdown period.*
3) *River Ghaggar failed to comply with the Primary Water Quality Criteria for Outdoor Bathing during Pre-lockdown and lockdown period.*
4) *Water quality of two rivers viz., Sabarmati (55.6 %) and Mahi (92.9 %) remains unchanged in terms of compliance to Primary Water Quality Criteria for Outdoor Bathing during pre-lockdown and lockdown.*
5) *Improvement in water quality w.r.t Primary Water Quality Criteria for Outdoor Bathing was noticed in case of 7 rivers*

[159] Annexure 6 list of points /Flag 'F'

viz., Brahmani (increase in compliance to the bathing criteria limits from 85% to 100%), Brahmaputra (enhancement in compliance to the criteria limits from 87.5 % to 100%), Cauvery (marginal improvement from 90.5% to 96.97%), Godavari (increase in compliance from 65.8 % to 78.4 %), Krishna (improvement in compliance from 84.6 % to 94.4%), Tapi (improved compliance from 77.8 % to 87.5 %) and Yamuna (increase in compliance from 42.8 % to 66.67 %) which may be attributed to:

- ***(a)*** *Minimal industrial effluent discharges in view of closure of almost all industries;*
- ***(b)*** *No human activities involving disposal of worshipped puja materials and garbage;*
- ***(c)*** *No anthropogenic activities such as outdoor bathing, washing of clothes, vehicle washing and cattle washing, no pilgrimage activities etc. during lockdown phase; and*
- ***(d)*** *The cattle movement was also reduced considerably reducing biological contamination of surface water bodies.*

Cent percentage compliance was observed during lockdown w.r.t Primary Water Quality Criteria for Outdoor Bathing in case of 6 rivers (viz., river Baitarni, Brahmani, Brahmaputra, Mahanadi, Narmada and Pennar).”

242. Referring to the various news articles detailing the dumping of dead bodies during the recent "second wave of Covid-19 Pandemic, the Committee queried about the action taken to identify such spots and examine the impact of the dumping of dead bodies in River Ganga and steps taken to dissuade general public from doing so. In response, the Ministry of Jal Shakti submitted as under:[160]

“The news of floating dead bodies in River Ganga in the stretches of Uttar Pradesh and Bihar were reported amid the surge in coronavirus infection in the country. The issue was discussed by Secretary of Ministry of Jal Shakti with the Chief Secretaries of Uttar Pradesh and Bihar on 15.05.2021.

As decided in the meeting and keeping in view of this alarming situation, various government authorities such as CPCB, SPCB and specialized virology testing institute i.eCSIR-Indian Institute of Toxicology Research (IITR) under observance of NMCG joined hands and initiated the investigation of SARS COV-2 virus contamination and analysis of water quality due to disposal of dead bodies in river Ganga.

There were speculations that the bodies might be infected with the highly contagious COVID-19 virus, their disposal into the river might lead to spread of various infections and their decomposition in rivers might also affect the river water quality. Hence, an intensive study was conducted primarily for evaluation of water quality and detection of SARS-COV-2 virus contamination due to disposal of dead bodies in

[160] Q No 78 page 52 of list of points/Flag ‘F’

river Ganga. The investigation concluded that in each sampling sites the water quality was found to deviate from the standard *Designated Water Quality Criteria* /norms and the deviations are consistent with trends for previous periods and may not be attributed to incidents of floating dead bodies. The analysis report also showed that SARS-COV-2 was not detected in any of the sites. Thus, it was concluded that the disposal of dead bodies did not largely affect the water quality of river Ganga.

It was also decided in the meeting held on 15.05.21 that CPCB in co-ordination with the SPCBs may issue guidelines for creating awareness to communities, particularly residing near the river side, highlighting "Do's & Don't" for observance/ use of river water to prevent the spread of infection keeping in view of prevalent surge in scenario of Covid- 19. State Governments shall intensify and take up a major awareness drive to educate the inhabitants/ residents of the riverside communities in districts along river Ganga and other tributaries/water bodies so as to prevent recurrence of such incidents and ensuring safe health and hygiene of the people at large.

Hence, guidelines regarding measures to further prevent disposal of dead bodies into River Ganga and Yamuna as well as use of river water amongst such communities, were issued on dated 10th June, 2021 and the concerned district administrations, local bodies, police authorities, other stakeholders of the states of Uttar Pradesh and Bihar were directed to conduct awareness drive regarding the same amongst the communities located on the banks of River Ganga and Yamuna. As directed, State governments undertook awareness drive for creating awareness among the communities, particularly residing near the river side, highlighting "Do's & Don't" as well as to educate the inhabitants/ residents of the riverside communities in districts along river Ganga and other tributaries/ water bodies towards their safe health and hygiene.

NMCG also coordinated with the Ganga Task Force (GTF) and Ganga Vichar Manch (GVM) officials/ volunteers to mobilize and increase the sensitization so as to create more awareness and surveillance to prevent occurrence of the incidence or such instances mentioned herein above.

Continuous efforts at the Central level have led to coordinated actions at State's level towards providing necessary financial assistance to deserving families, towards cremation of COVID related dead bodies as per Government of India protocols, regular patrolling of river channel and river banks as well as necessary community awareness drive."

243. Asked whether any monitoring of building of modern crematoriums at various places for this purpose is being done by the

NamamiGangeProject Management, the Ministry in a written response submitted as under:[161]

"For progress monitoring of crematoriums sanctioned under the NamamiGange, during the Construction Period Monthly Progress Reports are submitted by the Executing Agencies. NMCG monitors the progress of crematoriums through regular discussions and site visits.

Post completion of construction, O&M of the crematoriums is undertaken by the Executing Agencies for duration of 6 months during which NMCG regularly monitors the performance of the crematoriums. After this, the crematoriums are handed over to the respective ULBs.

244. In response to the query posed about the scary situation of dead bodies floating on River Ganga during the second wave of Covid Pandemic, the Ministry has replied that they have issued guidelines regarding measures to further prevent disposal of dead bodies into River Ganga and Yamuna as well as use of river water amongst such communities, on 10th June, 2021. Asked whether the Ministry have any record of action taken by different States on theguidelines issued or whether any feedback received from the States in thisregard, the Ministry of Jal Shakti in a written response submitted as under:

"The Incidence of "Unclaimed/Unidentified, burnt or partially burnt Dead Bodies, found floating in river or in grounds, in the shallow depth, on the banks in river Ganga" was reported by media in certain districts (Unnao, Kanpur, Fatehpur, Kannauj, Ballia etc) in State of UP and districts [Buxar, Patna etc.] in the State of Bihar, in the media and has also come to the notice of the NMCG. Considering the intensity of the matter accordingly NMCG took cognizance of the matter and series of actions (as follows) were taken to manage the floating dead bodies:

Advisory dated 11.05.2021[162] from DG, NMCG to all District Ganga Committees, DO Letter dated 12.05.2021 from DG, NMCG to The Chief Secretary, U.P., Uttarakhand, Bihar, Jharkhand and West Bengal and a video Conference Meeting dated 15.05.2021 with the Chief Secretaries of Uttar Pradesh and Bihar. These were followed bycommunications dated 18th May, 2021 and 20th May, 2021. As per the decisions taken in the meeting CPCB issued guidelines dated 10th June, 2021 to the State Pollution Control Boards of Bihar and Uttar Pradesh. In response to the guidelines issued by the CPCB, SPCBs of Bihar and Uttar Pradesh vide letters dated 18.06.21 and 24.06.21 respectively has forwarded the guidelines to the concerned agencies of the states for necessary action. In reply to the communications sent by NMCG reports were received from the different authorities in the State of Uttar Pradesh and Bihar. As per the reports received from the State of Uttar Pradesh about 50 dead bodies were found floating in the state of Uttar Pradesh which were cremated by the State Government following COVID protocols. It was also informed that dumping of dead bodies in river Ganga and its tributaries is banned,

[161]Q no 79 page 53 of list of points/Flag 'F'
[162]Q 30 list of points/Flag 'G'

police patrolling is being undertaken, no dumping is being ensured by the District Magistrate and officials of Police department and Rs. 5000/- of assistance is being provided as per the government orders. In case of Bihar 81 bodies found in Buxar and 1 in Munger were cremated by the District Administration following Covid protocol and as per government order expenses for the cremation of the dead bodies of Covid-19 patients was borne by the UD&HD department. Thus, vide regular communications NMCG regularly followed up with the State Government agencies regarding the floating bodies found in river Ganga and ensured with the assistance of district administration that Covid19 protocol was followed in cremation and disposal of these bodies. Continuous efforts at the Central level have led to coordinated actions at State's level towards providing necessary financial assistance to deserving families, towards cremation of COVID related dead bodies as per Government of India protocols, regular patrolling of river channel and riverbanks as well as necessary community awareness drive.

245. Asked whether there existed such guideline before and the reasons for its violation during Covid Pandemic times and the steps taken by the Ministry to prevent violation of these guidelines, the Ministry of Jal Shakti in a written reply stated as under:[163]

"Ministry of Health and Family Welfare had issued "Guidelines on Dead Body Management" dated 15-03-2020, which guides how to dispose of dead body of a suspect or confirmed case of COVID-19. Steps taken by the Ministry in the pandemic times and follow up actions taken by the states have been summarized in the action taken report dated 11th July, 2021.

5.9 Conclusion

246. Audit has raised the concerns of meetings of various bodies/committees created under NGRBA framework, Societies Act and order of Government of India to monitor and evaluate programmes not being held as per the prescribed frequencies. There was slow implementation of projects sanctioned to CPCB for water quality monitoring, strengthening of regulators and inventorization, etc. Establishment of GangaMonitoring Centres was still inconceptual and planning stage. The use of Remote sensing data and mobile applications were at nascent stage. Concerns of audit were also raised in the report about non preparation of action plan, non-finalisation of GRBMP, pendency of DPRs, persistent shortfalls in human resources, slow progress of projects, etc. reflecting that monitoring and evaluating mechanism in place has been far from effective. The Part-II of this report deals with the Observations and Recommendations of the Committee.

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[163] Q no 30 (b) list of points/Flag 'G'

ANNEXURE-I

State	Name of Agency/ Department Responsible
Uttarakhand	• Uttarakhand Peyjal Nigam, Government of Uttarakhand • State Irrigation Department, Government of Uttarakhand • Water and Power Consultancy Services (WAPCOS) (CPSU) • Uttarakhand Forest Department • SPMG Uttarakhand • Wildlife Institute of India (WII), Dehradun
Uttar Pradesh	• Uttar Pradesh Jal Nigam, Government of Uttar Pradesh • Major ULBs in UP (like Varanasi Nagar Nigam, Allahabad Nagar Nigam, Kanpur Nagar Nigam, etc.) • Engineers India Limited (CPSU) • Uttar Pradesh Forest Department • SPMG Uttar Pradesh
Bihar	• Bihar Urban Infrastructure Development Corporation Ltd (BUIDCO), Government of Bihar • National Building Construction Corporation Limited (CPSU) • Bihar Forest Department • SPMG Bihar
Jharkhand	• Jharkhand Urban Infrastructure Development Company Limited, Government of Jharkhand • National Projects Construction Corporation Limited (CPSU) • Jharkhand Forest Department • SPMG Jharkand
West Bengal	• Kolkata Metropolitan Development Agency, Department of Urban Development and Municipal Affairs (Government of West Bengal) • Kolkata Municipal Corporation • Engineering Projects (India) Ltd (CPSU) • West Bengal Forest Department • SPMG West Bengal • Central Inland Fisheries Research Institute (CIFRI), Barrackpore, Kolkata
Delhi	• Delhi Jal Board, Government of NCT of Delhi
Haryana	• PHE Department, Government of Haryana
Rajasthan	• Urban Improvement Trust, Kota/ Urban Development & Housing (UDH) Department (Government of Rajasthan)
Himachal Pradesh	• Irrigation and Public Health Department, Government of Himachal Pradesh

ANNEXURE-II

S.No.	Actionable points from Consortium Report	Paragraph of Authority Order	Status as on Jan'2021
1.	AviralDhara	This thematic area has been covered under the NMCG Authority Order, 7th October, 2016, **para 4, sub section v, vi and para 5**	**Ecological -flow Notification** Government vide gazette notification dated 09.10.2018 has notified environmental flow regime for river Ganga (from its origin to Unnao, UP). Supervision of implementation of notified environmental flow norms is being done by Central Water Commission. Hourly flow data is being monitored from the identified projects. As of now, 2 quarterly reports have been submitted by the CWC. In addition, NIH has been awarded a study for assessment of environmental flow in river Yamuna (from Hatnikund barrage to Okhla barrage). An interim report on said study has been submitted by NIH in June 2019 and is under consideration. **Wetland Conservation** a project has been sanctioned for developing detailed briefs and an integrated management plan to conserve 226 wetlands situated in 27 Ganga districts in U.P. up to ten kms on either side of the river. **Small River Rejuvenation** A GIS based inventory of small rivers hav44e been created along with district wise list of small rivers. Recently this has been got included as priority under MGNREGA. A number of activities are already underway towards revival of small rivers. District Ganga Committees (DGC) under the District Magistrates is being strengthened and closely monitored for this work.
2	Nirmal Dhara	This thematic area has been covered under the NMCG Authority Order, 7th October, 2016, **Para 4, sub-section ii, Para 6 and Para 7**	**Sewerage Infrastructure** Details of sewerage infrastructure being funded and monitored by NMCG has already been provided. **Industrial Pollution Abatement** Status of projects being considered by NMCG for management of industrial pollution in Ganga Basin. **a) Jajmau Tannery cluster:** NMCG has sanctioned the project for construction of 20 MLD CETP, Collection and Conveyance system, Pilot scale 200 KLD ZLD plant and 900 KLD Common Chrome Recovery unit at Jajmau tannery Cluster, at an estimated cost of Rs. 617 crores with certain financial conditions. **b) Mathura textile cluster** NMCG has sanctioned the project for upgradation of existing 6.25

MLD CETP at Mathura Textile Cluster at an estimated cost Rs.13.87 crores with certain conditions such as share of 25% of project cost and 100 % O&M to be borne by industries, SPVs to reuse 50-60% treated effluent water in their process.

c) Farrukhabad Textile Cluster

A new Textile Park is proposed for which 1.5 MLD CETP is required. ZLD based system has been accepted by textile association with 25 % funding toward the capital cost by the SPV of Textile Park. However, due to financial constraint they have requested for two phase implementation of ZLD based DPR. First phase to be completed with 50 % recirculation and thereafter ZLD is to be achieved in second phase.

d) Unnao and Banthar

The up-gradation of CETPs for tannery cluster at Unnao &Banthar have been sanctioned by NMCG.

NMCG has engaged Central Pollution Control Board (CPCB) for inventorization, monitoring and surveillance of pollution load discharging to river Ganga. The industrial pollution load in river Ganga and tributaries are assessed and appropriate actions are taken against the non-complying units. Further, the STPs and CETPs existing in Ganga basin are monitored and appropriate directions are issued to non-complying units.

Solid Liquid Waste Management (SLWM) & ODF

Department of Drinking Water &Sanitation has constructed 10,83,688 no. of Individual Household Latrines (IHHLs) in 4465 Ganga bank villages and declared Open Defecation Free (ODF), for which NMCG has released Rs. 829.04 Cr.

Solid Liquid Waste Management is being implemented by department of Drinking Water & Sanitation in 1662 Ganga bank Gram Panchyats under Ganga Gram scheme, for which NMCG has released Rs. 124.0 Cr. Out of 1662 GPs, DPR for 1061 GPs has been prepared and SLWM work has been completed in 32 GPs.

Crematoria

As cremation grounds are generally located on the banks of rivers, ash and old belongings from these cremation grounds are usually disposed of into the river resulting in river pollution. Therefore, NMCG sanctioned projects for development of 49 crematoria based on new and cleaner technology along the 5 States on main stem of River Ganga. Of the 49 projects, 29 projects have been completed and 18 on-going projects are under various stages of implementation.

Water Quality Monitoring

Water quality monitoring of River Ganga is carried out through manual as well as sensors based real time system.

- Water quality monitoring of River Ganga at 94 locations in five States viz. Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and

			West Bengal is carried out by CPCB under NamamiGange in association with State Pollution Control Boards. Real Time Water Quality Monitoring of River Ganga, tributaries and drains began under NamamiGange Programme from 11th March, 2017 at 36 locations. Additional 40 new RTWQMS are proposed to be established in Year 2019-20 by CPCB under NamamiGange programme. Real time water quality data from stations is being displayed on a web portal.
3	Ecological Restoration	This thematic area has been covered under the NMCG Authority Order, 7th October, 2016, Para **4, sub-section iii and viii**	**<u>Afforestation</u>** NMCG under the NamamiGange Programme is implementing Forestry Interventions in Ganga as per the DPR prepared by FRI, Dehradun. The DPR has projected site specific plantation along the banks of river Ganga over an area of 1.34 lakh hectares. The estimated plantation cost under this project for a period of five years is Rs. 2293.73 crs. The FRI DPR provides for 43 numbers of models under four major heads viz. Natural landscape-32, Agricultural landscape-3, Urban landscape-5 and Conservation intervention-3. NMCG has allocated funds under afforestation and biodiversity component of *NamamiGange* to the tune of Rs. 200.0 crs. for the period 2016-17, 2017-18, 2018-19, and Rs. 69.78 cr. has been approved for year 2019-20 in the five Ganga States for plantation of 20,340 hectares. In addition, NMCG has also sanctioned Rs. 67.0 crs for plantation in identified Ganga villages as per proposal of department of Drinking Water & Sanitation. For implementation of the remaining portion of the DPR, MoEF&CC, has agreed to fund the remaining afforestation work from CAMPA fund. This initiative under NamamiGange programme has been duly recognized and Ministry of Environment, Forest and Climate Change, Government of India has asked the Indian Council of Forest Research and Education to undertake the project on preparation of DPR for rejuvenation of major rivers in the country through forestry intervention. **<u>Biodiversity Conservation project:</u>** One of NMCG's long term visions for Ganga Rejuvenation is to restore the viable populations of all endemic and endangered biodiversity of the river so that they occupy their full historical range and fulfil their role in maintaining the integrity of the Ganga River ecosystems. The proximate goal of this restoration plan is to ensure a significant reduction of threats to the biodiversity of River Ganga that are either currently endangered, or are likely to become endangered in the foreseeable future. To address the threats to the aquatic biodiversity of Ganga, Wildlife Institute of India (WII), Dehradun has been awarded a project at a cost of Rs. 24.84 crore for three years. The project aims to develop a science - based aquatic species restoration plan for Ganga River by involving multiple stakeholders. Under this project Rescue & rehabilitation centre for conservation of aquatic species established and a cadre of more than 600 volunteers (Ganga Praharis) has been developed and trained for conservation of Ganga & its ecosystem. Key ecosystem services of Ganga River have been identified and an assessment framework, namely, "Framework for evaluating ecosystem services of Ganga River" has been developed. Nature interpretation and education for biodiversity conservation along

