



4
Chapter

4

Chapter

Pollution Abatement and Ghat Development

4.1. Introduction

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 *Namami Gange* (May 2015) the scale and scope of various interventions for sewage treatment, Ghats and river front development and rural sanitation have been enhanced by involving multiple agencies, Ministries and Departments.

The details of the funds released by NMCG to SPMGs, Executing Agencies (EAs) and Central Public Sector Undertakings (CPSUs) and expenditure incurred by them during 2014-17, are given in the Table 4.1.

Table 4.1: Details of funds released by NMCG during 2014-17

(₹ in crore)

SPMGs, EAs and CPSUs	2014-15		2015-16		2016-17	
	Release by NMCG	Expenditure by SPMGs /EAs	Release by NMCG	Expenditure by SPMGs /EAs	Release by NMCG	Expenditure by SPMGs /EAs
Bihar		10.58	41.21	62.70	82.03	18.53
Delhi			4.96	4.96	2.17	2.17
Haryana			30.00	30.00	52.73	37.00
Jharkhand	0.97	0.47	-	1.03	46.18	12.74
Uttarakhand	4.26	8.91	7.70	5.64	30.66	10.36
Uttar Pradesh	74.58	12.53	76.82	114.96	287.17	187.73
West Bengal	73.85	38.44	122.96	130.45	99.25	86.83
CPSUs						
EIL			5.77		15.73	18.29
EPIL					3.00	0
NBCC			4.00		0	0
NPCC					3.35	1.40
WAPCOS			6.78		13.31	5.00
Total	153.66	70.93	300.20	349.74	635.58	380.05

Source: Information provided by NMCG

It can be seen from Table 4.1 that NMCG released ₹ 1,089.44 crore to SPMGs and EAs of seven States and five CPSUs, out of which ₹ 800.72 crore (74 per cent) was utilised by SPMGs/EAs/CPSUs. The fund allocated to the States through Ministry of Drinking Water & Sanitation (MoDW&S) for Rural Sanitation are discussed separately in Chapter 5.

The present Chapter deals with audit findings relating to sewage generation, interception of drains and installed treatment capacity in selected towns through which the Ganga and its tributaries flow. It also deals with projects undertaken by NMCG through SPMGs and EAs for sewerage treatment, interception and diversion, Ghats, crematoria, river front development and canal.

4.2. Towns

4.2.1 Non-achievement of targets for Sewage treatment under *Namami Gange*

Namami Gange programme²⁸ was to target sanitation of all anthropogenic activities, waste management of all industrial units, reduction in water pollution level etc. The quantifiable targets for the same along with corresponding target dates as approved by the Cabinet are given in Table 4.2.

Table 4.2: Milestone for STPs

	Milestone	Target Date from Date of Sanction
1.	Preparation of DPRs for STPs	October 2015
2.	Tendering of STPs	March 2016
3.	Award of Works	September 2016
4.	Completion of STPs	September 2018

As per the information provided by NMCG, the treatment capacity gap in 106 towns in the five basin States along the River Ganga was 2,109 Million Litres per day (MLD) (Year 2016). The State wise details of treatment capacity gap along with STP projects under implementation are indicated in Table 4.3:

²⁸ The Cabinet Approval to *Namami Gange* was given on 13 May 2015. The programme was to be implemented by 2020.

Table 4.3: Treatment capacity gap along with STP projects under implementation

State	Treatment capacity Gap in 2016 (MLD)	Projects under Implementation (Treatment capacity in MLD)			
		Ongoing	Under Tendering	Approved	Proposed
Bihar	556	222	0	239	86
Jharkhand	15	12	0	4	0
Uttarakhand	79	1	93	38	0
Uttar Pradesh	428	393	50	103	102
West Bengal	1,031	84	0	92	41
Total	2,109	712	143	476	229

Source: Information provided by NMCG

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.

NMCG replied (August 2017) that there were many small towns, where pollution load was too small to create STPs and it was exploring various other options to treat this sewage. Further, NMCG stated that the projects under construction/ tendering shall bridge the gap significantly. However, the reply was silent about non achievement of the targets approved by the Cabinet.

4.2.2 Sewage generation, interception of drains and installed capacity

We also collected information about sewage generation, interception of drains and installed treatment capacity of 58 towns and Delhi State from their respective Pollution Control Boards/ Municipalities/ Jal Boards, independently. The details of State-wise data are given in Table 4.4, which was in variation with the data provided by NMCG, as indicated in Table 4.3 above.

