

# **SIXTY-SECOND REPORT**

**PUBLIC ACCOUNTS COMMITTEE  
(2003-2004)**

**(THIRTEENTH LOK SABHA)**

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## **GANGA ACTION PLAN**

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*Ministry of Environment and Forests*

SEAL

*Presented to Lok Sabha on 05.02.2004*

*Laid in Rajya Sabha on 05.02.2004*

**LOK SABHA SECRETARIAT  
NEW DELHI**

February, 2004/ Magha, 1925 (Saka)

# **CONTENTS**

COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE (2003-2004)

INTRODUCTION

REPORT

Annexure-1

## **PART II\***

Minutes of the sitting of the Sub-Committee (Ganga Action Plan) of PAC (2000-2001) held on 25.8.2000; the sittings of PAC/Sub-Committee (Ganga Action Plan) (2001-2002) held on 24.7.2001, 11.10.2001; the sittings of Sub Committee (Ganga Action Plan) of PAC (2002-2003) held on 16.10.2002 and 22.10.2002 and the sittings of Public Accounts Committee (2003-2004) held on 22.9.2003, 23.9.2003 and 03.02.2004.

APPENDIX 1\*-            Statement of Conclusions/ Recommendations

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\* Not appended to the cyclostyled copy of the Report

**COMPOSITION OF PUBLIC ACCOUNTS COMMITTEE  
(2003 - 2004)**

**Sardar Buta Singh** - **Chairman**

**LOK SABHA**

2. \*Shri Haribhai Chaudhary
3. Shri Priya Ranjan Dasmunsi
4. Shri M.O.H. Farook
5. Dr. Madan Prasad Jaiswal
6. Shri Raghunath Jha
7. Dr. K. Malaisamy
8. Dr. M.V.V.S. Murthi
9. Shri Rupchand Pal
10. Shri Mohan Rawale
11. Dr. Nitish Sengupta
12. Shri Raghuraj Singh Shakya
13. Shri Brij Bhushan Sharan Singh
14. Shri Kirit Somaiya
15. \*\*Shri Bhartruhari Mahtab

**RAJYA SABHA**

16. Shri Santosh Bagrodia
17. Shri Prasanta Chatterjee
18. Shri K. Rahman Khan
19. Shri Bachani Lekhraj
20. Dr. Alladi P. Rajkumar
21. \*\*\* Shri S. Viduthalai Virumbi
22. Prof. Ram Gopal Yadav

**LOK SABHA SECRETARIAT**

- |    |                         |   |                      |
|----|-------------------------|---|----------------------|
| 1. | Shri P.D.T. Achary      | - | Additional Secretary |
| 2. | Shri S.K. Sharma        | - | Joint Secretary      |
| 3. | Shri Raj Shekhar Sharma | - | Deputy Secretary     |
| 4. | Shri B.S. Dahiya        | - | Under Secretary      |
| 5. | Shri N.S. Hooda         | - | Under Secretary      |

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\*Shri Haribhai Chaudhary, MP resigned w.e.f. 9<sup>th</sup> May, 2003 and re-elected w.e.f. 30<sup>th</sup> July, 2003.

\*\* Shri Bhartruhari Mahtab, MP elected w.e.f. 30<sup>th</sup> July, 2003 vice Shri Chinmayanand Swami, MP ceased to be a Member on his appointment as Minister w.e.f. 24<sup>th</sup> May, 2003

\*\*\* Shri C.P. Thirunavukkarasu, MP retired w.e.f. 6<sup>th</sup> October, 2003

## INTRODUCTION

I, the Chairman, Public Accounts Committee having been authorised by the Committee to present this Report on their behalf, do present this Sixty-second Report on the Report of C&AG of India for the year ended 31 March 2000 (No. 5A of 2000), Union Government (Scientific Departments) relating to "Ganga Action Plan".

2. The Report of the C&AG for the year ended 31 March 2000 (No. 5A of 2000), Union Government (Scientific Departments) was laid on the Table of the House on 22 December 2000.

3. The Committee took the evidence of the representatives of the Ministry of Environment and Forests on the subject at their sittings held on 22.9.2003 and 11.10.2001. The Committee also took oral evidence of the representatives of State Governments of Uttaranchal, Haryana, Uttar Pradesh and West Bengal on 23.9.2003. The Committee took strong exception to the absence of representatives of Bihar Government at the sitting. The Committee considered and finalised this Report at their sitting held on 3 February 2004. Minutes of the sittings form Part II\* of the Report.

4. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix\* to the Report.

5. The Committee would like to express their thanks to the Public Accounts Committee (2000-2001, 2001-2002 and 2002-2003) for taking evidence of the representatives of Ministry of Environment and Forests and State Governments of Uttaranchal, Haryana, Uttar Pradesh and West Bengal and obtaining information thereon.

6. The Committee would like to express their thanks to the officers of the Ministry of Environment and Forests for the cooperation extended by them in furnishing information and tendering evidence before the Committee.

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

NEW DELHI;  
4 February, 2004  
15 Magha, 1925(Saka)  
**Committee**

**SARDAR BUTA SINGH,**  
**Chairman,**  
**Public Accounts**

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\* Not appended to the cyclostyled copy of the Report

# **REPORT**

## **CHAPTER I**

### **I. INTRODUCTORY**

1.1 This Report is based on the Report of the Comptroller and Auditor General of India for the year ended March 2000, Union Government (Scientific Departments), No. 5A of 2000 relating to “Ganga Action Plan”.

#### **Ganga River System**

1.2 The Ganga rises from the Gangotri Glacier in the Garhwal Himalayas at an elevation of some 4100 metres above the sea level under the name of Bhagirathi. This main stream of the river flows through the Himalayas till another two streams – the Mandakini and the Alaknanda – join it at Dev Prayag, the point of confluence. The combined stream is then known as the Ganga. The main tributaries of the Ganga are Yamuna, Ram Ganga, Gomati, Ghaghara, Son, Damodar and Sapt Kosi. The river after traversing a distance of 2525 kms from its source meets the Bay of Bengal at Ganga Sagar in West Bengal.

#### **Pollution in the Ganga River**

1.3 The Ganga Basin, the largest river basin of the country, houses about 40 percent of population of India. During the course of its journey, municipal sewages from 29 Class-I cities (cities with population over 1,00,000), 23 Class II cities (cities with population between 50,000 and 1,00,000) and about 48 towns, effluents from industries and polluting wastes from several other non-point sources are discharged into the river Ganga resulting in its pollution. The NRCD records, as mentioned in audit report, put the estimates of total sewage generation in towns along river Ganga and its tributaries as 5044 MLD (Million Litres per Day). According to the Central Pollution Control Board Report of 2001, the total wastewater generation on the Ganga basin is about 6440 MLD.

#### **Launching of GAP**

1.4 An action plan, popularly known as “Ganga Action Plan” (GAP) for immediate reduction of pollution load on the river Ganga was prepared by Department of Environment (now Ministry of Environment & Forests) in December 1984 on the basis of a survey on Ganga basin carried out by the Central Pollution Control Board in 1984. To oversee the implementation of the GAP and lay down policies and programmes, Government of India constituted the Central Ganga Authority (CGA) under the chairmanship of the Prime Minister in February 1985. It has been renamed as the National River Conservation

Authority (NRCA) in September 1995,. The Cabinet approved GAP in April 1985 as a 100 per cent centrally sponsored scheme. The GAP was thus launched in June 1985 with the establishment of the Ganga Project Directorate (GPD), renamed as the NRCD (National River Conservation Directorate) in June 1994, as a wing of the Department of Environment, to execute the projects under the guidance and supervision of the CGA. The state agencies like Public Health Engineering Department, Water and Sewage Boards, Pollution Control Boards, Development Authorities, Local Bodies etc. were responsible for actual implementation of the scheme. The organizational structure and composition of each of the bodies for implementation of the Ganga Action Plan are shown in Annexure-I.

### **Objectives of the Ganga Action Plan**

1.5 At the time of launching, the main objective of GAP was to improve the water quality of the Ganga to acceptable standards by preventing the pollution load reaching the river. The objective of GAP was, however, recast in June 1987 as restoring the river water quality to the “Bathing class’ standard which is as follows:

(i)	Dissolved Oxygen (DO)	Not less than 5 mg/litre
(ii)	Bio-chemical Oxygen Demand (BOD)	Not more than 3 mg/litre
(iii)	Bacterial Load/Coliform Count (Most Probable Number)	Not more than 10,000 per ml.
(iv)	Faecal Coliform (Most Probable Number)	Not more than 2,500 per 100 ml.
(v)	pH value	6.5 to 8.5

### **The Ganga Action Plan Phase-I**

1.6 The Ganga Action Plan Phase I (GAP-I) was started in 1985 to improve the water quality of River Ganga to acceptable standards by preventing the pollution load reaching the river. The GAP-I envisaged interception, diversion and treatment of 882 MLD out of 1340 MLD of wastewater estimated at that time, generated in 25 class-I towns in 3 States of Uttar Pradesh, Bihar and West Bengal (presently 1 in Uttaranchal, 5 in Uttar Pradesh, 4 in Bihar and 15 in West Bengal). The main focus of the Plan, where a major part of public investment was made, was on tackling pollution from municipal sewage, accounting for about 75% of the river pollution. The programme also partly addressed to non-point sources of pollution by way of creating facilities like toilet complexes, crematoria, improvement of bathing ghats etc. in the fringe area of the river. Prevention and control of industrial pollution was tackled under the existing environmental laws without any public funding {except for a Common Effluent Treatment Plant (CETP) at Kanpur}. The approved cost for GAP-I was Rs.462.04 crores. Out of

this, Rs.451.70 crore were released by the Government of India to the implementing agencies. Under GAP-I, 261 schemes were sanctioned for completion of which 259 schemes were completed. Two schemes of sewage treatment plants in Bihar could not be completed because of litigation problems. A sewage treatment capacity of 865 MLD has been created under GAP Phase-I as of October 2000. With the completion of the remaining two STPs in Bihar, the total capacity will become 882 MLD (revised from 873 MLD). The NRCD had scheduled the GAP-I for completion by March 1990, but extended it progressively upto 31 March 2000 when this phase was declared closed.

## **The Ganga Action Plan Phase-II**

1.7 Since GAP-I did not cover the pollution load of Ganga fully; the Ganga Action Plan Phase II (GAP-II) was launched in stages between 1993 and 1996.

- (a) On the tributaries of river Ganga viz. Yamuna, Damodar and Gomati
- (b) In 25 class-I towns left out in Phase-I
- (c) In the other polluting towns along the river.

The Cabinet Committee on Economic Affairs (CCEA) approved the GAP-II in various stages during April 1993 to October 1996. The States of Uttaranchal, Haryana, Delhi, Uttar Pradesh, Bihar and West Bengal were to implement the GAP-II by treating 1912 MLD of sewage. Against this, a treatment capacity of 780 MLD has been created so far (October 2003). The approved cost of GAP-II is Rs. 2285.48 crore (excluding establishment charges) against which, an amount of Rs.792.38 crore has been released till 30.11.2003. The total number of schemes sanctioned under GAP-II so far is 495 at a cost of Rs.1380 crore, out of which 318 schemes have been completed. The revised date for completion of GAP-II was kept as December 2005. The Ministry of Environment & Forests have now stated that as the second Phase of Gomti Action Plan and Yamuna Action Plan have been approved and these are targeted to be completed by March 2007 and September 2008 respectively, the GAP-II is now targeted to be completed by December 2008 provided commensurate funds are made available in time.

## **II. AUDIT APPRAISAL**

2.1 The Audit in their review covering the period from the year 1993-2000 involving Rs.655.23 crores of the total releases, had stated that the Ganga Action Plan has met only 39 *per cent* of its primary target of sewage treatment, according to the performance reported by the participating States. The Government released a total of Rs 987.88 crore on the Plan since its inception; the states have reported expenditure of Rs 901.71 crore till March 2000. There were heavy shortfalls in the achievement of targets of creation of assets and facilities under the plan. Even those “achievements” were poor indicators of the

extent of success of the plan, as most of them did not function either fully or partially for a variety of reasons.

2.2 The Audit para had pointed out that the Ministry left to the States the crucial determinants of sewage characteristics and downstream water quality for selection of towns for phase-II of the plan, leading to non-uniformity in selection across the States and many questionable inclusions and exclusions. The Ministry had no mechanism to evaluate the estimations of sewage by the States. Audit found instances of incorrect estimations in test check.

2.3 The Audit had also observed that Ministry did not fix any time schedule for submission of Detailed Project Reports, the basic document for expenditure sanction, from the States for phase-II of the plan, till the Supreme Court forced the issue on the basis of a Public Interest Petition. Test audit check found delays in submission of Detailed Project Reports by the States and their sanction by the Ministry. Moreover, Audit had not found much evidence of a well-defined monitoring mechanism at the Ministry to ensure adherence by the States of the time-schedule prescribed at the instance of the Supreme Court.

2.4 The main highlights of various shortcomings in the implementation of the Ganga Action Plan pointed out by Audit in the review are as under: \*

**Monitoring Mechanism.** The apex body headed by the Prime Minister to monitor the plan, viz. the National River Conservation Authority, met only twice, in 1994 and 1997. The National River Conservation Directorate of the Ministry did not show to audit any recorded evidence of the results of field visits, review meetings with the implementing agencies, and follow up actions, as enjoined upon it in the plan. At the States level, Haryana, Bihar and Delhi governments did not constitute Citizen Monitoring Committees in any of the towns and West Bengal constituted committees only in 5 out of 42 towns. The constituted committees in West Bengal and Uttar Pradesh met only infrequently. Thus, both at the central and the States level monitoring of the plan was inadequate.

**Execution of schemes.** Phase-I of the plan is not yet fully complete, even after delay of over 10 years. Phase-II is also far behind its schedule. It is due to end in December 2001, but there are reports of creation of only 13.7 *per cent* of the targeted sewage treatment capacity so far.

**Core schemes: Interception & Diversion schemes.** Bihar could not obtain any sanction from the Ministry for interception & diversion scheme in the phase-II of the plan, as it did not submit Detailed Project Reports per the Ministry's guidelines. Audit test check in the States revealed many instances of administrative delays leading to cost escalations, faulty designs of the schemes, lack of necessary spade work such as soil testing leading to damage to equipment, bad contract management, stolen equipments, idling of expensive equipments, and in general of poor maintenance.



**Core Schemes: Sewage Treatment Plants.** Bihar and West Bengal could not obtain sanction from the Ministry for any Sewage Treatment Plant in the Phase-II of the plan. For Bihar, that was because of unsatisfactory operation and maintenance of assets during phase-I; and, for West Bengal, because the State Government did not confirm the availability of land.

Audit test check found many instances of avoidable delays leading to cost escalation, idling of the plants, mismatch with interception & divergence schemes, technical flaws, diversion of resources, etc.

**Non-Core Schemes.** The objective of the non-core schemes of the plan was to cater to the peripheral environmental concerns, having a bearing on the river pollution. Audit test check in the states generally revealed instances of impairment of assets created at much public expense because of neglect and lack of maintenance, besides delays in their setting up at the first place.

**Operation and Maintenance of Assets.** As per the Audit scrutiny, the Ministry failed to ensure the optimum utilisation of assets created under the plan. The States and their implementing agencies, too, neglected operation and maintenance of assets.

**Public Participation.** Audit did not find much evidence of any significant initiative on the part of the Ministry and the States to improve and promote public participation.

**Water Quality Monitoring.** The Ministry discontinued the water quality monitoring, a key instrument for technical assessment of the success of the plan, since September 1999 reportedly due to funds constraints. Collateral findings revealed further deterioration of water quality in all its parameters.

**Control of bacterial load.** The Ministry did not take action on the recommendations of the expert committee for control of bacterial load.

**Industrial pollution.** Only about 45 *per cent* of the grossly polluting industrial units had installed Effluent Treatment Plants. Over 18 *per cent* of those did not function properly, and did not meet the technical standards. Those units discharged industrial effluent of 2667.16 MLD into the rivers. The NRCD had no mechanism to see that the installed plants functioned satisfactorily.

West Bengal Government was yet to submit a satisfactory Detailed Project Report and obtain the Ministry's sanction for setting up a Common Treatment Plant for treatment of effluents of relocated tanneries in Calcutta, which the Supreme Court had ordered in April 1995.

**Financial management.** The States reported expenditure of Rs 587.63 crore out of Government funds of Rs 655.23 crore released to the implementing agencies. Audit test check in the States found many instances of financial mismanagement; such as, funds diversion to unauthorised activities (Rs 36.07 crore), incorrect reporting (Rs 6.75 crore), and parking of funds by Bihar Rajya Jal Parishad (BRJP) in its own personal account (Rs 1.17 crore), and unutilised funds with the implementing agencies (Rs 72.62 crore), etc.

### III. FINANCIAL PROFILE

3.1 Approved outlays for the GAP-I and the GAP-II were Rs 462.04 crore and Rs 1276.25 crore respectively. The Central Government was to bear the entire expenditure on schemes under the GAP-I, and to share it equally with the States in the GAP-II in 1993. The Government of India decided in November 1998 to bear the entire expenditure on schemes from April 1997, as the States found it difficult to provide their matching share. With effect from 01.04.2001, the funding pattern was changed to 70:30 between Centre and States, which is continuing at present for the new schemes. Of the 30 per cent share of states, a minimum of 1/3 is to be in the form of share of local/public body.

3.2 The following table, prepared from the records of the NRCD shows the position of release of funds and actual expenditure under the GAP-I and II during 1993-94 to 1999-2000:

*Rs in crore*

Year	GAP-I		GAP-II			
	Central Release	Expenditure	Release			Expenditure
			Centre	State	Total	
Till 92-93	332.65	314.08	-	The NRCD could not provide annual break up		-
93-94	46.85	46.01	11.93			1.05
94-95	27.22	20.00	8.40			17.04
95-96	12.28	19.29	13.12			19.82
96-97	12.11	15.30	94.23			128.93
97-98	3.29	13.90	80.81			101.70
98-99	2.50	3.69	86.00			108.99
99-2k	Nil	0.41	88.54			91.50
<b>Total</b>	<b>436.9</b>	<b>432.68</b>	<b>383.03</b>	<b>167.95</b>	<b>550.98</b>	<b>469.03</b>
<b>Total for the GAP-I &amp; II</b>					<b>987.88</b>	<b>901.71</b>

### IV. OPERATIONAL PROFILE

4.1 The GAP aimed to tackle 2794 MLD of sewage; 882 MLD under the GAP-I and 1912 MLD under the GAP-II. To achieve the objective of pollution

abatement, the GAP took up core and non-core schemes. The core sector schemes consist of interception & diversion schemes and STPs (Sewage Treatment Plants), designed to tackle 'point pollution', i.e. pollution that is from measurable sources such as drains, sewage pumping stations and sewage systems. Non-core schemes comprise low cost sanitation schemes, river front development schemes, electric and improved wood crematoria; and, tackle non-point, non-measurable pollution, such as dumping of solid waste and open defecation, dumping of unburnt / half-burnt dead bodies etc.