			Ganga River has been established at Sarnath. River exhibition was developed on a house boat in Varanasi, which is locally known as "Bajda". Training of stakeholders has been done in different aspects of participatory biodiversity conservation and methodologies of ecological survey. Encouraged by the successful conclusion of the phase-I project, a more comprehensive project under phase II has been accorded to WII at a cost of Rs. 113.99 Cr. for scaling up the research over the entire Ganga basin in next five years. The project is continuing.
4	Sustainable Agriculture		**<u>Organic Farming</u>** To control pollution due to agriculture run off MoU has been entered into with Ministry of Agriculture and farmers Welfare (MoA&FW) for promoting organic farming in Ganga states. The MoA&FW has released an amount of Rs.26.49 Cr. from the Rashtriya Krishi Vikas Yojna (RKVY) fund during the year 2017-18 and 2018-19 for 1192 clusters. **<u>Medicinal Plantation:</u>** Similarly, an MoU has been entered into with Ministry of AYUSH for Promotion Medicinal Plantation for abating the pollution of River Ganga, soil stabilisation and creation of livelihood opportunities by diversifying the cropping pattern towards high value medicinal crops. Ministry of AYUSH has sanctioned Rs. 14.97 cr. and released Rs. 10.45 cr. for 14 projects in the state of Uttar Pradesh, Uttarakhand and West Bengal for medicinal plantation in Ganga basin. Further, in an area of 2500 ha. of River Ganga from Allahabad to Ballia stretch in 40 blocks of 08 districts of Uttar Pradesh. A project has been sanctioned for medicinal plantation in villages to Forest Dept., State of U.P, at an estimated cost of Rs. 35.466 crore for two years. The project is being implemented by Forest & Wildlife Department, Uttar Pradesh.
5	Geological Safeguarding	covered under the NMCG Authority Order, 7th October, 2016	District Ganga Committee (DGC), a multidisciplinary body, has been assigned the task of monitoring River Ganga safety. Geomorphic and Ecological Impacts of Sand Mining in Large Rivers as revealed from high resolution historical remote sensing data and drone surveys: Assessment, Analysis and Mitigation under NamamiGange Program by IIT Kanpur has already been initiated for providing policy inputs for sand mining.
6	Basin Protection against disasters	This thematic area has been covered under the NMCG Authority Order, 7th October, 2016, **Section 4 point 5, 6 & 7**	**<u>Flood Plain Demarcation</u>** Flood plain zoning and flood plain demarcation comes under purview of respective State Governments. In compliance of Hon'ble Tribunal earlier order dated 12thJuly'2017 a Special Committee was constituted vide NMCG Office Memorandum dt. 01.08.2017 to identify and demarcate the flood plains for Phase-I, Segment 'B' of River Ganga (Haridwar to Unnao). The interim report of Special Committee has been submitted to the Hon'ble Tribunal on 27th July 2018. It was suggested in the 4th meeting of the Special Committee

		dated 22nd April'2019 that before finalization of report, results of model studies may be further verified on ground by Government of Uttar Pradesh. Accordingly, a team consisting of officials from Central Water Commission, Upper Ganga Basin Organization of Central Water Commission, National Institute of Hydrology, Ganga Flood Control Commission, Irrigation and Water Resources Department of UP and Irrigation Department of Uttrakhand carried out field visit of the stretch in 3 phases (Phase-1: Haridwar to Bijnore barrage, Phase-2: Kannuaj to Kanpur, Phase-3: Garhmukteshwar to Narora). The report of the team has been submitted to Special Committee in June' 2019, which is being examined by CWC. **<u>High Resolution Climate Scenario Mapping</u>** A project has been sanctioned to map out high resolution climate scenarios for basin-scale water resources management to Indian Institute of Technology, Delhi (IIT Delhi). The study will be executed through Centre for Atmospheric Sciences of IIT Delhi. Impacts of climate change and climate variability on the water resources are likely to affect irrigated agriculture, installed power capacity, environmental flows in the dry season and higher flows during the wet season, thereby causing severe droughts and floods in urban and rural areas. Ganga basin is one of the largest basins in India and contributes to almost 40% of the population, change in climatic scenarios can result a disbalance in near future. There is a demand for information from policymakers, administrators and common public to work on quantitative estimates are uncertainties. One of the major bottlenecks we face now-a-days is lack of appropriate data. Climate changes are likely to have a strong effect on the hydrology of the Ganga basin, to plan accordingly this project has been sanctioned. One of the major outcomes of this project will be improved understanding and scientifically rigorous estimates of climate change and its impact on water resources in the Indo-Gangetic Plain.
7	River hazard management	**<u>Microbial Diversity Mapping by NEERI</u>** • Study titled "Assessment of Water Quality and Sediment Analysis to understand the special property of river Ganga" completed by NEERI and final report submitted in Sep. 2018. • Interim report for study to understand the Non-Putrefying Property of River Ganga in both Water and Sediment submitted by CSIR-NEERI. Study is being conducted by CSIR-NEERI along with CSIR-NCL (National Chemical Laboratory), IIT-Roorkee and ICMR institutes viz. AIIMS and BHU. • Study on impact of pollution caused by Tannery cluster at Jajmau on health of people in the vicinity added as additional component to above study. **<u>High Resolution Mapping of Ganga River</u>** GIS Project on "Generation of high-resolution DEM & GIS ready database for part of River Ganga for NMCG" has been sanctioned for an amount of INR 86.84 Cr and executing by Survey of India,

			Dehradun. Deliverables of mapping would be Digital Elevation Model/ Digital Terrain Model (The bare earth model has vertical accuracy better than 50 cm), contour of 1.0 m, ortho-photos (25 cm Ground sampling distance or better), GIS ready dataset, outlet/vent of sewerage and other discharge from all dwelling units, industrial, commercial and all type of other institutions mapping from the sources outlet to the public drainage network, the entire public network integrated with the present project mapping, crematoria, ghats, RFD, solid waste disposal sites, STP/ETP/CETP etc. for defined project area of interest. GIS ready datasets including high resolution DEM would facilitate major support to Ganga river basin management by embedding GIS in different aspects of planning and implementation at National/State/Local level; bringing GIS support in decision making; enable a sound process of monitoring development and identifying critical hotspots.
8	Environmental knowledge building and restoration	This thematic area has been covered under the NMCG Authority Order, 7th October, 2016, **Section 4 point 10**	**<u>Formation of District Ganga Committees</u>** 52 District Ganga Committees (DGC) have been constituted and notified for all 5 States of River Ganga. **<u>Association with NIUA</u>** In December 2017, NMCG released the "Vision Ganga" document that describes the overarching framework and approach of the Mission in restoring the wholesomeness of the Ganga River. The document indicates that one of the key objectives of the Ganga River Management plan is to ensure that "all existing, ongoing and planned anthropogenic activities in the basin shall be reviewed or scrutinised in a transparent, inclusive manner (with consensus of all affected people and stakeholders) for the overall health of the basin". Much of the current undesirable state of the River Ganga can be attributed to these disruptive anthropogenic activities, which somehow are more prevalent in urban areas (cities). Therefore, any improvement in the river health cannot be achieved without first addressing the issues and drivers in urban areas. Cities in the Ganga River Basin, hence, will have a central role to play in the rejuvenation and replenishment of the River Basin. With this background, in March 2019, the National Institute of Urban Affairs (NIUA) was entrusted with a project by National Mission for Clean Ganga for a project "Addressing the urban drivers of human health in the Ganga River Basin" for a project duration of two years. The broad objective of this project is to promulgate sustainable urban development that makes judicious use of vital natural riverine resources. The project will seek to demonstrate that maintaining healthy rivers in the Ganga River Basin is crucial to enhance liveability in urban areas of the basin. The project targets three unique (but interrelated) elements of river management within the urban context. The first is related to mainstreaming sustainable river health management into a city's larger long-term vision. The second is associated with developing a dedicated river-specific management plan for a city. The third is to build capacities of multiple levels of stakeholders on aspects

relating to the first two elements, as well as other pertinent matters related to river health management keeping in mind the challenges of urbanization.

Association with SPA

Water bodies in the form of lakes, ponds, tanks and other wetlands are an integral part of the hydrological cycle. Properly managed wetlands, especially lakes, in urban areas have an important role as a source of water supply, controlling run-off and groundwater recharge. These water bodies host a wide variety of flora and fauna, provide recreational spaces and improve micro climate in the built environment. With rapid urbanization and expansion of city boundaries, a number of wetlands in urban areas are facing issues of over exploitation, encroachment, discharge of industrial effluents/ domestic sewage and uncontrolled siltation. This results in the destruction of the water body and its catchment area.

With this objective in mind, in March 2019, NMCG awarded a project titled "Urban Wetland Management Guidelines - A Toolkit for Local Stakeholders" to School of Planning and Architecture, New Delhi.

Association with IIT Kanpur (corona)

GIS Project on "Reconstructing the Ganga of the past from Corona archival imagery" has been sanctioned for an amount of INR 40,96,800.00 and executing by IIT Kanpur. Deliverables of Corona project would be as make all processed Corona images available for upload on public portal such as Bhuvan Ganga, develop an Atlas of the Ganga River showing a comparison between 1960s and present, establish the reference condition of the Ganga river and quantify the changes in morphological characteristics and land use/landcover within the Ganga valley between 1960s and present, propose a policy document on 'desirable' land use within the Ganga valley, capacity building for Corona image processing through training workshops including development of a working manual.

Association with NRSC

Bhuvan Ganga Geoportal provides platforms to manage, access, visualize, share and analyse geo spatial data, non-spatial data products and services towards spatial mashups to support NMCG objectives of environmental and ecological improvement within the Ganga River basin.

Bhuvan Ganga mobile app is a user-friendly application to enable user/public to collect and report information on various pollution sources that affect water quality of River Ganga. Bhuvan Ganga mobile application has provision to collect information regarding urban sewage, semi-urban/rural sewage, natural drains/nallas, industrial waste water, solid waste disposal or any other pollution source. Total no. of geotagging is 904 with defined classes like industrial waste water, natural drain/nallas, open defecation sewage, semi urban/rural sewage, solid waste disposal, urban sewage, plantation and other.

Strengthening of State Pollution Control Board

Strengthening of laboratories of Ganga main stem State Pollution Control Boards have been envisaged to improve the infrastructure

	and logistics with upgraded quality assurance outputs. **IEC Activities** To connect river with people, NamamiGange has taken interventions for improving amenities, community outreach, development of Ganga Vichar Manch, Ganga Praharis, NYK Ganga Doots, Ganga Mitras, Ganga Task Force with ex-serviceman, Ganga Utsav, Ganga Quest, Ganga Run, Ganga Rafting expeditions, Treks with a social message and several activities has been taken up."

ANNEXURE-III

State wise details of ongoing, under tendering and approved projects undertaken by NMCG

Uttarakhand

S. No.	Name of the project / scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1.	Interception and Diversion (I&D) with STP at Joshimath	I&D, Network – 2.5 km 3.78 MLD STP	48.42	Ongoing
2.	Interception &Diversion Works for Rispana&Bindal River in Dehradun	I&D, Sewer Network – 30.88 km	63.75	Ongoing
3.	Sludge Management Plant at Chorpani, Muni Ki Reti Uttarakhand State, under NamamiGange Programme	Sludge Management Facility	8.67	Ongoing

Uttar Pradesh

S. No.	Name of the project / scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1.	Rehabilitation of old trunk sewer in Varanasi		89.95	Ongoing
2.	Non Sewerage, Institutional Development and other works for Pollution Abatement works in Varanasi		126.2	Ongoing
3.	Mathura Sewerage Scheme(HAM)	67.3 MLD Sewage Treatment	460.45	Mixing of industrial effluents leading to high COD levels which will result in non-compliance of KPIs leading to non-supply of treated wastewater of IOCL
4.	Interception, Diversion of Drains & Sewage Treatment works at Shuklaganj, Distt.-Unnao (HAM)	5 MLD Sewage Treatment	65.18	Ongoing
5.	Interception, Diversion of drains & sewage treatment works at Unnao(HAM)	15 MLD Sewage Treatment	102.2	Ongoing

6.	STP at Panka, Kanpur & integration with existing STPs	160 MLD Sewage Treatment	967.23	Ongoing
7.	Sewerage works in Sewerage District I of Kanpur	0	430.49	Ongoing
8.	Interception, Diversion and Treatment works for Naini (Dist.-G), Phaphamau (Dist.-F) and Jhusi Area Dist. In Prayagraj (HAM)	72 MLD Sewage Treatment	767.59	Ongoing
9.	I&D and STP works at Kasganj, Uttar Pradesh	15 MLD Sewage Treatment	76.73	Ongoing
10.	Sewerage Scheme Interception and Diversion (I&D) with STP works at Etawah, Uttar Pradesh	44.95 MLD Sewage Treatment	140.6	Ongoing
11.	Interception & Diversion with STP at Sultanpur	17 MLD Sewage Treatment	70.18	Ongoing
12.	Interception & Diversion (I&D) of Drain and Sewage Treatment Plant at Jaunpur	30 MLD Sewage Treatment	206.05	Ongoing
13.	Interception and Diversion (I&D) and Sewage Treatment Plant at Baghpat Town	14 MLD Sewage Treatment	77.36	Ongoing
14.	Interception and Diversion (I&D) works and STP at Muzaffarnagar, Uttar Pradesh	54.5 MLD Sewage Treatment	234.03	Project under progress (Effective date: 4 Jun-21)
15.	Interception and Diversion (I&D) works and STP at Budhana, Uttar Pradesh.	10 MLD Sewage Treatment	48.76	Project under progress (Effective date: 4 Jun-21)
16.	I&D works with STP at Moradabad	25 MLD Sewage Treatment	118.69	Land Issue; Matter sub-judice in Honorable High Court
17.	Interception and Diversion Works at Farrukhabad	35 MLD Sewage Treatment	213.62	Matter to be resolved with UPJN regarding

				award of tender
18.	Rehabilitation / Renovation of Agra Sewerage Scheme(Interception & Diversion Works) in Agra ,Uttar Pradesh	177.6 MLD Sewage Treatment	842.25	NIT published on 17 May 21. Bid Opening due date-12 Jul 21 Tree cutting permission awaited
19.	Sewerage Scheme Interception and Diversion (I&D) with STP works at Meerut, Uttar Pradesh	220 MLD Sewage Treatment	690.71	Bid document sent to World Bank for NOC
20.	Interception and Diversion (I&D) works with STP at Bareilly, Uttar Pradesh	63 MLD Sewage Treatment	271.39	Evaluation pending with UPJN
21.	I&D works and STP, Ghazipur(HAM)	21 MLD Sewage Treatment	152.83	The project has recently been awarded
22.	I&D works and STP, Mirzapur(HAM)	18 MLD Sewage Treatment	129.08	The project has recently been awarded
23.	Interception and Diversion (I&D) works with STP at Lucknow, Uttar Pradesh	82 MLD Sewage Treatment	213.91	One of the disqualified bidder appealed in High Court for re-tendering Matter sub-judice in Honorable High Court Follow-up by state has been inadequate
24.	I&D works at Kairana	15 MLD Sewage Treatment	78.42	Evaluation pending with UPJN
25.	Interception & Diversion (I&D) of drains atAyodhya, District-Faizabad	33 MLD Sewage Treatment	221.66	Sanctioned in May' 21, tender preparation is under progress NIT to be floated in 2 weeks

Bihar

S. No.	Name of the project / scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1.	Sewerage system with Sewer network, Patna Beur	180 KM Sewer Network	225.77	Ongoing
2.	Saidpur Sewer Network, Patna, Bihar	172.50 KM Sewer Network	268.63	Ongoing
3.	Sewerage scheme at Pahari Zone V, Patna, Bihar	115.93 Km Sewer network	356.37	Ongoing
4.	Sewerage Treatment Plant at Pahari - Patna, Bihar	60 MLD sewage treatment	191.62	Ongoing
5.	Sewerage system with Sewer network ,PatnaKarmalichak	96.54 Km sewer network	277.42	Ongoing
6.	Sultanganj I&D and STP works	10 MLD sewage treatment	60.22	Ongoing
7.	Sewerage System and STP for Barh town	11 MLD sewage treatment	58.26	Ongoing
8.	I&D and STP works for Naugachia	9 MLD sewage treatment	60.79	Ongoing
9.	I&D and STP works for Mokama	8 MLD sewage treatment	60.91	Ongoing
10.	I&D and STP works for Sonepur	3.5 MLD sewage treatment	30.93	Ongoing
11.	Sewerage System and STP for Digha zone, Patna**(HAM)**	100 MLD sewage treatment	824.00	Ongoing
12.	Sewerage and STP for Kankarbag zone, Patna **(HAM)**	50 MLD sewage treatment	578.89	Ongoing
13.	I&D and STP work at Maner	6.5 MLD sewage treatment	41.36	Ongoing
14.	I&D and STP work at Bakhtiyarpur	10 MLD sewage treatment	35.88	Ongoing
15.	I&D and STP work at Chappra	32 MLD sewage treatment	236.15	Ongoing
16.	Sewer network and STP works, Begusarai	17 MLD sewage treatment	230.06	Ongoing
17.	I&D and STP works, Danapur	25 MLD sewage treatment	103.27	Ongoing
18.	I&D and STP works, Phulwarishariff	13 MLD sewage treatment	46.25	Ongoing
19.	I&D and STP work at Fatuha	7 MLD sewage treatment	35.49	Ongoing

S. No.	Name of the project / scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
20.	I&D and STP work for Bhagalpur(HAM)	45 MLD sewage treatment	413.29	Ongoing
21.	Sewer Networks, SPS and STP, Hajipur	22 MLD sewage treatment	305.19	Ongoing
22.	Sewer Networks, SPS and STP, Munger	30 MLD sewage treatment	294.02	Under Tendering
23.	I&D and STP Scheme for Barahiya	6 MLD sewage treatment	27.00	Under Tendering
24.	I&D and STP Scheme for Kahalgaon	6 MLD sewage treatment	25.77	Under Tendering
25.	I&D and STP works At Khagaria	4.5 MLD sewage treatment	21.00	Under Tendering
26.	Sewer Networks, STP at Buxar	16 MLD sewage treatment	164.23	Under tendering

Jharkhand

S. No.	Name of the project / scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1	Sewerage Scheme & STP works at Rajmahal	3.5 MLD sewage treatment	56.76	STP 100% work completed; SPS work under progress
2	I&D & STP project at Phusro	15 MLD sewage treatment	61.05	Tender evaluation under progress

West Bengal

S. No.	Name of the project / scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1.	Sewerage System & STP at Halisahar Municipality	16 MLD sewage treatment	274.76	Ongoing
2.	Sewerage System & STP at Budge-Budge Municipality	9.33 MLD sewage treatment	145.98	Ongoing
3.	Sewerage System & STP at Barrackpore Municipality	24 MLD sewage treatment	272.32	Ongoing