Table 4.4: State-wise details of sewage data in sampled towns

State/Number of Sampled Towns	Sewage Generation (MLD)	Sewage Treatment (MLD)	Untreated Sewage (MLD)	%	Untapped Drains
Bihar/8	637	70	567	89	42
Delhi	3,270	2,090	1,180	36	4
Haryana/2	102	76	26	34	2
Jharkhand/2	12	0	12	100	7
Uttarakhand/8	136	65	71	52	32
Uttar Pradesh/16	1,252	535	717	57	147
West Bengal/22	700	162	538	77	192

Source: Information provided by States Pollution Control Board/ Municipalities/ Jal Boards

Table 4.4 indicated that maximum untreated sewage (1,180 MLD) discharged to the River Ganga and its tributaries (Yamuna) is in Delhi and minimum is in selected towns of Jharkhand (12 MLD). However, selected towns of Bihar, Jharkhand and West Bengal along the Ganga River have more than 75 per cent of untreated sewage with respect to total sewage generation.

The wide divergence in the data furnished by NMCG (Table 4.3) vis-à-vis data furnished by the State authorities (Table 4.4) further points towards requirements for NMCG to work in close coordination with State authorities to have complete, up-to-date and consistent data for these important parameters, so that relevant intervention can be planned effectively.

NMCG replied (August 2017) that it had sanctioned many projects for the towns to bridge the gap of sewage generation and sewage treatment. Further, the projects under construction/tendering shall also bridge the gap significantly. Delhi Jal Board is constructing 15 more STPs, upgrading Kondli and Rithala STPs and replacing Okhla STP with capacity augmentation to bridge this gap. In Jharkhand, two sewerage projects have been sanctioned in Sahibganj and Rajmahal which will create STP capacity of 15.5 MLD. Project in Sahibganj is under construction.

Few illustrative cases and audit findings in sampled towns are described in succeeding paragraphs.

4.2.2.1 West Bengal: (a) We further identified 65 drains in 12²⁹ municipalities discharging into the River Ganga, apart from drains identified by West Bengal Pollution Control Board (WBPCB). This indicated that the inventory of drains maintained by WBPCB was not comprehensive and updated. Some of the identified drains in 12 municipalities are shown in Plates 4.1 and 4.2 below.

Sewage discharged directly into the River Ganga in West Bengal	
	
<p>Plate 4.1: Steamer Ghat Outfall (Jiaganj-Azimganj)</p>	<p>Plate 4.2: Manipur Ghat drain (Nabadwip)</p>

²⁹ Bhadreswar (2), Baidyabati (6), (4), Jiaganj-Azimganj (3), Nabadwip (1), Barrackpore (1), Krishnagar (1), Maheshtala (9), Hooghly-Chinsurah (4), Chandannagar (4), Diamond Harbour (6), Bhatpara(25), Budge Budge(3).

NMCG stated (August 2017) that the discharge of the drains does not necessarily contain sewage component only as significant contribution may come from other sources.

However, the reply of NMCG was not specific and was silent about the inventory of drains.

(b) In three towns (Jiaganj - Azimganj , Hooghly-Chinsurah and Baidyabati) waste was being dumped on the bank of the River Ganga as shown in Plates 4.3 and 4.4 below.



Plate 4.3: Dumping of solid waste (mainly plastic) on the bank of the River Ganga in Jiaganj and Azimganj



Plate 4.4: Solid waste dump at Tin paisa Ghat at Baidyabati

(c) The Bhatpara Municipality was facing difficulties in operating its water treatment plant as the oil mixed water discharged by 26 factories situated on the banks-blocked the sand bed of the filter house of the water treatment plant. Owing to this, the Municipality had to shut down the plant for six to eight hours which caused scarcity of water. The matter was informed to the WBPCB in February, 2017 but no action was taken by WBPCB upto May 2017.

(d) Similarly, in Haldia, the water flowing in the drain near Oil Jetty was found to be covered with oil layer. This flows directly into the River Ganga. Kolkata Port Trust had placed work order (June 2016) amounting to ₹ 15 crore for procurement of equipment for combating oil spill as shown in Plate 4.5 and 4.6 below.



Plate 4.5: Water flowing in the drain near Oil Jetty was found to be covered with oil layer



Plate 4.6: Oil mixed water discharged by factories situated on the banks-blocked the sand bed

4.2.2.2 Uttar Pradesh : In case of Kanpur city, the daily average sewage generation is 453 MLD against which total STP capacity of 423 MLD is available. However, only 170.30 MLD of sewage is being treated in Kanpur leaving 282.70 MLD sewage untreated. As a result, the capacity of 252.70 MLD was unutilized. The project for interception and diversion of Sisamau Nala is targeted to divert the sewage so as to utilize 138.33 MLD of surplus capacity. Hence, even after completion of this project, 114.37 MLD of surplus STP capacity will remain to be utilized for which no project has been planned as yet.

NMCG stated (August 2017) that it has sanctioned a sewerage network project for district 1 of Kanpur. In addition, Uttar Pradesh Jal Nigam has prepared DPRs for sewerage district II. The sewerage projects will result in channelization of the sewage to the existing STPs.

Sewage discharged directly of the River Ganga in Uttar Pradesh



Plate 4.7: Sisamau Nala falling in the Ganga river at Kanpur

4.2.2.3 Uttarakhand: Out of eight selected towns, four towns (Muni Ki Reti, Gopeshwar, Badrinath and Karnprayag) did not have STP facility, which was a major reason for non-interception of the drains.