4.2 The operational status of core and non-core schemes alongwith details of sewage treatment under the GAP-I & II as reported by the NRCD and the states concerned till March 2000 were as follows:

### I: Status of Core Schemes

State	Phase	Interception and Diversion				Sewage Treatment Plants			
		Schemes		Sewer Lines (in kms)		Schemes		Sewage Treatment (in MLD)	
		T*	A*	T	A	T	A	T	A
Uttar Pradesh**	I	40	40	136.00	136.00	13	13	375.09	375.09
	II	51	30	95.49	72.94	16	3	1098.14	13.00
West Bengal	I	31	31	173.14	173.14	15	14	371.60	341.60
	II	4	0	NA	NA	0	0	373.63	0.00
Bihar	I	17	17	53.71	53.71	7	5	135.50	118.00
	II	0	0	28.68	0.00	0	0	92.18	0.00
Haryana	II	19	9	130.56	122.63	12	8	323.00	228.00
Delhi	II	0	0	0.00	0.00	2	2	20.00	20.00
Total	I	88	88	362.85	362.85	35	32	882.19	834.69
	II	74	39	254.67	195.57	30	13	1911.95	261.00
<b>Grand Total (GAP I + II)</b>		162	127	617.52	558.42	65	45	2794.14	1095.69

### II: Status of Non-Core Schemes

State	Phase	Low Cost Sanitation		Crematoria		River front Development	
		T	A	T	A	T	A
Uttar Pradesh**	I	14	14	3	3	8	8
	II	28	11	11	10	10	2
West Bengal	I	22	22	17	17	24	24
	II	0	0	0	0	0	0
Bihar	I	7	7	8	8	3	3
	II	8	0	1	0	9	0

Haryana	II	6	4	6	6	1	1
Delhi	II	0	0	1	0	0	0
Total	I	43	43	28	28	35	35
	II	42	15	19	16	20	3
<b>Grand Total</b>		85	58	47	44	55	38

**\*T: Target; A - Achievement**

**N.B: The figures of reported achievement are subject to test audit comments on the core and non-core schemes in the report.**

**\*\* Before bifurcation of the state of Uttaranchal from Uttar Pradesh**

4.3 It was seen from above table that the reported achievements in key core and non-core schemes under the GAP II fell well short of the targets, being 13.65% in Sewage Treatment, 52.70% in Interception and Diversion Schemes, 76.79% in Sewer Lines, 35.71% in Low cost sanitation, 84.21 % in crematoria and 15 % in River Front Development.

4.4 On enquiry from the Committee, the Ministry of Environment and Forests submitted a written note stating that under GAP-II, sewage treatment capacity of 780 MLD for Ganga river, 173 MLD for Yamuna River (under YAP-II), 68 MLD for Damodar river and 436 MLD for Gomti river is still required to be created. The Committee desired to know the reasons for heavy shortfall in the capacity created vis-à-vis targeted sewage treatment capacity in the case of Ganga Action Plan – II. The Ministry of Environment and Forests in a written reply, inter alia stated:

“Against the Targeted sewage treatment of 882 MLD under GAP I, 865 MLD of sewage treatment capacity have already been created. Under GAP-II the figures are 737.75 MLD out of 753 MLD for Yamuna river in YAP-I scheme. These figures show that almost the targeted sewage treatment capacity have been created.”

4.5 In the note, the Ministry specified the following reasons for delay in implementation of GAP-II:

“(i) The scheme of National River Conservation Plan, of which Ganga Action Plan Phase-II is a part, was originally envisaged on 50:50 cost sharing basis between Centre and the States. However, in view of the difficulties of the State Governments in bringing their 50% share, the National River Conservation Authority under the chairmanship of Prime Minister at its X meeting held in July, 1997 converted the scheme into a 100% centrally funded scheme. But the Cabinet approval to this decision could be obtained only in November 1998. During the intervening period of 16 months, the

States were not providing their share in anticipation that the scheme will become 100% centrally funded. As a result, the progress of the scheme became very slow.

- (ii) The conventional technologies proposed earlier did not address the problem of bacterial pollution fully. In order to address this issue, a decision was taken in July 1999 to adopt oxidation pond based sewage treatment in all the places. These ponds, although requiring large areas of land are capable of reducing faecal coliform suitably. The State Governments could not provide such areas of land in larger towns, which account for major chunk of the capital cost. As a result, the progress of work was extremely slow for nearly 18 months.
- (iii) Until 1999-2000, grants were released to the State Government transfer of such grants to the implementing agencies were invariably delayed in almost all the States for a period ranging from 6-9 months affecting the progress of work adversely.
- (iv) The quality of preparation of Detailed Project Reports (DPRs) was not upto the mark from a number of States, which resulted in significant delays.
- (v) There were delays in land acquisition in UP and West Bengal.”

4.6 When quizzed by the Committee that the Ministry must have fixed a time frame for completing GAP-II, the representative of the Ministry of Environment & Forest during evidence stated:

“.....there are problems. Earlier, the approach was that on the pre-feasibility report, the scheme was sanctioned. Now on the basis of a detailed project report the schemes are being sanctioned. So the first step in this process is that the State Governments, through their implementing agencies shall have to prepare a detailed project report. Once that is prepared, NRCD examines it and sanctions it. Depending upon the nature of works, some projects take two years time and some projects take three years time. State Governments and implementing agencies have been very slow in this operation.”

## **V. SELECTION OF TOWNS**

5.1 Audit para had pointed out that the GAP-I had sought to address the issue of pollution abatement in class I towns along Ganga. For the GAP-II, the NRCD did not fix any clear parameters in terms of sewage characteristics or downstream water quality for selection of towns; and had left the selection to the

States. The EFC (Expenditure Finance Committee) recommended, however, in its first meeting held in August 1996, that the States might not include towns with BOD (Bio-chemical Oxygen Demand) less than 3 mg/l (Milligram Per Litre) downstream of the river. Towns approved by the NRCD included 23 towns in West Bengal, Bihar and Uttar Pradesh, where BOD levels were below 3 mg/l. While Uttar Pradesh Government excluded Kannauj where BOD was always above 3 mg/l during 1994 to 1999 and touched 4.8 mg/l in 1999. Danapur in Bihar, with 8 drains discharging 0.6 MLD of raw sewage direct into Ganga, did not get selected. Likewise, Uluberia in West Bengal with a BOD of 43.07 mg/l of wastewater also remained excluded, even though this exclusion violated the State Government's adapted parameters of 30 mg/l BOD of wastewater. Audit para had disclosed that the NRCD did not have information about BOD levels of 5 towns it had approved.

5.2 The Committee made inquiries to know the reasons for non-uniformity in selection of towns across the states leading to many questionable inclusions and exclusions. The Ministry in a written note stated:

“Although EFC recommended for inclusion of towns with BOD greater than 3 mg/l for taking up in GAP-II programme, the towns which were having less than 3 mg/l BOD were taken up on the directions of Supreme Court in its order dated 1.11.1995 in Writ Petition No. 3717/85. The inclusion of these towns was also approved by EFC in its meeting held in August 1996.”

5.3 On being asked about the parameters that were taken into account for selection of towns in their states for the GAP-II, the State Governments in their post evidence information stated that the Government of India did the selection of towns.

5.4 When inquired as to why the towns of Kannauj in UP, Danapur in Bihar and Uluberia in West Bengal were not selected for pollution abatement under GAP even though these towns were found polluting the rivers substantially where as some towns which were less polluting have been selected, the Ministry in their advance information stated:

“Proposals for inclusion of these towns under GAP have not been received from respective State Governments so far.”

5.5 Clarifying on the exclusion of Kannauj from GAP-II, the representative of the Uttar Pradesh Government during evidence stated:

“Under Ganga Action Plan I, the condition was that the population of the town should not be less than one lakh.”

5.6 When pointed out by the Committee that Kannauj comes under GAP-II the only parameter of which is the BOD, the representative replied:

“All the water which is discharged from this particular town does not go into any drinking stream. It is discharged outside the town.”

5.7 As regards the non-selection of Danapur, under GAP –II, Bihar Government in a written note stated that only Class-I cities were included in GAP-I. Danapur town has been taken up under GAP-II.

5.8 In view of the reported approval of five towns without knowing their BOD levels, on a Committee's query whether the NRCD cross check pollution levels of the towns suggested by the State Governments for GAP-II, the Ministry in a written note stated:

“These towns were taken up to carry out the instructions of Supreme Court. Hence, the NRCD did not monitor information about the BOD levels of the five towns in question”.

## **VI. ESTIMATES OF SEWAGE GENERATIONS**

6.1 According to Audit para, under the GAP-I, the NRCD's sewage estimates were based on population and water supply rate, with the sewage generation taken as 80 per cent of water supplied. The NRCD found that criterion to be flawed which led to over estimation of sewage in several cases, and fixed the criteria of actual flow of drains at the outfalls to estimate the generation of sewage in the town in the GAP-II. The NRCD also had no mechanism to evaluate and check the estimations of sewage by the States. Test audit observations on estimations of sewage are as follows:

- (a) The sewage estimation of 70 MLD in Noida town of Uttar Pradesh was incorrect as it did not include the sewage of Shahdara drain, which discharges 404 MLD sewage in the river Yamuna at Okhla barrage.
- (b) The estimate of 200 MLD sewage in Varanasi did not include 50 MLD sewages by-passed into the river Varuna, which finally meets the river Ganga.

6.2 The Committee enquired as to whether the Noida and Varanasi exposed the unreliability of the procedure of sewage estimation, the Ministry stated in a written note:

“In respect of Noida, the total sewage generation was taken on the basis of field investigations carried out by UP Jal Nigam and the data supplied by the Noida Authorities to UP Jal Nigam. The Shahdara drain had not been included in the proposals of Noida at that stage as its discharge was

only on account of sewage generated from Delhi, for which the Government of Delhi has a separate action plan. As per the information provided by the Delhi Jal Board, about 500 MLD of discharge in Shahdara drain is due to Delhi. It is proposed by the Delhi Jal Board to divert and treat about 410 MLD of sewage discharge now flowing in the Shahdara drain in the Kondli STP where 205 MLD treatment capacity already exists and another 205 MLD treatment capacity is proposed for which tendering is in process. The Delhi Jal Board have also informed that the balance 90 MLD discharge in Shahdara drain (500-410) consists of treated effluent from the Yamuna Vihar STP.”

With regard to Varanasi, the Ministry stated:

“The proposal for GAP-II at Varanasi have been prepared by UP Jal Nigam on the basis of actual flow of various drain measured during 1996-98 which is estimated to be 213 MLD and it includes 50 MLD of sewage bye-passed into river Varuna.”

The Ministry further stated:

“As per the guidelines circulated by NRCD to all the State Governments, actual field surveys are to be conducted during dry weather to assess the pollution load. 4 samples were to be taken in a month, with 3 samples on week days and the 4<sup>th</sup> sample on a off day (eg. Sunday). It was also suggested in the guidelines that the measured sewage flow of a town may be cross-checked with the water supply rate, population and interception factor to ensure that the assessment is as realistic as possible. Thus, the estimate of sewage generated in the towns under GAP Phase-II were based on actual flows in the drains confluencing with the river, which were measured by the implementing agencies of the various State Governments.”

6.3 As considerable delay has already taken place in completion of pollution abatement works, the Committee observed that sewage generation estimated at the time of formulation of GAP would be of little relevance, as population in those towns wherein GAP is being undertaken would have increased by a large extent. As such the existing/intended capacity being created under GAP would not be sufficient to tackle sewage being generated now. Since the ultimate aim of improving the quality of the water could not be achieved by partial treatment of the sewage, the Committee enquired as to how the Ministry propose to tackle the issue. In their written reply, the Ministry stated as under:

“Though considerable delay has taken place in completion of pollution abatement works as the programme was new in its kind. The personnel involved at Policy and Implementing Stage took time to understand the problem. The untreated sewage of GAP-I is being taken up in GAP-II and



in NRCP. The State Govts have been advised to take up works for treatment of additional sewage (if any) from their own resources after the completion of ongoing GAP-II and NRCP works. The Ministry in future proposes to take a holistic approach of pollution abatement to improve the water quality of rivers and lakes. This approach will include:

- (i) Sewerage Systems – Conveyance and its Disposal
- (ii) Municipal Solid Waste-Collection and Disposal
- (iii) Low cost sanitation
- (iv) Crematoria
- (v) Other non-point sources of pollution
- (vi) River Front Development Works
- (vii) Water shed/catchment treatment
- (viii) Public Participation
- (xi) Afforestation”

## VII. DELAY IN APPROVAL OF DPRS

7.1 For each of the GAP schemes, the states had to obtain administrative approval to the Preliminary Feasibility Reports (PFRs) of the targeted towns and expenditure sanction to Detailed Project Reports (DPRs) of each of the schemes. Audit had reported that the NRCD had not fixed any time schedule for submission of DPRs of the GAP-II by the States and their sanction. It was only in January 1996, on intervention of the Supreme Court, that the NRCD prescribed that States would submit the DPRs within 3 months of the date of approval of PFRs. The NRCD was to approve DPRs within 1 month from the date of their receipt. In August 1996, the Steering Committee also asked the States to submit all pending DPRs by November 1996. Yet only 73 per cent of the expected DPRs reached the NRCD from the States till March 2000. The NRCD approved only 58 per cent of the submitted DPRs. The NRCD did not maintain any record for dates of receipt and sanction of DPRs, because of which the diligence with which NRCD followed its assurance to the apex court could not fully be evaluated.

7.2 Audit had test checked 40 DPR files, and found inordinate delays in 12 cases ranging from 2 to 33 months in submission of DPRs by the States. The NRCD also took 2 to 10 months in approving DPRs as seen from the following table.

Sl. No.	Name of Scheme	Time taken by states in submission of DPRs.	Time taken by NRCD in communicating comments	Time taken by state Govts. in responding to comments	Time taken by NRCD in approval of DPRs	Total time taken in submission and approval	Total Delay (Col.7 -4)

				of NRCD			
1	2	3	4	5	6	7	8
1.	Renovation of existing sewer and pumping stations in old Kanpur	31 (8/95 to 2/98)	-	-	3 (2/98 to 5/98)	34	30
2.	78 MLD STP at CIS Yamuna Agra	36 (11/93 to 11/96)	-	-	8 (12/96 to 8/97)	44	40
3.	Interception and Diversion Zone-I Panipat	5 (11/93 to 4/94)	-	-	10 (4/94 to 2/95)	15	11
4.	Interception and Diversion Zone-I Faridabad	5 (11/93 to 4/94)	5 (4/94 to 7/94) (8/94 to 10/94)	(7/94 to 8/94) (10/94 to 5/95)	1 (5/95 to 6/95)	19	15
5.	LCS Garhmukteshwar	16 (8/95 to 12/96)	(12/96 to 12/96)	5 (1/97 to 6/97)	2 (7/97 to 8/97)	24	20
6.	LCS Vindhyachal (Mirzapur)	11(8/95 to 7/96)	-	-	4 (7/96 to 11/96)	15	11
7	STP at Sain Nursing Home Nala, Delhi	7 (11/93 to 6/94)	-	-	10 (7/94 to 5/95)	17	13
8	STP/MPS Gohana	15 (5/96 to 8/97)	-	-	2 (9/97 to 11/97)	17	13
9.	27 MLD STP at Noida	33 (11/93 to 8/96)	2 (9/96 to 10/96)	1 (11/96 to 12/96)	8 (12/96 to 8/97)	45	41
10	Interception and Diversion restoration work at Part V Mathura	12 (11/93 to 10/94)	-	-	3 (11/94 to 2/95)	15	11
11.	STP at CIS Hindon Ghaziabad	33 (11/93 to 8/96)	2 (9/96 to 11/96)	1 (12/96)	8 (1/97 to 8/97)	45	41
12.	Interception and Diversion Part-II Noida	28 (11/93 to 3/96)	2 (4/96 to 6/96)	2 (7/96 to 9/96)	1 (10/96)	35	31

7.3 According to Audit, the NRCD attributed the delay in approval to lack of manpower. The Directorate stated in October 1999 that preparation of DPRs for core schemes required surveys, investigations, design, and estimation of the least cost alternative by the implementing agencies, and as such it was not possible for the States to submit DPRs within 90 days. Audit had stated that this stand was not consistent as it was the NRCD that fixed the time schedule. Audit had observed that, the NRCD did not have adequate monitoring; mechanism to ensure adherence by the States of the time-schedule prescribed at the instance of the Supreme Court.

7.4 When the Committee sought the information on the role of Monitoring Committee in the consideration and approval of the DPRs, the Ministry, in a note, stated:

"The Ministry did fix the time schedule for submission of DPRs for major projects. However, these could not be adhered to due to delays in submission of DPRs by the State Governments. A comprehensive monitoring mechanism at the Centre and the State level is in place for Ganga Action Plan. The programme is being monitored by an Apex Committee called National River Conservation Authority (NRCA), which is chaired by the Prime Minister. There is a Steering committee under the Chairmanship of the Secretary, Environment & Forests, which reviews the programmes on a quarterly basis in addition a Monitoring Committee under the Chairmanship of Member Planning Commission, also reviews the progress on a quarterly basis. At the State level, there is a nodal department and a nodal implementing agency earmarked for this programme. The Secretary of the Nodal Department reviews the progress on a regular basis. Also there is a Steering Committee under the Chief Secretaries of the participating State, which reviews the progress on a quarterly basis. All these Committees monitor the progress and ensure adherence of the time schedule. NRCD is also maintaining records in the form of Management information System indicating the progress of work being implemented."

7.5 The Committee desired to know as to what problems the state Governments faced in the preparation of DPRs. The reply of each state Governments is stated under:

State	Problems	Whether able to submit DPRs within time
Uttaranchal	Some DPRs had to be reframed due to the change in the design parameter of the treated effluent and accordingly change over of the conventional technology to the latest technology of sewage treatment, which is able to treat the influent sewage up to the desired level of the Faecal	All the proposed DPRs under GAP-II have already been submitted to NRCD.

	Coliform count.	
Haryana	Nil	Not Applicable
Uttar Pradesh	As such, State Government faces no problem in preparation of the DPRs. However, in some town, the C.C.E.A. cost is not sufficient to meet the requirement of proposed pollution control works, for such towns preparing DPRs within C.C. E.A. cost is not possible. However, now Government of India has instructed to submit DPRs instead of PFR for CCEA approval. As per revised procedure, the administrative approval has been accorded under Gomti Action Plan-Lucknow Phase-II for Rs. 263.04 crore in the month of June, 2003.	By and large the timetable for submission of DPRs is adhered to. But in certain specific cases this could not be followed for variety of reasons beyond control of implementing agency.
Bihar	No major problems are being faced in the preparation of DPRs.	Yes, we were able to submit DPRs within time.
West Bengal	Not Available	Not Available

## VIII. EXECUTION OF SCHEMES

8.1 According to Audit para, the CGA had at the outset emphasized that the project should be implemented in a time bound manner. It expected the States and the NRCD to work together and to avoid time overruns. However, even after delay of over 10 years, the GAP-I was not fully complete, when it was officially closed in March 2000. Audit found that the GAP-II was also far behind its schedule. December 2001 was its time of completion, yet it had reportedly created only 13.7 per cent of the targeted sewage treatment capacity till March 2000.

8.2 In the succeeding paragraphs, the Committee have examined state-wise position of implementation of the Ganga Action Plan.

## IX. UTTARANCHAL

9.1 As per the information provided by the Uttaranchal Government the following were the achievement vis-à-vis target of Core and Non-core schemes in the State as of March 2000:

### Status of Core Schemes

State	Phase	Interception and Diversion Schemes				Sewerage Treatment Plants Schemes			
		Sewer Lines (in kms)		Sewage Treatment (in MLD)					
		T	A	T	A	T	A	T	A
	I	13	13	17.44	17.44	3	3	24.32	24.32
Uttaranchal	II	14	-	30.02	5.86	11	1	29.72	0.18
	<b>Total</b>	<b>27</b>	<b>13</b>	<b>47.46</b>	<b>23.30</b>	<b>14</b>	<b>4</b>	<b>54.04</b>	<b>24.50</b>

### Status of Non-Core Schemes

State	Phase	Low Cost Sanitation		Crematoria		River Front Development	
		T	A	T	A	T	A
Uttaranchal	I	-	-	2	2	-	-
	II	10	4 Partial	-	-	6	6

T:Target, A: Achievement

The aforesaid achievement in Sewage treatment remained unchanged as of March 2003.

9.2 The Committee during their study visit to evaluate the pollution abatement works under GAP to Rishikesh, Haridwar on 30<sup>th</sup> and 31<sup>st</sup> March, 2003 found that the condition of the STP was far from satisfactory. Plastic bags & night soil was seen floating in the nalas, which was being directly discharged into the Holy River. The quality of treated water at Arya Nagar intermediate Sewage Pumping Station (SPS), Kankhal Sewage Treatment Plant and the main Sewage pumping station at Jagjitpur was not upto the acceptable limits. The Committee also witnessed the plastic waste being thrown into Nalas thereby choking sewer lines as well as enormous quantities of cow dung swept into the river from various Gaushalas situated on the banks of the river. Further, the Committee witnessed many dead bodies/animal carcasses rotting in the river inspite of the setting up of electric crematoria. The officials admitted that due to limited resources the works under GAP-I could only partially abate the pollution of river Ganga. The officials attributed the delay to administrative problems in the Government of Uttar Pradesh.