4.	I & D with STP at Nabadwip Municipal town	20 MLD sewage treatment	61.23	Ongoing
5.	I & D with STP at Kanchrapara Municipal town	18 MLD sewage treatment	48.77	Ongoing
6.	I & D with STP at Berhampore Municipal town	3.50 MLD sewage treatment	51.20	Ongoing
7.	I & D with STP at Jangipur Municipal town	13 MLD sewage treatment	68.47	Ongoing
8.	I & D with STP at Howrah Municipal town	65 MLD sewage treatment	595.72	Ongoing
9.	I & D with STP at Bally Municipal town	40 MLD sewage treatment		Ongoing
10.	I & D with STP at Kamarhat-Baranagar Municipal town	60 MLD sewage treatment		Ongoing
11.	Rejuvenation of existing STPs at Hooghly district (7 nos. municipal towns)	78.9 MLD sewage treatment	154.73	Ongoing
12.	Rejuvenation of existing STPs at North 24 Parganas (5 municipal towns)	46.24 MLD sewage treatment	65.54	Ongoing
13.	I&D and STP at Hooghly Chinsurah	26.5 MLD sewage treatment	154.73	Under tendering
14.	I&D and STP of Tolly Nullah, Kolkata	26.1 MLD sewage treatment	307.12	Under tendering
15.	I&D and STP at Maheshtala	35 MLD sewage treatment	224.69	Work awarded
16.	Rehabilitation of Garden Reach STP, 57 MLD Capacity and KeorapukarSTP, 45 MLD capacity including 15 yerars O&M at Kolkata	102 MLD sewage treatment	165.16	Under tendering
17.	I&D and STP at Durgapur	80 MLD sewage treatment	287.53	Revised DPRs under preparation
18.	I&D and STP at Asansol	95 MLD sewage treatment	384.96	
19.	I&D and STP at Burdwan	50 MLD sewage treatment	234.31	Revised DPRs under preparation

20.	Design and Build of I & D structure. including Lock Gate and it's all appurtenant structures as well as allied works at Barrackpore Municipality, North 24 Parganas, West Bengal State	0.93	Ongoing

Delhi

S. No	Name of the Project / Scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1.	Construction of 7 Nos .prioritized STPs, 1 No. SPS & Peripheral Sewers at Najafgharh Drain	94 MLD Sewage Treatment	344.81	Project on hold by Delhi Jal Board (DJB); no further decision by Delhi Govt.
2.	Construction of SPSs and 9 Nos of Decentralized STPs in Chattarpur	22.5 MLD Sewage Treatment	65.24	Tender on hold; no further decision by Delhi Govt.
3.	Construction of 318 MLD (70 MGD) WWTP with 10 years O & M on DBO basis at Coronation Pillar, Delhi	318 MLD Sewage Treatment	515.07	Ongoing
4.	Rehabilitation of Trunk Sewer No.4 (K1)	Sewer Network	87.43	Ongoing
5.	Rehabilitation and upgradation of Kondli Phase-I STP (45 MLD), Phase-II STP (114 MLD) & Phase-III STP (45 MLD) (K3)	204 MLD Sewage Treatment	239.11	Ongoing
6.	Rehabilitation of Rising Mains (K4)	Sewer Network	59.13	Ongoing
7.	Rehabilitation of Trunk Sewers (R1a)	Sewer Network	43.92	Ongoing
8.	Rehabilitation and up-gradation of Phase-I STP (182 MLD) (R2)	182 MLD Sewage Treatment	211.79	Ongoing
9.	Construction of 564 MLD (124 MGD) Waste Water Treatment Plant (WWTP) at Okhla	564 MLD Sewage Treatment	665.78	Ongoing

Rajasthan

S. No.	Name of the Project / Scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1	Environmental Improvement Plan for River Chambal at Kota	36 MLD Sewage Treatment	258.48	Ongoing

Himachal Pradesh

S. No.	Name of the project / scheme	STP Capacity to be created/ Sewerage Network to be laid	Project / Scheme Cost (in Rs. Cr.)	Status
1	Sewerage scheme for Zone II & III of Paonta Town in Tehsil PoantaSahib,DistrictSirmour, Himachal Pradesh[164]	1.72 MLD Sewage Treatment	11.57	Ongoing

[164]Annexure 8 List of Points

ANNEXURE-IV

Total 28 STPs (676.1 MLD) have been sanctioned by NMCG so far. Till date 3 STPs (140 MLD) have been completed and are under O&M; 5 STPs (93.5 MLD) are in trial run stage; 13 STPs having total capacity of 365.5 MLD are under construction and tender to be expedited for 7 STPs (77.1 MLD). Detail as mentioned below:

Sl.No.	City/Town	STP Capacity (in MLD)	Physical Progress in (%)	Remarks
STP Completed and under O&M				
1	Patna, Beur STP	43	100	
2	Patna, Karmalichak STP	37	100	
3	Patna, Saidpur STP	60	100	
STP Construction Completed and under Trial Run				
4	Patna, Pahari STP	60	99.6	O&M likely to start on November 2022
5	Barh I&D and STP	11	99.7	O&M likely to start on October 2022
6	Sonepur I&D and STP	3.5	99.9	O&M likely to start on October 2022
7	Sultanganj I&D and STP	10	99.6	O&M likely to start on October 2022
8	Naugachia I&D and STP	9	99.7	O&M likely to start on December 2022
Under Construction				
9	Patna, Digha STP and Sewerage Network	100	10.53	Expected date of completion Dec. 2024
10	Patna, Kankarbagh STP and Sewerage Network	50	5.98	Expected date of completion December 2024
11	Danapur I&D and STP	25	60	Expected date of completion December 2023
12	Maner I&D and STP	6.5	41.3	Expected date of completion December 2023
13	Fatuha I&D and STP	7	10	Expected date of completion December 2023
14	Bakhtiyarpur I&D and STP	10	77.5	Expected date of completion June 2023
15	Phulwarishariff I&D and STP	13	0	Expected date of completion December 2023
16	Mokama I&D and STP	8	91	Expected date of completion March 2023
17	Hajipur STP and Sewerage Network	22	67.35	Expected date of completion December 2023
18	Chhapra I&D and STP	32	83.2	Expected date of completion June 2023
19	Begusarai STP and Sewerage Network	17	65	Expected date of completion September 2023
20	Munger STP and Sewerage Network	30	39.15	Expected date of completion December 2023
21	Bhagalpur I&D and STP	45	4.5	Expected date of completion June 2024
Tender Stage				
22	**Dehri On Sone STP**	**21**		**AA&ES received on 01.12.2021**
23	**Ramnagar STP**	**9**		**AA&ES received on 12.09.2022**
24	**Supaul STP**	**12.1**		**AA&ES received on 07.09.2022**

25	**Narkatiyaganj**	**7**		**Recently sanctioned**
Revised AA to be Obtained				
25	Buxar STP	16		Proposal sent to NMCG
26	Barahiya STP	6		Proposal to be sent
27	Kahalgaon STP	6		Proposal sent to NMCG

Apart from STPs project, NMCG has sanctioned 5 separate sewerage network projects, out of which 01 project is completed. Incomplete 4 projects progress is being reviewed on regular basis and efforts are being made to complete these projects within time limit.

Sl. No.	City/Town	Network (in Km)	Physical Progress in (%)	Remarks
1	Beur Sewerage Network	180	99.74	Expected date of completion October 2022
2	Saidpur Sewerage Network	162	99.1	Expected date of completion October 2022
3	Pahari Sewerage Network Zone IV	92	100	Completed
4	Pahari Sewerage Network Zone V	116	95.23	Expected date of completion December 2022
5	Karmalichak Sewerage Network	96.5	94.75	Expected date of completion December 2022
Total Network (in km)		**646.5**		

After completion of these network projects, capacity utilization of STP will significantly increase.
In addition to above, DPRs for 23 towns (442.26 MLD) are under different stages, out of 23 towns, DPRs for 15 towns (189.51 MLD) have already been sent to NMCG for further process to obtain AA&ES from NMCG. The details of the same with expected timeline for completion of the project are as under;

Sl. No.	City/Town	STP Tentative Capacity (in MLD)	Timeline for completion of project	Remark
1	Saharsha	30.45	2.5 years after receipt of AA&ES	
2	Madhepura	10.73	2.5 years after receipt of AA&ES	
3	Kishanganj	19.97	2.5 years after receipt of AA&ES	
4	Daudnagar	10.1	2.5 years after receipt of AA&ES	
5	Raxaul	12	2.5 years after receipt of AA&ES	
6	Jamui	16.3	2.5 years after receipt of AA&ES	
7	Motihari	23	2.5 years after receipt of AA&ES	
8	Darbhanga	24.4	2.5 years after receipt of AA&ES	
9	Lakhisarai	21	2.5 years after receipt of AA&ES	
10	Bagaha	11	2.5 years after receipt of AA&ES	
11	Arwal	3.5	1.5 years after receipt of AA&ES	
12	Manihari	0.018	1.5 years after receipt of AA&ES	
13	Dighwara	0.024	1.5 years after receipt of AA&ES	
14	Teghra	0.026	1.5 years after receipt of AA&ES	
Total (MLD)		**182.51**		

The DPRs are under preparation for following 8 Towns:

Sl. No.	City/Town	STP Tentative Capacity (in MLD)	Timeline for Submission of DPR
1	Jogabani	4.25	November 2022
2	Gopalganj	11	September 2022
3	Samastipur	3.5	September 2022
4	Jamalpur	14	November 2022
5	Ara	50	December 2022
6	Gaya	110	November 2022
7	Bettiah	25	December 2022
8	Katihar	35	January 2023
Total (MLD)		**252.75**	

After receipt of AA&ES of these 8 proposed projects it will likely take 2 to 3 year time for its execution.

In addition to above projects, many STPs are under constructions which are under different funding:-

Sl. No.	City/Town	STP Capacity (in MLD)	Funding
1	Rajgir STP and Sewerage Network	10	GoB
2	Bodhgaya STP and Sewerage Network	10	GoB
3	Madhubani STP and Sewerage Network	15	GoB
4	Muzaffarpur I&D and STP	38	AMRUT
5	Muzaffarpur - II STP and Sewerage Network	15	SMART CITY
6	Biharshariff STP and Sewerage Network	25	SMART CITY
Total (MLD)		**113**	

Thus Total sewage treated capacity for are the mentions STPs comes to be 1224.36 MLD against estimated sewage generation of 1100 MLD and hence gap is zero."

PART-II

Observations and Recommendations

NAMAMI GANGE PROGRAMME- INTRODUCTION

1. **The Namami Gange Programme is a holistic initiative aimed at restoring the health of the Ganga River by ensuring its continuous flow, improving water quality, and maintaining its ecological integrity through an integrated river basin management approach involving multiple sectors and agencies. The programme includes pollution abatement measures, conservation of wetlands and biodiversity, and the promotion of river front development and public outreach to strengthen the connection between people and the river. Research, scientific mapping, real-time monitoring, and evidence-based policies and programs are also essential components of the programme, which can be broadly categorized into five areas: Nirmal Ganga, Aviral Ganga, Jan Ganga, Gyan Ganga, and Arth Ganga.**

2. **The Government of India under the River Ganga (Rejuvenation, Protection, and Management Authorities) Order 2016, dissolved the National Ganga River Basin Authority (NGRBA) and replaced it with the National Ganga Council, which has overall responsibility for preventing pollution and rejuvenating the River Ganga Basinwhich includes the Ganga River and its tributaries. The National Mission for Clean Ganga (NMCG) was established as a society in 2011[165] to implement the mandate of NGRBA, and was later converted into an Authority with the power to issue directives and exercise powers under the**

[165] www.nmcg.nic.in/about_nmcg

Environment Protection Act, 1986. The National Ganga Council, is responsible for implementing measures to prevent and control environmental pollution in the River Ganga, ensuring continuous flow of river water, and rejuvenating the river. The Environment Protection Act of 1986 has established a hierarchical organizational structure at the national, state, and district levels to prevent and control pollution in the River Ganga and ensuring its continuous flow. The National Ganga Council, chaired by the Prime Minister of India, and the Empowerment Task Force on River Ganga, chaired by the Union Minister of Jal Shakti, oversee the implementation of measures to achieve this goal.

3. **The National Mission for Clean Ganga (NMCG), headed by a Governing Council and Executive Committee led by the Director, is responsible for implementing the policies and programs of the National Ganga Council. At the state level, the Executing Agencies of the respective State Governments implement the program under different nomenclatures for their state units replicating NMCG, such as State Programme Management Groups (SPMGs) in Bihar and West Bengal, State Mission for Clean Ganga (SMCG) in Uttar Pradesh, and a nodal Cell within the State Government's Urban Development Department in Jharkhand. The NMCG is responsible for ensuring the implementation of this flagship program at the central level.**

<u>AUDIT FINDINGS</u>

4. In light of the limitations of the Ganga Action Plan highlighted in the C&AG's Report No. 5A (2000) and the subsequent recommendations made by the Public Accounts Committee (PAC), the Ministry submitted an Action Taken Note which was accepted by the PAC in March 2008. However, the MoWR, RD&GR requested the C&AG to conduct a 'Concurrent Audit' of NMCG in August 2015 and June 2016. Furthermore, the Hon'ble High Court of Uttarakhand issued several directions[166] on measures for prevention of pollution of the river in December 2016, and also sought a special audit by the C&AG of all the Centrally Financed Schemes launched to rejuvenate the River Ganga, as well as of the amounts spent by the State Governments for Rejuvenation of River Ganga. Considering the significance of the topic, the government's initiatives, the MoWR, RD&GR's request, and the judicial pronouncement, an audit was conducted to assess the performance of the Rejuvenation of River Ganga (Namami Gange). The C&AG identified several issues in the financial management of NMCG, including slow utilization of funds and significant amounts of unutilized funds as of 31 March 2017, which are discussed as under:

- **One of the major issues identified was the slow utilization of funds. The audit report revealed[167] that there were delays in utilizing the funds allocated in the Revised Estimates during 2014-15 to 2016-17. Only eight to 63**

[166] Page no 5 C&AG Report No 39 of 2017
[167] Executive summary of the Audit report No 39 of 2017

percent of the allocated funds were utilized during this period, and funds amounting to Rs. 2,133.76 crore, Rs. 422.13 crore, and Rs. 59.28 crore were lying unutilized with NMCG, various State Programme Management Groups, and Executing Agencies/Central Public Sector Undertakings, respectively, as of 31 March 2017.

- **The Audit report also highlighted that NMCG could not finalize the long-term Ganga River Basin Management Plan (GRBMP) even after more than six and a half years[168] of signing an agreement with the consortium of Indian Institutes of Technology[169]. As a result, NMCG does not have a river basin management plan even after a lapse of more than eight years of National Ganga River Basin Authority notification. Delay was also noticed in the approval of Detailed Project Reports (DPRs), and river conservation zones were not identified in the States of Uttar Pradesh, Bihar, Jharkhand, and West Bengal.**

- **Furthermore, the Audit report revealed delays in the execution of projects pertaining to Sewage Treatment Plants (STPs), Interception & Diversion projects, and Ghats and Crematoria works, which suffered due tonon-obtaining of requisite clearances. NMCG missed the target dates approved by the Cabinet, and the treatment capacity gap in 106 towns was 2,109 MLD, but STP projects having treatment capacity of 712 MLD were ongoing as of August 2017. The works in respect of 1,397 MLD were yet to be awarded.**

[168] Since signing of agreement in July 2010
[169] IITs at Mumbai, Delhi, Guwahati, Kanpur, Kharagpur, Chennai and Roorkee

- **In addition, except Uttarakhand, the other four States namely Bihar, Jharkhand, Uttar Pradesh, and West Bengal could not achieve the target of construction of 100 percent Individual Household Latrines as of 31 March 2017. Solid Liquid Waste Management activities were not taken up in any of the identified districts of these States, and there were discrepancies in the data reported under Management Information System and basic records maintained by Gram Panchayats in test-checked districts of Uttar Pradesh and Jharkhand.**

- **Regarding the conservation of flora and fauna and maintenance of ecological flow, the audit report revealed that no interventions for Agriculture and Urban Landscape were undertaken in the identified districts/divisions in Bihar and Jharkhand[170]. Non-identification of places of discontinuity of water flow due to engineered diversion or storage was also noted, and no remedial action was initiated. Furthermore, NMCG did not set up the National Project Facilitation Unit (NPFU) to act as a National Level Partner Organization for strengthening knowledge management and capacity building for conservation of riverscapes, despite the proposal made by Forest Research Institute, Dehradun (FRI). The scheme, Forestry Interventions for Ganga (FIG) was to be replicated on the tributaries of the Ganga, but NMCG did not initiate any plan**

[170] As per project schedule para 19 (DPR, Volume-I)

for replication and scaling up of planned efforts in additional sites/states.

EXAMINATION BY PAC

5. The vast scope and the significance of the matter, led the Public Accounts Committee (2022-23) to investigate further after its predecessor Committee (2021-22) had already looked into it. The Committee conducted a study visit to Kolkata and Berhampore in West Bengal from January 9th to 14th, 2021, followed by discussions with representatives from the Ministry of Jal Shakti on August 12th, 2021.

Since the subject matter was broad, the Committee held additional discussions with the Ministry of Jal Shakti, National Mission for Clean Ganga (NMCG), and representatives of the Government of West Bengal on November 22nd, 2021, to examine the initiatives' impact aimed at cleaning the River Ganga on its last stretch on land. A follow-up study visit to Kolkata and other locations was conducted from January 3rd to 8th, 2022, with discussions held with various stakeholders from the Ministry of Jal Shakti, and State Government representatives to assess the implementation of the Namami Gange Project in West Bengal.

On June 14th, 2022, the Committee took oral evidence from representatives of the West Bengal State Government to examine the progress of the Namami Gange Programme's implementation in the State. Furthermore, on September 22nd, 2022, the Committee evaluated the project's progress in the main riparian states of

Uttarakhand, Uttar Pradesh, Bihar, and West Bengal, along with representatives from the Ministry of Jal Shakti and NMCG. The Committee conducted a thorough analysis of the entire project based on data and informationobtained from the Administrative Ministry and the implementing agency of the riparian states, forarriving at reasoned conclusions.

The Committee's observations and recommendations on the subject are discussed in the following paragraphs, after examining the project's implementation in detail.

Absence of effective and long term action plan

6. The Committee recognize the extensive scope of the Namami Gange Project, a Central Sector Scheme approved in 2015, which includes various interventions to address pollution from sources such as municipal sewage, industrial effluents, municipal solid waste, and non-point sources of pollution, as well as measures to improve ecological flows, conserve bio-diversity, promote afforestation, enhance amenities and sanitation at riverbanks, build capacity, conduct research and monitoring, and raise public awareness. The Committee also acknowledge the different dimensions of the programme, namely Nirmal Ganga, Aviral Ganga, Jan Ganga, Gyan Ganga, and the recently added Arth Ganga.