NMCG stated (August 2017) that the STP projects for all these towns had been sanctioned and their completion shall not leave any gap in sewage treatment capacity

Sewage discharged directly to the Ganga in Uttarakhand



Plate 4.8: Matr Sadan Nullah discharging into River Ganga in Haridwar

4.3. Projects under *Namami Gange* Programme

Under *Namami Gange* Programme, infrastructural projects are implemented by SPMGs through EAs. These projects include, installation of Sewage Treatment Plants (STPs), Interception & Diversion, Ghats and Crematoria and Canal works. Central Public Sector Undertakings (CPSUs) are involved in the work of Entry Level activities in respect of Ghats and Crematoria and Conditional Assessment and Feasibility Study (CA&FS) of towns. During 2014-17, 128 infrastructural projects (₹ 10,638.75 crore) were implemented by NMCG, out of which we selected 70 projects (₹ 7,655.84 crore), for detailed scrutiny as detailed in Table 4.5.

Table 4.5: State/CPSUs/ Category of Total and Sampled projects

States/CPSUs	Projects	Sampled projects	Categories of sampled projects		
			Sewerage/ STP/ I&D/ Canal Works	Ghats & Crematoria and RFD	Implemented by Multilateral agencies
1. Bihar	14	7	6	1	
2. Delhi	2	2	1	1	
3. Haryana	2	2	2		
4. Jharkhand	6	4	1	2	1
5. Madhya Pradesh	2	2	2		
6. Uttar Pradesh	21	10	10		
7. Uttarakhand	38	19	17	2	
8. West Bengal	16	9	7	2	
9. EIL	11	6		6	
10. EPIL	4	2		2	
11. NBCC	5	3		3	
12. NPCC	1	1		1	
13. WAPCOS	6	3		3	
Total	128	70	46	23	1

RFD : River Front Development

The audit findings in respect of Sewage Treatment Plants /Interception & Diversion Projects/ Canal work, Ghats/Crematoria works and those implemented by multilateral agencies are discussed in paragraphs 4.4, 4.5 and 4.7 respectively.

4.4 Sewage Treatment Plants, Interception & Diversion Projects and Canal

A total of 46 of Sewage Treatment Plants, Interception & Diversion Projects and Canal works costing ₹ 5,111.36 crore were sampled in Audit. Out of these nine projects were completed valuing ₹ 680.36 crore. There were delays in 26 projects costing ₹ 2,710.24 crore ranging from three to 82 months. The important audit findings in respect of STPs, I&Ds and Canal are discussed in succeeding paragraphs:

4.4.1 Delay in execution of Projects

4.4.1.1 Bihar: SPMG awarded the contracts (December 2011 to March 2012,) for four projects at Begusarai, Buxar, Hazipur and Munger having total sanctioned cost of ₹ 328.67 crore. The projects were to be completed within 24 months. However, all the four projects were incomplete as of June 2017 even after delay of more than three years. It was observed that land was handed over to the contractor with delays ranging from 310 to 1,434 days³⁰.

NMCG stated (August 2017) that it has already taken action and issued No Objection Certificate (NOC) for termination for the Hajipur, Begusarai and Munger sewerage projects and requested SPMGs/ Bihar Urban Infrastructure Development Corporation Limited (BUIDCo) for submission of their future plans.

Thus, there has been inordinate delay due to non-possession of the site on time.

4.4.1.2 Madhya Pradesh: National River Conservation Directorate (NRCD) sanctioned (July 2007) a project for setting up of a STP of 12 MLD capacity at Rewa town on River Beehar, with duration of three years. The estimated cost of the project was ₹ 4.29 crore. However, due to non-availability of land, work could not be started upto February 2011. Meanwhile, State Government identified the land but the same was insufficient to construct the STP of 12 MLD capacity. Accordingly, State Government decided to adopt a suitable technology, as per the available land. As a result of change of the technology, the cost of the project was revised (February 2009) to ₹ 8.30 crore, for completion by March 2011. The Project implementing agency initially appointed by State Government was unable to execute the work so it-decided (July 2010) to hand over the work to Public Health and Engineering Department (PHED).

We found that site was acquired in February 2012 i.e. almost three years after the sanctioning of the project and work order was issued to contractor in February 2013. The time line for completion of project was extended from time to time and finally it was extended (November 2016)-upto November 2017. We further noticed that only 95 *per cent* of work of STP could be completed as of March 2017. Thus, the project could not be completed as of March 2017 even after lapse of six years.

³⁰ Begusarai- 1,434 days, Buxar- 1,006 days, Hajipur- 310 days , Munger – 546 days

NMCG replied (August 2017) that it has made mandatory for Executing Agencies not to award any work till land is in the possession of Executing Agency, which will help in reducing unnecessary delays.