9.3 The Committee desired to know the major difficulties being faced in the implementation of schemes under GAP in the State and the concrete measures taken thereon. The Uttaranchal government in a written note stated:

“Following are some of the major difficulties being faced in the implementation of the schemes under GAP:

- (i) Delay in Land Acquisition.
- (ii) Delay in DPR clearance from NRCD due to excess in the cost of proposed Projects over sanctioned CCEA provision in the year 1996-97, change of norms for treated effluent parameters and unexpected development due to creation of new Uttaranchal State.
- (iii) Shortage of Engineers in Uttaranchal Peyjal Nigam.

- (a) Land acquisition cases are being expedited on priority basis at the level of district administration as well as by Government of Uttaranchal.
- (b) The PFRs of the towns included in GAP-II were approved by the GOI in the year 1996-97 which were based on the rates of the year 1993-94. Due to the creation of new Uttaranchal State there had been unexpected development hence the proposed projects have been modified as per ground conditions and changed norms of treated effluent fixed by NRCD, GOI. As such GOI has been requested to provide additional funds as 100% grant-in-aid.
- (c) The Uttaranchal Peyjal Nigam has been formed and the vacancies for the post of Assistant Engineers & Junior Engineers are being filled very shortly.”

9.4 When asked about the State Governments efforts in ensuring optimum utilization of the STPs, ECs and other assets created under the GAP, the Uttaranchal Government in their written reply stated:

“Government of Uttaranchal is maintaining 3 STPs at Hardwar, Rishikesh and Swargashram constructed under GAP-I & II. All these STPs are being utilized as per their optimal design capacity but due to more generation of sewage these STPs are being overloaded and need to be upgraded. The STP of Hardwar and Swargashram need to be modified in view of latest fecal coliform design parameter of the treated effluent fixed by the NRCD, G.O.I. There is only one EC installed at Hardwar, which is inoperational due to disconnection of power connection because of non-payment of electric bills, by the Hardwar Nagar Palika Parishad. The State Government is considering to provide funds from Ardh Kumbh Mela – 2004 budget.”

9.5 On being asked how the State Government proposed to treat the sewages generated in excess of the estimations, the State Government in their post evidence information stated:

“Only in Hardwar, Rishikesh & Swargashram the expected sewage generation is likely to exceed earlier estimations. Uttaranchal being the newly created State is not in a position to treat this balance sewage from its own resources due to financial constraints. Therefore, the N.R.C.D, G.O.I has been requested by the Uttaranchal Government to fund the required projects as 100% special grant-in-aid and Government of India has agreed in principle. As such two D.P.Rs. of STPs for Bhopatwala Hardwar and Swargashram have already been submitted to NRCD,

Government of India and another D.P.R of STP for Hardwar town is likely to be submitted very shortly.

So far as Rishikesh is concerned additional sewage treatment capacity of 2 MLD was to be created under Ardh Kumbh Mela – 2004 for which proposal was sent to G.O.I. but due to less allocation of funds, this work couldn't be taken up. Therefore, NRCD, G.O.I. is being requested to record it's consent so that the DPR may be prepared.”

The note further added:

“ 15 DPRs are under appraisal with NRCD till date. Most of the DPRs could not be sanctioned due to excess over cost from already sanctioned CCEA limit of Rs 38.48 crores. Besides these, five more DPRs submitted under special assistance from the Government of India for pollution abatement works required to be done for Kumbh Mela are also pending with NRCD.”

9.6 On being asked whether the existing sewer treatment capacity in Rishikesh and Hardwar was able to treat wastewater discharge adequately in view of floating population. The Ministry of Environment & Forest in a written note stated as follows:

“Rishikesh – Presently about 9.2 MLD sewage is generated out of which only about 6.5 MLD sewage reaches up the Lakkar Ghat STP because the city is only partially sewered (60%) and a large number of houses are having their own septic/soak pits and also because of ponding of sewage in low lying pockets. The existing capacity of Lakkar Ghat STP is 6 MLD, which is being over loaded. In view of the increasing population, both permanent and floating, the treatment capacity at Rishikesh is to be enhanced. As a first step, the detailed project report for construction of a 2.5 MLD capacity STP at Laxman Jhoola has recently been sent by the Uttaranchal Government to NRCD for consideration in view of the Ardh Kumbh scheduled for early 2004. In addition, comprehensive master planning is being done by the Uttaranchal Government for the whole town.”

On Hardwar, the Ministry added:

“Hardwar – The existing capacity of Kankhal STP is only 18 MLD, which is insufficient. Also the plant is incapable of meeting out fecal coliform norms fixed by Government of India. Therefore, upgradation/ augmentation of the STP from 18 MLD to 45 MLD is proposed for which the detailed project proposal is under preparation by the Uttaranchal Government. Similarly, a 9 MLD STP capacity is proposed to be created for Bhopatwala Zone, the detailed project proposal of which has recently

been sent by the Uttaranchal Government to NRCD for consideration. In addition, a 8 MLD STP is being created at Saraiwala sewage farm under GAP-II to cater to sewage flows generation in Ranipur-BHEL area. The DPR for this project already stands sanctioned by NRCD.”

9.7 As regards non-functioning of the electric crematoria, when the Committee enquired about problems being faced by the civic bodies in running the crematoria, the Ministry stated in the note:

“There is no technical problem in running the electric crematoria in Hardwar, which is non-functional only due to disconnection of power supply because of non-payment of electric bills to the Uttaranchal Power Corporation by Hardwar Nagar Palika Parishad. The issue of proper O&M of GAP assets is being constantly pursued by the Ministry with all State Governments, including Uttaranchal and they are being repeatedly requested to provide adequate and timely funds for O&M of all assets created under GAP.”

9.8 In view of the reported low popularity of electric crematoria among the people, the Committee desired to know publicity measures, if any launched with a view to persuading them to use it. In their written reply, the Uttaranchal Government stated:

“Except a notice board which has been displayed out side the electric crematoria no other publicity measure has been launched as it is still non-functional.”

9.9 On being enquired about the current status of proposal regarding modernized wood-based crematoria under GAP-II, the Uttaranchal Government in their written reply stated:

“No modernized wood based crematoria have been proposed in Hardwar-Rishikesh under GAP-II.”

9.10 The Committee enquired about the problem of cow dung swept out into the river from various Gaushalas situated alongside the river in Hardwar. The Uttaranchal Government in their note stated:

“The local body of Hardwar and the Uttaranchal Pollution Control Board are responsible for tackling the problem of cow dung swept out into the river from various Gaushalas situated alongside the river in Hardwar. This problem is yet to be contained.”

9.11 Emphasizing the need to have greater public participation for achieving success of the Ganga Action Plan, most of the non-core schemes of which have



direct interface with the local population, the Committee desired to know different publicity programmes/policies undertaken in Utaranchal for promoting public participation in GAP schemes. In their reply the Uttaranchal Government stated:

“It is true that without public participation the success of Ganga Action Plan can't be ensured. Therefore, to create awareness among the people to maintain the purity of holy river Ganga, hoardings depicting what to do and what not to do have already been put up at vital places in the towns included in GAP towns by the Ganga Pollution Control Units. More-over 4 DPR's of Public Participation amounting to Rs. 27.00 lakh have already been submitted to NRCD, out of which one DPR for Uttarkashi amounting Rs. 5.40 lakh has already been approved. Against this DPR, the activities such as Seminars, Debates, Rallies, Display of hoardings etc will be taken up.”

## X. HARYANA

10.1 The Haryana Government have stated that against the target of treating 323 MLD of sewage, the achievement as of March 2000 and March 2003 were 293 MLD and 306.50 MLD. The latest status of various core and non-core schemes under Ganga Action Plan in the State is as follows:

### Status of Core Schemes

State	Phase	Interception & Diversion Schemes		Sewage Schemes	Treatment Plants Sewage Treatment (in MLD)				
		Sewer Lines (K.M.)							
Haryana	II	T	A	T	A	T	A	T	A
March, 2000		19	18	130.56	117.59	12	7	323	293
October, 2003		19	18	130.56	120.76	12	12	323	309.50

### Status of Non Core Schemes

State	Phase	Low Cost Santation		Crematoria	River Front Development		
		T	A		A	T	A
Haryana	II	6	6	6	6	1	1

10.2 Explaining the reasons for the delay, the State Government in a written note stated:

“The delay is on account of approval of DPRs of STPs in six additional towns by Government of India as late as 10/2000. Further, work of construction of balance 50% of sewer at Palwal is held up for want of approval of revised DPR by Government of India.”

**(a) Delay in approval of DPR's**

10.3 According to Audit in August 1996, the Steering Committee also asked the States to submit all pending DPRs by November 1996. Yet only 73 per cent of the expected DPRs reached the NRCD from the States till March 2000. The NRCD approved only 58 per cent of the submitted DPRs. Audit test checked 40 DPR files, and found inordinate delays in 12 cases ranging from 2 to 33 months in submission of DPRs by the States. Against the total number of 86 expected DPRs from Haryana Government, the NRCD received 85 DPRs out of which 74 were sanctioned by the NRCD and 11 returned for revision.

10.4 When asked as to whether Haryana Government were able to submit DPRs complete in all respects within the time limit the State Government in their note stated that all DPRs were submitted in time. About the pending DPRs relating to Haryana Government till date, the State Government stated that revised DPR of I&D work in Palwal was pending for approval with Government of India since November 1999.

**(b) Execution of Schemes**

**(i) Interception & Diversion Schemes**

10.5 As per Audit, the NRCD sanctioned 19 interception & diversion schemes in 12 towns of Haryana. The implementing agency could not complete 10 of these schemes even though the stipulated dates of their completion were over. On being enquired by the Committee in this regard the Ministry of Environment & Forest in their note stated:

“Out of 19 Interception and Diversion works, 13 in six original towns had been fully completed by March 2000. Out of total 130.45 kms of sewer lines (82.91 kms in original six towns and 47.54 kms in additional six towns) to be laid, 126.58 km had been laid till March, 2000.”

10.6 When asked about the reasons for delay in this regard, the State Government of Haryana stated:

“In actual, 18 DPRs for I&D works in 12 towns were approved by Government of India. Out of these, 12 in 6 original towns had been fully completed by 3/2000. Work in 5 additional towns is also complete since 3/2002. In Palwal it is 50% complete and balance 50% work is held up for

want of approval of revised DPR by NRCD, which is pending since 11/1999.”

10.7 According to Audit, in one case of Interception and Diversion Scheme the PHD (Public Health Division) Faridabad laid RCC (Reinforced cement concrete) pipe sewer by April 1997 in place of brick circular sewer and incurred expenditure of Rs. 1.99 crore. That expenditure was much higher than the cost of Rs. 64 lakh the PHD had originally envisaged for brick circular sewer. The Ministry's reply of August 1999 to audit justified Haryana's action to time constraints arising out of the Court orders. According to Audit this should be viewed in the light of the facts that there were avoidable delays prior to the Court orders because of which the work could not be completed as contemplated and in time in the first place.

10.8 In reply to a query, the Ministry of Environment & Forests in their note stated:

“The sewer was to be laid along Gurgaon Canal in the land belonging to Irrigation Department, Haryana. Later on, it was found that necessary permission for cutting of the trees along the alignment of the sewer was required from the Ministry of Environment and Forests, Haryana (Chandigarh). Though the matter was taken up immediately after the approval of the DPR with the Forests Department but the permission to cut the trees was received in May 1996 only. During re-survey of the area it was observed that while originally the sewer was proposed to be laid in dry conditions, spring level was observed to have got raised in about 800 mt length. On the basis of experience in case of 1400 mm dia brick circular in zone III Faridabad, it was realized that construction of 1530 m of 1830 mm i/d brick circular sewer may take about 3 years and it was practically not possible to complete the same upto March 1997. In view of the target date of 31.3.1997 fixed by the Hon'ble Supreme Court, there was no other alternative except to switch over to change specifications from brick circular sewer to RCC pipe sewer. Accordingly, the matter was referred to NRCD for change of specification from brick circular sewer to RCC NP-3 pipe sewer and the same was duly approved by NRCD, Government of India. Therefore, a conscious decision was taken to lay RCC pipe sewer even though it involved an additional expenditure of Rs 1.10 crore. Accordingly, tenders for supplying, laying and joining of 1830 mm i/d RCC pipe sewer were invited in July 1996 and the work allotted in August 1996 to another contractual agency against contract agreement amount of Rs 1.73 crore with the time limit of 8 months. This agency laid the sewer within the time limit i.e. by 25.4.1997 as per directions of Hon'ble Supreme Court of India within the extended targeted time of 30.6.1997.”

## (ii) Sewage Treatment Plants

10.9 As per para 33 of Audit Report it was seen that to treat 323 MLD of sewage in Haryana, the NRCD sanctioned 12 STPs of 306.5 MLD capacity in between May 1996 to November 1997. Haryana's implementing agency completed 8 STPs of 228 MLD by March 2000. Audit findings in these cases in test check are given below:

(a) Out of 10 STPs and 1 oxidation pond of 303 MLD capacity contracted for construction by May 1996 for completion in 12 months, PHDs could commission only 7 STPs and the oxidation pond as of March 2000. There were delays ranging from 14 to 34 months. The NRCD ascribed the delay in August 1999, to non-release of the matching share during the year 1997-98 by the State. This reply was not tenable as the implementing agency had surplus unspent funds ranging between Rs 20.17 crore and Rs 27 crore during 1997-98 to 1999-2000.

10.10 In their note, the Ministry of Environment & Forest stated:

“10 out of 11 STPs of 293 MLD capacity stood commissioned by March 2000 as under:

STP	Capacity	Date of Commissioning
Yamunanagar	25	11/99
Karnal	8	11/99
	40	11/99
Panipat	10	7/99
	35	10/99
Sonepat	30	1/99
Gurgaon	30	8/99
Faridabad	20	2/99
	45	10/98
	50	3/99
<b>Total</b>	<b>293</b>	

10.11 As regards unspent balances, the Haryana Government, in their post evidence information stated:

“There were no such huge unspent balances as stated in the Para. Unspent balances in 1997-98, 1998-99, 1999-2000, were only Rs (-) 0.41, 5.80 & 6.43 crores respectively (details enclosed) which is not abnormal when such a big project costing Rs. 200 crore is in hand.”

10.12 Clarifying on the issue of non-release of the matching share by the State in 1997-98, the representative of the Haryana Government during evidence stated:

“In 1993-94, the Central Government released Rs 6.96 crore and the State Government released Rs 1 crore. The total was Rs. 7.96 crore. That was in the first year. In that year the expenditure was Rs. 82 lakh. In the next year the Central Government released Rs 1.5 crore and the State Government released Rs 2.2 crore and the total was Rs 3.7 crore. In that year we spent Rs 9.33 crore. The money, which was released in the month of February-March last year, was utilized in the next year. We have submitted this reply. In the next year, the Central Government released Rs 3.80 crore, the State Government released Rs. 9 crore and the total was Rs 12.80 crore. Out of that Rs 8.46 crore were spent.

In the year 1996-97, the Central Government released Rs. 62.57 crore, the State Government released Rs 41.99 crore, the total was Rs 104.56 crore and we spent Rs 93.73 crore in that year. The bulk of the money was spent during the year. It is not as if the money were lying idle. In 1997-98, the Central Government released Rs 25.85 crore; the State Government released Rs. 2.34 crore; the total was Rs 28.19 crore; we spent Rs. 46.10 crore which was the earlier year's balance.

From then onwards, it has become 100 per cent Central Government funded scheme. In 1998-99, Rs 26.5 crore were released by the Central Government and we spent Rs 20.81 crore in that year. In 1999-2000, Rs 14.83 crore were released by the Central Government and we spent Rs 13.67 crore. There will always be some marginal balance which will get consumed in the next year.”

He also stated:

“At times for most of the year the money was not available with us. That is why we said that delay occurred because of non-availability of funds. The funds were released towards the end.”

10.13 In another case the Audit had reported that Faridabad (Zone II) STP processed only 15 to 20 MLD sewage against the installed capacity of 45 MLD as of December 1999. The anticipated quantity of sewage from areas developed by the HUDA (Housing and Urban Development Authority) did not reach the STP, as the HUDA and the Municipal Corporation, Faridabad did not complete ancillary works.

10.14 In their written note, the Haryana Government stated the reasons for the non-completion as under:

“HUDA is itself responsible for the same. In spite of repeated efforts by holding meetings at the level of Financial Commissioner Public Health on

19.3.1999, 17.9.1999, 5.7.2000, 28.11.2000, 13.4.2001 and 15.7.2002, the work has still not been completed by HUDA.”

10.15 Asked about steps taken to ensure that no untreated sewage reached the river, it was stated in the note:

“Now it is proposed to lay some additional outfall sewers under YAP-II to ensure that all untapped sewage reaches STPs constructed.”

10.16 Audit had reported that the NRCD approved requisition of land for the construction of STP Gurgaon in November 1993. The State acquired 15.6 hectares of land in December 1994 out of the GAP funds, which was in excess of land required per the NRCD norms by 5.2 hectares, involving excess expenditure of Rs 69.80 lakh. The excess land was not in use since its acquisition. The Ministry of Environment & Forests, in their note stated:

“15.6 hectares of land for STP Gurgaon was acquired keeping in view the future extension required, as the STPs in first instance was designed for 5 years only, against required norms of 15 years. Proposal for balance capacity has since been included in YAP Phase II which has been prepared by Haryana and Government and sent to NRCD for consideration.”

10.17 On being asked as to who was responsible for acquiring the excess land and steps taken to utilize the excess land, the Haryana Government in a written note stated:

“Initially, it was proposed to install a STP of 52 MLD capacity at Gurgaon and accordingly DPR for 15.6 hectare of land was approved by NRCD and the land was acquired accordingly. However, later it was felt that full discharge of HUDA area and colonizers area was not expected by 1998, as such the DPR of STP was approved for 30 MLD only (taking into account a 68 MLD STP being constructed by HUDA). Now, under YAP-III the STP capacity is proposed to be augmented for 2012 population and for that this land shall be utilized. Moreover, there being rapid development in the area, land for future expansion of STP would not have been available at a later date.”

10.18 Audit para reveals that the PHDs executed the works of 6 STPs, 2 each in Yamunanagar and Faridabad and 1 each in Karnal and Panipat. As against embedding of 46137 meters of electrical cables required to be done at a tendered cost of Rs 1.80 crore, the electrical cable actually embedded was only of 13579 meters. The actual payment made was Rs 1.55 crore till March, 2000 which was in excess by Rs 1.02 crore on pro-rata basis.

10.19 Suspecting an act of overestimation in the above embedment of cables, the Committee desired to know the details of the huge mismatch. The Haryana Government, in a written reply stated:

“There was no over estimation. Total quantity of 46137 mtr., shown is as per DPR which includes cable length required for STP Staff quarters, Street & Flood lights etc, whereas the length of 13579 mtr., pointed out in para does not include cable length required for street/flood lights, and staff quarters and other structures. As such, the two are not comparable. Moreover, the quantity of 46137m as per DPR was never reflected in any bidding documents and agencies quoted their rates as per actual site requirements. Cost provisions taken in DPR were tentative and could vary on actual execution of work”.

10.20 When asked as to why provisions of electrical cable in Detailed Project Report were not made part of Draft Notice Inviting Tender (DNIT), the Haryana Government in a written reply stated:

“DPR provisions were for estimation purposes only and were not to be reflected in DNITs. Contractors were supposed to quote their rates as per actual site requirements.”

10.21 Further asked as to why quality and quantity to be actually supplied was not mentioned in DNIT, the State Government added:

“Because it could vary as per estimate of individual tenderers.”

10.22 Audit had reported that the PHD-I, Sonapat detected defects in September 1998 in mechanical screen bars of 30 MLD MPS at Sonapat and in the STP at Gurgaon constructed in June 1997 at the cost of Rs 2.53 crore and Rs 10.58 crore respectively. Because of that, bulk material and polythenes passed into pumping stations. That choked the pumps and the STP. The implementing agency had not got the bars repaired or replaced as of March 2000, impairing the functioning of the MPS and the STP. In their action taken note the Ministry of Environment and Forests stated:

“The work of supplying erection and commission of pumping machinery at 30 MLD MPS Sonapat was allotted to M/s Chemi Tech Engineer, Delhi. The work was completed on 4.1.99 at the cost of Rs. 1.28 crores (DPR cost Rs 2.53 crore) and not in June 1997 as mentioned in the para. The defects as developed in mechanical screen during 9/98 were brought to the notice of the agency and final payment along with security deposits were withheld. The agency attended the defects by deputing their staff many times but the screen did not work upto the mark. Finally, the experts employed by the agency rectified the defects of the mechanical screen during 4/2000 and presently the mechanical screen is working

satisfactorily. Similarly the work of supply, erection and commissioning of pumping machinery at Gurgaon, was allotted to M/s Subhash Project, Delhi. They too have rectified the defects and the bar screen is now working satisfactorily.”