In its written submission to the Committee, the Ministry of Jal Shakti disclosed that while the Union Government had approved Phase-I of the Namami Gange Mission in

2015[171] with an allocated budget of Rs. 20,000 crore for a five-year period, the actual implementation of the projects on the ground did not commence until 2016-17 due to a two-year planning period. The Committee note that the Union Cabinet approved the Namami Gange Mission-II on 19th January 2022, with a budget outlay of ₹22500 crore until 31st March 2026.

The Committee has taken note of the audit findings that, even after more than six and a half years aftersigning an agreement with a consortium of Indian Institutes of Technology, the National Mission for Clean Ganga has not been able to finalize long-term action plans. Consequently, the programme lacks a river basin management plan, even eight years after the National Ganga River Basin Authority Notification. During the Committee's discussion with representatives from the Ministry of Jal Shakti, it was revealed that the IIT Consortium had produced the Ganga River Basin Management Plan,[172] which was under implementation by NMCG, as per NGRBA notification dated 7.10.2016. However, the Committee note that the Ministry's response is silent on whether the GRBMP was circulated to different Ministries and Departments.

The Committee also recognize the importance of the long-term River Basin Management Plan in rejuvenating the River, and recommend that NMCG streamline and prioritize the objectives and interventions of the Namami Gange Project to achieve measurable outcomes. The Committee are concerned about the delay in project implementation and emphasize the need for completing

[171] Page 13 Background note from Ministry 14th June 2022 / Flag'C'
[172] Annexure -I Page 54 of 88 List of Points / Flag'F'

itwithin the designated timeline and budget. Moreover, the Committee find the absence of a long-term action plan for the National Mission for Clean Ganga alarming, and urge NMCG to prioritize the development of a comprehensive river basin management plan that can guide the project's implementation effectively. The plan should be shared with various Ministries and Departments, as well as the Administration of Riparian States for feedback and input to ensure that all stakeholders are on board, and it should set a definite timeline for cleaning the River Ganga and maintaining its cleanliness in subsequent phases of the Namami Gange Programme.

Inordinate delays in approval of Detailed Project Reports

7. According to the National Ganga River Basin Authority (NGRBA) framework, the National Mission for Clean Ganga (NMCG) must review Detailed Project Reports (DPRs) submitted by State Project Management Groups (SPMGs) within 60 days. Third-party evaluations are conducted during the review process, and NMCG either approves or sends the DPRs back to the SPMGs for modifications. However, during an audit of 154 DPRs, it was discovered that 54 DPRs had been pending at NMCG for 120 to 780 days, violating the prescribed timeline. The Committee note that this delay issue persists, with SPMG Uttar Pradesh blaming NMCG for the delays and NMCG partly attributing the delays to DPRs not being submitted in an appropriate format[173]. Upon reviewing NMCG's response

[173] Page 54 Verbatim Proceeding 22/09/2022 / Flag'P'

and considering the Audit findings, the Committee have observed a significant lapse in record maintenance within NMCG, particularly concerning the date of receipt and sanction of the DPRs. This lack of record-keeping is deemed entirely unacceptable, indicating a concerning disregard for maintaining crucial documentation. Furthermore, the Committee note that instead of addressing the issue directly, NMCG has attributed the problem to the inefficiency of the State Government Administration and State Programme Management groups responsible for implementing the Namami Gange Project in various States. The Committee having noted a concerning lapse in record maintenance at NMCG, particularly regarding the date of receipt and sanction of the DPRs, which they find utterly unacceptable, strongly recommend that NMCG take immediate and proactive steps to rectify the situation. Rather than blaming external factors, NMCG should take immediate action to address this issue directly. Suggested measures to enhance NMCG's efficiency, transparency, and successful execution of the Namami Gange Project include establishing comprehensive record-keeping protocols, conducting regular internal audits, providing staff training and capacity building, integrating technology for efficient record management, fostering collaboration with State Governments, instituting accountability mechanisms, and considering public reporting of relevant records. Additionally, the Committee strongly recommend that NMCG implements a standardized format for DPR submission, utilizing e-office for online flagging of pendency exceeding 60 days as mandated by the NGRBA

framework. Adherence to the NGRBA framework's prescribed timeline for DPR evaluation is also emphasized by the Committee. By implementing these measures and recommendations, NMCG can ensure streamlined processes and a more effective and timely execution of the Namami Gange Project.

Need for effective utilization of funds

(a) Allocation of funds

8. The Namami Gange Mission-I and II were approved by the Union Cabinet with a dedicated outlay of ₹20000 crores and ₹22500 crores, respectively, for the clean-up of River Ganga.[174] Despite the Government of India releasing funds to the tune of ₹13797.77 crores till 2022-23, the National Mission for Clean Ganga (NMCG) has only spent ₹13297.43 crores[175]. The Committee has noted the audit findings that a significant portion of the funds were unutilized or underutilized in the past, and the pace of implementation was relatively slow.

(b) Non submission of utilization certificate

9. The Committee has repeatedly raised concerns about the slow release of funds and delays in the submission of utilization certificates by State Programme Management

[174] Background note from Ministry of Jal Shakti 14th June, 2022
[175] Para 20 of the narration portion

Groups (SPMGs). To ensure effective utilization of funds, NMCG has taken steps such as constituting Budget Review and Audit Review Committees, streamlining the submission of utilization certificates, and introducing Monthly Expenditure Reports from all SPMGs. However, the Committee note that some SPMGs did not conduct their Internal Audit as per the prescribed frequency during 2014-17, and the SPMGs of Bihar and Uttarakhand did not conduct the Internal Audit. The Committee therefore recommend that NMCG and all SPMGs should ensure frequent and regular discussions about the Budget Review Committees and Internal Audits to achieve prudent financial management.

The Committee recommend that NMCG should vigorously pursue withSPMGsthe matter ofeffective utilization of funds and obtain conclusive proof of the River having been cleaned over different stretches.

The Committee observe that the work done under the Namami Gange Programme is not proportionate to the funds released by NMCG as given in the succeeding paragraphs.

The Committee note that an amount of ₹15930.02 crores has been the Budget Estimate till 31st July 2021, with an amount of ₹ 10071.86 being the Revised Estimate for the period. Against this, an amount of ₹ 10160.34 has been the expenditure by NMCG, which indicates that almost the entire fund has been released by NMCG. Rounding of Rs. 843.19 crore and Rs. 53.36 crore might have been done to Rs. 843.2 crore and Rs. 53.4 crore. In view of the under utilisation of the funds by SPMGs and the ritual release of funds by NMCG, without properly examining the reasons

for under-utilisation of funds by SPMGs, the Committee are forced to conclude that efforts are needed on part of the State Programme Management Groups, in addition to NMCG, to effectively implement the programme. Although the Committee note that it is because of the repeated queries of the Committee that the submission of utilisation certificates of the various interventional projects were now streamlined, the Committee would still like to recommend that efforts should be made by the NMCG to ensure the effective and proper utilization of the amount released to the States. Bereft of any clinching proof of the River Ganga having been cleaned as envisaged, the veracity of the Utilisation Certificates is questionable and amount of funds released may have resulted in the expenditure being infructuous. The Committee would, therefore, like to recommend that NMCG should release the subsequent amount of funds, only after assuring itself of the actual work done and proportionate increase in cleaning up of the River Ganga.

(c) Wasteful expenditure on advertising

10. The Committee note that a significant amount of funds have been spent on promoting the Namami Gange Mission Programme, yet the impact on the ground has not been commensurate, particularly in terms of public participation. Despite efforts to publicize the inauguration of STPs etc. through advertising, the desired effect of engaging the

public in cleaning the RiverGanga does not seem to have been achieved. Therefore, the Committee recommend that the Ministry evaluate the expenditure on advertising and ensure that it effectively raises public awareness and participation in the Ganga cleaning initiative before issuing any further advertisements. This would not only help reduce the expenditure onadvertising but also make it more cost-effective. The Committee believe that it is important to be transparent about the amount of public money spent on advertising and the outcomes achieved, and therefore recommend a review of the yearly advertising expenditure and its intended and actual impact to be conducted.

(d)Clean Ganga Fund

11. The Committee havetaken note of the establishment of the Clean Ganga Fund (CGF) to raise contributions from the public, residents, Non-Resident Indians (NRIs), Persons of Indian Origin (PIOs), and others to finance various activities related to Ganga Rejuvenation. A Trust was created in 2015[176] under the Chairmanship of Union Finance Minister to operationalize CGF. However, the Committee also note the Audit finding that a corpus of Rs 198.14 crores[177] was lying unutilized in banks due to non-finalisation of the action plan by the Trust. Additionally, there was a delay in investment in the interest-earning instrument of the CGF, resulting in the loss of Rs 2.04 crores on interest.

[176]Page 13 Background Note 14th June 2022 / Flag'C'

[177]Para 2.6.1 Idling of Funds Page 17 /CAG report/ Flag'A'

The Committee note the audit findings that no amount of fund was used from the CGF till 2017 and the main reason for this is attributed to not holding the meetings of the Clean Ganga Fund Board of Trustees. However, the persistent probing by the Committee during the course of examination of the subject, had yielded results with the Committee being informed that as on 31st August 2022, the CGF has a total contribution including accumulated interest of Rs 615.58 crores.[178] The Committee also note that the fund lying idle has accumulated an interest of Rs 88.47 crores. Out of a total corpus fund of Rs 615.58 crores, the Committee note that the projects worth Rs 398.85 crores mainly in the areas of afforestation, *in-situ*bioremediation and Ghat Works/River Front Development (RFD) were being undertaken. The Committee find no plausible reason for a delay in the start of the project sanctioned out of the CGF. Further, the Committee note that out of a total release of Rs 173.23 crores from the sanctioned amount of Rs 398.85 crores[179] of CGF, only an amount of Rs 160.87 crores were actually spent till 31st August 2022. Thus, it is clear that there was considerable delay in expending from CGF and only after repeated questioning by the Committee could the Ministry come up for spending of nearly 25% of the total corpus of CGF, seven years after it was set up. The Committee note the indicative list of activities permitted under Clean Ganga Fund, which include setting up of waste treatment and

[178] Background note from Ministry 14th June 2022 / Flag'C'
[179] Page 15 background Note from Ministry / Flag'D'

disposal plants, control of non-point pollution and any other activity permitted by the Governing Council[180]. The Committee fail to understand that with such a wide range of activities permitted under CGF, the reasons attributed for delays and sanctioning limited number of projects by the Ministry is baffling. The interest generated on the major portion of Clean Ganga Fund lying idle is reflective ofthe ineffective utilisation of the fund and the Committee recommend the Ministry of Jal Shakti and NMCG to ensure proper utilisation of Clean Ganga Fund.

The Committee also note that the Clean Ganga Fund (CGF),though intended to garner funds from philanthropists especially from abroad, has not been able to generate much interest, if the contributions from abroad are counted *vis-à-vis* the contributions made by PSUs.[181] Instead of finding ways to generate interest from philanthropists and funds from abroad the Committee find that PSUs have, in a way, been made an alternative route for contributing to the Fund in a major way. The Committee observe that the Clean Ganga Fund was envisaged with a two pronged objective of generating public interest and soliciting contributions from the philanthropists. However, the Ministry of Jal Shakti and NMCG have apparently ignored the basic objectives of the setting up of the Clean Ganga Fund. Given theculturalimportance ascribed to River Ganga, the Committee would like to make a suggestive recommendation that Ministry and NMCG should explore ways to garner public interest in cleaning of River Ganga and alsoutilise the opportunity to solicit funds

[180] Page 14 Background Note 14th June 2022 / Flag'C'
[181] Page 14 background Note from Ministry / Flag'D'

from members of public. This way, there would be a greater feel of attachment to the cause of cleaning and rejuvenating Ganga would be generated from the public.

Major interventions under the Programme

12. The Committee note that the main thrust of the Pollution abatement programmes under Nirmal Ganga dimension of the Namami Gange Project mainly pertain to Sewerage infrastructure, rural sanitation, industrial pollution abatement and modernization of ghats and crematoriums, afforestation and medicinal plantations.

The Committee also note that serious gaps are still present in the sewerage treatment capacity in the main Ganga stem itself. The Committee note that about 3603 million litres per day (MLD) of sewage is generated by 97 towns situated on the main stem of the Ganga River based on the projected population for year 2035. As against this only about 2100 MLD is treated at present and the rest of untreated sewage goes directly into the river. The Committee note the submission of the Ministry that the NMCG along with State Programme Management Groups have sanctioned 169 sewerage infrastructure projects for development of sewerage infrastructure to provide a total treatment capacity of 5175.87 MLD and laying of sewerage network of 5159.84 km[182]. While these figures are encouraging, the Committee are also concerned about the quality of water being released from these STPs. In the

[182] Table given in the Para 119 of the Narration.

absence of proper treatment of sewerage liquid, the Committee are apprehensive that these STPs will simply be reduced to "divergent channels" routing sewerage discharge.

The Committee note with concern that out of a total 2706 industries presently classified as Grossly Polluting Industrial Units causing discharge of pollutants in main stem of River Ganga in five States, 332 have been found to be temporarily closed while 144 were found to be permanently closed and 463 are still not complying with norms.[183] The Committee are also concerned that about 280.17 MLD (Million Litres per Day) of effluents are being discharged into the river Ganga main stem having biological oxygen demand (BoD) load of 9.68 tons per day as per CPCB report in 2020-21.

It was also observed with satisfaction by the Committee that the inventorisation of the Grossly Polluting Industries has increased as against the Grossly Polluting Units identified by Audit in their 2017 Report. However, the Committee note that the Ministry of Jal Shakti and CPCB are following a very strict definition of Grossly Polluting Industries, as industries, which are discharging wastewater more than 100 KLD and 100 hazardous chemicals as per *Schedule I, Part II of the Manufacture, Storage and Import of Hazardous Chemicals Rules of 1989 under Environment (Protection) Act, 1986.* The Committee also note that nearly 90 percent of Grossly Polluting Industries (GPIs), by the above definition are marked in the State of Uttar Pradesh. Industrial waste accounts for nearly 50 percent of the total discharge of wastewater in River Ganga, which

[183] Page 23 of background Note ministry 14th June 2022 / Flag'C'

therefore compel the Committee to observe that the key to cleaning Ganga River lies mainly in the State of Uttar Pradesh. Along with the above, Audit has, in their comparative study of water quality in selected towns along the river Ganga during 2012-13 and 2016-17, noted that in six cities of U.P., Bihar and West Bengal, the dissolved oxygen (DO) has declined from 2012-13 levels. During 2016-17, Total Coliform levels in all the cities of Uttar Pradesh, Bihar and West Bengal was very high. The Committee feel that water quality in River Ganga in West Bengal presents a bleak picture of the result of the intervention to clean and rejuvenate the river.

Delays in implementation of the Project

13. The Committee note that several Courts of law /Tribunals have pulled up the NMCG for delays not only in planning stage but in the implementation stage of the flagship scheme of Namami Gange as well. The Committee have also come to know that the identification and enlisting of the source of pollutants entering the River Ganga at many places, is not yet comprehensive, whichcompel the Committee to recommend the NMCG to document the complete identification and enlisting of source of pollutants entering River Ganga at all places. The Committee also recommend NMCG to expedite the implementation process as the flagship progamme was launched in year 2014 and more than Rs. 11000 crores have already been released, but with no visible difference

or irrefutable and clinching evidence of the River Ganga being cleaned. The Committee are surprised by the Ministry of Jal Shakti's claim that all projects will be completed under the River Basin Management Plan, despite the submission made earlier that Namami Gange projects are taking approximately 36 months to complete and the delays that have been questioned by various Tribunals and Courts. The NMCG has assured the Committee that the remaining projects will be completed by 2024[184], but this contradicts the Ministry's earlier written submission informing that the projects will be completed by 2023[185]. The Committee find these frequent changes in timelines are reflective of lack of commitment towards implementation. It is concerning to note that the Ministry and NMCG have not demonstrated a graphic reduction in pollution load at different intervals of time, as they should have. To address this issue, the Committee recommend that the Ministry of Jal Shakti and NMCG provide a detailed and transparent timeline of all projects under the River Basin Management Plan, including the expected timeframes for completion and milestones to be achieved. The timelinesshould also include a plan for reducing pollution load at specific intervals and should be regularly updated and reported to the Committee. The Committee believe that this will enable them to better monitor progress and hold the Ministry and NMCG accountable for meeting their commitments. Furthermore, the Committee suggest that the Ministry and NMCG undertake a thorough review of their project management processes to identify

[184] Page 21 of the Verbatim proceeding 22/09/2022 also at page 33 ibid / Flag'P'
[185] Point 3 Page 2 of 88 List of points

any inefficiency and take corrective action to ensure timely completion of projects.

Sewerage Infrastructure Projects

14. The Committee observe that the current overseeing body responsible for the cleaning and rejuvenation of River Ganga seemsto be focussingsolely on the number of Sewerage Treatment Projects completed and sanctioned, with little regard for the crucial aspect of the treated water quality being released from these STPs. Consequently, this has led to the unfortunate situation of STPs becoming mere conduits for rerouting waste water back into the River. According to the data provided, out of the 169 sanctioned Sewerage Treatment Plants, only 98 projects were completed by August 2022. These completed projects have a collective capacity to treat 5175 MLD (Million Liters per Day) of waste water when fully functional. However, as per the information furnished, as of August 2022[186], only 973 MLD capacity of waste water was being treated through 73 operational treatment plants[187]. Furthermore, the Committee has been informed about the future plans for additional STPs. Fifty-two projects are scheduled for implementation between 2023 and 2025, aiming to treat 2094 MLD of waste water. Additionally, there are 44 ongoing projects aimed at treating 2109 MLD of waste water. Given the current scenario and the urgency of the

[186] Verbatim proceeding page 21 and 22 , date 22/09/2022 / Flag'P'
[187] Table given in the Para 119 of the Narration

matter, the Committee strongly recommend that immediate and comprehensive efforts be made to complete the installation and operationalization of the remaining STPs. These remaining projects are essential to effectively manage the waste water flowing into the River Ganga. To ensure timely execution of the projects, the Committee urge the Ministry to view any delays in the project execution seriously. In case of delays, the Committee recommend seeking intervention from higher levels to expedite the work. The Committee would like to be kept informed about the progress of these projects on a state-wise basis within the next six months. This report needs toinclude details on any cost and time overruns that may have occurred, as well as any revised timelines for completion, if applicable.

As regards the quality of treated wastewater being released in the River Ganga after STP treatment, the Committee feel that a regular and systematic study of the impact of STPson effluents in the Ganga River be carried out to assess the quality of wastewater getting discharged in the River Ganga. The Committee note that there have been no notable efforts by the State Programme Management Group or NMCG to check and assess the quality of STPs and released water by involving independent third party agencies working in the area of environmental technology etc.[188] The Committee, therefore, recommend that hefty environmental compensation be imposed on such officials who certify and approve a faulty STP discharging untreated and/or partially treated

[188]Page 3 Verbatim Dy. C&AG 22/09/2022/ Flag'P'

wastewater in the River Ganga along with the contractors responsible.