Further, NRCD had sanctioned (April 2009) another project for construction of STP of 4.7 MLD capacity on Mandakini River, Chitrakoot, Satna at a total cost of ₹ 1.18 crore. All works were to be completed in a span of three years i.e. March 2012. The Project implementing agency appointed by State Government was unable to execute the work, so it was decided (July 2010) to hand over the work to Public Health and Engineering Department (PHED).

We noticed that the land was acquired in March 2013 and work order was issued in April 2013. However, due to land disputes, work remained suspended from July 2013 to April 2015. Although, STP work was completed in March 2017, yet the same could not be functional, as connection of high tension line was still in progress as of March 2017.

Thus the project had not been operationalized even after five years of scheduled date of completion due to selection of implementing agency which was not technically qualified, non-availability of land and lack of effective monitoring.

NMCG replied (August 2017) that selection of Executing Agency is mandate of State Government but NMCG is doing regular monitoring to cut short such delays.

4.4.1.3 Uttarakhand: The scheme of Sewerage System and STP for Gangotri Dham at Uttarkashi was sanctioned in March 2011 at an estimated cost of ₹ 9.87 crore, which was scheduled to be completed by April 2014. We observed that the project was still incomplete though a sum of ₹ 5.51 crore had been spent. As a result, 0.75 MLD of untreated sewage was being discharged into the Bhagirathi (Ganga). On being pointed out, it was stated by the Project Manager, Uttarakashi, that the project could not be completed in time due to closure of shrine and road blockage due to the 2013 floods. The reply was not tenable as six years had elapsed since the sanction and four years since the 2013 floods but the work was still incomplete.

4.4.1.4 Uttar Pradesh: (i) The AA&ES for Japan International Cooperation Agency (JICA) assisted Ganga Action Plan (GAP) phase-II project at Varanasi, under the NGRBA at an estimated cost at ₹ 496.90 crore was accorded in July 2010. We observed that as per the AA&ES, the work of the project was to be completed within 60 months from the date of sanction i.e upto 31 July 2015. There was delay in processing of obtaining approvals from time to time from NMCG and JICA at the stages of bid documents, clearance of queries of the bidders in pre-bid meeting and obtaining NOC from JICA on bid evaluation report of all the packages. However, due to delay in award of work packages ranging from 17 to 49 months (beyond nine months allocated for completion of tendering process i.e upto April 2011), the work could not be completed till date

and the project cost was escalated by ₹ 137.46 crore³¹. Subsequently, a revised DPR has been sent to NMCG for ₹ 571.92 crore which has not been sanctioned as yet (June 2017).

NMCG stated (August 2017) that the DPR was considered and Uttar Pradesh SPMG has been advised to put up the proposal of cost escalation to State Government in accordance with the condition of AA&ES for the project.

(ii) Under JICA assisted GAP-II project, NRCDC sanctioned (July 2010) one component relating to rehabilitation of STP Bhagwanpur (eight MLD) and Deenapur (80 MLD) of Varanasi district at a cost of ₹ 14.90 crore.

We observed that even after the lapse of seven years from the date of sanctioning of the project, the physical progress is only 35.57 *per cent*. Due to inordinate delay in award of work by UPJN by 48 months which has resulted in cost-overrun of ₹ 3.74 crore due to escalation of prices during the period 2010-14. Further, the execution has suffered from flood, farmer's agitation, non-availability of various components of STP.

Hence rehabilitation and capacity enhancement work at Varanasi is much behind schedule.

NMCG stated (August 2017) that rehabilitation of existing STPs does not involve any capacity enhancement. The project is expected to be completed within the revised time frame i.e. by July 2018. However, the fact remains that only 35.57 *per cent* work has only been completed, therefore, the possibility of completion of project within revised time frame seems remote.

(iii) As per NRCDC Guidelines for preparation of projects, 100 *per cent* house connections for the present population within the project implementation period is to be provided in the DPRs. We observed that in two projects, house connections to sewerage network were not incorporated in the DPR of the sewerage projects at Garhmukteshwar (₹ 46.51 crore), and JICA assisted GAP-II at Varanasi (₹ 496.90 crore). A proposal sent to State Government for providing house connections amounting to ₹ 17.26 crore for Garhmukteshwar is yet to be sanctioned (May 2017).

Thus, non-inclusion of house connection works in the DPR led to idle investment on creation of sewerage infrastructure and non-achievement of intended objective.

NMCG accepted the audit observation and stated (August 2017) that the State Government had been advised in the past to ensure last mile connectivity for all the sewerage network projects so as to enable optimal utilization of the assets created.

³¹ Awarded cost of Packages 1 to 5, ₹ 488.77 crore - Sanctioned estimated cost of work ₹ 351.31 crore = cost escalation ₹ 137.46 crore

4.4.2 Non recovery of Liquidated Damages

In Bihar, Uttarakhand and Uttar Pradesh the Liquidated Damages (LD) for delay were not recovered from the contractors in three cases as shown in Table 4.6. Moreover, in respect of Uttarakhand project, the penalty could not be realized, as the Term Deposit Receipt (TDR) amounting to ₹ 69.20 lakh provided as security was found to be fake.