10.23 On being asked as to why the defective bars could not be repaired in time, the Haryana Government, in their post evidence information stated:

“The agency attended to the defects by deputing their staff a number of times and finally the defects were rectified in 4/2000.”

10.24 Asked as to whether any effort was made to get the work completed from other agency the State Government have stated:

“Agency was continuously pursued to complete work and agency never expressed its inability to do so, as such there was no need to look for another agency. During this period the screenings were removed manually.”

10.25 In one more case, the Audit had stated that the Executive Engineer, PHD-I, Yamuna Nagar allotted the work of construction of 2 STPs in Yamunanagar in May 1996 at Rs. 6.50 crore and Rs 3.08 crore respectively for completion within 12 months. The Executive Engineer recovered a penalty of Rs 65 lakh for slow progress of work. In February 1998, the Superintending Engineer ordered release of 50 per cent of penalty amount on assurance by contractor to complete the work by March 1998. The work, however, remained incomplete as of April 2000. In their action taken note the Ministry of Environment & Forests stated:

“2 nos STPs at Yamunanagar (10 & 25 MLD capacity) & one STP at Karnal (40 MLD capacity) were allotted to M/s California Design and Construction Company which was foreign Company and had some problem in the beginning with Reserve Bank of India regarding opening of Accounts in India. This took about one year. Thereafter the agency was under huge financial constraints due to income tax problems which have now been sorted out by Hon'ble High Court. Even then the contractor made his best efforts and put all available resources with him and showed marked progress at site. On the basis of progress achieved by the agency, part portion (50%) of the penalty amount was released to the contractor on temporary basis to further accelerate the pace of work at site. While releasing 50% of the compensation the competent authority i.e. Superintending Engineer (YAP), Head Office categorically state that it was an interim measure in the interest of work and not waiving of the compensation under Clause – 2 of the Contract Agreement.



It is intimated that 25 MLD STP at Yamunanagar against which 50% of compensation was released has been commissioned and put to use since November 1999 and is working satisfactorily.”

10.26 In view of the release of 50% of the penalty amount, the Committee desired to know whether there were other factors for the failure to construct STPs timely. The State Government in their reply stated:

“Tenders for 11 STPs were similarly floated and all agencies were supposed to complete work as per schedule. Except for M/s California Design and Construction Co. which was of foreign origin, all others were able to complete work as per schedule.”

10.27 Asked as to why the penalty money was released when the work was not complete as of March 2000, the Haryana Government, in their note stated:

“Due to non-release of payments and due to imposition of extra Income Tax by the Income Tax Department the Co. was not able to complete the work. The release of partial penalty amount helped in getting work completed from the agency.”

10.28 As regards the action taken against the contractor as of now, the State Government stated :

“0.15% of the agreement amount of the three agreements (Rs 3.08+6.50+9.60 crores) Rs. 2.88 lacs as penalty was finally imposed on the agency. The agency has since completed all works. No further action has been taken as the owner of the agency has since expired.”

10.29 Asked as to whether responsibility has been fixed in this regard, the State Government stated in their reply as under::

“Nil, as the intention was to get the work completed before finalisation of agreement with JB IC in 3/2002.”

10.30 On being asked what efforts were made to get the work completed expeditiously from the other agency, the State Government stated:

“All out efforts were made to persuade the agency to complete the work before finalization of agreement with JBIC in 3/2002.”

### **(iii) River front Development**

10.31 Audit para stated that the Public Health Branch, YAP (Yamuna Action Plan), PWD constructed 2 bathing ghats in Yamunagar in July 1995 at a cost of Rs.72.64 lakhs. The design and site closes were defective because of which the

ghats could not be put to public use, resulting in wasteful expenditure of Rs.72.64.

10.32 The Ministry of Environment & Forests in their action taken note stated:

“The irrigation Department selected the site for construction of 2 nos. of bathing ghats namely City Centre Bathing Ghat and Yamuna Gali Bathing Ghat. These two sites were also approved by the District Administration. The technical details including design, drawing and DPR of these bathing ghats were prepared by Haryana Irrigation Department. Accordingly, the construction of the bathing ghats, was carried out by the Irrigation Department and stands completed. The City Centre Bathing Ghats was inaugurated by Governor of Haryana on 13.3.1996.

City Centre Bathing Ghat is located on right bank of Yamuna Canal opposite to crematoria. People after performing last rites take holy dip at this ghat. The other ghat is also located on the right bank of Yamuna Canal, opposite to Laxmi Narayan Mandir. Visitors before paying their prayers in temple, take bath at this Ghat. In view of the above the sites selected for these Ghats were the best suited from the point of view of users.

Except for the lean period i.e. 3-4 months when flow in Yamuna canal is very less, for remaining period of the year the water remains available at these ghats for taking holy dip and performing other religious ceremonies. It is correct to say that Ghat are not being used. The same are in usable condition as explained above and no wasteful expenditure of Rs.72.64 has been incurred.”

10.33 Asked as to what action has been taken against the officers responsible for this defective design and site, the Haryana Government, in their post evidence information stated:

“The site was selected by Irrigation Department with the approval of District Administration, keeping in view their nearness to the cremation ground and the Luxmi Narain Temple, where a lot of people regularly take bath in the Western Yamuna Canal. Thus the sites were best suited from the point of view of users. Though there is some problem of silting due to meandering nature of canal at that place, but it is being taken care of by resorting to periodical desilting.”

### **Public Participation**

10.34 According to Audit Para the NRCD and the State Governments continued to give only routine attention to the public participation schemes as may be evinced from the paltry total expenditure of only Rs.38.60 lakh during the period

from 1995 to 2000 by the participating States on the activities relating to enhancing public participation.

10.35 On being enquired as to what publicity, programmes/policies undertaken by Haryana Government for promoting public participation in GAP schemes, the Haryana Government stated:

“Under YAP-I, DPRs for PPA were approved for Rs.64.80 lacs for 6 main towns in 12/1999. Citizen Monitoring Committees to guide and monitor construction work were established in 2/2000. Meetings/seminars were held during 1999 and 2000. Steps to propagate Public Awareness and Public Participation were taken. However, further implementation was dropped by NRCD, G.O.I. Subsequently, under extended phase, a PPA component of Rs.77.50 lacs was approved in 7/2001 which was utilised against the following activities.

- (1) Seminars, workshops, Rallies, Padyatras, Meetings, Exhibitions, and School competitions
- (2) Training Courses
- (3) Camps
- (4) Shramdan
- (5) Folk media and street theatre
- (6) Forming and training of beneficiary groups like Eco Clubs.”

### **Water Quality Monitoring**

10.36 According to Audit Para the water quality of river Yamuna also did not improve over the period 1996-99. The BOD exceeded the permissible limits at 14 sampling stations during 1999, as against 13 out of 25 sampling stations during 1996. The coliform levels exceeded in 17 out of 60 stations sampled during 1999.

10.37 On being enquired about the position in the State, the State Government in a written note stated:

“Haryana State Pollution Control Board is monitoring River Yamuna jointly with Central Pollution Control Board and Delhi Jal Board, at specific points in Haryana. As per the results of joint Monitoring of River Yamuna, it has been found that the BOD at Palla is within the prescribed limit i.e. 1.02 mg/l. The Pollution in River Yamuna is from the sewage/industrial effluent of Delhi. The BOD range at Badarpur border in Agra Canal is between 12 to 16 mg/l which is due to the sewage effluent discharged from 18 drains of Delhi and 1 drain from NOIDA (U.P.). The Haryana State Pollution Control Board is pursuing the case in the Hon'ble Supreme Court of India, under PIL 725 and also pursuing the matter with Central Pollution Control Board.”

## Industrial Pollution

10.38 According to Audit the GAP envisaged tackling of domestic sewage only to bring the pollution level of rivers under permissible limits. The treatment of entire sewage as envisaged in the GAP cannot bring the water quality to the acceptable standards of bathing without effective steps to check/control the discharge of industrial effluents into the rivers. The CGA, however, observed in its first meeting held in October 1985 that though treatment of industrial waste was not included in the Action Plan, it was necessary to take special steps due to seriousness of industrial pollution in specific locations. The CGA made CPCB and SPCBs directly responsible to ensure compliance to environmental laws by grossly polluting industries (CPCB identified a grossly polluting industry as one which handled hazardous substances or industries discharging effluent having BOD load of 100 kg per day or more). The GPD was to monitor progress on installation of ETPs (Effluent Treatment Plants) by grossly polluting industries. As per directives of the NRCA, CPCB submitted a report to the NRCD regarding installation of ETPs by the grossly polluting units. Based on this, the NRCA issued directives in July 1997 to all grossly polluting industries discharging their effluents into the river to install the requisite ETPs within 3 months, failing which closure notices should be issued.

10.39 The following table gives the status of installation of ETPs in the State of Haryana:

State	Number of Units				
	Grossly polluting units	ETPs installed	Closed	ETPs under construction	ETPs not function properly
Haryana	56	47	9	-	18

*Source: Report of the Pollution Control Boards of the participating States.*

10.40 Audit had reported that ETPs in 18 industrial units in 5 towns of Haryana, viz. Faridabad, Gurgaon, Panipat, Sonapat and Yamuna Nagar, discharged 12.615 MLD effluents into river Yamuna.

10.41 The State Government of Haryana in their written note stated as follows:

“The information of Grossly Polluting Units is as under:-

No. of Industries	Closed Units	Non complying	Complying
56	11	02	43

The Board has issued notices to the Non-Complying Units. It is also mentioned that there is a regular checking of non-complying units and actions are being taken from time to time. Now, only two units have been recently found non-complying, where actions are being taken against them.”

### **Monitoring Mechanism**

10.42 Audit had pointed out that the monitoring of the GAP at the Central level left much to be desired. At the State level, the State Governments were to constitute CMCs (Citizens Monitoring Committee) for each town, as per directive of the NRCD issued in March 1995, to monitor the progress of execution and timely completion of schemes and their operation and maintenance, and to facilitate public awareness and participation. The CMCs were to meet once in a month. Audit had noticed that Haryana Government did not constitute CMCs in any of the towns.

10.43 When asked in what way Haryana Government was co-operating with the NRCD in the co-ordination and monitoring of GAP, the State Government in their post evidence infrastructure stated:

“Regular review meeting were held by NRCD, GOI and the representatives of JBIC with the officers of State Government.”

10.44 Asked about the number of field visits and review meetings undertaken by the NRCD and outcome thereof, the State Government stated in their post evidence information as follows:

“During the project implementation period from 1996 to 2002, review meetings were held every 2-3 months. All observation were duly attended to and Haryana is the only State to have most efficiently managed the creation as well as the maintenance of the assets and has been able to achieve maximum targets. All 11 STPs in 6 original towns have already been commissioned. 3 STPs in 6 additional town have also been commissioned and balance are in progress and likely to be commissioned by 3/2004. I&D works in 6 additional towns are also complete except at Palwal where these are 50% complete and balance work is held up for want of approval of revised DPRE by G.O.I.”

10.45 On being enquired as to how often the different committees and bodies were required to meet, the Haryana Government, in their reply, stated as under:

“State Empowered Committee under the chairmanship of Chief Secretary was supposed to review and advise during construction period. Keeping in view field requirements, 6-7 meeting of this apex committee were held during the project implementation period. However, regular monthly

physical and financial progress reports were submitted to State Govt. as well as Government of India.

10.46 Asked about the Audit observation that Haryana Government did not constitute CMCs, the State Government in their post-evidence note stated:

“Citizen Monitoring Committees were formed in 2/2000 to guide and monitor construction work on YAP phase-I & these have been quite helpful in their purpose.”

10.47 On being asked about the latest position of achievement targeted-sewage treatment, the State Government in their post evidence information stated:

“As stated above, 14 STPs with a capacity of 309.5 MLD (out of 323 MLD) stand commissioned and balance 4 are in progress and are likely to be completed by 3/2004.”

## **XI. DELHI**

11.1 As per Audit, the achievement vis-à-vis target of various core and Non-core schemes under GAP in Delhi as of March 2000 was as under:

### **Core schemes**

State	Phase	Interception and Diversion				Sewage Treatment Plants			
		Schemes		Sewer Lines (in Kms)		Schemes		Sewage Treatment (in MLD)	
		T	A	T	A	T	A	T	A
Delhi	II	0	0	0.00	0.00	2	2	20.00	20.00

T: Target; A: Achievement  
Non-core schemes

State	Phase	Low Cost Sanitation		Crematoria		River front Development	
		T	A	T	A	T	A
Delhi	II	0	0	1	0	0	0

T: Target; A: Achievement

*N.B.: The figures of reported achievement are subject to test audit comments on the core and non-core schemes in the report.*

11.2 As per Audit, of total sewage generation of 5044 MLD estimated in towns along river Ganga and its tributaries by the NRCD, Delhi alone accounts for 2270 MLD. The GAP-II was to tackle only 20 MLD in Delhi and Delhi Government was to handle the balance 2250 mild separately from augmentation of its own available installed capacity.

11.3 Of the total sewage of 2270 MLD in Delhi, the DJB (Delhi Jal Board) could achieve the treatment capacity of only 1574 MLD as of March 2000. The GAP in Delhi covers treatment of only 20 MLD of sewage for which the NRCD sanctioned 2 STPs of 10 MLD capacity each at Dr. Sen Nursing Home and at Delhi Gate drains in May 1995. The DJB awarded the construction work in May 1995 itself on negotiated tendered cost of Rs.5.39 crore and Rs. 6.31 crore respectively. The stipulated date of completion of both the STPs was December 1996. The DJB could commission the STPs in January 1999 and November 1999 respectively, after delays of 25 and 35 months respectively.

11.4 The Ministry of Environment and Forest in their action taken note stated:

“The Sen Nursing Home Nallah STP and Delhi Gate Nallah STP were commissioned and made functional in December 1998 and November 1999 respectively. As on October 2000, existing sewage treatment capacity in Delhi is 402 MGD (1825) MLD. The Sewage treatment capacity of Delhi including the existing as well as ongoing plants would be 512 MGD (2325 MLD) as on March 2003. In addition, two STPs of 70 MGD (318 MLD) in trans-Yamuna area are likely to be completed by March 2003.”

11.5 Elaborating on the issue, the Government of NCT of Delhi, in a written note stated:

“Delhi Jal Board is supplying potable water to the tune of 640 MGD in Delhi. The generation of sewage is generally taken as 80% of water supply. Therefore the generation of sewage works out to 512 MGD. In addition to this it is supposed that the residents of Delhi are tapping the ground water from the private bore holes installed in their houses resulting into 100 MGD of domestic sewage. The waste water from industries generated in Delhi is roughly 40 MGD. Therefore, the total waste water generated in Delhi works out to 652 MGD. The Delhi Jal Board enhanced the installed capacity of Sewage Treatment Plants from 280 MGD to 512 MGD in the last 8 years. At present 380 MGD sewage is being treated at these sewage treatment plants. Tenders for further increasing the capacity of Sewage Treatment Plant at Kondli by 45 MGD have been received and are being processed. The DSIDC is also installing the 15 CETPs for a total capacity of 40 MGD of these 10 have been completed and commissioned.”

11.6 It is further stated in the note as follows:

“The major causes for water quality degradation are as follows:

- Population density
- Industrial as well as domestic waste discharge.

- Decrease inflow
- Open defecation
- Cattle Wading and Dairy activity
- Bathing and religious offerings
- Washing of Clothes
- Immersion of Idols”

11.7 On the schemes undertaken under Yamuna Action Plan (GAP-II), the Government of NCT of Delhi stated:

“Under YAP following schemes were taken up:

MCD:

- (i) Construction of Electric Crematorium at Sarai Kale Khan,
- (ii) Construction of Community Toilet Complexes,
- (iii) Construction of Mini Micro STPs.
- (iv) Procurement of Sanitation equipment,
- (v) Public participation and awareness

DJB:

- (i) Dr. Sen Nursing Home Nallah STP
- (ii) Delhi Gate STP”

11.8 As per Audit para, the MCD (Municipal Corporation of Delhi) awarded the work of construction of EC at Sarai Kale Khan at a cost of Rs.99.60 lakh in January 1995, for completion by May 1996. The work was incomplete as of March 2000, due to late release of payments to the contractor by the MCD. For the construction of a sub-station for electric crematorium, the DVB (Delhi Vidyut Board) demanded Rs.43.62 lakh from the MCD in January 1997 as connection charges. The MCD deposited the amount in October 1998 after more than 18 months. The DVB did not commence the construction work of sub-station as of November 1999. Even if civil works of electric crematorium had been completed, the MCD could not have commissioned it for want of electricity supply.

11.9 In their action taken note, the Ministry of Environment and Forests stated:

“In September’94 NRCD accorded only Administrative approval for Rs.103 lakhs for EC at Sarai Kale Khan and expenditure sanction was kept pending for final selection of land and firmed up estimated cost. AA&ES was accorded in August 1996 after getting the detailed estimate from Govt. of NCT Delhi and funds were released in October’96 on receiving demand from MCD/Government of NCT, Delhi as fund release could have been made only after accordance of expenditure sanction. MCD received the 1<sup>st</sup> installment in October’97 (though said to have been sent by Delhi govt. in March’97). The progress remained very slow due to the following reasons- (a) Nature of foundation changed due to the poor soil conditions by replacing conventional foundation with pile foundation; (b) Inadequate



and belated flow of funds from Govt. of NCT Delhi. The Ministry look up the matter at various levels with the Govt. of NCT Delhi.”

11.10 Explaining the matter, the Government of NCT of Delhi, in a written note stated:

“Ministry of Environment and Forests approved the project of an estimated amount of Rs. 249.96 lacs. M/s PHE-Projects executed the work to the tune of 70% upto July, 2001 and stopped the work thereafter. Due to cost escalation and as a number of items were not included in the initial proposal revised estimate of Rs. 414.07 lacs was approved by the Ministry of Environment and Forests in December, 2001. Against the revised cost of 414.07 lacs, Rs. 225.0 lacs have been received from Delhi Government and Rs. 169.29 lacs have been received from the Ministry and the same has been fully utilized for the work of Construction of Electric Crematorium at Sarai Kale Khan.”

11.11 During the Committee’s study visit to different sites of Yamuna Action Plan in Delhi, the Chief Secretary, Government of NCT of Delhi while apprising the Committee on the progress of various schemes under the Master Plan 1993 to clean up the river Yamuna stated that since Delhi did not have actual experience of sewage rehabilitation before 1999, the achievements on this front do not appear to be high and admitted that it was only 40% of the target. The Chief Secretary stated that 16% of current plan outlay of Delhi Government has been earmarked for water supply and sewage rehabilitation schemes and that this was financed entirely out of their own finances. She stated in this connection that initially financial assistance from the Union Government to the tune of about Rs. 1100 crore was assured for Yamuna Action Plan as a whole but it was subsequently reduced to Rs. 379 crore only.

11.12 In view of the city of Delhi being the major cause of pollution in the river, the Committee asked the reasons for such drastic cut in the financial assistance to the government of NCT of Delhi. In their reply, the Ministry of Environment and Forests stated.