Perspectives of Riparian States

15. During the course of their examination of the subject, the Committee proceeded to examine the performance of the respective State Governments on the subject, since the project implementation in the States concerned present a final picture of the success of the Namami Gange Programme. The Committee also note that the period of their examination of the Programme was marked with the onset of the world wide pandemic COVID-19 and the nationwide lockdown in wake of the Pandemic.

The Committee acknowledge that the cleaning and rejuvenation of the River Ganga is a massive task that presents unique challenges and requires tailor-made solutions in each state due to their varying geological, geographical, and socio-cultural characteristics. To better understand the progress made in the main riparian states where the River Ganga flows, the Committee had conducted discussions with the SPMGs of Uttarakhand, Uttar Pradesh, Bihar, and West Bengal. The Committee have examined the unique challenges faced by each State and made specific suggestions and observationsfor addressing these challenges, taking into account the geological, geographical and socio-cultural characteristicsspecific to each State. The Committee

present their findings on the efforts made by the SPMGs in these states, along with their perspective, in the following sections:

SPMG Uttarakhand

16. The Committee note with an element of surprise, the submission made by the representative of the Ministry of Jal Shakti that the total sewerage generation in the State of Uttarakhand is assessed to be around 329 MLD, whereas the existing capacity that is created is 397MLD.[189]The Committee also take note of the submission of the Ministry of Jal Shakti that already there is more capacity created to treat sewerage than what is being generated in the State, and that the Ministry would declare that no untreated water is going into the river, subsequent to the completion of few more projects.

The Committee also note in this regard that the ground reality is far from the truth. As per the C&AG Report, out of 180 defaulting industries in Uttarakhand, to whom show cause notices were issued, in 109 cases, the show cause notices were revoked.[190] The Committee also note that as per the admission of the State Government of Uttarakhand, out of 8921 industries operating in the state of Uttarakhand, only 5284 industries are running with valid consent of the authority (CTO-Consent To Operate)[191]. The Committee are also not oblivious to the oft-reported matter of collusion and nexus of illegal industries operating

[189]Page 23 Verbatim 22/09/2022/ Flag'P'
[190]Page 24 Verbatim SPCB, Uttarakhand 22/09/2022/ Flag'P'
[191] Para 106 of the Narration

especially during night times. The Committee while taking into consideration the submission of the State Government of Uttarakhand of a third party inspection report, note that not only the High Court of Uttarakhand, but the National Green Tribunal also has, time and again, reminded that even after monitoring and spending crores of rupees, nearly 50% of the untreated sewage and substantial industrial effluents are still continuing to be discharged in the river, in the absence of a requisite functional treatment capacity. The Committee also note that as per CPCB Report, nine most polluted river stretches in river Ganga arein the State of Uttarakhand, which belies and makes questionable, the claim declaring that sufficient number of treatment plants have already been set up in the State of Uttarakhand. The visible sights of heaps of garbage and waste water going into River Ganga, the oft- reported illegal constructions of hotels and Ashrams on the banks of the River, also stand in contradictionto what is being claimed. Further, in light of contradictory observation of the National Green Tribunal, and CPCB report about most polluted river stretchesbeing in Uttarakhand, the Committee find it hard to agree with the claims made about the STP Plants in the State being adequate.

17. While the Committee is appreciative of the efforts of the State Government of Uttarakhand towards construction of Sewage Treatment Plants (STPs) and Effluent treatment Plants (ETPs) they also note that the State Government has not been able to realize the environment compensation to

the tune of Rs. 40 crore imposed on industries etc.[192] The Committee also note that no notable efforts seem to be made by the State of Uttarakhand to realize the said amount. The Committee, therefore, feel that not only hefty financial compensation needs to be imposed on the defaulters, but efforts be made to realize the environment compensation., The Committee also desire that the Ministry take appropriate action in the matter , and furnish a detailed report pertaining to all riparian States on the imposition of penalty detailing inter alia the provisions of the Acts under which the penalty has been imposed and action taken against defaulting industries along with fines /challans realized.

18. As for the number of Sewage Treatment Plants being finalized in the State of Uttarakhand is concerned, the Committee recommend that all efforts be made to complete the construction of the required numbers of STPs. However, at the same time, the Committee alsonote that it is known that at several locations in the State, the treatment facilities established are not fully functional. The Committee find this unacceptable and observe that although substantial funds are already being provided by NMCG, yet it is not yielding the desired result. The Committee also find that although the flagship programme has been approved by the Government in June, 2014, yet in case of the State Government of Uttarakhand, the timeline is being changed. The Committee recommend that utmost commitment to any timeline be fixed, demonstrated and the timelines for completion of construction and operation of

[192]Page 26 Verbatim 22/09/2022/ Flag'P'

treatment plants should be strictly adhered to. The Committee expect appropriate action to the be taken by the Central Ministry in this regard.

Illegal mining in the State of Uttarakhand along the River

19. The Committee also take note of reports of several cases of illegal mining going on rampantly in the State of Uttarakhand. The Committee were surprised to note the reportedsharp increase in the quantum of illegal mining in the State and intend to place on record that no plausible explanation has been given for the sudden and sharp increase in the number of cases of illegal sand mining along the river Ganga in the State. The Committee also find it surprising to note that the State Government's explanation, attributes the increase in illegal mining to the findings reported by the Quick Response Team or the Special Task Force. The said response appears to be weak and raises concerns about the efficiency of the state administration in addressing the issue. The Committee therefore recommend a thorough review of the Quick Response Team and Special Task Force's activities to identify possible gaps that may be enabling illegal mining. The Committee also take note of the apparent non-serious attitude of the State Administration towardsdirect exploitationof riverbeds. The Committee apprehend that large scale incessant mining of Riverbed along River Ganga and its tributaries in the State of Uttarakhand may eventually invite floods, including flash floods along the

River Ganga & its tributaries. The Committee note that scooping up of Riverbed along the River Ganga is a serious environmental concern. The Committee do not find the replies of the Uttarakhand administration on the issue of criminal proceedings initiated against illegal mining along River Ganga in the State to be satisfactory.

The Committee further note that activities relating to sand mining have been considered as "de-criminalised" by the State Government, which has also gone on appeal before Supreme Court of India against the directions issued by Uttarakhand High Court in the matter in Writ Petition No. 140 of 2015.

To address this issue, the Committee suggest, formulation of a suitable mining policy and rules in compliance with the Mines and Minerals (Development and Regulation) Act, 1957, as amended and putting the Poicy in place. The policy should be based on competitive bidding, ensuring fairness and balance, and must consider the environmental impact of mining in the region. In addition, the Committee recommend the State Administration to take legal action against those involved in illegal sand mining as per established laws. The Committee also propose conducting inspections by the Ministry of Jal Shakti & Central Pollution Control Board which would eventually support these criminal proceedings. The Committee further suggest that the Ministry of Jal Shakti& Central Pollution Control Board should enforce relevant sections of the MMDR Act and other applicable laws to address the issue of illegal sand mining effectively. To tackle these illegal acts consistently, the NMCG should consider assisting the

State Administration in establishing a high-level permanent panel in Uttarakhand, accountable for formulating and implementing policies related to River Bed Mining. This measure, the Committee feel, will help address any delays in policy implementation.

The Committee has taken note of the audit findings from 2017 regarding the operation of 44 industries along the River Gangathat were served closure notices[193] by the Uttarakhand Pollution Control Board. The audit found that out of a sample size of 13 units, 9 were still operating despite the notices. This leads the Committee to conclude that the implementing agencies have not been conducting themselvesconducivelyin these cases. The State Government of Uttarakhand apparently lacks transparency in monitoring, and ensuring accountability in checking the discharge of severe and toxic pollutants from industries into the River Ganga. Thus, the Committee have reason to question the correctness of the submissions of the NMCG and the State administrative machinery in Uttarakhand. The Committee have also noted frequent reports of illegal industrial units operating along the banks of the River Ganga and the indifferent attitude of the State administration contributing to the growth of such activities. The Committee believe that without a responsive State administration, it is hard to expect fundamental change in the cleaning and rejuvenation of the River Ganga. Therefore, the Committee recommend that the State Government assess the environmental damage caused by

[193] Page 82 CAG report/ Flag'A'

all polluting industries in the State, publicly disclose the details of polluting units, establish online platforms to solicit public participation and awareness, and appreciate and incentivize the reporting of illegal operation of polluting industrial units.The Ministry of Jal Shakti needs to hand-hold the State in this exercise.

SPMG - Uttar Pradesh

20. As regards the implementation of the Namami Gange Programme in the State of Uttar Pradesh, the Committee note that this assumes significance as the State of Uttar Pradesh is perceived to be the most significant contributor to the River Pollution. Further, the Committee note that the River Ganga has the largest stretch of more than 1000 kms in Uttar Pradesh. The Committee note that there have been cost overruns in approximately 27 projects out of a total of 114 STPs[194] installed in the State and since all the projects in the State of Uttar Pradesh are planned by NMCG, the delay and subsequent cost overrun should logicallyalso be ascribed to NMCG. This, the Committee note, is corroborated by the deposition of the State Government representative before the Committee. The Committee express their concern over the tardy progress and undue delays in the implementation of the project Namami Gange in the State of Uttar Pradesh. The Committee also feel that it is not just an aberration that cost overrun and delays have been reported from the State of Uttar Pradesh, but have shown a consistent trend in the entire Namami Gange Programme. The Committee note that NMCG and the Ministry of Jal Shakti have been

[194]Page 48 verbatim 22/09/2022 / Flag'P'

lackadaisical in the implementation of this flagship programme and there has been lack of coordination between NMCG and various State Programme Management Groups especially the State Mission for Clean Ganga in Uttar Pradesh. However, the Committee cannot help but observe that the renewed vigour of the department in committing itself to complete the projects as per schedule, which needs to be appreciated. At the same time, the Committee would like to stress upon the fact that there have been serious doubts cast over these claims, one of which is the test check by Audit at a few places. There have been numerous reports of River Ganga becoming more polluted than ever, which lead the Committee to infer that there has been visible lack of seriousness on the part of the statutory authorities implementing the flagship programme especially in the State of Uttar Pradesh. The Committee observe that there is neither any shortage of financial resources nor any provisions to equip the agency implementing the work with necessary and relevant powers and therefore, cannot help concluding that the willingness and seriousness in implementing the programme seems to be lacking. The Committee recommend that the above short comings should be noted by the Ministry and, in turn, the Ministry should take up the matter with the State Government in right earnest with the eventual aim of fixing accountability at all levels of the State Programme Management Group and the officials or persons responsiblefor the delays and resultant cost overrun be identified. The corrective action

so taken be intimated to the Committee by the Ministry of Jal Shakti at the earliest.

21. The Committee also note that Pollution Control Board monitors the level of pollution at several places in major cities in River Ganga and there have been district level Committees to monitor at various other places. The Committee would like to recommend that the number of places being monitored along the River Ganga in the State of Uttar Pradesh be increased as the River is densely populated along its longest stretch in the State. The Committee further recommend that all monitoring along the River Ganga be turned into real time water quality monitoring, which the Committee feel, if implemented, can enhance quality monitoring of River Ganga, and facilitate pollution control. The Committee feel that the real progress in case of rejuvenation of the River Ganga can be gauged by way of real time water quality monitoring as well as bio-testing of the River Water at various places.

22. The Committee during the course of their examination of the subject, learnt that at several places where the Pollution Control Board, Uttar Pradesh is not monitoring the water quality, there are district level Committees under the supervision of District Magistrates (DMs) of the district monitoring the same. The Committee have been apprised that the District Ganga Committees under the DMs areresponsible for the implementation of the various programmes under the Namami Gange Programme at the district level. As such, it can be understood by anyone that the water quality monitoring system, monitored by State Pollution Control Boards, which is an indicator of the

results of the efforts made under Namami Gange,may not be carried out accurately, when the Authority concerned with the monitoring is different, that is, the District Administration. The Committee feel that the Ministry needstogive specific directions to the State Government for monitoring of the water quality at the district level in all 75 districts in Uttar Pradesh only through Online and Real Time Monitoring Systems supplemented and verified by frequent, regular and surprise inspections in all the areas earmarked by State Mission for Clean Ganga. NGOs need to participate in this endeavour on a large scale and evaluation by independent agencies as well as by CPCB teams also needs to be done on regular intervals. This, the Committee feel, will ensure real time and accurate assessment of Water quality in the State. The Committee also recommend that inputs from private Organisations, and NGOs like Sankat Mochan Foundation etc. taking initiatives in the area of monitoring the water quality in the State at various places with alerts and inputs from social media be taken into consideration to monitor the quality of water in River Ganga. Also, the data of CPCB, State Pollution Control Boards and NGO's should be considered to arrive at the most accurate assessment of pollution levels in River Ganga.

23. The Committee noticed that the reports of the Special Environment Surveillance Task Force at the District level are not accessible to the public. They suggest uploading these reports on the State Pollution Control Boards'

website for better public participation. Additionally, theCommittee desire that details about the Surveillance Task Force, the number of inspections, and the inspection reports of the last two years of all riparian States along the main Stem of River Ganga be shared with them.

24. During the examination of the subject and the impact assessment of the anthropogenic activities near the River Ganga in the State of Uttar Pradesh, the Committee had been informed that the State of Uttar Pradesh was declared open defecation free (ODF) under the Swachh Bharat Mission. This appreciable development notwithstanding, when enquired further, the Committee havenoted that there is a major digression from the "parameters"in declaring the State as "ODF" on Paper under the Swachh Bharat Mission. The Committee also take note of the findings of the Audit in this regard, wherein they have revealed that despite shortcomings in the number of IHHLs made, the State proceeded with making the declaration.The Committee also note the Audit findings that the verification process in ODF under SBM-I was completed in 108 villages, but the State declared 1022 villages as ODF without verification. The Committee cannot help but take note of the recent remarks of High Court of Judicature at Allahabad (Prayagraj) in this context, where the Court had expressed displeasure over the claims of Government Departments on making the River Ganga Pollution free in Uttar Pradesh and had recorded that the NMCG was not stating the facts correctly and that there had been little effective efforts to clean the

river. The Committee are not oblivious to the various media reports which have cited incidents of people relieving themselves in the open. The Committee also note that SPMG possesses the list of villages along the River Ganga stretch in UP, which are said to be causing a rise in the Coliform levels in the river. The Committee, therefore, are of the view that the status of ODF especially in the case of Uttar Pradesh is questionable and the ground reality may be different. The Committee also feel it appropriate to draw attention to the observations of the Allahabad High Court in the recent Public Interest Litigation case pertaining to river pollution in Uttar Pradesh that there is visible lack of seriousness on the part of the State administration with regard to cleaning the river Ganga. The Committee, therefore, recommend that constant vigil, public awareness, adequate and realistic construction of IHHLs, and third party monitoring at regular intervals is required to bring out the real facts to light. The Committee would like to recommend to the Ministry of Jal Shakti, Department of Drinking Water and Sanitation, as well as Ministry of Housing and Urban Affairs to get the real assessment of ODF status of the State reviewed and report the same to the Committee. Considering the facts, the Committee recommend that steps be taken to bring out the real picture on the ground which may possibly be different and carry out vigorous public awareness campaigns with a view to achieving the targets in real terms.

25. The Committee acknowledge the ongoing Public Interest Litigation (PIL) No. 4003 of 2006[195] in the High Court of Judicature at Allahabad, which concerns Ganga Pollution vs State of Uttar Pradesh and others. While the matter is sub-judice, it has brought to light certain crucial issues that have been commented on by the Court of Law. The Committee note the following significant points from the Court's observations: (i) There is a dispute regarding the accuracy of pollution indicators at various locations in River Ganga; (ii) When the effluent entering the Sewage Treatment Plants (STPs) exceeds the capacity, the State Government tends to relax the parameters for discharging treated water; (iii) There is a lack of experts to supervise the implementation of Namami Gange - the functioning of the effluent treatment plants established by different authorities in the State is supervised by Jal Nigam, which lacks any expert team for water treatment, especially for sewerage effluent; (iv) Under the Court's directions, IIT Kanpur and IIT BHU tested water samples and presented their reports to the Court. The Committee find these observations to be of utmost importance, and recommend that the Ministry should leave no stone unturned to impress upon the State Government to take swift action to address these issues and thereby ensure the effective implementation of Namami Gange.

26. The Committee observe that in the State of Uttar Pradesh, the parameters for the discharge of treated water are being relaxed, if the effluents are more than the capacity of STP. The Committee note that if the "claim"

[195] Verbatim proceeding 22/09/2022/ Flag'P'

about untreated or partially treated effluents being released into the RiverGanga, is true, the situation that emerges contradicts the submissions made before the Committee. The representative of the State Government of Uttar Pradesh had stated that the required capacity Sewage Treatment Plants (STPs) were already installed in the State, with further plans to install 32 STPs to bridge the gap of 1000 MLD.[196]. The Committee also note that in the entire State of Uttar Pradesh, there is no expert team for water treatment, especially the sewerage effluents. The Committee are, therefore, constrained to observe that the entire operation and mission of cleaning and rejunevating River Ganga may not be being implemented effectively. The Committee therefore recommend that NMCG should first endeavour to see that there are expert teams in various authorities not only in the State of Uttar Pradesh but in all riparian States of main stem of River Ganga, for supervision of the functioning of the effluent treatment plants. The Committee also recommend that a detailed note on the same incorporating *interalia* the availability of experts in the States for water treatment and sewerage effluents should be prepared by the NMCG within three months of this report and submit the same to the Committee along with the action taken.

27. The Committee notes a significant oversight during the planning stage, resulting in Sewage Treatment Plants (STPs) set up in different cities of Uttar Pradesh not meeting the required capacity. The Committee

[196]Page 11 of 106 Background Note from State of UP/ Flag'W'

acknowledges the State Government of Uttar Pradesh's acceptance of gaps in Sewage Treatment and generation, particularly in Prayagraj[197]. Consequently, the Committee wish to highlight the existing gaps between sewage generation and treatment throughout the State of Uttar Pradesh. These gaps present an opportunity for authorities to potentially permit or relax the parameters required for effluent and sewage treatment, ultimately undermining the entire effort of cleaning and rejuvenating the River Ganga. The Committee also note in this regard, the Court's observation that the transitional population in the city of Prayagraj was not considered in the planning process for treatment. Therefore, the Committee recommend that the NMCG (National Mission for Clean Ganga) and the State Mission for Clean Ganga (SMCG) in Uttar Pradesh reevaluate the entire planning strategy for the cleaning and rejuvenation of River Ganga in the State. This reassessment should include a thorough examination of the permissions granted to relax parameters for effluent and sewage treatment discharges into the River Ganga.

28. The Committee note that several untapped drains are still discharging into the River, with no action being taken for any kind of intervention so far. The Committee would also like to know the reasons for the delay in identifying the drains discharging into the River Ganga, the exercise of which should have ideally been completed at the planning stage itself. The Committee would also like to recommend assigning identifiable and achievable targets for intervention to address the issue of open drains directly discharging into the River Ganga at various

[197]Page 56-57 Verbatim 22/09/2022/ Flag'P'

locations. The Committee desire that these targets be communicated to them .