Table 4.6: Non recovery of Liquidated Damages

Name of State	Name of project	LD to be recovered (₹)	LD recovered (₹)	LD not recovered (₹)
Bihar	Sewerage System & STP projects at Begusarai, Munger and Hajipur	27.45 crore	16.61 lakh	27.28 crore
Uttarakhand	Construction of a Sewerage System and a STP for Gangotri Dham at Uttarkashi	69.20 lakh	Nil	69.20 lakh
Uttar Pradesh	Sewerage and non-sewerage in District A at Allahabad"	9.79 crore	15.00 lakh	9.64 crore

Bihar Urban & Infrastructure Development Corporation Ltd. (BUIDCo) replied (June 2017) that in Sewerage System & STP projects of Begusarai and Hajipur, remaining penalty shall be deducted in final running account bills. For Munger project, it stated that contract has already been terminated with forfeiture of Performance Bank Guarantee.

Regarding Uttar Pradesh, NMCG stated (August 2017) that the contractor has completed the work within the sanctioned cost and requested to reconsider the amount of liquidated damage imposed on him. Contractor's application is under consideration on legal point of view. The balance amount will be recovered from the contractor's final bill or from the performance Bank Guarantee submitted by contractor.

4.4.3 Observations in respect of completed projects

4.4.3.1 West Bengal: (i) A project for abatement of pollution of Beliaghat Circular Canal at an estimated cost of ₹ 10.22 crore, was completed in January 2015 at a cost of ₹ 9.08 crore and a time overrun of three years and two months.

The work entailed Interception and diversion of sewer, fencing, construction of pumping stations, afforestation etc. During site visit (May 2017), it was seen that water in the Canal was almost stagnant and polluted due to dumping of solid waste, open defecation, etc. Further, the concrete pillars of the fencing completed in January 2015 were almost demolished. In many locations, there were encroachments by slums/refugees, car repairing shops, garages, eateries, etc. In several places, there were make- shift toilets discharging waste into the canal. Thus the fencing completed

at ₹ 3.13 crore could not be maintained to safeguard the site. Kolkata Municipal Corporation (KMC) did not carry out the afforestation works and returned the amount of ₹ 25 lakh to SPMG without giving any reason. Had this work been carried out by KMC, the encroachment could have been avoided to some extent rendering the work more successful

KMC accepted (June 2017) that there is encroachment in the area.

Stagnant water and encroachment of Beliaghata Circular Canal of West Bengal	
	
<p>Plate 4.9: Belighata circular canal with stagnant water (May 2017)</p>	<p>Plate 4.10: Slums within the buffer zone. Broken Pillars of the fence can be seen (May 2017)</p>

(ii) In Gayeshpur area a project for construction of a STP with 8.33 MLD capacity was sanctioned (February 2011) for ₹ 168.67 crore. The work was to be completed by February 2014.

As per the MoA executed between SPMG, Gayeshpur Municipality and Kolkata Metropolitan Development Authority (KMDA), the Municipality had to ensure house connection of sewer lines. Audit observed that out of 22,000 households, sewerage connection with the manhole/house pit had been provided to only 25 households. The project was completed in December 2016 and has been put on trial run (January 2017) for six months (June 2017) without completion of house connection. Consequently, against the designed capacity of 8.33 MLD of sewage, the STP was treating less than one MLD³² of sewage leading to under-utilization.

NMCG stated (August 2017) that the State Government is taking up separate project for house connection.

4.4.3.2 Uttarakhand: The Uttarakhand Peyjal Nigam is responsible for construction of sewerage network and STPs. The Uttarakhand Jal Sansthan (UJS) is responsible for connecting the establishments and households to the sewerage network laid and for its operation and maintenance. It was noticed that construction of 3.5 MLD STP at

³² The plant was running for at least 30 minutes. Taking eight hours of operation for 8.33 MLD, the sewage treated was less than one MLD.

Tapovan area in Rishikesh was completed and the STP was in operation since May 2016 without being handed over to the Jal Sansthan as on the date of audit (June 2017). It was further noticed all the establishments/ houses in the project area were not connected with the STP. As a result, only 0.29 MLD sewage was being treated against the total capacity of 3.5 MLD.

NMCG accepted the audit observation and replied (August 2017) that it had highlighted this issue in various meetings with senior officers of Uttarakhand. It has been reported that flow had been increased to double but still EAs have to provide more connections.

4.5 Ghats, Crematoria works and Conditional Assessment and Feasibility Study

A total of 24 of Ghats, Crematoria works Projects costing ₹ 2,416.65 crore were sampled in Audit. Out of these two projects were completed valuing ₹ 20.05 crore. There was delay of 12 months in one project costing ₹ 243.27 crore. The important Audit findings in respect of these projects are discussed in succeeding paragraphs.