“Initially for Delhi, projects for Delhi, projects amounting to about Rs. 1100 crore were posed for JBIC funding under YAP-II. But due to fund constrains, JBIC agreed to fund following project amounting to Rs.387.17 crore under YAP-II. The remaining projects were agreed to be considered for funding by JBIC under YAP-III, which is proposed to be posed to JBIC in the fiscal year 2004-

(Rs.in crore)		
S.No.	Name of Scheme	Estimated Cost
1.	Bela Road Trunk Sewer	17.47
2.	Wazirabad Trunk Sewer	64.20

3.	Ring Road Trunk Sewer	90.07
4.	Okhla STP with electricity generation plant for 170 MGD STP from biogas	85.27
5.	Keshopur STP with electricity generation plant for 72 MGD STP from biogas	66.36
6.	DPR preparation including Pilot Plant implantation from YAP III	35.00
7.	Misc. e.g. Slum Rehabilitation, Public Participation & Awareness & Capacity Building/PR	28.80
	<b>Total</b>	<b>387.17</b>

“

11.13 When asked how the Ministry of Environment & Forests was going to help the Delhi Government to implement the GAP-II core-sector projects of sewage treatment, the Ministry in their post evidence information stated:

“A sewage treatment capacity of 2355 MLD exists in Delhi against sewage generation of about 3300 MLD at present. However, due to settlement of trunk sewers and other deficiencies in the sewerage systems in Delhi, about 65 to 70% of the installed sewage treatment capacity is being utilised at present. The Ministry of Environment & Forests proposes to help the Delhi Government in two phases to implement the GAP-II core sector projects of sewage treatment.

In the first place, out of 91 kms. of settled/silted trunk sewers, 30 km length of trunk sewer has been proposed to be rehabilitated under the approved project of YAP-II. In addition, 135 MLD of sewage treatment capacity is also proposed to be constructed under YAP-II.

In the second place, the remaining projects of sewage treatment capacity and rehabilitation/new trunk sewers is proposed to be taken up under YAP-III which is proposed to be posed for JBIC funding in the fiscal year 2004.”

## **XII. Uttar Pradesh**

12.1 The Audit had reported that against the target of treating 1473.23 MLD Uttar Pradesh (before bifurcation of Uttaranchal) could create capacity of 388.09 MLD only as of March 2000 under GAP. The Committee enquired the contributory factors responsible for this huge shortfall. In their reply Uttar Pradesh Government stated:

“DPRs for 349.50 MLD sewage treatment capacity under GAP I and for 407.75 MLD sewage treatment capacity under GAP II was approved by NRCD till March 2000. Against target of total 757.25 MLD of sewage treatment under GAP I & II sewage treatment capacity of 395.50 MLD was

created by March 2000. Under GAP I the DPRs for 9 STPs having total sewage treatment capacity of 349.50 MLD were approved by NRCD. All these 9 STPs were completed and made operational before March 2000. Under GAP II the DPRs of 17 STPs were approved by NRCD upto March 2000 of which 4 STPs were completed by March, 2000.”

12.2 Giving the latest position of sewage treatment capacity created in the State, it was further stated in the note:

“DPRs for total 29 STPs having total 864.75 MLD sewage treatment capacity (9 STPs of total 349.50 MLD capacity under GAP I and 20 STPs of total 515.25 MLD capacity under GAP II) have been approved by NRCD till March 2003. Out of these 26 STP fully and 1 STP partially having total 795.95 MLD sewage treatment capacity (9 STPs of total 349.50 MLD capacity under GAP I and 17 STPs fully and of total 445.95 MLD capacity under GAP II) have been created.”

12.3 On the Committee’s enquiry the Uttar Pradesh Government submitted the status of targets and achievements of various core and non-core schemes in the state as of March 2003. While in GAP-I the state had registered 100 percent achievement, in GAP-II the status is as follows:

Sl. No.	Item	Target	Achievement	%age
1.	Total Sanctioned schemes by GoI	205	170	82
2	Interception and diversion			
	No of schemes (Nos.)	96	76	79%
	Sewer line (Kms)	95.306	75.474	79%
3	Sewage Treatment Plants			
	No. of STPs	18	17	94%
	Total capacity (MLD)	449.75	445.95	99%
4	Low Cost Sanitation (Nos.)			
	No. of schemes (Nos.)	24	23	95%
	No. of LCS	360	344	96%
5.	Crematoria (Nos.)			
	No. of schemes (Nos.)	12	12	100%
	No. of Crematoria	76	76	100%
6.	River Front Development (Nos.)			
	No. of schemes (Nos.)	3	3	100%
	No. of Ghats developed	11	11	100%
7.	Financial Achievement			
	Expenditure (GoI Share) incurred against funds released by GoI (Rs. Crore)	334.53	323.71	96.7%

*(The targets for GAP II shown in above table, are on the basis of 205 DPRs approved by NRCD upto March 2003. Out of these 4 DPRs were approved in the year 2002-2003.)*

12.4 On the issue of delay in approval of DPRs, the Audit in their Report had stated that against expected no. of 224 DPRs from the State, 211 were received out of which 146 were sanctioned, 60 were returned for revision and five were pending as of March 2000. In view of the Ministry of Environment & Forests' statement that DPRs submitted by the States were not as per NRCD's guidelines, the Committee asked the Uttar Pradesh Government to state the procedure of preparing DPRs and the subsequent administrative approval. The State Government, in their reply submitted a note specifying:

"The PFRs are prepared as preliminary Forecast of Cost for pollution abatement works in a town on the basis of population data and discharge in drains. The broad proposals given in PFR are checked by officials at NRCD, Ministry of Environment and Forests, Government of India. Thereafter, the CCEA approval is granted as per recommendations of NRCD. After the CCEA approval, the detailed project reports (DPRs) for different components i.e. Interception & Diversion, Sewage Treatment Plant, Low Cost sanitation etc. are prepared by Uttar Pradesh Jal Nigam. For preparing DPRs the detailed investigation, planning, designing etc. as per actual site conditions and requirements is done. The DPRs are prepared as per norms provided by NRCD."

12.5 As regards the approval of DPRs, the State Government submitted:

"The DPRs are prepared by Pollution Control Units of Uttar Pradesh Jal Nigam deployed at different major towns of GAP II. The DPR prepared by these units is appraised by Chief Engineer (Ganga) at U.P. Jal Nigam Headquarters. The appraised DPR is submitted to State Government where it is once again appraised by Ganga Cell of Urban Development Department. The Ganga Cell of Urban Development Department forwards the DPR to NRCD, Government of India. At NRCD, the DPR is checked and put to the Inter Departmental Appraisal Agency (IDAA) for appraisal and to Sub-Committee of the Steering Committee to consider the cost estimate. After the approval of IDAA and Sub-Committee, the administrative sanction for DPR is issued by NRCD."

12.6 The State Government further added:

"The PFRs submitted by Government of U.P. were not rejected but the cost of PFRs was cut down by Gol without assigning any reason. The DPRs submitted by State Government were not rejected, but in few cases, DPRs were returned for modifications and revision."

12.7 The Ministry further stated in a note that in Uttar Pradesh, a sewage treatment capacity of 818.34 MLD had been created so far. This was a considerable improvement over the capacity of 388.09 MLD created till end of March 2000. The progress in this respect was slow as these works have been

sanctioned recently, DPRs for the works had not been received from the State Government and the availability of funds for these works was also not to the desired level.

12.8 During evidence the Committee desired to know the reasons for less than one-fourth achievement of sewage treatment in Uttar Pradesh. The representative of the State Government of Uttar Pradesh stated in their reply as under:

“Sir, mainly it is availability of funds. Whatever funds have been made available to us, we have already spent it. This year also the provision of funds is very less.”

12.9 When asked whether their projects were cleared without adequate sanction of funds, the representative added:

“The project is approved but the funds are not made available in complete, in totality....”

He further stated:

“The estimated cost is much more and the funds made available are on year-to-year wise basis.”

12.10 On being pointed out that Uttar Pradesh had an unutilized balance of Rs 67.90 crore and that being the position, obviously the State could not say that there was shortage of funds, the representative added:

“Today, we are minus rupees nine crore which were spent from our kitty.”

12.11 In this connection, the Committee desired to know as to what financial constraints were being faced by the State Government in the implementation of GAP. The Uttar Pradesh Government in their post evidence note stated:

“The CCEA cost for different towns is sanctioned on the basis of PFRs, which are Forecast of Cost. In some cases, even the CCEA sanctioned cost not as per PFR. There are a time gaps between approval of CCEA and sanction DPRs. During this period the market price of material and labour increases, but no price escalation is allowed by NRCD. So it becomes difficult to execute the works within sanctioned cost.”

12.12 Following the Ministry of Environment & Forests’ representatives revelation that State Governments are very slow in preparation of DPRs, the

Committee enquired from the State Government if they faced any problem in this regard. The Uttar Pradesh Government in a written note stated:

“As such, State Government faces no problem in preparation of the DPRs. However, in some town, the CCEA cost is not sufficient to meet the requirement of proposed pollution control works for such towns preparing DPRs within CCEA cost is not possible. However, now Government of India has instructed to submit DPRs instead of PFR for CCEA approval. As per revised procedure, the administrative approval has been accorded under Gomti Action Plan – Lucknow Phase II for Rs 263.04 crore in the month of June, 2003.”

## **Execution of Schemes in UP**

### **(i) Interception and Diversion Schemes**

12.13 Audit had reported that the NRCD sanctioned 51 interception & diversion schemes under the GAP-II. UPJN (Uttar Pradesh Jal Nigam) could complete only 30 by March, 2000 while stipulated dates of 17 of the remaining 21 schemes were over. Against the target of laying 95.49 km of sewer line, the UPJN laid 72.94 km of sewer line till March 2000.

12.14 In a case of mismanagement, the Audit had revealed that as against the target of procurement and installation of 103 pumping sets, the UPJN purchased 96 sets at a cost of Rs 9.85 crore between June 1998 to December 1999 and installed only 70 sets as of March 2000 as it had not completed the civil works.

12.15 The Committee called explanations from the Ministry of Environment & Forests in this regard. In their written reply submitted to Committee, the Ministry stated:

“Expenditure on these works upto 31.3.1999 was 14.70 crore and upto 31.3. 2000 was Rs. 18.60 crore, up to date expenditure till 31.12.2000 was Rs. 21.69 crore. As against 103 pumping plants proposed, 96 were purchased upto March 1999. Out of which, 70 were installed upto March 2000. Remaining 26 pumping plants have been installed after March 2000. At present all the 96 have been installed. The remaining seven have also been received and are in the process of installation.”

12.16 When the Committee enquired from the State Government as to what was responsible for delay in taking up follow up action after the purchase of pumping sets, the Uttar Pradesh Government, in a written note submitted the following:

“

Pumping Station		Dates, as per contract, supply and instllation of Pumping plants		Revised date of completio n granted	Civil works compl eted on	Actual date of installation of pumping plants	Cost of contract for supply and installation of pumping plants	Remarks for cost and time overruns
		Date of start	Date of comp -letion					
1		2	3	4	5	6	7	8
1	Etawah	04/1997	07/1998	12/2000	02/2000	03/2000	50.93	There was no cost overrun but the time over run was due to delay in contraction of civil works
2	Mathura Masani nala	07/1999	03/2000	10/2000	01/2000	06/2000	48.733	There was no cost over run, also there was no significant time over run
3	Mathura Dairy Farm	04/1998	07/1999	11/2000	09/1999	06/2000	54.89	There was no cost over run but the time over run was due to delay in construction of civil works and delay due to late arrival of erection team of firm also due to unforeseen problems at site.
4	Mathura Cantt nala	10/1999	06/2000	09/2001	01/2000	04/2001	13.05	There was no cost over run but the time over run was due to delay in construction of civil works and delay due to late arrival of erection team of firm also due to unforeseen problems at site.
5	Mathura Vrindavan Kalideh	12/1997	09/2000	09/2000	12/1999	04/2000	13.95	There was no cost over run, also there was no significant time over run

12.17 In view of the significant delay taken in the construction of civil works, the Committee wanted to know as to whether UPJN had required infrastructure for installation of pumping plants. In a note submitted to the Committee, the State Government stated:

“ UP Jal Nigam has sufficient infrastructure for installation of pumping stations and plumping plants. In every Pollution Control Units of U.P Jal Nigam, there are engineers of civil, electrical and mechanical cadre. For electrical and mechanical works in each unit there is a Project Manager (E&M), an officer of the rank of Executive Engineer posted to plan, coordinate and execution of E&M works. It is to mention here that Pumping plants of different capacity are manufactured by specified industries. These plants can not be manufacture at site of works. There JP Jal Nigam has to purchase the pumping plants from different firms

manufacturing these through tendering process,. Also the erection of different plant requires different skill as specified by manufacturer for which they have their own trained staff. Thus the tenders are invited for supply installation, commission, testing and three months trial run of pumping plants as one contract.”

12.18 In another case, Audit had reported that the UPJN purchased 10 diesel generating sets at a cost of Rs. 0.73 crore during 1997-99 for Mathura and Vrindavan. It delayed installation of 6 sets by 5 to 19 months and did not install 4 sets purchased at a cost of Rs 46 lakh as of March 2000 as generating rooms were reportedly not ready. On being enquired by the Committee, the Ministry of Environment and Forests stated:

“In case of 10 diesel generating sets all of them have been installed and commissioned by now. As far as expiry of warranty period is concerned, it was never allowed to expire and extension of time was taken by the Contractor wherever required.”

12.19 The Committee further enquired from the State Government the reasons for delay in the installation of Diesel Generating sets. The State Government in a written note stated:

“The reason for delay in installation of DG sets were mainly due to delay in construction of DG Rooms and in two cases due to delay caused by erection team of the firm.”

12.20 Audit further reported that the NRCD sanctioned Rs. 7.88 crore in October 1997 for ‘Rehabilitation of MPS (Main Pumping Station), Rising Main and Effluent Channel Part-I’ at Agra for completion by March 1999. The works included mainly electrical and mechanical works, viz, installation of pumps, diesel generating sets, electric sub-station and transmission line. The work remained incomplete, reportedly due to change in its scope by the State Government. The UPJN had incurred a total expenditure of Rs 8.63 crore till March 2000.

12.21 When the Committee sought reasons for the delay from the Ministry of Environment & Forests, the Ministry submitted a note stating:

“In case of main sewage pumping station at Agra, all the works have now been completed. The delay had been mainly due to involvement of other departments, contractual problems and tackling/fitting of existing works with the new ones.”

12.22 The Committee enquired about the State Government’s possible mismanagement in the non completion of the station. The State Government of Uttar Pradesh in a note stated:



“The main reason for non completion of works regarding Rehabilitation of Main Sewage Pumping Station at Agra were the following:

- (i) MPS was in the custody of Agra Jal Sansthan. After taking many efforts Agra Jal Sansthan gave shutdown of old pumping plant in March 99. The proposed pumping plants were received in the year 1998. After dismantling the old pumping plants, the installation of proposed pumping plants could be completed in 10/99.
- (ii) The delay in the power connection was due to non-payment of power bills amounting approximately Rs 3.00 crore which was not paid by Jal Sansthan to UP Power Corporation Limited. After many correspondences, a letter was written by the Chairman, UP Jal Nigam, Lucknow, to Secretary, Energy, Govt. of UP regarding power connection. After many efforts power connection was restored on 19.06.2001 at MPS Agra.
- (iii) The funds released against sanctioned DPR of Rs 7.88 crore were utilized for replacement of pumping plants, sub-station, DG Sets, power connection etc at MPS Agra. Thus there was no mismanagement of funds. The reasons for delay caused in execution activities is as mentioned above.”

## **(ii) Sewage Treatment Plants**

12.23 Audit had reported that the NCRD sanctioned 16 STPs of 433.31 MLD capacity under the GAP-II between June 1994 to January 1999. Those sanctions also left a large portion of estimated sewage uncovered. The UP JN could complete only 2 STPs of 13 MLD capacity by March 2000. Audit examination of the two STPs had revealed that:

- (a) The UPJN re-assigned the work of Allahabad STP to the same contractor at an additional cost of Rs. 1.2 crore, per advice of the NRCD. The contractor completed the work in March 1998, after a delay of 5 years.
- (b) The UP JN reduced the scope of work of Kanpur STP from Rs. 18.60 crore to Rs. 13.70 crore by excluding installation of imported dual fuel generating set. The UP JN commissioned the STP in January 1999, after a delay of 63 months and after incurring an excess expenditure of Rs. 0.72 crore. Besides, there was infructuous expenditure of Rs. 0.89 crore on electricity charges for the pre-commissioning period between April 1997 to December 1998.

12.24 On being enquired by the Committee in this regard, the Ministry of Environment & Forests, in a note submitted to the Committee stated:

“Twelve STPs of 341.75 MLD capacity under YAP(GAP-II) were sanctioned between June 1994 to January 1999 as per the projected required capacity for sewage treatment. Out of these 12 STPs, 9 STPs of 109.5 MLD capacity were completed by UP Jal Nigam by March 2000.

12.25 With regard to the Allahabad STP issue, the Ministry stated:

“As per the agreement with the Contractor, M/s Driplex, New Delhi, the work of 60 MLD STP at Allahabad was to be completed by February 1993 which could not be completed and the contract was rescind by UPJN in April 1994. The contractor then approached Ministry of Environment & Forests which constituted a Committee and the following directions were issued to UP Jal Nigam on 22.5.95. The Ministry suggested that further disputes and litigations which may cause further delays should be avoided at all costs. Accordingly, the work was restarted by M/s Driplex which he could complete it only in March 1998 due to slow pace of work for which UP Jal Nigam can not be held responsible as the wanted to avoid any dispute or litigation as directed by MOEF. UP Jal Nigam got the work completed in public interest and at the old coated rates of 1986. “

12.26 On being asked on the case of Kanpur STP, the Ministry in their written note stated:

“After having received the indicative sanction form NRCD, vide Telex dated 28.6.87 tenders for 130 MLD STP were invited, received, evaluated and forwarded to World Bank on 29.6.88. The World Bank did not find any firm to be clear winner and vide letter dated 9.9.88 directed to re-invite the financial bids but the Hon'ble High Court stayed the NIT dated 30.9.88 on a writ by a prospective bidder which was finally dismissed as withdrawn in November 1989. Only after this revised price bids were obtained in July 1990 and the work was awarded to M/s Driplex Water Engineering Limited in December 1990 at a cost of 18.60 crore + price escalation during pendency of contract. Thus the delay was not due to UP Jal Nigam. The date of start of the contract was 15.4. 1991 and date of completion was 14.10.93 but due to slow pace of work by the contractor, the contract was discontinued on 20.4.94. The contractor then approached the MOEF which constituted a Committee and the following directions were issued to UP Jal Nigam on 22.5.95. 'The Ministry is of the view that further disputes and litigation which would cause further delays must be avoided at all costs and accordingly directed that the balance work be competed by the same contractor after excluding the power package.' Accordingly, the work was restarted on 11.6.95 and the contractor could only finish it in January 1999 due to his slow pace of work for which UP Jal Nigam cannot be held responsible as it wanted to avoid any dispute or litigation as directed by MOEF. Besides this, no excess payment of Rs.

0.7 crore has been made to the contractor as observed as this payment pertains to the price escalation during the original contract period and as per the provisions of the contract. As the expenditure on electricity for the period between April 1997 to December 1998, the 130 MLD STP was partially commissioned in April 1997 by commissioning of one effluent stream out of three while the other two streams were commissioned in March 1998 and the sludge treatment unit was commissioned in January 1999. Thus during the period from April 1997 to December 1998, the STP was in operation after being partially commissioned and therefore the expenditure on electricity during this period was not infructuous.”

12.27 The Committee asked the State Government about the latest status of the 16 STPs and reasons for their non-completion. The Uttar Pradesh Government, in a written note stated:

“All the 16 STPs have been completed. The reasons for delay are as under-

1. Dutch consultants were appointed by GOI to finalise the type of technology to be adopted for treatment of sewage. They visited several places in India before finalising treatment technology in 1996. The DPRs of STPs were prepared after finalisation of technology which resulted in delay in submission of DPRs and sanction.
2. There were litigations regarding acquisition of land at several places which resulted in delay.
3. Accordingly sanction of DPRs were also delayed which ultimately delayed in completion of STPs. “

### **Operation and Maintenance of Assets**

12.28 Audit had observed that the NRCD did not show due diligence to ensure the optimum utilization of assets created under the GAP. The state agencies also neglected their operation and maintenance. Out of 45 STPs commissioned as of March 2000, 19 STPs did not perform to their full treatment capacity due to erratic power supply, non-rectification of defects, and non-release of funds by the State Governments. The effluent quality from 6 STPs did not meet the desired standards. The crematoria were not properly maintained. Out of 28 electric crematoria constructed under the GAP-I, 8 electric crematoria were either closed or inoperational.