29.. The Committee note the silence maintained by the State Administration when posed with the question of instances of polluting industries operating in the night, the severe polluting discharges from the various industries and diversion of the ETPs during night time and release of toxic waste discharge in the River. The Committee also note that Directions under Section 5 of the Environment Protection Act have been issued from time to time to the Industries concerned, but no stringent action is possibly being taken, thereby adding to the industrial pollution in Uttar Pradesh. The Committee recommend that the allegations being made aboutindustrial units operating in collusion with the Authorities concerned of the State of Uttar Pradesh be investigated. . The Committee would like to recommend that accountability be fixed at the highest level in the Pollution Control Board of the State of Uttar Pradesh for the inaction and the continued operation of the polluting industrial units, if the allegations are proved to be correct. The Committee would like to know the details of the action taken in this regard along with the nature of accountability fixed on the officials of the Pollution Control Board of the State in this regard.

30. The Committee would also like to observe here that apparently there is lack of monitoring by the authorities concerned. Examples of the several untapped drains discharging into River Ganga at several places in Varanasi and Kanpur stretch are abound. The Committee note that

Kathal drain at Ballia, Uttar Pradesh is alone responsible for more than 500 MLD of sewage discharge into the River Ganga as late as the post monsoon period of the year 2020 as per CPCB data. The Committee not only recommend that all major and minor drains including seasonal drains discharging into the River Ganga in the State of Uttar Pradesh be identified and enlisted as early as possible, but also necessary interventional action be taken to check, divert, reduce, restrict and treat the waste water discharge from these drains. The Committee wish to be apprised of the action taken in this regard at the earliest.

SPMG- Bihar

31. The Committee note that as per the NGRBA Programme framework, the Project Management Group (PMG)[198] transfers funds to the State Project Management Group (SPMGs) on half-yearly basis for the implementation of the agreed annual action plan under the Namami Gange Programme. The PMG has to release the second half-yearly installment to each SPMG only when *(i) the SPMG has submitted its Audit Report of previous financial year to the PMG and (ii) on reasonable utilisation of the first installment of the reporting year.*The State Government concerned is to release its share of funds to the SPMG or SMCG within two months of receipt of the installment from the PMG.

[198]Para 3.18 Chapter III Compliance Audit Page 117, CAG report No 5 year 2020 State of Bihar / Flag'g'

32. The Committee find that in the case of State Government of Bihar, the Audit, in their findings specific to the State observed (in November 2020) that only 16 to 50 per cent funds were being utilised during the period 2016-17 to 2019-20.[199]The progress of works was also very poor and against the sanctioned cost, only 35.48 per cent of financial progress was achieved till December 2020. In case of Kankarbagh and Digha STPs and Sewerage Networks, the financial progress was negligible, which is indicative of poor performance in execution. Further, the NMCG, without ensuring the utilization of previously releasedinstalment of fund, went ahead with releasing the next installments. As a result, huge amount of funds to the extent of ₹683.10 crore (in September 2019) remained parked in the Savings Bank Account of Bihar State Ganga River Conservation and Programme Management Society (BGCMS) and thus remained idle. The Committee note the admission of SPMG Bihar on the delays whereby they have attributed the reasons of the delays to coordination issues with other departments, want of NOCs from Road Construction Department of the Stateetc., The Committee also find that lack of coordination amongst various departments of State Governments were attributed to procedural delays. This, the Committee feel, was seldom intervened and addressed by the NMCG which ultimately contributed to the overall financial mismanagement. The Committee note this to be a irregularity whereby the half yearly review was rendered to be lacking and the next and

[199]Para 3.18 CAG report no 5 of 2020 of State of Bihar/ Flag'g'

subsequent installment was released to the States without insisting on the completion and utilisation certificates in respect of the funds released earlier. The Committee recommend that PMG should review proper utilisation of funds before releasing the next instalment to the State Government. At the same time, the Committee would like to recommend that the process of submission of utilization certificates should be streamlined by insisting on submission electronically.

33. The Committee's recommendations in this report are primarily based on the examination of the Namami Gange program, as detailed in C&AG Report no. 39 of 2017. However, the Committee also took note of the Audit Report No. 5 of 2021 by CAG on the State of Bihar, which focused on specific aspects of the sewerage infrastructure development in Patna under the program. Of particular concern was the Saidpur Sewerage Network Scheme, where the networking of sewerage was underway in the Bajarangpuri Colony and its surrounding areas. Due to poor coordination among various departments in Bihar and the issuance and subsequent withdrawal of NOCs by the Road Construction Department, an expenditure of ₹8.10 crore incurred in the said networking was rendered unfruitful, thereby defeating the objectives of treating 1.5 MLD sewerage from 800 households. The Committee find it surprising to find that no action was taken against any official for this financial irregularity, and SPMG Bihar attributed it to procedural delays. This, the Committee feel is indicative of adopting a casual attitude on the part of implementing agencies which has the affect of impeding

the progress of the program, and needs to be investigated for taking appropriate corrective measures.

34. The Committee also note that the Executing Agency in Bihar has attributed the reasons for the undue delays in the tendering process to the non-availability of the qualified bidders from Bihar and lack of interest shown by bidders from other States. The Committee also note the examples advanced by them to prove their point. The Committee note from the reply of SPMG, Bihar that the tender for Barh I&D and STP was published three times. The fourth time re-tender notice of the HajipurSewarage Project was marked by a delay of more than 2.5 years in the bidding process itself. The Naugachia I&D and STP were delayed by more than one year due to the tendering process itself. The Committee are surprised to note several reasons attributed to delays by BUIDCO which range from Covid-19 Pandemic to heavy rainfall and water stagnation, to the ban on sand mining in the State of Bihar. The Committee notice in this regard that except the COVID-19 Pandemic, all other reasons attributed cannot be categorised as unforeseen and therefore delays due to the reasons of not being able to attract suitable bidders would rightfully rest on the implementing agencies.

35. In this regard, the Committee observe that NMCG is the authority constituted *vide* Notification No. S.O.3187(E) dated 07.10.2016 of the Ministry of Jal Shakti (Department of Water Resources, River Development and Ganga Rejuvenation) under the provisions of Environment

(Protection) Act, 1986 for planning, financing, execution and implementation of projects for prevention, control and abatement of pollution in river Ganga. Under the notification dated 02.03.2019 issued by Government of India, National Mission for Clean Ganga, Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation are responsible for Administrative Approval and Expenditure Sanction for the projects which may be implemented in the State by SPMG or any agency of the State Administration Department or SPMG as an executing agency for the project. The Executing Agency is duty bound to comply with all observations of the Funding Agency i.e. NMCG before bidding and during implementation. It is important to note that under the statutory notification dated 07.10.2016 issued under Section 3(3) of the Environment (Protection) Act, 1986, the NMCG is empowered to issue directions to any person or authority, which it may consider necessary, for proper and prompt execution of the projects or cancel such projects or stop release of funds etc.

36. The Committee find that under the said statutory notification itself, the NMCG is the ultimate authority to approve, monitor and review the overall execution and implementation of the tenders and projects. It is also empowered to give its observations before bidding ,during implementation and, the executing agency is obliged to comply with all such observations and directions. The Committee note that there has been absence of any kind of intervention from NMCG in regard to delays in Bihar . Also, the bidding process not having attracted any

response, the Committee have not been apprised of any serious efforts on part of NMCG or SPMG, Bihar to investigate the cause and take follow up action for revising the tenders so as to evoke response from prospective bidders.

The Committee also find it diffcicult to agree with the contention that the ban on sand mining during the year 2020 could hamper the tender process and cause delays in the tendering which was initiated in the year 2017 and 2018. The Committeetherefore, recommend that NMCG should examine the cause of delays and come up with a plan to address the cause for delays in the tendering process.

37. The Committee note that under the flagship programme of Namami Gange in Bihar till September 2022, out of 28 STPs planned, only three STPs were 100 percent completed and running[200]. The Committee, in this regard find the apparent non-interference by the NMCG for ensuring the actual physical progress of the Mission in the State to be surprising .

38. The Committee also note that only one of the five sanctioned sewerage network projects were completed in the State. The Committee also note that the DPRs for 23 Ganga towns in Bihar were in the stage of preparation and process. The Committee recommend that since much delay of nearly eight years took place, NMCG should

[200] Annexures IV of the Narration

explore ways to expedite the programme. All that the Committee encounter in the replies from the Ministry of Jal Shakti as well as NMCG are the number of treatment plants that have been envisaged or are in the pipeline, the completion of which shall treat a lot more sewage and waste water going into River Ganga. The Committee also wish to highlight the acute delays in the Projects, especially in Bihar, where the Beur STP which was sanctioned in 2014 could not see any progress as late as year 2017[201]. They also note the instances of Digha STP and Kankarbagh STP[202] and Sewerage Network which were sanctioned on 11th August 2017, but are still at 10 percent and 5 percent of their completion. At this pace, the Committee feel the Project Namami Gange is bound to suffer and NMCG being the Authority in-charge of all these tenders executed through State Programme Management Groups should also be held accountable along with the State implementing agencies. The Committee recommend that NMCG along with all SPMGs should oversee the progress in States and sort out the impending factor without any delay.

Rural Sanitation in Bihar

39. On one hand, the Committee note that the State of Bihar was declared (ODF) Open Defecation Free with 100 % IHHL construction in all Ganga Towns of Bihar. On the other hand, the Committee also note that there has been in general, an increase by 20 times in the fecal coliform

[201] Annexures IV of the Narration
[202] Annexures IV of the Narration

level in the River Ganga flowing in the State of Bihar. The Committee have been furnished an assurance that there would be a decrease in coliform levels in future once network sewerage projects are up and running. The Committee therefore recommend that causes for delays in projects should be studied, reasonsidentified and the project implementation speeded up. The Committee wish to be apprised of the Action Taken on this front at the earliest.

40. The Committee find it surprising to note the reply of SPMG, Bihar to the query related to response furnished to the Audit findings. Whereby it has been informed*inter alia* that BUIDCO will review the situation and will furnish the replies, if not submitted earlier. The Committee perceive this response to reflect poorly on the State Programme Management Group, Bihar. The Committee are of the view that the State Administration did not undertake due diligence to check up the status of the replies furnished to Audit. The Committee observe in this regard that NMCG is equally accountable as according to established rule, all projects under Namami Gange are 100% Centrally funded, with powers vested in NMCG to oversee the implementation of the project. The absence of any intervention on part of NMCG to check delays is surprising the Committee recommend measures be taken to improve the situation.

Silt Management Policy

41. The Committee note the absence of a River Ganga Silt Management Policy or a National Policy on Sediment Management. The Committee also note the silence of the State Government of Bihar as well as NMCG over the queries on likely situation of huge siltation being caused in River Ganga both in Bihar and West Bengal due to Farakka Barrage. It is commonly known that major part of Silt is trapped in reservoirs made on any river. The Chairman, Central Water Commission (CWC) had deposed before the Committee that de-siltation for flood management is not a techno-economically viable solution. The Committee note that there is a pending draft national framework in the Ministry of Jal Shakti and it has been assured by CWC that relate4d guidelines would be issued to the States. The hydrological alteration of the course of the river due to the construction of a barrage or dam on the river is well documented. The Committee express their apprehension about the shifting of the course of River Ganga every year and recommend that a review of the flood level in the River Ganga, for the last ten years, be made and accounted for in the National Policy on Sediment Management. The Committee also perceive that there has been no review of the likelihood of the dysfunctionalityof Farakka Barrage, which could possibly be a contributor to the siltation in River Ganga. The Chairman, CWC has also accepted that there has been a failure of desiltation process in River Ganga and the gates of Farakka Barrage, meant to release silt have been inoperational for many years. The Committee recommend that CWC and Ministry of Jal Shakti come out with a

solution for this problem. Since a number of gates in the Farakka Barrage, meant for de-silting are non-functional, the Committee recommend that action must be taken to make these gates functional along with alternative technological interventions for the de-silting. The Committee were apprised that China too is facing such issues of siltation and therefore recommend that best international practices from around the world be studied and incorporated in the National Policy on Sediment Management[203] in respect of River Ganga. The Committee note that already eight years have passed since the Namami Gange Programme was taken up and the absence of any policy towards Silt Management in the River is hampering the natural flow of the River Ganga thereby giving credence to the belief of reducing *Aviral Ganga* to mere sloganeering. They therefore recommend the framing and adoption of River Ganga Silt Management Policy at the earliest.

SPMG -West Bengal

42. The Committee note that various studies have put the quality of River Ganga water in the State of West Bengal in the category of 'very poor' amongst all riparian States. Notable among the studies, include the report of Wildlife Institute of India, Dehradun, which has categorized the River Ganga water as the most polluted in the State of West Bengal.

[203]Pages 32 to 34 Verbatim proceding 22/11/2021/ Flag'L'

The Committee further note that the West Bengal Pollution Control Board monitor the water quality of River Ganga in fifteen different locations from Farakka to Diamond Harbour, twice in a month. The water quality parameters of BOD in the State of West Bengal during the period Jan to Aug 2022 reveal that the River Ganga is categorised between priority III to IV[204].

The Committee also take note of the replies of the Ministry of Jal Shakti and NMCG wherein the progress of the project *vis-à-vis* the amount of financial allocation spent has been furnished. The Committee note that this programme, although executed by State Programme Management Groups is hundred percent centrally funded. NMCG has provided substantial funding for the projects and has also imposed conditions amongst others to keep overall control over the nodal authorities in the State. In this backdrop, the Committee note that in the State of West Bengal alone, the Central Government has released approximately Rs 1168.95 crores and State Government has contributed Rs 833.01 crores on the projects out of which the SPMG West Bengal have claimed to have used the entire funds[205]. However, the Committee note that the ground reality remainsto be contrary from the picture being presented before them. Nowhere has there been a visible effect of River cleaning. The Committee feel that the Government has spent a significant amount of resources but the visible results as well as the results from the water quality monitoring systems seem to belie the claims of the Ministry of Jal Shakti and NMCG.

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[204] Ppt West Bengal slide 4/ Flag'c'

[205] West Bengal, List of Points Question No 8 / Flag'f'

43. Based on the response from the WBSPMG, it is clear that the estimated sewage generation in towns on the banks of Ganga is 1401 MLD. Currently, 34 STPs are operational, with a cumulative treatment capacity of 408 MLD[206]. An additional 11 STPs are under construction or rejuvenation, which will add treatment capacity of 373 MLD. Moreover, 19 more STPs with a total capacity of 409 MLD are in the proposal or tendering stage. Thus, the total envisaged sewage treatment capacity under Namami Gange in West Bengal is 1190 MLD, which means there is still a gap of 211 MLD between the envisaged and the current sewage treatment capacity.

To bridge this gap and ensure adequate measures for sewage treatment, the authorities are preparing DPRs for further capacity under Namami Gange Phase-II (NG-II), which are expected to be submitted in tranches. Two DPRs for STP projects under NG-II on Murshidabad and Chakdah Municipalities have already been sent to NMCG for approval and funding.

Based on this information, the Committee recommend that the authorities expedite the process of submitting DPRs for further capacity to bridge the gap in sewage treatment. They also need to ensure that the construction and rejuvenation of STPs is completed on time and without any delay. In addition, regular monitoring and evaluation is to be conducted to ensure that the existing and upcoming STPs function efficiently and effectively, and the envisaged

[206] Ppt west benagl 22/09/2022 3rd slide / Flag'c'

sewage treatment capacity is achieved as per the planned schedule.

44. The Committee note that the Sewage Treatment Plants are usually designed in a conventional way in India. The Committee also note a number of other low cost techniques like oxidation ponds etc are being used *inter alia*for interception and diversion for treatment of sewage. The Committee would like to recommend that the Integrated Fecal and Septage policy of the State of West Bengal should also take note of these possible solutions and strive towards achieving zero liquid discharge in the River.

The Committee note that for a State as large as the State of West Bengal, where the flow of River Ganga stretches more than nearly 500 kms, presence of only four (04) number of Laboratories[207] of the State Boards to regularly monitor the Fecal Coliform and Dissolved Oxygen and other parameters of water quality in the River Ganga are insufficient. The Committee recommend that the number of laboratories, especially in the State of West Bengal, should be increased to be commensurate with the area covered by the River Ganga in the State.

45. The Committee have been apprised that the water quality in River Ganga is assessed as per primary water quality standards for outdoor bathing, as notified by Ministry of Environment, Forest and Climate Change in terms of pH 6.5 to 8.5, Dissolved Oxygen >5mg per litre, biochemical oxygen demand <3mg per litre and fecal coliform less than 2500 MPN per 100 ml. The Committee

[207] Q no 23 WB Lop 22/09/2022 / Flag'f'

note that as on 21.04.2021, at Budge Budge, the Faecal Coliform (FC) was 790000 MPN/100 ml as against the prescribed limit of FC less than 2500 MPN /100 ml. This, the Committee note is extremely high,and is far higherthan the pollution level reported by Audit at the same place in their report for the year 2016. The Commiittee are, therefore, inclined to believe that nothing much has changed in the State of West Bengal. The Committee also note that the FC level is exorbitantly high at 110000 MPN/100 ml in Behrampur[208]and around 240000 MPN/100 ml at Palta Shitalatala in West Bengal. The Committee note the reply of the West Bengal Pollution Control Board that it monitors the water quality of River Ganga at 14 stations and with effect from January, 2022, this monitoring has also been started at Farakka. The State Board monitors the river water sample for 29 parameters. However, the Committee observe that expenditure of a large sum of money under the Namami Gange Scheme, has not borne the desired result in the State of West Bengal. The cases behind these factors need to be investigated and details relating thereto informed to the Committee.

Polluting Industries in West Bengal

46. The Committee have taken note of the definition of Grossly Polluting Industries (GPIs) provided by the Central Pollution Control Board (CPCB). According to the guidelines, industries that discharge effluents into a

[208]Q no 11 Page 10 and 11 WB LoP / Flag'e'

watercourse and meet any of the following criteria are identified as GPIs: a) effluent with a BOD load of 100 Kgs/day or more, b) handling hazardous substances, or c) a combination of (a) and (b). However, the Committee believe that strictly adhering to this definition would exclude several industries whose wastewater may not be strictly hazardous and only marginally falls below the prescribed effluent BOD load. Therefore, the Committee recommend a review of the definition of GPIs to include industries that significantly pollute the River Ganga in various ways, and efforts should also be made to regulate such industries operating in the vicinity of the River. The Committee note that 41 number of Grossly Polluting Industries are functioning in and around River Ganga in the State of West Bengal.[209] The Committee also note that out of these 41 Grossly Polluting Units, action was taken against only 17 GPIs out of which only 6 Grossly Polluting Units in the State of West Bengal have deposited environment compensation challans. The Committee further note that out of all 17 Grossly Polluting Units, only one case of M/s Debjyoti Pulp and Papers[210], Asansol, West Bengal was not issued any environment related challans and the closure order issued to the industry in August 2020 was revoked in September 2020. Further, the Committee note that a partial forfeiture of Bank Guarantee for one GPI namely, M/s Kamarhatty[211] Co. Ltd (paper Division) was done in June 2020. Reasons for such inaction or inadequate action need to be looked into in detail and remedial measures taken. The Committee desire

[209] Q no 3 LoP 22/11/2021 / Flag'H'
[210] Q no 1 Wb Lop 3/1/2022/ Flag'I'
[211] Page 2 q no 1 of west Bengal replies to list of points 3/1/2022 Part (d) / Flag 'I'

that the nodal Ministry at Centre coordinate and furnish details of Action Taken at the earlist.