4.5.1 Non-signing of MoU for CA&FS and delay in approval of DPRs for entry level activities

The work of Entry Level activities³³ in respect of Ghats and Crematoria and Conditional Assessment and Feasibility Study (CA&FS) was allocated to five CPSUs as detailed in Table 4.7. The Cabinet had approved (May 2015) the engagement of CPSUs as EA or nomination basis or as deposit work by these agencies.

Table 4.7: Details of MoUs with CPSUs by NMCG

CPSUs	Date of MoU for carrying out Entry Level activities	State and number of Towns covered
EIL	23 April 2016	32 towns (including 5 priority towns) in Uttar Pradesh and 6 priority towns in other States ³⁴ .
EPIL	25 May 2016	42 towns in West Bengal
NBCC	6 June 2016	22 towns in Bihar
NPCC	25 May 2016	2 towns in Jharkhand
WAPCOS	19 May 2016	13 towns in Uttarakhand and 25 towns in Uttar Pradesh

Table 4.7 indicates that NMCG entered in to MoU with the CPSUs, only in respect of Entry Level Activity. MoUs for CA&FS were yet to be signed.

NMCG accepted (August 2017) the fact and stated that MOU for preparation of CA&FS will be signed.

³³ Entry level activities included modernization/ development of Ghats and Crematoria, Village Sewage Drains Treatment and River Surface Cleaning

³⁴ Uttarakhand, Bihar, Jharkhand and West Bengal

4.5.2 Delay in start of work

4.5.2.1 In Bihar, an amount of ₹ 243.27 crore was sanctioned to SPMG by NMCG for River Front Development (RFD) in Patna (June 2013), to be completed by June 2016.

We observed that as per the conditions of the contract, site would be handed over to the contractor on signing of the contract. Out of total 20 Ghats, land was not made available for four Ghats³⁵ to the contractor due to construction of Ganga Expressway (till June 2017). The physical progress of work under different components of items ranged from 60 to 92³⁶ per cent as of July 2017.

Bihar Urban Infrastructure Development Corporation Limited (BUIDCo) replied (June 2017) that due to release of sites in phased manner contractor could achieve limited progress of work.

4.5.2.2 In Bihar, three works were entrusted to NBCC as detailed in Table 4.8.

Table 4.8: Details of progress of work by NBCC

Place	Contractor	Stipulated Date of start	Stipulated date of completion	Stipulated completion period	Value of contract (₹ in crore)
Sonepur	M/s Trilok & Associates	12 July 2016	12 Oct 2017	15 months	24.55
Buxar	M/s Urmila RCP Projects Pvt. Ltd.	11 July 2016	11 Oct 2017	15 months	26.92
Munger*	M/s Rama Construction Co.	05 Dec 2016	05 Mar 2018	15 months	66.60

*Combined LOA for Sultanganj, Munger and Jamalpur

We noticed that NOCs from various agencies were not taken before the start of work at all sites and foundation work was in progress.

NBCC stated (May 2017) that the proposed project committee for issue of NOC has not been constituted by Government of Bihar. Further, it attributed the slow progress to delay in clearance of land, rise in river water level, hindrances encountered during execution of work and delay in mobilization of contractors. The reply was not tenable as these reasons were foreseeable and NBCC should have taken suitable steps to mitigate their impact and keep pace of the work.

4.5.2.3 In Uttarakhand, NMCG sanctioned (May 2016) ₹ 72.37 crore³⁷ for “Development of Ghats and Crematoria in the Stretch from Rishikesh to Devprayag and Devprayag to Rudraprayag” to WAPCOS. The projects consist of developing of 28

³⁵ Gai Ghat, Bhadra Ghat, Mahavir Ghat and Naujar Ghat

³⁶ Ghats 92 per cent, Promenades 72 per cent, Crematorium 90 per cent, Buildings 60 per cent, Electrical works 75 per cent and Environmental Management Programmes (EMPs) 84 per cent

³⁷ ₹ 22.11 crore + ₹ 50.26 crore

Ghats³⁸ (15 bathing Ghats and 13 cremation Ghats), to be completed within 18 months from the date of AA&ES (i.e. by November 2017).

As per the conditions of AA&ES of the projects, WAPCOS would obtain all the statutory clearance/ permission/ licenses on behalf of NMCG for implementation of the project. Notice Inviting Tender (NIT) also stated (April 2016) that the Contractor would be provided clear site for construction.

- In stretch- Rishikesh to Devprayag, out of 10 Ghats, work was in progress only in four Ghats. Out of these four Ghats, in two Ghats (Devprayag-sangam and Bharat) WAPCOS started the work without obtaining the NOCs. On three Ghats (Phoolchatti – Bathing, Phoolchatti- cremation and Sirasu) though the NOCs were received yet no work could be started so far.

WAPCOS stated (June 2017) that the NOC's were pending with SDM's and DM's.