12.29 Audit had observed that Electric crematoria at Allahabad and Hardwar, commissioned in January 1993 and March 1992 at a total cost of Rs 97.25 lakh are non functional since October 1999 and July 1999 respectively due to power

disconnection as the respective municipal bodies failed to pay the electric bills. Kanpur electric crematorium commissioned in May 1991 at a cost of Rs 77.22 lakh was lying closed since March 1997 due to technical fault and non-supply of power.

12.30 On being enquired by the Committee, the Ministry of Environment and Forests in a note stated:

“The electric crematoria were constructed and maintained by respective local bodies. However, due to their poor financial condition, they face difficulty in maintaining them. UP Government has taken a Policy decision to provide grant-in-aid to Nagar Nigams as per State Finance Commission’s recommendations. The Nigams have also been advised to review their taxation structure to enhance the income. For this purpose they have been asked to increase the tariff for House properties, to bring those properties under taxation which are not yet covered to improve/enhance sewage tax and to realize arrears effectively etc.”.

12.31 When the Committee desired to know from the Uttar Pradesh Government about the matter, the State Government, in a note submitted to the Committee, stated:

“In GAP-I ECs were constructed in Allahabad and Kanpur towns. In both the towns ECS are functional. But due to religious rituals, generally masses do not like to go to ECs.”

12.32 During their study visit to Allahabad and Varanasi, the Committee found many dead bodies floating in the Ganga thereby enhancing the pollution load of the river. The Committee enquired as to why didn’t Uttar Pradesh Government undertake any survey in this regard. The State Government in a written note submitted to the Committee stated:

“Traditionally the dead bodies are disposed as per cast rituals at different designated places in different towns. There is no direct control of State Government on disposal of dead bodies, as such Government of U.P did not consider the need for such survey.”

12.33 On being asked about the remedial action taken by the State Government, the Uttar Pradesh Government in a note stated:

“The floating dead bodies in the river are collected through boats and are cremated properly.”

12.34 At Lucknow the Committee had the opportunity to see large volumes of caustic soda effluent being discharged into the Gomti river from numerous dhobighats along the river. Asked about the consequences of this problem which

had not been figured in the Gomti Action Plan under GAP-II, Uttar Pradesh Government in a written note submitted to the Committee stated:

“Caustic soda effects the acidity/alkalinity (pH value) of the river water which do not have direct effect on pollution load. The parameters for pollution load are Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD) and total coliform. As such the assessment regarding quantity of caustic soda is not being done because this hardly makes any effect on river water.”

## **Public Participation**

12.35 Audit Report had pointed out that the NCRD and the State Governments continued to give only routine attention to maximize public participation particularly of people living on banks of river Ganga, and of the local bodies, social organisations and Non-Government Organisation as may be evinced from the paltry total expenditure of only Rs. 38.60 lakh during the period from 1995 to 2000 by the participating States on the activities relating to enhancing public participation.

12.36 The Committee asked the Uttar Pradesh Government to spell out different publicity programmes/policies undertaken in the State for public participation in GAP Schemes and the amount sanctioned for and spent on the same.

12.37 In their reply the Uttar Pradesh Government stated:

“The public participation activities were started in 8 towns of Yamuna Action Plan under GAP-II, for which DPRs were approved by NRCD. For promoting public participation in above mentioned 8 towns, the following programmes/policies were proposed in DPRs and were under taken:

- a. Seminar, workshops, rallies, pathyatra, meetings, exhibitions and competition.
- b. Training courses.
- c. Camps.
- d. Shramdan.
- e. Folk/Media and street theatre.
- f. Forming and training beneficiary groups take up construction and maintenance of non-core works.

Against the sanctioned DPRs of Rs. 1.589 Crore for Public Participation, an expenditure of Rs. 1.581 Crore was incurred. For Gomti Action Plan (Phase-II) for Lucknow and for Yamuna Action Plan (Phase-II) Rs. 0.16 crore and Rs. 24.65 crore has been earmarked for Public Participation activities respectively.”

## **Water Quality Monitoring**

12.38 Water quality monitoring is an important function of the GAP. Audit had pointed out that the NCRD had discontinued the water quality monitoring of river Ganga since September 1999 reportedly due to funds constraints. The BOD, Dissolved Oxygen and coliform levels for all 60 stations as furnished by the NCRD for the period 1995-2000, showed that the water quality of Ganga had deteriorated over the period 1993-1999. During 1999 BOD exceeded the permissible limit at Kannauj upstream, Kannauj down stream, Kannauj at Ramganga, Kannauj at Kalindi, Kanpur up stream, Kanpur down stream, Varanasi down stream in U.P. as against only at 1 sampling station, viz. Kanpur down stream in 1993. The water quality of river Yamuna also did not improve over the period 1996-99. The BOD exceeded the permissible limits at 14 sampling stations during 1999, as against 13 out of 25 sampling stations during 1996. The coliform levels exceeded in 17 out of 60 stations sampled during 1999.

12.39 The Committee enquired Uttar Pradesh Government about the water quality monitoring in the state. In their reply, the State Government stated:

“Water quality monitoring of river is conducted by State Pollution Control Board monthly to assess the water quality and to know the sources of pollution.”

## **Industrial pollution**

12.40 According to Audit para, NRCA, based on a CPCB report regarding installation of ETPs by the grossly polluting units, issued directives in July 1997 to all grossly polluting industries discharging their effluents into the river to install the requisite ETPs within 3 months, failing which closure notices should be issued. Audit had reported that out of 117 grossly polluting industrial units, 96 units had installed ETPs, 21 had closed and 8 ETPs were not functioning properly. On being enquired as to what steps were initiated by Uttar Pradesh Government against the industrial units who failed to comply with the directives of NRCA regarding installation of requisite ETPs, the State Government in a note stated:

“Under GAP-I, UPPCB identified 34 industries, later on 83 other industries were identified on the direction of CPCB, which were discharging their effluent directly into river Ganga. The present status of 116 industries in UP (now 1 industry is in Uttaranchal), which are discharging effluent directly into river Ganga is as follows:

Total industries	Closed industries	Working industries	ETP installed	Achieving Board's	Not achieving
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				standards	Board's standards
116	57	59	59	58	1

M/s Koshi Sahkari Chini Mill, Aurai, Sant Ravidas Nagar is the state owned unit which is not meeting the standards. Its consent have been refused and is directed to achieve the norms. During this crushing season the performance of the ETP will again be monitored. Thus all the above 116 industries are being monitored by UPPCB. If they fail to comply the standards, the show cause notice under section 33A of Water Pollution Act-1974 is issued to the factory. On non compliance of show cause notice the closure order is issued against such industry.”

### **Financial Management**

12.41 Audit had pointed out that the implementing agencies in Uttar Pradesh had diverted Rs. 9.37 crore on establishment, operation and maintenance on charges on schemes not related to the GAP, supervision charges on low cost sanitation and office establishment and contingences which were not covered under the programme. Further, implementing agencies in Uttar Pradesh charged excess centages of Rs. 2.63 crore which resulted in excess reporting of expenditure. Audit had also reported that unutilised balance of Rs. 67.90 crore were lying with the implementing agencies in Uttar Pradesh.

12.42 The Committee enquired as to why the State Government's mechanism for ensuring effective utilization of funds released to implementing agencies had failed to check these financial irregularities. Uttar Pradesh Government outlining the reasons in a note stated:

“ There were balance amount left with U.P. Jal Nigam at the end of every financial year, but most of these balances were due to funds released in the month of February and March of the financial year. It is also to mention here except first three years (1993-96) the balance (leaving funds released in February and March) at the end of year and was not more than 4.6% in any year. The average balance of such funds available with UPJN works out to be 1.22%.”

12.43 The Committee desired to know what action the State Government had initiated to generate additional revenue, the Uttar Pradesh Government informed:

“The additional revenue is being generated in operation and maintenance of assets created under GAP by following measures:

1. Sale of treated sewage for irrigation.

2. Sale of dry sludge cakes as manure.
3. Generation of bio-gas and its use in dual fuel engines for producing electricity for the purpose of running equipments and for electrification at the treatment plant.
4. Possibilities are also being explored for sale of bio-gas as fuel to the near by consumers.

The additional revenue generated through sale of above, is being utilized for incurring expenditure on operation and maintenance of assets, by the units of U.P. Jal Nigam. By the end of the year 2002-03, the additional revenue generated from above sources was Rs. 3.25 crore.”

12.44 The Committee also looked into the financial constraints faced by the State. On being enquired, the Uttar Pradesh Government stated:

“At times the actual expenditure on the works of sanctioned scheme becomes more than the sanctioned cost which has to be borne by the State Government. State Government through high level committee (Steering Committee and Standing Committee) had been requesting for the same. Now the decision has been taken that the CCEA cost and the project will be approved by Gol on DPRs submitted by State Government, instead of PFR. Under these revised rules the Comprehensive DPR for Lucknow Phase II has been approved. But in case of other towns of GAP II, the above financial constraint is still there.”

12.45 They further stated:

“The cost of operation and maintenance of assets created under GAP was shared by Government of India and the State Government up to year 1996-97. After the 74<sup>th</sup> Constitution Amendment, the operation and maintenance of assets created under GAP became the responsibility of respective Local body. Due to lack of resources, no technical staff and know-how to handle these assets, the local bodies in Uttar Pradesh are not in position to operate and maintain the assets created under GAP.”

### **Monitoring Mechanism**

12.46 Audit had pointed out that at the state level, the State Governments were to constitute CMCs (Citizen Monitoring Committees) for each town, as per directives of the NRCD issued in March 1995 to monitor the progress of execution and timely completion of schemes and their operation and maintenance and to facilitate public awareness and participation. The CMCs were to meet once in a month. Audit had noticed that the constituted CMCs in



Uttar Pradesh in 6 towns met only once, CMCs in 2 towns met twice and CMCs in another 2 towns met only thrice since their constitution.

12.47 When the Committee asked about the status of constitution and working of CMCs in the State, the Uttar Pradesh Government stated:

“CMCs for all the GAP towns have been constituted under the chairmanship of respective elected head of the local body. The main contribution of CMCs is towards more public awareness and coordination between different departments.”

### **XIII. BIHAR**

13.1 According to Audit report, the target and achievement in various core and non core schemes in Bihar as of March 2000 is as under:

#### **I: Status of Core Schemes**

State	Phase	Interception and Diversion				Sewage Treatment Plants			
		Schemes		Sewer Lines (in kms)		Schemes		Sewage Treatment (in MLD)	
		T	A	T	A	T	A	T	A
Bihar	I	17	17	53.71	53.71	7	5	135.50	<b>118.00</b>
	II	0	0	28.68	0.00	0	0	92.18	<b>0.00</b>

**T: Target; A - Achievement**

#### **II: Status of Non-Core Schemes**

State	Phase	Low Cost Sanitation		Crematoria		River front Development	
		T	A	T	A	T	A
Bihar	I	7	7	8	8	3	3
	II	8	0	1	0	9	0

*T Target A- Achievement*

*N.B. The figures of reported achievement are subject to test Audit comments on the core and non-core schemes in the report*

13.2 As per the information furnished by the State Government, the aforesaid statuses remain the same as of March 2003. On being enquired by the Committee, Bihar Government, in a note submitted to the Committee, stated as under:

## REASONS FOR SHORTFALL IN CORE SCHEMES

State	Phase	Interception Scheme		Diversion Sewer line in Km.		Reasons for shortfall
		T	A	T	A	
Bihar	I	17	17	53.71	53.71	-
	II	0	0	28.68	0	DPR of Arrah, Mokamah, Hajipur & Kahalgaon submitted in the year 1996-97 NRCD repeatedly raised some observations time to time finally submitted in 2003 with all compliance sanctioned is awaited
State	Phase	Sewage Treatment Plant Scheme		Sewage Treatment in MLD		Reasons for Shortfall
		T	A	T	A	
Bihar	I	7	5	135.50	118	2 Nos. of STP could not be made functional in time due to L/A problem & contractual dispute. Efforts are being made to complete the scheme till August 2004
	II	0	0	92.18	0	DPR of 5 Nos. of S.T.P. submitted in the year 1996-98 NRCD repeatedly raised some observations time to time. Finally submitted in 2003 with all compliance sanction is awaited.

## Reasons for shortfall in Non Core Schemes

State	Phase	Low Cost Sanitation		Reasons for shortfall
Bihar	I	7	7	
	II	8	0	Change of funding procedures and share of fund between Central and State Government
State	Phase	Crematoria		Reasons for shortfall
		T	A	
Bihar	I	8	8	
	II	1	0	DPR of 5 nos. of scheme viz. Baxur, Barh, Fatuha, Sultanganj, Kahalgaon were submitted in 1996. NRCD raised some observations repeatedly from time to time. Finally submitted in 2003 with all compliance & DPR of 1 no. of scheme viz. Danapur submitted in 2002, recently sanctioned. Sanction of rest 5 nos. is awaited
State	Phase	River Front Development		Reasons for shortfall
		T	A	
Bihar	I	3	3	
	II	9	0	9 nos. of schemes sanctioned and work was in progress. 1 no. of scheme submitted and

				sanction is awaited.
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13.3 Bihar Government stated in December 2003 that out of 8 Low Cost Sanitation Schemes, 6 schemes at Arrah, Barh, Sultanganj, Barahiya, Fatuha and Mongyr had already been completed. Of the remaining two schemes, the first unit of the scheme at Baxur had been completed, while the Hon'ble High Court had stayed the second unit. The scheme of Bhagalpur was submitted to the NRCD but sanction was awaited. In the case of River Front Development scheme, out of 9 schemes, 8 schemes at Arrah, Patna, Fatuha, Barh, Barahiya, Sultanganj, Mongyr & Bhagalpur had been completed while the sanction is awaited for the rest one scheme at Baxur. As for other schemes, no progress had been made till then.

13.4 In view of the non-sanctioning of any Interception & Diversion and Sewage Treatments Schemes under GAP-II in Bihar and lack of progress in other schemes, the Committee were curious to know the difficulties being faced in the implementation of GAP schemes in the State. The Bihar Government in their written reply stated:

“The Major difficulties faced in the implementation were as under:

1. Contractual dispute
2. Land acquisition
3. Law & order problem at STP Munger and Karmalichak (East Zone) STP Patna.
4. Encroachment at Saidpur STP.”

13.5 When the Committee enquired about the concrete measures taken by the State Government to resolve these problems and difficulties, the Bihar government in a note submitted to the Committee stated:

“Concrete measures taken are as under:-

1. Contractual dispute is being solved through arbitration by the order of the Hon'ble High Court Patna
2. Land acquisition problem was solved by the timely persuasion in the concerned Court. Finally, it was decided in the apex Court in the favour of BRJP/State Government of Bihar.
3. Law & Order at site was tackled by the deputation of police forces with Magistrate through Local Dist. Administration.
4. Encroachment problem at Saidpur STP premises Patna was solved by the order of Hon'ble High Court, Patna.”

13.6 On being asked by the Committee as to what inputs were sought from the Bihar Government by the Ministry of Environment & Forests in the conception stage of GAP, Bihar Government, in their reply, stated:

“The following inputs were sought:

- (i) Formation of Steering Committee headed by the Chief Secretary of the State to decide a nodal agency and executing agency and to screen the schemes before sponsoring, indicating their inter-se priority.
- (ii) To under write State Government's role or contribution in the execution/maintenance of the project as may be necessary for the proper fulfillment of the objectives of the schemes.
- (iii) To ensure inter-departmental co-ordination at the State level.
- (iv) To review physical and financial progress from time to time.
- (v) To arrange for furnishing such information as is required by the Ganga Project Directorate.”

### **Delay in approval of DPRs**

13.7 Audit para had pointed out that against expected number of 119 DPRs, NRCD received 65 DPRs from Bihar Government. Of these 18 were sanctioned and 47 returned for revision. In a written note submitted to the Committee, the Bihar Government disclosed that due to frequent observation made by NRCD, schemes could not be sanctioned to the State till March, 2000. The Committee enquired about problems faced by them in the preparation of DPRs. The Bihar Government in a written note stated:

“No major problems are being faced in the preparation of DPRs”

13.8 On being asked whether the State Government were able to submit DPRs as per the time limit prescribed by the Steering Committee, the Bihar Government in their written note stated:

“Yes, we are able to submit DPR's within the time limit. DPR's are being sent through State Government”.

### **Execution of Schemes**

#### **(i) Interception & Diversion Schemes**

13.9 Audit had brought out that the NRCD sanctioned 17 interception & diversion schemes under the GAP-I, which involved laying of 53.71 km of sewer

line. The BRJP had reportedly achieved that target by March 2000. It was to lay 23.66 km of sewer line and to strengthen 5.02 km of sewer line under the GAP-II. The BRJP (Bihar Rajya Jal Parshad) did not, however, take up laying and strengthening of sewer line till March 2000. It could not submit the DPRs per guidelines of the NRCD; and, consequently, could not obtain sanction for any interception & diversion scheme for the GAP-II from the NRCD.

13.10 In their comments on the Audit observation, the Ministry of Environment & Forests stated:

“DPRs received from BRJP had to be returned since these were not as per the guidelines of NRCD. Due to unsatisfactory performance in respect of operation and maintenance of assets created under GAP-II, the Ministry took a policy decision not to release any further funds to Bihar till this issue is resolved.”

13.11 When the Committee asked the State Governments about the matter, the Bihar Government in their note stated:

“Under GAP-I targeted sewer line 53.71 km. of I&D scheme has been completed earlier 2 no. of STPs at Karmalichak (Patna) and Munger could not be completed till March 2000. So, I&D scheme of both STPs could not be made functional. DPRs for I&D Ara, Hajipur, Mokamah and Kahalgaon were sent during the year 1996-97 observations made by NRCD were complied time to time and finally DPRs of these towns including Patna and Chapra have been sent to NRCD in March and July 2003 respectively. Sanction is awaited”.

**(a) Non achievement of targeted sewage treatment**

13.12 Audit had reported that the GPD sanctioned Rs 20.70 lakh for recommissioning of Exhibition Road Pumping Station, Patna for diversion of 6.9 MLD of sewage. The BRJP did not correctly assess the incoming and outgoing flow of raw sewage. It laid 4 sewer lines, 1 of 9 inches diameter, 2 of 15 inches diameter and 1 of 18 inches diameter for incoming sewage, but one of 18 inches diameter for outgoing sewage. Defective designing resulted in overflow of sewage from 4 manholes, and non-achievement of targeted sewage treatment. Commenting on the Audit observation, the Ministry of Environment & Forests, in a note submitted to the Committee stated;

“BRJP has reported that proposal for new scheme for diversion of sewage of Exhibition Road had been prepared for consideration under GAP-II.”

13.13 When the Committee sought reasons from the State Government, the Bihar Government in a note stated:

“Presently DPR was sent for approval for new sewer line from Exhibition Road to STP Saidpur but GPD advised to prepare DPR by using existing PMC sewer line in place of new sewer line by reducing the DPR cost. Accordingly DPR was sanctioned and work was executed but in due course PMC sewer line was choked resulting in achievement of targeted sewage treatment. As a remedial measure considering the problems in existing site condition a new proposal for sewer line from exhibition Road to Pirmohan I.P.S. has been sent to NRCD for approval. So, the question of defective design does not arise.”

13.14 When the Committee enquired the Bihar Government about defective designing resulting in overflow of sewage from four manholes, the State Government in their written reply stated;

“Incoming and out going flow of sewage was correctly assessed by BRJP. Initially BRJP has prepared and submitted the GAP-I schemes considering 15 years design period. But as per directions of NRCD the schemes were revised on 5 years design period. This was the main reason of the problems and there was nothing like defective design. The matter was raised in NRCD.”

**(b) Unauthorised connection of the drains by the PMC (Patna Municipal Committee)**

13.15 Audit report had highlighted that the BRJP executed the work of diversion of sewage from Krishnaghat in December 1988 for Rs 14.72 lakh. It could not, however, divert the sewage due to unauthorised connection of the drains by the PMC (Patna Municipal Committee) directly to the sewer line, resulting in overflow of sewage and its continuous discharge directly to Ganga from Krishnaghat. In their comments on the Audit observation, the Ministry of Environment & Forests stated:

“The BRJP informed that action to remove unauthorised construction of the drains by Patna Municipal Committee (PMC) is being taken and is expected that Intermediate Pumping Station at Krishnaghat will function smoothly by March 2001.”