47. The Committee has observed that the State Pollution Control Board (SPCB) of West Bengal has shown little response towards the Grossly Polluting Units (GPIs) in the state and has taken only nominal action which appears to be a mere formality. The Committee have noted that the closure notice issued to one GPI was revoked within a month, which is indicativeof the SPCB's lackadaisical attitude and indifferent response. Such an approach of the SPCB is a major hindrance to the rejuvenation of River Ganga in the State of West Bengal. Despite the classification of GPIs, there is very little environmental compensation cess or fine being imposed, which results in the unabated and uncontrolled functioning of these industries. The Committee have also noted that SPCBs hesitate to impose reasonably high environmental compensation fines, which is essential to deter GPIs in the state. The Committee recommend that the Ministry should impress upon SPCBs of West Bengal and all riparian states of River Ganga overcome this hesitation and impose environmental compensation duty which would serve as a deterrence. Additionally, the Committee suggests that the SPCB of West Bengal furnish the details of environmental compensation realized, issue of challans and other actions taken on all polluting units, including GPIs, in the state in the past year through the Ministry o Jal Shakti.

48. Another surprising element that came before the Committee when they asked about details of the inspections to ascertain the cases of encroachment by Polluting Industries along the River Coast is that the SPCB, West Bengal is not aware of the total number of polluting units along the River Ganga in the State. The Committee note that the SPCB, West Bengal has requested the Kolkata Port Trust (KoPT or The Shyama Prasad Mookherjee Port Trust) [212]for furnishing the names of the industries located along both the banks of the stretch of River Hoogly from Farakka to Diamond Harbour, which falls within their jurisdiction. This is indicative of the ineffective coordination between different agencies monitoring pollution in the State. The Committee while expressing surprise that even after 8 years followinginitiation of the Namami Gange Programme, the State Pollution Control Board does not have information on the total number of industries in the State of West Bengal, and is only relying on the management of KoPT to manage the affairs in their jurisdictional area. The Committee recommend that the matter of jurisdiction be sorted out as per the mandate under the Namami Gange Programme, and the authority responsible for managing the Pollution abatement in and around the RiverHoogly should furnish the details of the action taken on the issues of polluting industries as well as remedial action taken on encroachment on both sides of River Hoogly (Ganga), with the Central Ministry coordinating in the matter.

[212]Q no 5 LoP West Bengal page 6 / Flag'd'

49. During the field study visit, the Committee noted the huge pile of garbage lying as legacy waste in the City of Behrampore, West Bengal. The Committee also noted that for a city with a population of nearly 3 to 4 lakhs people, there were no STPs to tap the sewerage across the city and treat the liquid waste. The State Government of West Bengal was lagging behind in their efforts to provide Solid and Liquid Waste Management facilities which is a major concern for the Committee. The study visit of the Committee came in the backdrop of the Audit observation that Solid and Liquid Waste Management was not taken up in any of the identified districts of the States of Uttar Pradesh, Bihar, Jharkhand and West Bengal, and the Visit of the Committee validated the findings in the regions of State of West Bengal. The Committee, therefore, recommend that efforts be made to remove the legacy waste in a time bound manner, and the Sludge and Sewage Treatment Plants of the required capacity installed to reduce the quantum of waste water released in the River Ganga. The Committee also desire that the result of implementation of the measures under 'Integrated Fecal Sludge and Septage Management Policy' for the urban areas be intimated to the Committee[213] through the Ministry of Jal Shakti.

50. The Committee also express concern of crematoriums lying unrepaired and dysfunctional at various places in

[213]Q no 2 Lop Wb page 3 / Flag'd'

West Bengal. The Committee noticed instances of crematoriums of Khagra and Gora Bazaar in Behrampore in need of urgent renovation. Further, the Committee note that the State Administration of West Bengal is reluctant to take action towards removal of encroachments which has contributed in the considerable delay in renovation of Gora Bazaar crematorium. The Committee also note that funds were released by the State Administration but the matter has been excessively delayed. The Committee desire that repair, renovation and construction work of all crematoria in the State should be done on priority basis. Despite the State Administration of West Bengal committing to renovate the Gora Bazar crematorium by 31.12.2022,[214] before the Committee, they note that the work is yet to be completed. The Committee, therefore, recommend that the Ministry should procure the details of financial sanction and status of progress of work in respect of all the Ghats and Crematoria in the entire State of West Bengal be furnished to them. The Committee also desire that NMCG closely monitors the works relating to the Ghats and Crematoria in the State and take action in having the requisite information furnished.

51. The Committee also note that the model of one city one operator was found to be non-feasible by the NMCG in the State of West Bengal, due to sheer complexity of issues involved and huge number of sub towns in Kolkata. They therefore suggested that instead of going for replicating the same model which was found useful in one State as compared to another, they may, for the purpose of seamless and smooth functioning and maintenance of the

[214]Page 58 to 59 Verbatim 22/09/2022 / Flag'P'

Treatment plants divide Kolkata into major sub parts. The Committee recommend that the NMCG, with active input from SPMG, West Bengal make efforts towards taking new initiatives in regard to the Sewage and effluent Treatment plants in West Bengal for reducing the waste water discharge in the River.

52. While the Committee are appreciative of the efforts of NMCG and SPMGs in implementing the Namami Gange Programme, many aspects of the Programme need immediate attention and are seen to be lagging. The Committee also appreciate the aspect of promotion of Faecal Sludge Treatment Plants as part of the Faecal Sludge Management and intend to remain posted about the details of the efforts in this regard *vis-à-vis* the results as per the Water quality monitoring in the entire stretch of Ganga in the State of West Bengal.

During one of the Committee's sittings, a videographic depiction of a huge amount of legacy waste in Behrampore District of West Bengal was shown as a representative sample of the solid waste problem that the State Administration has repeatedly ignored, despite being pointed out during the Study Visits of the Committee. The Committee find it appalling that the SPMG West Bengal has reported 15.73 lakh MT of legacy waste in Murshidabad District and yet no serious actions have been taken to address this pressing issue. The Committee also presented a videographic depiction of the encroachments near the River Front in Behrampore District of West Bengal to draw the State Administration's attention to this matter. The

Committee strongly recommend the Ministry to intimate the State Administration to take immediate action to check encroachments in the vicinity of the River Ganga in the State of West Bengal. The Committee are deeply concerned that the Waste to Energy Plants in West Bengal are still in the nascent stage of planning, and such delays are significantly affecting the entire River Cleaning efforts in the State of West Bengal. Therefore, the Committee suggest that the State Administration of West Bengal should expedite the establishment of Waste to Energy Plants as one of the several measures to target the problem of legacy waste in West Bengal, and take urgent and concrete actions to address the problem of solid waste in the state.

Drains discharging in River Ganga in West Bengal

53. The Committee observed an audit finding in their report which highlighted that the State Government in many places was found to be not fully aware of the magnitude of the problem. In fact, the audit revealed that there were 65 drains discharging into the river Ganga in 12 municipalities in West Bengal, in addition to those already identified by the West Bengal Pollution Control Board. The Committee in this regard concur with the Audit's conclusion that this is indicative of the fact that the inventory of drains maintained by the West Bengal Pollution Control Board may not be comprehensive. The State Government of West Bengal noted in their reply that the National Green Tribunal identified 56 more drains discharging into the River Ganga within West Bengal

based on the report of the Central Pollution Control Board. Both the CPCB and West Bengal Pollution Control Board carried out a joint survey to identify major drains and identified an additional 14 drains, which are now being monitored for water quality by both organizations.

The Committee note that evidently there is lack of awareness and serious attitude towards cleaning the river, right from the planning stages by the authorities involved, and therefore recommend that a review of all drains that discharge into the River Ganga be completed within three months from the presentation of this Report. To facilitate this process, the Committee suggest that the Ministry of Jal Shakti use the Bhuvan Ganga App and other social media platforms to invite and promote public participation. The Committee also take note of the internal Audit Report of the West Bengal State Mission for Clean Ganga (SMCG) which revealed significant delays in the procurement and installation of instruments for the strengthening of laboratories of West Bengal Pollution Control Board (WB-PCB). According to the report, the delays ranged from 180 to 560 days, which is yet another indication of the lack of seriousness in implementing Project Namami Gange in the State of West Bengal.

54. Despite an estimated sewage generation of 1401 MLD, the current STP capacity in the State of West Bengal is only around 408 MLD, leaving a significant gap of around 1000 MLD. Although the Committee was informed about the increase in the sewage treatment capacity due to the proposed and planned STPs, substantial gaps still exist.

The Committee also note the internal audit report of the SPMG, West Bengal, which revealed substantial gaps in the progress of the STPs in the Kolkata Metropolitan Development Authority (KMDA). The Committee therefore recommend urgent action to bridge the gaps in sewage generation and treatment capacity in the State of West Bengal.

River Surface Cleaning in West Bengal

55. The Committee find it utterly alarming that the State Programme Management Group has also admitted that the fecal coliform levels in West Bengal remain very high, reaching an astonishing 170000 MPN/ml in many places. This is a blatant violation of the recommended level of 2500 MPN/100 ml. It'salso ironic that the State Government of West Bengal has been declared Open Defecation Free despite this situation. The Committee can't help but point out the clear contradiction in the submissions mode. It is, essential that the State Government make sincere efforts to address this issue. The Committee therefore strongly recommend that Faecal Sludge Treatment plants should be installed, and immediate action taken to prevent cattle and stray animals from further polluting the river by developing the River Bank wherever possible.

The Committee are appalled to note the noticeable amount of floating waste in River Ganga, which was till recently only being partially cleaned by using trash skimmers. The River surface pollutants comprise not only offerings and discarded items but also solid waste and effluents from the drains. The Committee acknowledge that some trash

booms have been installed at some of the drains, discharging into the River, but this felt to be not enough. The River Surface Cleaning project using trash skimmers seems to have been effective in collecting a significant amount of floating solid waste from the two rivers in West Bengal, with a total of 385 MT being collected until June 2020. However, it is concerning that even this project was discontinued after June 2020, despite the fact that floating solid waste primarily enters the river through waste water drains. Therefore, the Committee would like to recommend exploring additional measures that could be taken to prevent floating solid waste from entering the river, such as installing more screens on waste water drains or increasing public awareness about the impact of littering on the environment. The Committee recommend that SPMG West Bengal should direct the concerned authority to install trash booms on all the drains discharging into the River Ganga without any further delay. Failure to do so will only exacerbate the River's surface pollutant problem, which is completely unacceptable. The Committee expect the Ministry of Jal Shakti to monitor and report to the Committee on action being taken in this regard.

Flood Plain Zoning in West Bengal

56. The Committee note that the views of Irrigation & Waterways Department on the Report of the Department of Geography, University of Calcutta relating to identification of Flood Plain has long been submitted to the State

Environment Department, but no concrete action[215] has been taken on it. The Committee intend to know the reasons for the delay in any kind of action taken on the above said report along with the timeline of the submission of the said report. The Committee recommend that action to identify and demarcate the flood plain zone along with the flood plain zoning act of the State Government of West Bengal be enacted, in line with the model flood plain zoning Bill. The Committee also recommend that action taken in this regard be intimated to them through the Ministry of Jal Shakti at the earliest and later than six months.

Rural Sanitation

57. The Committee note the Audit findings that as against the total funds of Rs. 951.11 crores released by NMCG and State Governments for activities relating to construction of Individual Household Latrines, Information, Education and Communication and Solid Liquid Waste Management, the five States namely, Bihar, Jharkhand, Uttar Pradesh and West Bengal could utilize a sum of Rs 490.15 crores[216] only. The Committee also note the Audit findings that except for Uttarakhand, the other four States namely, Bihar, Jharkhand, Uttar Pradesh and West Bengal could not achieve the target of construction of 100 percent IHHL as of 31st March 2017. The Committee also note the Audit findings of discripancies in the data reported under Management Information System and basic records of Gram Panchayats in a few test samples in Uttar Pradesh and Jharkhand and recommend a review of the findings in view of the discripancies in the data.

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[215] Q no 70 List of points / Flag'F'

[216] Q No 27 List of Points also Para 5.3 of C&AG Report / Flag'F'

58. It is noteworthy for the Committee that the Ministry of Jal Shakti in their written submission before the Committee claimed that all villages along the banks of River Ganga are declared Open Defacation Free (ODF). The Committee also note that, as on 31st August 2022, a sum of Rs 953 crore has been provided by NMCG for rural sanitation, of which Rs 274.06 was lying unutilised. However, the Committee also note that, as on 31st August, 2021, only 88.10% [217]of the total toilets (IHHLs) constructed in the five Ganga River States have been uploaded on the website of Swachh Bharat Mission. The Committee recommend uploading 100 % photographs on the website of SBM as early as possible, to demonstrate in clear terms, 100% construction of IHHLs in the State of West Bengal, and all riparian States of River Ganga.

Biodiversity Conservation and Ecological Flow of River Ganga

59. The Committee also note that the findings of the Audit that NMCG has not formulated any parameters for the determination of ecological flow at different points nor identified the particular impediments affecting the flow. The Committee also note the shortcomings in the progress noted by Audit in Biodiversity Afforestation Programme as well as the absence of long term action plan for Ganga Rejuvenation. As regards the Biodiversity Conservation Programme, the

[217] Q No 63 LoP / Flag'F'

Committee note that a total of 9 projects have been sanctioned so far, from 2016-17 to 2020-21, out of which 6 projects[218] were completed and 3 projects were ongoing. The Committee note with satisfaction the actual utilization of the fund and recommend expeditious completion of Biodiversity Conservation Programmes.

River Conservation Zones

60. The Committee note the Audit findings that the River Conservation Zones were not identified in the States of Uttarakhand, Uttar Pradesh, Jharkhand, Bihar and West Bengal[219]. The Committee during the course of examination of the subject came to know that the River Conservation Zones were yet to be notified. The Committee were apprised that a draft Flood Plain Zoning Bill, 2020 was prepared by Central Water Commission in June 2020, which provided for constitution of a Flood Plain Zoning Authority by State Governments.[220] Further, it has a provision of 'No Development Zone', 'Controlled Development Zones', and 'Development Zones'. The States have to notify such a legislation as per model bill prepared by CWC. Pending Notification of the same, the States are to adhere to the directions of the NGT vide judgement dated 10.12.2015 in *M.C.Mehta vs Union of India and ors*. The National Green Tribunal (NGT) has directed that as an interim measure, at least 100 metres from middle of the River would be treated as 'Eco-Sensitive and Prohibited Zone', with no permission of any activity in this zone. The area beyond 100 to 300 metres would be treated as

[218] Q No 6 LoP / Flag'F'
[219] Audit Para 3.8 / Flag'A'
[220] Page 29 , point 48 Replies to List of Points / Flag'F'

regulatory zone in hilly regions. The area upto 200 metres shall be the prohibited area in the plain terrain and area from 200 to 500 metres would be treated as regulatory zone. Accordingly, as an interim measure, flood plain demarcation/ river conservation zones have to be earmarked, pending the notification by the respective State Governments of the same through legislation.

In addition to recommending for renewed efforts on part of NMCG and State Government to notify the River Conservation Zones, the Committee would like to observe that interim demarcation of the flood plain zone as per directions by NGT must be strictly complied with. The Committee, having noted that the directions of NGT being interim in nature, and may warrant modifications on the ground in respective States, would also recommend NMCG to review the interim demarcation of the River Conservation Zone along with the SPMGs for an effective zone demarcation exercise and apprise the Committee of any changes warranted.

International best practices

61. The Committee note from the replies of the Ministry that pollution in rivers like Rhine (in Europe), Thames (U.K.), Danube (Europe), Mississipi (USA), has been brought under control effectively after several decades of continuous studies, exhaustive monitoring, substantial capital investments for creating sewerage infrastructure, solid and liquid waste management systems for domestic and industrial sectors. The Committee also note the significant

differences in the challenges posed in the cleaning of River Ganga *vis-a-vis* Rivers like Rhine, Danube and Thames etc. The Committee note that the vast stretch being traversed by the River Ganga with more than 500 million population residing in the rivers vicinity pose a formidable challenge. The novel solutions are required to tackle the problem of cleaning of the river and its rejuvenation. The problem also gets myriad dimensions added as there are mass religious congregations on the banks of the river owing to the sacredness attached to the river.

62. Having noted the challenges, the Committee also feel that there is no reason as to why polluted river stretches along River Ganga cannot be restored. The Committee have no hesitation in expressing appreciation on the determination of the Government in cleaning the River. However, the required commitment is seen lacking amongst various implementing authorities, in several States adjoining the River, with a discernible lack in seriousness in planning and implementation by NMCG. The Committee in this regard note that, till now, there are 118[221] reportedly untapped drains in Phase II, Kanpur to Ballia stretch, whereas in West Bengal, the inventorisation of untapped drains is yet to be completed.

63. The Committee note that it took efforts to clean the river Rhine and Danube in Germany, and the Ministry have entered into implementation agreement with PTB (PhysikalischTechnischeBundesantstall), the national meteorology institute of Germany for the project of water monitoring of River Ganga, and GIZ, Germany is also a key

[221] Replies by State of UP Page 5 Q no 9 / Flag'X'

partner in the Ganga Rejunevation project, apart from other similar partnership and Joint Ventures of the Ministry of Jal Shakti with other nations like Austria etc.. The Committee recommend that wherever possible, environmental technology assistance should be supplemented from Indian Technological Agencies/units such as CSIR-NEERI, IITs etc.However, the best environmental technology experiences from around the world should also be taken into account in the effort to rejuvenate the River Ganga. The Committee further recommend that efforts should be made for obtaining technical know-how and implementing it not only in the field of restricting discharge of untreated sewage and industrial effluent, but also in terms of achieving Zero Liquid Discharge (ZLD) in the river.

River Ganga during Pandemic

64. The Committee express grave concern over the images of dead bodies being discarded on the banks of the River Ganga, which were widely reported in both national and international media. The Committee in this regard, find it hard to agree with the response of the Uttar Pradesh State Government, which claimed that only about 50 dead bodies were detected to be floating in the river and were cremated following COVID protocols, despite numerous images and videos showing countless unaccounted dead bodies floating in the river. The Committee observe that the timeline submitted before it shows that the National Mission for Clean Ganga (NMCG) issued advisories and notices to the States only after the reports of dumping of dead bodies became

public, despite all statutory provisions of the River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 being already in place. The poor planning and non-construction of adequate crematoria, either electronic or otherwise, by the state governments of Uttar Pradesh and Bihar is possibly a causative factor leading to the occurrence of such incidents.