- In Stretch- Devprayag to Rudraprayag, out of 18 Ghats, NOCs were received in respect of 10 Ghats. Of these, the work was started in respect of nine Ghats. The work on Farasu Ghat was not started inspite of receipt of NOC. The work on another two Ghats namely, (Kirtinagar-old Ganga Ghat and Kirtinagar-New Ganga Ghat) was started by WAPCOS without obtaining the NOCs from the concerned DM. The work was not stated in respect of seven Ghats.

WAPCOS replied (June 2017) that it started the work on two Ghats, i.e. Kirtinagar Old Ganga Ghat and Kirtinagar New Ganga after obtaining NOC prior to commencement of construction. For Ghat at Farasu, NHAI said that this Ghat lies within the area proposed for the expansion of their roads. The matter was being resolved by SPMG, Uttarakhand and WAPCOS was awaiting for further instructions. The reply of the WAPCOS is not tenable as it was stated in the progress report (for the month of March 2017) that NOCs were pending and work was in progress in these Ghats.

Thus, WAPCOS awarded the work to the contractors without getting the NOCs from the State Authorities for starting up the work.

4.5.2.4 Uttar Pradesh, (i) NMCG sanctioned (December 2016) the project for construction of one bathing Ghat and eight cremation Ghats on the selected locations on the bank of river Yamuna (Mathura Stretch) at an estimated cost of ₹ 27.30 crore. The period of completion of the project was 18 months from the date of issuance of the AA&ES.

An inspection team comprising of members from Uttar Pradesh Jal Nigam, Mathura, Municipal Corporation Council, Mathura and SPMG, Uttar Pradesh visited these sites in Mathura stretch on 28 December 2016. Even after the inspection, WAPCOS was not

³⁸ 18 Ghats/Crematoria in Devprayag to Rudraprayag Stretch and 10 Ghats/Crematoria in Rishikesh to Devprayag Stretch

able to get NOC for these sites from the various State Authorities. While accepting the facts, WAPCOS stated that the process of NOC shall commence, on receipt of formal approval from NMCG outlining the Ghats and crematoria to be taken up for construction.

Thus, due to non-obtaining of NOCs from the concerned authority, the construction work of Ghat in Mathura Stretch could not be started even after a lapse of 6 months from the date of AA&ES.

(ii) NMCG sanctioned (September 2016) the project for Ghat works at Brijghat - Garhmukteshwar, to be executed by Engineers India Limited (EIL) within 16 months. However, it has not yet (June 2017) handed over the site to the contractor due to prioritisation exercise by NMCG (February 2017) and instructions issued in May 2017, despite lapse of more than 10 months since award of the contract and eight months since issue of sanction. Therefore, possibility of completion of work within 16 months of issuance of sanction seems remote as the construction activities have not yet (June 2017) started.

4.5.2.5 In **West Bengal**, the works at Bhatpara Crematoria (sanctioned on 22 September 2016 for ₹ 3.73 crore) and Garulia Ghat (sanctioned on 23 September 2016 for ₹ 11.61 crore) were given to EPIL, with maximum time for completion of work as 21 months (June 2018). We noted that the physical progress of work was very slow, as EPIL achieved only 1.15 *per cent* and 2.48 *per cent* of progress of work respectively. NMCG replied (August 2017) that in Bhatpara crematoria, the existing old huge crematoria building is surrounded by residents. Hence, to maintain the safety of the residents, it requires considerable time for the demolition work. Secondly, due to non finalization of approach road for the existing Ghat nearby the crematoria building, work could not be commenced as scheduled. In Garulia Ghats, site was handed over to EPIL in March 2017 only. No work could be possible after second week of April 2017, due to rise of the Ganga river water at work place.

In respect of projects relating to Ghats and Crematoria, NMCG replied (August 2017) that they undertook prioritization exercise in February 2017 as CPSUs delayed the commencement of the work even after finalization of tenders. NMCG also stated that the works started at many locations without obtaining AA&ES and NOCs. The reply of NMCG confirms the audit observations.

4.6 Other Issues

4.6.1 Expenditure on construction activities without receiving sanction

EIL awarded (August 2016) the project for Bithoor Ghats and Crematoria to M/s VRC Construction (India) Private Limited without obtaining sanction from NMCG. Further,

as on 31 March 2017, EIL had incurred an amount of ₹ 1.74 crore on Bithoor which has been met from the funds for Kanpur project.

NMCG stated (August 2017) that the works that are approved should be taken up for construction activities. NMCG further stated that as per the project sanction, the project could be tendered out after obtaining all the clearances including NOC and EIL was expected to follow established practice for execution of work.

4.6.2 Non-provisioning of revenue generation mechanism in O&M activities

As per MoA between NMCG and EIL, Operation and Maintenance (O&M) for six to 12 months shall be part of the construction contract

NMCG, while issuing sanction for the projects, had also stipulated that the organization engaged for O&M must have revenue generation mechanism in place for sustaining the O&M activities.