13.16 The Committee asked Bihar Government on this unauthorised connection of the drains by Patna Municipal Committee. In their reply, Bihar Government stated:

“PMC has separate sewer line through which sewage water comes to S.T.P. Saidpur. But due to choking of sewer line the PMC Connected this line to rising sewer line, which comes from Krishnaghat. This connection overloaded the rising sewer line. Repeated reminders have been given to PMC to disconnect the unauthorised connection.”

## **(ii) Sewage Treatment Plants**

13.17 Audit para had stated that to tackle 227.48 MLD sewage in Bihar, the NRCD sanctioned construction of 7 STPs of 135.5 MLD capacity under the GAP-I. The BRJP completed 5 STPs of 118 MLD capacity as of March 2000. The NRCD did not sanction any STP under the GAP-II, due to unsatisfactory operation and maintenance of assets created under the GAP-I. Test check in Audit revealed the following cases of mismanagement:

### **(a) Idling of feeder interception & diversion scheme**

13.18 Audit had pointed out that the GPD sanctioned a further revision in the 8 MLD STP at Chapra, in March 1995 from 8 MLD UASB to 2 MLD oxidation pond, as it considered the BRJP's calculations of the wastewater characteristics arbitrary. The BRJP actually completed revised STP after a delay of about 4 years in December 1999. Meanwhile, the feeder interception & diversion scheme completed in February 1990 at a cost of Rs 1.21 crore, remained idle. In their comments on the Audit observation, Ministry of Environment & Forests, in a note submitted to the Committee stated:

“STP has been completed and commissioned by December 1999. Presently, it is running successfully with the installed capacity of 2 MLD.”

### **(b) Delay in completion of 4 MLD STP in Eastern Zone Patna.**

13.19 Audit Report had brought out that the BRJP awarded the contract for completion of 4 MLD STP in Eastern Zone Patna in October 1995 without resolving the dispute with the owners of the land, required for construction of approach road. The contractor commenced the work in November 1995 but stopped it in February 1996 due to continued resistance of the landowners, after incurring expenditure of Rs 95.60 lakh. In their comments on the Audit observation, Ministry of Environment & Forests in a note submitted to the committee stated:

“Problem in the acquisition of land for approach road has been sorted out and possession of land has been taken up on 13.1.2001. Remaining works of STP have been started and it is expected that the scheme will be completed by September 2001.”

### **(c) Delay in completion of 45 MLD STP in Saidpur**

13.20 Audit Report had brought out that 45 MLD STP in Saidpur, scheduled for completion by December 1993, was delayed due to encroachment of a portion of plant site. Audit further stated that despite clearance of the site in November 1996, the contractor could complete the work only after 3 years in October 1999, against its scheduled gestation of 15 months. Commenting on the Audit observation, Ministry of Environment & Forests in a note submitted to the Committee stated:

“Contractor could not complete the work even after the clearance of encroachment due to reluctance on the part of the contractor in the execution of work and dispute over the demand of the payment by the Contractor.”

**(d) Non- completion of 13.5 MLD STP at Munger**

13.21 Audit Report had brought out that despite completion of interception & diversion scheme which had costed Rs 2.50 crore in May 1993 and the assurance given by the Ministry that the STP would be operationalised by December 1995, the 13.5 MLD STP at Munger was still incomplete. The implementing agency had spent over Rs 1.70 crore on it. The contractor abandoned the work in May 1997 for want of release of necessary funds by the BRJP. In their comments on the Audit observation, Ministry of Environment & Forests in a note submitted to the committee stated:

“The remaining works of STP are held up due to dispute in claim over the earth work done on Lagoon and Pond. Due to delaying tactics of contractor, the works of STP are held up. Dispute over the payment is near settlement and the work is to be commenced very soon. It is expected that the scheme will be completed by September 2001.”

**(e) Transferring of transformer to a scheme not related to the GAP**

13.22 Audit had stated that out of 2 transformers of 200 KVA each, installed in November 1993 at Patna Southern Zone STP, the BRJP transferred 1 transformer to Anjuman Ismania hall in March 1994 for general water supply not related to the GAP. In their comments on the Audit observation, Ministry of Environment & Forests stated:

“One No.200 KVA transformer was transferred to Patna Water Board by the order of the Government. In February 2001. STP at Pahari has been supplemented with another 150 KVA transformer and this STP is now having 2 nos. of transformers as per sanctioned DPR.”

13.23 When the Committee enquired from the Bihar Government as to why they could not get any core scheme from NRCD under GAP-II, the State Government stated:

“DPR’s were prepared/ submitted as per the then guide line of NRCD but due to frequent changes of norms of the NRCD guide lines the PFR/DPRs of interception & diversion units had to be changed many times and could not be approved by NRCD.”

13.24 Land acquisition being a stumbling block in the implementation of GAP in Bihar, the Committee asked the state Government the reasons for not providing



required land for the schemes under GAP. In their reply, the State Government stated in a note:

“Except in a few cases there was no major problem in land acquisition under GAP-I. The land provision for GAP-II schemes is already under consideration of the State Government.”

13.25 In reply to a query on the latest status of completion of balance works in Bihar, the State Government in their written note stated:

“Latest status of balance work of STPs are as under:

GAP-I 2 nos. likely to be completed by August 2004.

GAP-II no sanction received from NRCD as yet.”

### **(iii) Low Cost Sanitation Scheme**

13.26 Audit report had brought out that the BRJP could complete none of the 8 schemes sanctioned by the NRCD under the GAP-II till March 2000. Audit observations on the 7 schemes of low cost sanitation completed by it under the GAP-I are as follows:

#### **(a) Construction of community toilets in violation of GAP guidelines**

13.27 Audit had pointed out that the BRJP constructed 40 community toilets for Rs 1.09 crore in 9 towns (Chapra, Patna, Hazipur, Sonapur, Mokama Barauni, Buxar, Munger, Bhagalpur and Sultanganj) of Bihar in the campuses of Government/semi Government/private institutions, in violation of the GAP guidelines that toilets were to be made in substitution of those contributing sewage pollution to the river. In their comments on the Audit observation, Ministry of Environment & Forests stated in a note submitted to the Committee:

“In the absence of toilet facilities, people go for open defecation. In this process, the wastes so generated ultimately reach the river Ganga through open drains. Thus construction of toilets wherever they are, helps in minimising the pollution of river.”

#### **(b) Irregular use of community toilets**

13.28 Audit had revealed that the BRJP constructed 20 community toilets at a cost of Rs 57.37 lakh in 7 towns (Chapra, Buxar, Sonapur, Hazipur, Mokama, Sultanganj and Bhagalpur) of Bihar. These either remained unused due to closure or unauthorised occupation or were partly used for a few days in a year during fairs and locked up for the rest of the period. The State Government and municipal bodies did not take effective steps for their regular use.

13.29 Giving their comments on the Audit observation, Ministry of Environment & Forests, in a note submitted to the Committee, stated:

“Efforts have been made to improve the condition and utility of community toilets constructed under GAP-I. The present status is as follows:

SONEPUR – Seven units were constructed under GAP-I. Three of them are non-functional due to non-availability of water supply. Remaining four are used in Kartika Mela.

CHHAPRA – All 11 units are functional and used by the Public.

HAJIPUR – All 10 LCS units constructed under GAP-I are functional.

MOKAMAH – All four community toilets constructed under GAP-I are functional

BHAGALPUR – All LCS clusters are functional.”

**(c) Failure to keep community toilets in proper condition**

13.30 Audit report had made it known that Bihar Government and the maintenance agency, M/s Sulabh International failed to keep 10 community toilets of 4 towns (Chapra, Munger, Barauni and Bhagalpur) in proper condition. The toilets were impaired variously for want of repairs of the doors, buildings, drains, pipes, pans, urinals, hand pumps, electric fitting, septic tanks etc. The GAP fund of Rs 35.82 lakh spent on their construction did, therefore, not yield the desired benefits. In their comments to the Audit observation, Ministry of Environment & Forests in a note stated:

“... Action against defaulting agency involved in upkeep of toilet units has been initiated.”

13.31 When the Committee enquired about the progress of Low Cost Sanitation Schemes like Community toilets in the State, the Bihar Government, in their reply, stated:

“Low cost sanitation (LCS) Scheme 7 no. was target in GAP-I and 8 no. target in GAP-II. Achievement under GAP-I was 7 no. and out of 8 no. in GAP-II LCS 6 no. completed so far, 1 no now in Jharkhand and construction of 1 unit of Buxar LCS has been stayed as per order of the Hon’ble High Court.”

They further added:

“Out of 9 no. sanctioned RFD Schemes under GAP-II, 7 no. of the RFD scheme have been completed.”

## **Operation & Maintenance of Assets**

13.32 Audit had observed that the NRCD did not show due diligence to ensure the optimum utilisation of assets created under the GAP. The state agencies also neglected their operation and maintenance. Out of 45 STPs commissioned as of March 2000, 19 STPs did not perform to their full treatment capacity due to erratic power supply, non-rectification of defects, and non-release of funds by the State Governments. The effluent quality from 6 STPs did not meet the desired standards. The crematoria were not properly maintained. Out of 28 electric crematoria constructed under the GAP-I, 8 electric crematoria were either closed or inoperational. Audit had divulged following shortcomings in operation and maintenance of assets in Bihar:

### **(a) Discharge of untreated sewage to the river due to poor maintenance of STP**

13.33 Audit had stated that the BRJP commissioned 25 MLD capacity STP in Southern Zone, Patna in June 1994 at a cost of Rs 4.04 crore. It treated an average of only 2 MLD of sewage during 1998-99, further reduced to 0.81 MLD after April 1999, as the pumping stations did not function due to erratic power supply and reported paucity of funds. Thus, poor maintenance of the plant resulted in discharge of almost entire quantity of untreated sewage to the river. In their comments on the Audit observation, Ministry of Environment & Forests, in a note submitted to the Committee, stated:

“STP at Station Zone Pahari is presently working at a capacity of 12 MLD. It is expected that the Plant will be made fully functional from March 2001.”

### **(b) Non utilisation of Interception & Diversion Scheme and the STP**

13.34 Audit had stated that the BRJP spent Rs 2.09 crore up to September 1992 on interception & diversion and Rs 1.79 crore up to June 1994 on STP to tackle 11 MLD of sewage of Bhagalpur town. It commissioned the project in June 1994. The average actual flow of sewage to the plant was, however, only 3 MLD, as the BSEB (Bihar State Electricity Board) did not provide high-tension electric connection to the pumping stations at Maharaja Ghat and Koelaghat till August 2000. Further, out of 7 out-falls to the STP Bhagalpur, sluice gates of 5 were broken. Pumping station at Manik Sarkar was also out of order. The BRJP did not take any steps for repairs of pumping station and sluice gates. It took up the matter with the BSEB only in February 1997 after over 5 years. The STP had not been functioning since March 2000 due to disconnection of power supply. The BRJP's negligence has, therefore, led to non-utilisation of interception & diversion scheme and the STP created at a cost of Rs 3.88 crore. The Ministry of Environment & Forests in their note submitted to the Committee on the above Audit observation stated as under:

“Efforts have been made by BRJP to make STP fully functional. Electric connection to Koilaghat and Maharaj Ghat IPS will possibility be resumed

by the end of 2001. Presently, STP is running at 6 MLD capacity. STP is expected to be made fully functional after energisation of 2 mentioned IPS.”

**(c) Non release of funds for operation and maintenace of Buxar STP**

13.35 Audit had brought out that the BRJP constructed Buxar STP in September 1995 at a cost of Rs 43.54 lakh for treatment of 2 MLD sewage, but closed it in September 1996, reportedly due to break down of submersible pumps and their motors. The BRJP did not release funds for operation and maintenance of plant. The BRJP’s negligence led to the entire sewage flowing directly to Ganga after September 1996. In their comments on the Audit observation, Ministry of Environment & Forests stated:

“Funds for making STP functional has been made available to Bihar Rajya Jal Parishad (BRJP). Action is being taken by BRJP for making STP functional in the month of March 2001.”

**(d) Non repairing of pumping stations**

13.36 Audit had brought out that the BRJP completed a 35 MLD capacity Beur STP at Patna in December 1993 for Rs. 3.61 crore. The STP treated only 10.32 MLD during 1999-2000, because of inadequate power of pumping stations. The BRJP did not carry out repairs to the pumping stations due to paucity of funds. Resultantly, a major portion of the sewage continued to be discharged directly into Ganga. In their comments on the Audit observation, Ministry of Environment & Forests stated in a written note submitted to the committee:

“Repair works of non-functional/partly functional units and defective mechanical and electrical equipment have been carried out. Presently, the Plant is running at 15 MLD capacity. It is targeted to run the Plant at its full capacity of 35 MLD in the month of March 2001. Efforts are being made to achieve the target.”

**(e) Non functioning of electric crematoria**

13.37 Audit had pointed out that two electric crematoria at Mokamah and Barauni commissioned in Bihar in November 1992, at a cost of Rs 62.54 lakh remained non-functional since January 1994 and July 1997 respectively, due to the State Government’s failure to pay electricity bills. Audit had also pointed out that Bhagalpur electric crematorium, commissioned at a cost of Rs 37.25 lakh in 1991-92 remained non-operational since October 1993 due to non-payment of electricity bills by Bhagalpur Municipal Corporation. In their comments on the Audit observation, Ministry of Environment & Forests stated:

“Electric crematoria at Mokamah and Barauni have been energised and are ready for operation. Process of handing over this EC’s to local bodies will be completed in March 2001.”

As regards Bhagalpur electric crematorium, the Ministry added:

“ EC at Bhagalpur has been reinstalled and made functional with effect from 4.12.2000.”

**(f) Closure of electric crematorium for want of repairs**

13.38 Audit had brought out that the floods damaged Munger electric crematorium in April 1999, constructed at a cost of Rs 42.10 lakh during 1992-93. It is lying closed for want of repairs. No comments have been received from Ministry of Environment & Forests in this regard.

**(g) Non functioning of electric crematorium**

13.39 Audit had pointed out that the electric crematorium at Pahlezaghat, constructed at a cost of Rs 38.27 lakh, did not function since the date of its commissioning in March 1990 due to erratic power supply, although the implementing agency transferred some equipment costing Rs 5.70 lakh in January 1996 to the Bansghat electric crematorium at Patna. The Ministry of Environment & Forests in their comments on the Audit observation stated in a note submitted to the Committee:

“All the equipment transferred to Bansghat Electric crematoria are being procured. It is expected that Electric Crematoria will be made functional by March 2001.”

13.40 The Committee enquired from the Bihar Government whether the State Government was able to ensure optimum utilization of assets created under GAP in the State. In their reply, the State Government stated:

“Yes, State Government is able to ensure optimal utilization of STPs and ECs.”

They further elaborated as under:

“(a) At S.T. P. in Southern Zone, previously Power Supply was from rural feeder. Now it has been shifted to urban feeder in the year 2001. The capacity of S.T.P has improved a lot w.e.f. December 2000 at a capacity of 16 MLD average. State Government has sanctioned & released 199 lacs for special repair of different components of S.T.P. The tender is being floated soon and work is being taken to repair different components. After repair of the components S.T.P is likely to run at its full capacity.

(b) BRJP has taken steps for regular operation of S.T.P. and I&D at Bhagalpur. All I&D's have been made functional and S.T.P is running with full capacity after getting the operation & maintenance fund from the State Government in December 2000.

(c) Operation of S.T.P. Buxar was hampered from September 1997 to 1999 due to inadequate fund in O/M head. State Government re-heated the fund for operation and maintenance in December 2000. After getting the fund S.T.P. has been made functional in July 2001. S.T.P. is running with full capacity at present.

(d) Fund has been made available by the State Government. Action has been taken for repairing of pumping Stations. Power Supply has been improved w.e.f. December 2000. The S.T.P. is running with a capacity of 20 to 25 MLD. State Government has sanctioned and released 199 lacs for special repair of different components of S.T.P. The tender is being floated soon and work is being taken to repair different components of S.T.P. After the repair of the components, S.T.P. is likely to run at its installed capacity.

(e) The Electric Crematorium at Mokamah is not functioning due to low voltage for which BSEB is in the process of providing electric energy through a new feeder line of 33 KVA. The Electric Crematorium at Barauni is running and handed over to Mukhiya Gram Paanchayat, Malhipur Barauni on 23.6.2002 for operation & maintenance as per direction of the State Government.

(f) BRJP has handed over Electrical Crematorium, Bhagalpur to Municipal Corporation, Bhagalpur. Action has been taken by the State Government for payment of Electric bill.

(g) Action is being taken by the Local Administration/State Government to repair the damages.

(h) Order for the procurement of equipment of Pahlezaghat Electrical Crematorium has been issued to M/s Killick Nixon Ltd. Mumbai and equipments have been received recently. All efforts are being made to make Electrical Crematorium functional at the earliest."

13.41 The Committee desired to know whether the State Government had the necessary expertise and infrastructure for fulfilling the responsibilities assigned to them at the time of launching of GAP. The State Government submitted a written note stating:

"BRJP had necessary expertise and desired infrastructure for fulfilling its responsibilities under GAP as technical personell of BRJP are provided by PHED Government of Bihar the department which is considered expert of this subject."

13.42 The Committee further asked as to what factors the shortcomings in the proper operationalisation of assets created under GAP in the State. The Bihar Government, in their reply, stated:

“There is no such specific shortcomings in the proper operationalisation of assets created under GAP in the State. In spite of financial crunch of the State after bifurcation, Government is releasing fund regularly for operation and maintenance of the assets created under GAP and State Government has also released fund for special repair of the components of S.T.P.”

### **Public Participation**

13.43 Audit Report had pointed out that even though the CGA had laid great emphasis on the need to maximise public participation, particularly of people living on banks of river Ganga, and of the local bodies, social organisations and Non-Government Organisation through wider publicity, the NRCD and the State Governments continued to give only routine attention to that aspect, as may be evinced from the paltry total expenditure of only Rs. 38.60 lakh during the period from 1995 to 2000 by the participating States on the activities relating to enhancing public participation.

13.44 Commenting on the Audit observation, the Ministry of Environment & Forests, in a note submitted to the Committee stated:

“BRJP has tried to promote Public Awareness by setting up Citizens Monitoring Committees. Organised several Ganga Exhibitions at Patna, Sonpur, Sultanganj and Devgarh. A tableau (Jhanki) was presented in the Gandhi Maidan Parade at Patna. Apart from this Local Bodies and NGOs have also been entrusted with the work of Operation and Maintenance of Non-core schemes.”

13.45 The Committee enquired from the State Government about different publicity programme & policies being undertaken in Bihar. The Bihar Government in their reply stated as under:

“In order to carry out work of public participation a programme of public fair at Sonpur and Sultanganj banner as well as glimpses of Ganga Action Plan to photography etc. has been organised. Boards of projects have been installed at site. The amount spent for this programme is Rs. 22.00 lakh under GAP-I scheme.”

### **Water Quality Monitoring under the GAP**

13.46 The Steering Committee decided in December 1986 to bring the water quality of river to bathing levels, which were as follows:

Dissolved Oxygen	Not less than 5 mg/l
Bio-chemical Oxygen Demand	Not more than 3 mg/l
Bacterial load (Coliform Count)	Not more than 10000 per 100 ml

13.47 Water quality monitoring is an important function of the GAP. The NRCD had discontinued the water quality monitoring of river Ganga since September 1999 reportedly due to funds constraints. Audit had pointed out that the BOD, Dissolved Oxygen and coliform levels for all 60 stations, as furnished by the NRCD for the period 1995-2000, clearly shows that the water quality of Ganga has deteriorated over the period 1993-1999. During 1999 BOD exceeded the permissible limit at 10 out of 27 sampling stations.