The Committee therefore recommend that the Ministry of Jal Shakti and the state administrations revisit their reports on the number of dead bodies dumped in the river and surrounding areas, and ensure that the required number of crematoriums are constructed along the River Ganga to prevent such incidents from happening in the future. The Committee have been apprised that police patrolling is being undertaken to ensure that dumping of dead bodies does not happen. But the committee find this measure alone as insufficient. The Committee point out that the local administration and police authorities had failed to intervene when people were being 'overcharged' for cremation, leading to improper cremation of dead bodies. The Committee find that the state governments took up constructing crematoriums after the severe wave of the pandemic had passed.

Furthermore, the Committee note that only 60 out of 83 ghats and crematorium projects were completed till July 2021, indicating the shortcomings on the part of the state administrations and NMCG in constructing the crematoriums on time. The Committee recommend that the Ministry and the state governments concerned take stringent action against the local administration and police authorities for failing to intervene and prevent improper

cremation of dead bodies. The Committee feel the financial assistance of only Rs. 5000/- that was provided by the government for cremation of COVID-19 victimsto be meagre. The Committee conclude that the Ministry should take urgent steps to ensure that the required number of crematoria are constructed in a timely and efficient manner, and the state administrations take responsibility for their lack of planning. They also propose that the NMCG, in coordination with the riparian Ganga state administration, determine an adequate amount of financial support for the cremation of unclaimed bodies. This measure, the Committee feel will aim to discourage improper cremation practices or the abandonment of dead bodies in the River Ganga.

Use of technology in monitoring

65. The Committee note that several legal cases on the efficacy of Namami Gange Programme indicate that public money is being misued owing to improper functioning of the State Pollution Control Boards. The Committee feel that there are likely chances of misappropriation of pollution data and there is no authentication of the reporting on water quality. The Committee in this regard also note that any progress in cleaning the River Ganga is viewed with on element of doubt owing to non- installation of online real-time water quality monitoring system.

66. The Committee also take note of the claims of the Ministry of having conducted various inspections of different

polluting industries. They also note that different industries adopt various technological methods to reduce the affect of pollution over a period of time. As examples cited by the Ministry, the industries adopt to installating chemical recovery plants in agro based industries like pulp and paper mills.[222] Upgradations of ETP systems and processing technology such as fibre recovery system have also been believed to have led to substantial reduction in pollution load in the textile sector. Similarly, the Committee note that upgradation of ETP system up to tertiary level, recycling and reuse of spray pond and cooling tower overflow have led to substantial reduction in pollution in sugar industry.

67. The Committee observe that adopting new technologies in the industries for reduction of pollution is a time-tested method to reduce, divert and reuse of effluents from the polluting industries. The Committee, therefore, observe that the CPCB along with NMCG should enforce this technological upgradation not only in Grossly Polluting Industries (GPIs) along the River Ganga Banks and discharging waste into River Ganga, but also to all industries identified as source of pollution in River Ganga, irrespective of their categories. This, the Committee recommend, should be done keeping in view the latest technological advancements across the world and thus adopting the best international practices. The Committee also recommend that necessary directives invariably be issued to all polluting industries in this regard. The Committee further recommend that details of action taken on all polluting industries discharging wastewater in main stem of River Ganga along

[222] Page 63 Verbatim 22/11/2021 / Flag'K'

with latest technological intervention by industries for pollution reduction be furnished to the Committee. The Committee also recommend that the same technological intervention and upgradation be adopted in the tributaries of the River. The Committee observe that such technological interventions do not require much investment and the industries should not be allowed any further delay to install such technological interventions for reductionof pollution levels.

Polluting Industries

68. The Committee note that CPCB is content with the issue of directives against Polluting Industries as a measure to check pollution emanating from the industries, especially along the River Ganga. From the submission of the Ministry, they also note that there has been steady increase in the number of directions issued by CPCB to District Magistrates for physical verification as well as for the electricity disconnection of Polluting Industries which have been served closure notice by SPCB, based on the inspections so carried out. The Committee note that CPCB along with technical institutes are making efforts for examining the quality of the effluents being discharged in River Ganga. However, the Committee are not oblivious to the known facts that illegal and polluting industries thrive in and around River Ganga with the active collusion of authorities and that surprise inspections have become a source of irregularities. Joint inspections are being foretold to defaulters rendering the process of surprise inspections ineffective. Clandestine

operations of polluting industries during night or otherwise have been frequently reported. The Committee opine that only way to solve this big issue is by constant vigil, honest efforts on part of all stakeholders and effective technological intervention. The Committee note that although enough powers have been vested in CPCB by way of Section 5 of The Environment (Protection) Act, 1986, they are constrained to observe that honest efforts seem to be lacking on part of CPCB. The Committee observe that even with the existence of such effective laws, if there are a lot of industrial pollutants making their way to the river, some or majority of people in concerned authorities are simply not doing their job effectively & efficiently. They recommend that what remains to be done is the identification of such officials and action initiated against such officials / authorities responsible for this task. With this aim, the Committee also feel that stringent action against ineffective employees of State Pollution Control Boards and other state departments could become a part of the solution. The other part of the solution is to hire external agencies suitable for the job. The Committee recommend that environmental engineering students as well as students from various reputed technical institutes invariably be involved in the inspection and surveys for examining the quality of effluents from industries and suggesting ways to reduce wastewater discharge from polluting industries. This would also pave the way for greater peoples' participation. The Committee also recommend that online real-time water quality monitoring system be installed downstream and near to these Polluting and non-complying industries. Further, the Committee recommend that CPCB must invoke powers vested *vide* Section 5 of The

Environment (Protection) Act, 1986, wherever necessary, to regulate the polluting industries.

Human Resources

69. The Committee note the findings of the Audit that there has been an overall shortage of manpower ranging from 44 to 65 percent during the 2014-15 to 2016-17 in National Mission for Clean Ganga. In SPMGs the overall shortage ranged between 20 to 89 percent. The Committee also note that there have been instances of Court of Laws making disparaging remarks over the key positions in SPMGs remain unfilled. The Committee acknowledge that the Cabinet Committee of Economic Affairs (CCEA) have granted in principle approval for creation of 59 positions of NMCG to implement NGRBA programme effectively and efficiently. However, the staff strength at NMCG was increased with the support of contractual specialist employees. The Committee also note the proposal of NMCG to develop a cadre based staffing pattern and Administrative Staff College (ASC)[223] has been engaged to develop necessary plan. The Committee are inclined to believe that a cadre based NMCG would prove to be accountable and efficient in the long run. The Committee would, therefore, recommend that steps be taken to expeditiously fill up the remaining vacancies both at the NMCG and the SPMG level and starting with the key technical positions, all vacancies should be filled up expeditiously.

[223] Reply to List of Points Q No 80 14th September 2021 also Reply to List of Points Q no 26 and 27 22/11/2021 / Flag'F'

Monitoring and Evaluation

70. The Committee are deeply disappointed to learn that despite the CPCB's efforts to enforce the installation of continuous online emission/effluent monitoring systems; several highly polluting industries have failed to comply with these directives. It is unacceptable that these industries continue to operate[224] with complete disregard for the environment and the health of the people. The Committee believe that the success of online monitoring systems is dependent on their integration with the CPCB/SPCB servers and continuous monitoring. The fact that some industries have failed to comply with these directives is evidence of their lack of concern for the environment. The Committee is particularly alarmed by the lack of information regarding the industries that have been closed due to non-compliance with CPCB's directions. This lack of transparency suggests that the authorities are not taking the issue of pollution seriously. The Committee believe that all polluting units generating hazardous waste as per CPCB should be issued directions to mandatorily install OCEMs within a period of six months. Furthermore, details of penal and closure actions taken against non-complying industries should be provided to the Committee. The Committee also sugest to review whether the SMS data generated by Online Continuous Effluent Monitoring System (OCEMs) is in consonance with the show cause notices issued. The Committee strongly recommendthat the authorities take immediate action to enforce compliance and penalize polluting industries for their

[224] Shri Rajiv Ranjan Mishra , DG NMCG Verbatim 22/11/2021 page 40 / Flag'L' (narration Para 96)

reckless behavior. The government needs to necessarily take the issue of pollution seriously and work towards protecting the environment and the health of its citizens.

71. The Committee are deeply concerned about the ineffective functioning of Sewage Treatment Plants (STPs) due to frequent power cuts in the States, which also hampers the functioning of the OCEMs. It is highly unacceptable that the State Pollution Control Boards and CPCB have not taken any remedial measures to address this critical issue. Therefore, the Committee strongly recommend that immediate and effective provisions be made to ensure uninterrupted power supply to STPs and OCEMs, failing which strict action be taken against the concerned authorities.

The Committee are appalled to note that despite repeated requests from the District Magistrates, the power supply to the polluting industrial units, which were violating the environmental norms, was conducted. On one hand, the Committee note the STPs requiring power supplies are facing power outages leading to interruptions in their smooth functioning and on the other, despite repeated requests from the DMs, industries violating pollution norms continue to run unabated. It is distressing to learn of instances where the Pollution Control Board Officials were not only aware of such violations but also allowed these industries to function. The Committee strongly recommend that such delays and laxity is not be tolerated

as they are detrimental to the success of the Namami Gange project, which is of national importance. The Committee recommend that stringent action be taken against the officials concerned and implementing agencies, and details of all polluting units be identified and furnished to the Committee. Furthermore, the Committee recommend that the District Ganga Committee be held financially accountable for failing to close the violating units.

72. The Committee note that the Austrian Development Bank, OeEB, has provided a loan of 13 million Euros for a sewerage water treatment project in Maheshtala, West Bengal. This is reportedly the first European DFI lending for NMCG's Hybrid Annuity Model (HAM) project. The HAM project aims to improve the governance of sewerage assets and ensure their long-term sustained performance by apportioning accountability to the private sector. Under this model, 40% of the capital cost for the project is paid by NMCG during the construction period, and the remaining 60% is paid as quarterly annuity along with interest and operation and maintenance cost during the operation period of 15 years. The project also involves the integration of existing and new sewage treatment infrastructure under a single contract through the One City One Operator approach. This approach aims to ensure singular accountability and ownership for the operation of entire sewage treatment assets of a city, integration of existing assets for rehabilitation and long-term operation and maintenance, and better control by Urban Local Bodies/Jal Nigams on performance monitoring. The HAM project also includes a component of a 20 MLD Tertiary

Treatment Plant for the supply of treated wastewater to Mathura Refinery of Indian Oil Corporation Limited for non-potable purpose. The integrated Mathura project will act as a role model for a sustainable and futuristic developmental aspiration in the wastewater sector of the country. Given that the Maheshtala STP project is the first European DFI lending for NMCG's Hybrid Anmity Model (HAM) project, the Committee suggest that it would be valuable to share the learnings and best practices from this project with other stakeholders in the wastewater sector. This could involve organizing workshops, seminars, and training sessions to disseminate knowledge and promote capacity building in the sector. It would be advisable to closely monitor the progress of the Maheshtala STP project to ensure that it is delivered on time, within budget, and to the required standards. This could involve setting up a monitoring mechanism to track key performance indicators such as project milestones, quality of work, and adherence to environmental standards.

73. The Committee acknowledge the importance of the HAM model for sewage treatment plant projects under Namami Gange, but also note the lack of accountability and incentive for contractors to ensure the quality of STPs constructed by them. This lack of accountability may compromise the effectiveness of the STPs in treating wastewater and ultimately, in achieving the goals of Namami Gange.

Therefore, the Committee recommend that NMCG explore suitable mechanisms to ensure that contractors are bound to maintain the STPs constructed by them, and that their

payment would be affected if the quality of construction does not meet the required standards. The Committee also suggest that all STPs should be continuously monitored by OCEMs and other advanced technological interventions, and mechanisms for monitoring water quality before and after the treatment of wastewater should be put in place.

Furthermore, the Committee strongly recommend that records of continuous operationalization of the STPs be used as the quantitative basis for preferential treatment in further award of contracts for similar projects. This would promote healthy competition among contractors and STP operators, while also serving as a tool to grade the quality of STPs. The Committee urge NMCG to take prompt action on these recommendations to ensure the success of Namami Gange.

74. The Committee find it appalling that the National River Conservation Directorate (NRCD) guidelines issued in September 2000 regarding mandatory third-party monitoring of infrastructure projects have not been strictly followed by NMCG. It is unacceptable that guidelines aimed at ensuring the protection of River Ganga's ecosystem have been disregarded. The Committee recommend that NMCG take immediate action to ensure that the NRCD guidelines are strictly adhered to in all States. The Committee urge NMCG to prioritize the protection of the River Ganga and ensure that the ecosystem is not compromised.

The Committee once again, wish to express their disappointmenton the delay in installing Automatic Water Quality Monitoring Systems (AWQMS) along the River Ganga. It is unacceptable that the installation of 113

AWQMS has been going on since March 2013, and as of March 2017, only 36 AWQMS have been installed. The Committee recommend that NMCG immediately take action to ensure that all 113 AWQMS are installed as soon as possible. The Committee also recommend that NMCG identify other suitable spots for installing AWQMS. It is imperative that the quality of water in the River Ganga be monitored in real-time to prevent any further degradation of the ecosystem. The Committee expect NMCG to take swift and decisive action in this regard.

75. The Committee note the findings of the Audit that the CPCB was supposed to institute a consultancy verification of various water quality parameters and associated follow-on procedures to ensure that the data provided by Data Service Provider is representative and accurate. Audit had reported that CPCB hasn't appointed any State-level Consultant. The Committee note that CPCB has signed a contract with Data Qualification Service Consultant on 28th December 2021. The Committee note that malfunctioning of telemetry system and vandalism has been cited as major cause of dysfunctioning of the RTWQM and would like to recommend that a genuine real time monitoring can only be ensured if quick remedial actions are taken to check vandalism and report the malfunctioning of telemetry system etc.[225] The Committee would also like to recommend CPCB to ensure the data accuracy and transparency by simulateneous data validation of representative samples at their own in-house centres.

[225] APMS Portal Ministry remarks on C&AG Report (narration Para 216)

76. The Committee note that only one meeting of the National Ganga Council, (NGC) the apex body at the helm of the affairs, as against one meeting per year as mandated, was held on 14th December, 2019. The Committee during their various sittings have pointed out that NGC meetings, if not held regularly, will send a wrong signal on the commitment with which the Programme is being implemented. The Committee, however note that the second meeting of the NGC was held as late as on 30th December 2022. The Committee would like to recommend the scheduled meetings of the apex level to the DGC at the district level to be held as per the frequency prescribed under the rules.

77. The Committee note that there is an 'App'termed,"Bhuvan Ganga App" developed by ISRO to enable public to collect and report information on various pollution sources and provide a platform for crowd sourcing to monitor the pollution in the River Ganga. This, the Committee feel is a step towards encouraging public participation. However, the Committee also note the Audit findings that there has been no mechanism developed by NMCG to take appropriate remedial action on the information shared by the public. The Committee find that the Ministry of Jal Shakti has chosen not to reply when questioned on the mechanism to take appropriate remedial action, but instead stated that the information shared by the general public is very useful in preparing the DPR of the polluted stretch. The Committee recommend that information shared by the public on the

Bhuvan Ganga App[226] and social media should be considered and steps taken to improve services and products of NMCG. The Committee also recommend that reply and posting of the appropriate remedial measures taken by the NMCG and SPMG to the information shared by the public through social media platforms as well as the Bhuwan Ganga App, would be encouraging for the public and would increase public participation.

78. The Committee also note the deficiencies highlighted by the Audit in the compliance verifications of the Grossly Polluting Industries. The Committee note the Audit findings that as against the 5016 compliance verifications required to be conducted once a year by CPCB, for the 988 GPIs[227] identified till march 2017, only 3613 compliance verifications were conducted. The Committee also note that the identification of the Grossly Polluting Industries is a continuous exercise and recommend that CPCB should ensure complete compliance verification of all Grossly Polluting Industries once a year as stipulated.

79. Yet another lack of monitoring was noticed by the Audit in their finding that CPCB was required to evaluate the performance of STPs on regular basis, a half-yearly and later on quarterly basis for performance evaluation of STPs fixed under the Project. [228]The Committee during the course of examination of the subject also came across the finding of

[226] Para 9.6 C&AG Report / Flag'A'
[227] Page 100 C&AG Report / Flag'A'
[228] Page 100 C&AG Report Para 9.7.1/ Flag'A'

the Audit that this inefficiency on part of CPCB was mainly due to inadequate manpower with the CPCB. They would therefore like to recommend that CPCB should make efforts to evaluate the performance of STPs on regular basis, as per prescribed frequency, as well as increase the full manpower of personnel in CPCB.

Parameters of Water Quality Assessment

80. The Committee note that there has not been any significant improvement in the parameters of water quality assessment at various places across the stretch of River Ganga. The Committee also note the comparative findings of Audit in terms of Biological Oxygen Demand, Dissolved Oxygen and Total Coliform from the year 2012-13 to 2016-17 and find the Audit report convincing[229] that there has been marginal improvement at some places as against decline at a few places along the stretch of River Ganga. The Committee has not come across any clinching and conclusive data which can meaningfully narrate the success of the Namami Gange Programme at any level. The CPCB captures the water quality assessment data of the parameters fixed in the year 1978 and has not included parameters for restoration and maintenance of chemical, physical and biological quality of water of the River Ganga. The Committee would like to recommend that CPCB must raise the bar and include the parameters of water quality assessment of River Ganga, as per the international norms for assessing the physical, chemical and biological water quality.

[229] Table 9.4 Page 105 Audit Report / Flag'A'

Conclusion

81. The Committee having examined the subject and conducted field study visits have mainly highlighted the shortcomings especially at the implementation stage of the Programme by the SPMGs and Executing Agencies in the Riparian States. The Committee while acknowledging the humongous task which is being undertaken through the Programme,'Namami Gange' feel that much more efforts are needed to be made in the right earnest and in the right direction, by plugging the loopholes, at all stages*viz.*planning, financial management, as well as the implementation stage. The Grossly Polluting Industries continue to operate and the monitoring of Ganga water quality requiresappropriately novel solutions. The Committee recommend that while preparing DPRs and action plans, the goal of the planning and implementing authority should be to achieve zero-liquid discharge in the River Ganga. Only then, the Committee feel, the desired resultswould be achieved.

82. In summation, the Committee, as brought out in the preceding paragraphs, *interalia* highlighted the shortcomings in implementing the programme, which need to be acted upon with due diligence and care. The Committee, in this regard, recommend that the shortcomings highlighted and the observations/ recommendations relating thereto as made in the report, are acted upon for rectifying the situation, within a period of six months. The Committee ordain to be

informed of the measures taken in this direction in clear terms within the time frame of six months.

NEW DELHI
9 February, 2024
20 Magha, 1945 (Saka)

ADHIR RANJAN CHOWDHURY
Chairperson,
Public Accounts Committee

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