We observed that while sanctioning the projects, EIL made provision for O&M, but no provision was inserted for institutional arrangement and revenue generation mechanism for O&M activities, which may affect O&M of the facilities created under the project.

NMCG stated (August 2017) that EIL shall workout a feasible solution, under consultation with NMCG and SPMG, only when the project is towards the completion stage.

The reply is not tenable as NMCG also while issuing AA&ES for the projects stipulated that EIL had to explore the institutional framework and the O&M plan during execution and the DLP.

4.6.3 Improper planning for access road to Ghats

During the site visit of Ghats in Mathura Districts, we noticed that all these Ghats are located at the bank of Yamuna River, one on Ramganga/Kali Nadi River, had no "Pakka" road access to the sites that were to be constructed. The people have to reach the Ghat from a narrow and "Kachcha" road which would be full of mud and water during a rainy season.

NMCG replied (August 2017) that the development of access roads are not part of the NMCG mandate for Ghats as it is expected that CPSUs while proposing Ghats/ Crematoria on a certain location will ensure that the access to the site is available.

The reply is not tenable as the access road to all the Ghats were found infeasible and impractical which reflects that the feasibility of construction of access roads were not properly considered by the WAPCOS while preparing the DPR.

4.7 Project executed by multilateral agency

As per Rule 234 (3 & 4) of GFR, 2005 the Department of Economic Affairs (DEA), Ministry of Finance, as the nodal agency, shall execute the legal agreement and shall be responsible for implementing financial covenants laid down in the agreement executed by departments of Government of India and external agencies.

Further, as per Country Programme Action Plan (2013 to 2017) signed on 1st March, 2013 between Joint Secretary, DEA, Ministry of Finance and Resident Representative, United Nations Development Programme (UNDP) India, the programme will be nationally executed under the overall coordination of DEA in the Ministry of Finance. The DEA will exercise national ownership and direction of UNDP programme activities by approving and signing the Country Programme Action Plan with UNDP.

- NMCG sanctioned (April 2016) a project to United Nations Development Programme (UNDP) at a total cost of ₹ 127.83 crore for rural sanitation initiatives in Sahibganj district of Jharkhand under *Namami Gange* scheme and released ₹ 15.25 crore (June and July 2016) to SPMG without obtaining the clearance from Department of Economic Affairs (DEA), Government of India. Further, the State Government in Jharkhand released (August 2016) ₹ five crore as advance to UNDP, without any formal mechanism.

DEA cautioned UNDP (August 2016) as well as the MoWR, RD&GR (October 2016) that the project would be considered for further operationalization and signing only after due approval and consultation. DEA issued (December 2016) an Office Memorandum (OM) highlighting contravention of laid down guidelines of expenditure and GFRs, procedure for selection of UNDP as an implementing partner, fund transfer to UNDP. It advised MoWR, RD&GR that no money be given by Government of India to UNDP for the project.

Thus, NMCG sanctioned the project without adherence to the applicable rules and regulations.

- Under the project, ₹ 23.27 crore was proposed to be mobilized from other trusts/organization. However, no details regarding mobilization of fund from other sources (other than Government of India and UNDP) was available in the records to ascertain the status of fund.

The project aimed to improve the health and quality of life of around 45,000 households located in 78 villages of the Ganga river basin in Jharkhand through improved sanitation practices, quality of wastewater and storm water runoff flowing into the River Ganga. However, UNDP carried out other works such as organisation of special camps for making Aadhar card, opening of bank accounts, focus effectively on PDS system, old age, widow and disable persons pension scheme, special emphasis on eradication of TB in the region etc. which were not part of the approved project.

Thus, State Government of Jharkhand extended undue favour to UNDP by providing it with advance funds even before entering into any agreement with UNDP. Thus, there was lack of diligence in involving a multilateral agency as executing agency.

4.8 Conclusion

NMCG missed the target of preparation of DPRs for STPs as per the Cabinet approval of *Namami Gange* Programme. Untreated sewage was found to be discharged into the River Ganga in the selected towns of Bihar, Jharkhand and West Bengal. The projects executed by SPMG/EAs relating to sewerage systems and Sewerage Treatment suffered from delay in execution due to land acquisition problems, time and cost overrun, slow progress of work by contractor, underutilisation of STPs due to non-connection of all households etc. In case of projects relating to Ghats and Crematoria which are being executed by CPSUs, projects suffered due to delay in start of work, construction activities without receiving AA&ES, non- planning of village sewage drain treatment, lack of coordination among NMCG and CPSUs, delay in grant of NOC from various State Government authorities and non-availability of land, etc.

4.9 Recommendations

We recommend that

- i. NMCG may 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.
- ii. NMCG/ SPMGs may synchronize Interception and Diversion Projects with setting up of Sewage Treatment Plants and their operationalization for ensuring that no untreated sewage flows into the River Ganga.
- iii. NMCG, SPMGs in consultation with the State Government authorities and Executing Agencies may make tripartite agreements for making land available before awarding the contracts.