13.48 The Committee desired to know on what basis the parameters of water purity to be achieved was fixed. In their reply, Ministry of Environment & Forests, in a note stated:

“At the time of launching of GAP, the main objective was to improve the water quality of Ganga to acceptable standards by preventing the pollution load reaching the river. In a meeting of the Monitoring Committee held in June 1987, under the Chairmanship of Prof. M.G.K. Menon, the then Member, Planning Commission, the objective of GAP was fixed as restoring the river water quality to bathing class standard, which is as follows:

BOD	3mg/litre max
DO	5mg/litre min
Total coliform	10,000/100ml
Faecal coliform	2,500/ 100ml

This is the standard for bathing class water followed by developed/developing countries. The environmental standards followed by NRCD have been synchronized with those prescribed by CPCB under the Environmental Protection Act. Earlier NRCD adopted following standards for BOD and TSS for the use of treated sewage water on land:

BOD	50 mg per litre
TSS	50 mg per litre

NRCD has now adopted the standards prescribed by the CPCB:

BOD	100mg per litre
TSS	200mg per litre

Thus reducing the cost of sewage treatments substantially. The standards for microbial pollution in river water and treated wastewater for irrigation have been made stricter in the interest of public health. These are:



River Water – Faecal Coliform MPN 500 per 100 ml (Desirable); MPN 2500 per ml (max. permissible level)

Treated wastewater for irrigation – Faecal coliform count of MPN 1000 per 100 ml (Desirable); MPN 10,000 per 100 ml (max permissible level)."

13.49 When asked as to how the Ministry justified the discontinuance of the Water Quality monitoring, a key instrument for assessment of success of the plan on the grounds of funds constraints, the Ministry in their note stated:

"The annual average cost of water quality monitoring ranges from Rs. 75,000/- to Rs. 1,00,000/- per station. The discontinuation of water quality was done considering the fact that under the on-going GEMS/MINARS programmes of CPCB, the water quality of major river is being monitored with the help of SPCBs and the data generated there could be utilized. However, it was observed that the water quality monitoring of CPCB does not meet the objective of GAP and the submission of data is late. Hence the Water Quality Monitoring under GAP was restarted from December 2000."

13.50 On being enquired how the impact of GAP in bringing down the pollution level of the Ganga is assess in the absence of water quality monitoring. Ministry of Environment & Forests in their reply submitted a note stating:

"In the absence of water quality monitoring the impact of the scheme is assessed by evaluating the performance of the assets created under the Action Plan."

13.51 On being asked what additional measures have been taken by the Ministry to improve the water quality monitoring, Ministry of Environment & Forests stated in a note:

"...more stations were added to the programme under GAP-II. On the recommendations of one of the Expert Committees the monitoring was extended to three times a month at three widths. After three years a review of results revealed that there was no variation in the width wide data. Hence the monitoring was revised to ½ width for base line and ½-1/4 width for impact stations."

13.52 When the Committee enquired on the water quality monitoring in Bihar, the State Government in a note submitted to the Committee stated:

"We do not conduct water quality monitoring at present."

13.53 Asked further as to which agency is responsible for monitoring water quality in the State, Bihar Government stated:

“State Pollution Control Board and Patna Science College lab are responsible for monitoring water quality of the river.”

They further added:

“Bihar State Pollution Control Board is a body corporate, constituted under the Water (Prevention and Control of Pollution) Act, 1974. It ensures the implementation of the provisions of the Water Act, 1974.

NRCD, Ministry of Environment & Forests, Government of India has entrusted the Department of Zoology, Patna University, Patna for monitoring the Ganga Water Quality under the Ganga Action Plan.”

### **Control of bacterial load**

13.54 Audit report had pointed out that a committee of experts constituted by the NRCD under Chairman, CPCB, reviewed the standards and technology options and recommended in September 1999 that waste stabilisation pond technology was the only cost effective technology capable of making the levels of microbial pollution in treated water safe for bathing. The committee also recommended that all conventional technologies needed to be supplemented by maturation ponds for control of bacterial load. The NRCD, however, did not take any steps for inclusion of maturation ponds and the objective of reducing the bacterial load to the desired levels remained to be achieved.

13.55 On being asked by the Committee as to why this crucial parameter was ignored while selecting the design of STPs under GAP, the Ministry of Environment & Forests stated in a note:

“The wastewater standards at the time of framing of GAP-I were restricted to meeting BOD and TSS. Therefore, the design of STPs was done accordingly. However, STPs constructed under GAP-I bring about an incidental reduction in the Bacterial Load.”

13.56 When asked reasons for not implementing the recommendations of the Expert Committee, the Ministry in their reply stated:

“Expert Committee came in September 1999 which was reviewed and finalized in June 2000. Its recommendations have been accepted by the Ministry and communicated to States for implementation.”

13.57 The Committee also asked about the advanced technologies for tackling bacterial load like ultra-violet radiation, gama radiation, chlorination, ozonisation. Ministry of Environment & Forests in their reply stated:

“The Ministry has conducted R&D studies in respect of ultra-violet radiation, gama radiation, chlorination and zoo plankton. These were not found techno-economically feasible in Indian context.”

13.58 On being asked about the harmful effects of usage of such water having bacterial load beyond permissible limits, Ministry of Environment & Forests in their reply stated:

“The microbial pollution of water spreads diseases and affects the human activities. These bacterial cause infection of intestines, typhoid, para-typhoid fevers, dysentery and cholera.”

### **Industrial pollution**

13.59 Audit had stated that the CGA made CPCB and SPCBs directly responsible to ensure compliance to environmental laws by grossly polluting industries (CPCB, identified a grossly polluting industry as one which handled hazardous substances or industries discharging effluent having BOD load of 100 kg per day or more). The GPD was to monitor progress on installation of ETPs (Effluent Treatment Plants) by grossly polluting industries. As per directives of the NRCA, CPCB submitted a report to the NRCD regarding installation of ETPs by the grossly polluting units. Based on this, the NRCA issued directives in July 1997 to all grossly polluting industries discharging their effluents into the river to install the requisite ETPs within 3 months, failing which closure notices should be issued.

13.60 Audit had brought out that out of 35 grossly polluting industries in Bihar, the ETPs installed in 3 industries, viz. Bokaro Thermal Power Stations ‘A’ and ‘B’ and Chandrapura Thermal Power Station discharged 637.95 MLD effluents in Damodar river directly.

13.61 In view of the non-functioning of three ETPs in the State, the Committee enquired from Bihar Government what steps the State had taken against the grossly polluting industrial units who failed to comply with NRCA’s directives in this regard. Bihar Government, in their reply, stated:

“There are six grossly polluting industries on the bank of River Ganga in Bihar stretch-

- (i) Indian Oil Corporation Ltd., Barauni;
- (ii) Bata India Ltd. Mokama Ghat;
- (iii) Mc’Dowell and Company Ltd., Hathidah;
- (iv) Hindustan Fertilizer Corporation Ltd., Barauni;
- (v) Barauni Thermal Power Station, Begusarai; and
- (vi) Kahalgaon Super Thermal Power Station, NTPC, Kahalgaon.

Of these, Hindustan Fertilizer Corporation Ltd, Barauni has been closed for over four years and is not in operation. All other industrial units have their well designed Effluent Treatment Plants. Treated effluents from all these units are collected and monitored by the Bihar State Pollution Control Board regularly. Further, regular self monitoring by industries is also ensured.”

13.62 On being asked what solutions Bihar Government had evolved for ensuring that no industrial unit discharges untreated water into the river, the State Government in their reply stated:

“Does not arise.”

### **Financial management**

13.63 The Central and the participating State Governments released a total sum of Rs 655.23 crore to the implementing agencies during the period covered by audit, i.e. from 1993 to 2000. As of March 2000, the States reported utilisation of Rs 587.63 crore, which consisted of Rs 118.60 crore on the GAP-I and Rs 469.03 crore on the GAP-II. Audit had pointed out the following irregularities in Bihar:

- (a) **Diversion/misuse of funds:** The implementing agencies in Bihar diverted Rs. 24 lakh on purchase of computer, Xerox machine, vehicles and construction of circle office etc., which were not covered under the programme.
- (b) **Parking of funds:** The Managing Director, BRJP deposited the GAP funds during 1995-96 to 1997-98 totalling Rs 1.17 crore in their general operating account, which unauthorisedly cushioned ways and means position of BRJP, to the detriment of application of needed funds on the GAP schemes.
- (c) **Loss of interests:** The implementing agencies in Bihar incurred loss of interest of Rs 156.36 lakh by not investing the unspent balances in interest bearing accounts.
- (d) Besides, the implementing agencies in Bihar did not report to the NRCD the interest of Rs 25 lakh earned on the GAP funds despite pointing out in the previous Audit Report.
- (e) **Unutilised balances:** Unutilised balance of Rs. 4.31 crore was lying with the implementing agencies in Bihar as on March 2000. This was due to slow progress of works and release of funds by the Government of India/the State Government, without proper assessment of requirements.

13.64 The Committee enquired from Bihar Government as to what mechanism they have for ensuring for proper utilization of funds released to the implementing agencies. In their reply Bihar Government stated:

“The State Government has a suitable mechanism to ensure effective utilization of funds released to the agencies. Monthly Physical and Financial progress is sent to State Government by agency. In addition utilization Certificate is also sent to the State Government, which is reviewed in the State level Steering Committee meeting. There does not exist any such financial irregularity in the expenses incurred by implementing agency so question of failure of mechanism does not arise.”

13.65 During evidence, replying to the Committee’s query in this regard, the representative of the Ministry of Environment & Forests stated:

“This is the personal ledger account.”

Another representative added:

“It has been recouped.”

13.66 When the Committee sought further details, another representative of the Ministry added:

“The funds that were placed there seem to be placed in the personal ledger accounts or they must have been used for some other immediate purposes for which they were not released. So, that was a temporary diversion of funds. Now the IFD does not look into it. That comes in auditing of that particular agency. But unless utilization certificates are obtained even if money has been utilized, further tranche is not released.”

13.67 The Committee further asked how the State Government was ensuring O&M funds for assets created under GAP. In their reply, Bihar Government stated:

“Even after financial crunch in the State the State Government has allotted funds for O&M though not adequately and timely. In the year 2002-2003 State Government released 270 crores for O&M against the estimated O/M cost of Rs. 5.40 crores.”

### **Monitoring Mechanism**

13.68 Audit had pointed out that the monitoring of the GAP at the Central level left much to be desired. Audit found that while the NRCD did compile some data from the reports it received on physical and financial achievements from the States and the implementing agencies, there was little recorded evidence of follow up action on the shortcomings and irregularities mentioned in the reports.

The NRCD could not show to audit any recorded minutes of the Review meetings it might have held. At the state level, the State Governments were to constitute CMCs (Citizen Monitoring Committees) for each town, as per directives of the NRCD issued in March 1995, to monitor the progress of execution and timely completion of schemes and their operation and maintenance, and to facilitate public awareness and participation. The CMCs were to meet once in a month. Audit noticed that Bihar governments did not constitute CMCs in any of the towns.

13.69 The Committee enquired from the Bihar Government in what way the State Government was co-operating with the NRCD in the co-ordination and monitoring of GAP. In their reply, the Bihar Government stated in a written note submitted to the Committee:

“Under the direction of Central Ganga Authority, a Steering Committee at State level under the Chairmanship of Chief Secretary of the State has been formed. The meeting of the Steering Committee is held at intervals to sort out the problems in the implementation of GAP Schemes and the proceedings are sent to NRCD also. A meeting of Central Steering Committee is held at intervals. Nodal Department/Agency of the State Government takes part in the above meeting (Urban Development Department) under the direction of the Nodal Department of the State, executing Agency also takes part in meeting with NRCD officials at intervals for speedy disposal of Schemes.”

13.70 Asked further how often the different Committees and bodies responsible for monitoring of GAP at State level were required to meet, the Bihar Government replied:

“As per GAP provision, there is one Committee formed viz. (i) State Steering Committee. 21 nos. of meetings of State Steering Committee has been held so far. In addition quarterly meeting by the Nodal Department i.e. Urban Development Department with implementing agencies are held to ensure proper coordination for implementation and monitoring of the GAP schemes.”

13.71 On being asked by the Committee on field visits and review meetings undertaken by the NRCD with the implementing agencies, Bihar Government in a note submitted to the Committee stated:

“There are 29 field visits & 21 review meetings undertaken by NRCD with implementing agency. The main shortcomings identified are as follows:

- (i) Under capacity running of STP.
- (ii) Completing of two numbers of incomplete STP
- (iii) Proper operation & maintenance problem due to paucity of fund.

- (iv) Submission of DPRs under GAP-II.
- (v) Execution of non-core GAP-II scheme.”

13.72 With regard to the State Government’s plan to fulfill these shortcomings, the Bihar Government stated:

“The state agency has ensured the following steps para wise above:-

- (i) State Government released 199 lacs for special repairs of the component of STP to achieve full capacity of running of STP.
- (ii) State Government has sanctioned revised estimate of two incomplete schemes in the year 2002-03. Efforts are being made to complete the same by August 2004.
- (iii) State Government has released 270 lacs for operation & maintenance of STP in the year 2002-03.
- (iv) All DPR’s except one (Beur Secondary Treatment Plant, Patna) have been sent to NRCD.
- (v) Out of 18 nos of schemes sanctioned under GAP-II, 16 nos. of schemes have been completed. One no now in Jharkhand State.”

#### **XIV. West Bengal**

##### **Operational profile**

14.1 As per Audit, the following tables give operational status of core and non-core schemes along with details of sewage treatment under the GAP I and II in West Bengal as of March 2000:

##### **I: Status of Core Schemes**

State	Phase	Interception and Diversion				Sewage Treatment Plants			
		Schemes		Sewer Lines (in kms)		Schemes		Sewage Treatment (in MLD)	
		T	A	T	A	T	A	T	A
West Bengal	I	31	31	173.14	173.14	15	14	371.60	341.60
	II	4	0	NA	NA	0	0	373.63	0.00

**T: Target; A - Achievement**

## II: Status of Non-Core Schemes

State	Phase	Low Cost Sanitation		Crematoria		River front Development	
		T	A	T	A	T	A
West Bengal	I	22	22	17	17	24	24
	II	0	0	0	0	0	0

**T: Target; A - Achievement**

**N.B: The figures of reported achievement are subject to test audit comments on the core and non-core schemes in the report.**

14.2 It would thus be seen from the above table that the achievements of the State in treatment of sewage under the GAP, is 341.60MLD against a target of 750.23MLD.

14.3 Elaborating on the achievements of the State in implementing GAP during evidence, the representative of West Bengal stated:

“One STP was set up in 2002. As against the target of 750.23 MLD, we had created 371.68 MLD capacity, and remaining is supposed to be taken up in GAP-II.”

14.4 On being enquired by the Committee about the reasons for achieving only about half of the target, the representative stated during evidence:

“In the first programme, in GAP-I, we had taken up 31 schemes and we had completed them all. We have completed 15 sewage treatment plants. At the time of Audit, one STP, that is, South Suburban (East) was pending and that has also been completed now.”

14.5 The Committee further asked about the GAP-II. The representative of the State government in his reply stated:

“In GAP-II, the position is different.”

He further stated:

“In GAP-II we had identified 191 schemes. So far NRCD has sanctioned 93 schemes and we have sent 27 schemes to NRCD but that have not yet been sanctioned and 62 schemes are yet to be formulated and sent to NRCD.”

The witness also clarified:

” Out of these 62 schemes 50 number of schemes relate to public participation for which the Ministry of Environment & Forests is supposed to give us guidelines. We are awaiting the guidelines.”



14.6 When asked whether the State government has been getting matching funds from the Central government for the completion of their projects, the representative replied during evidence:

“Under GAP-II, we have got 93 schemes for which we were supposed to get Rs. 120 crore. We have so far, got Rs. 32 crore in the first instalment. We have received Rs. 15 crore recently. So far as this amount of Rs. 32 crore is concerned, we have already sent the utilization certificate for Rs. 23.69 crore. I have got Rs. 15 crore recently. So, we will take up this work, and the work is going on...”

14.7 The Committee then asked whether the State government was satisfied with this progress. The witness stated in his reply:

“I really cannot say that we are totally satisfied with the progress. We have some problem about land acquisition. We have identified the problem areas. Now, we will take it up with the appropriate department in the government to ease out...”

### **Selection of towns**

14.8 According to Audit report, 42 towns were selected in West Bengal under GAP as follows:

River	No of towns in selected in West Bengal
GAP-I	
Ganga	15
GAP-II	
Ganga	23
Damodar	4
<b>Total</b>	<b>42</b>

*Note: Of these, 15 towns were taken up on directives from the Supreme Court.*

14.9 Audit had reported that the GAP-I had sought to address the issue of pollution abatement in class I towns along Ganga. For the GAP-II, the NRCD did not fix any clear parameters in terms of sewage characteristics or downstream water quality for selection of towns; and had left the selection to the States. The EFC (Expenditure Finance Committee) recommended, however, in its first meeting held in August 1996, that the States might not include towns with BOD (Bio-chemical Oxygen Demand) less than 3 mg/l (Milligram Per Litre) downstream of the river. Towns approved by the NRCD included 8 towns in West Bengal where BOD levels were below 3 mg/l. On the other hand, Uluberia with a BOD of 43.07 mg/l of wastewater remained excluded, even though this exclusion violated the State Government's adapted parameters of 30 mg/l BOD of wastewater.

### **Estimates of sewage generation**

14.10 Audit had revealed that under the GAP-I, the NRCD's sewage estimates were based on population and water supply rate, with the sewage generation taken as 80 *per cent* of water supplied. The NRCD found that criterion to be flawed which led to over estimation of sewage in several cases; and, fixed the criteria of actual flow of drains at the outfalls to estimate the generation of sewage in the towns in the GAP-II. The NRCD also had no mechanism to evaluate and check the estimations of sewage by the States.

### **Delay in approval of DPRs**

14.11 According to Audit, against 154 expected DPRs, NRCD had received 67 DPRs from West Bengal Government. Of these 10 were sanctioned, 30 were returned for revision and 27 were pending as of March 2000.

### **Execution of schemes**

14.12 Audit had noticed several cases of mismatch in planning and execution of schemes and of infructuous and avoidable expenditure in West Bengal, as narrated in the following paragraphs:

#### **Core schemes**

##### **(i) Interception & Diversion schemes**

14.13 Audit had brought out that the NRCD sanctioned 4 schemes of interception & diversion under the GAP-II. The implementing agencies could complete none till March 2000, though stipulated dates for 3 schemes were already over. Calcutta Metropolitan Development Authority (CMDA), now known as Kolkata Metropolitan Development Authority, did not furnish the details of targeted and laid sewer lines under the GAP-II. Test check in Audit revealed the following cases of mismanagement of works.

##### **(a) Loss due to delay in construction of pumping stations**

14.14 As per Audit, the CMDA entrusted the work of construction of 3 pumping stations at Cossipore-Chitpur, West Bengal to a contractor in December 1988, without making available the land. The contractor left the work in December 1992 after completing pumping station II and supplying the equipment worth Rs 68.23 lakh. The CMDA took over the possession of the equipment only in February 1997, by which time some of the equipment was reportedly lost. The CMDA had to purchase replacements for Rs 12.75 lakh. It arranged alternative land for pumping stations I & III and invited tenders in January 1995. The CMDA could not finalise the tenders within the validity period of 4 months. The lowest tenderer did not agree to extend the validity period of his offer. The CMDA had to invite fresh tenders in December 1995 and had to award the work in July 1996 at a cost, which was higher than the earlier offer by Rs 41.85 lakh. There was also a delay of 39 months in completion of the work (March 1999), despite the

assurance of the Ministry in their ATN (Action taken Note) to the previous Audit Report to complete the work by December 1995.

14.15 In their comments on the Audit observation, the Ministry of Environment & Forests, in a note stated:

“For construction of 3 pumping stations at Cossipore-Chipur, CMDA could not finalise the tenders within initially validity period. After obtaining the legal opinion the matter was placed before the Works-cum Tender Committee (WTC) in its 115<sup>th</sup> Meeting. As advised by WTC the tenders were requested for extension of validity of the offers they had earlier sought. As the lowest tenders declined to respond positively and quoted revised prices of Rs.52.27 lakh and Rs.63.79 lakhs for PS-I and PS-III respectively, which evidently was substantially higher than the original rates quoted by them. Hence there was no alternate course open than to invite fresh tenders thereby leading to escalation of expenditure in compelling circumstances.

The avoidable expenditure was the consequence of the litigation over settlement of disputed claims of the contractor. The possession of equipments could be taken over only after obtaining the leave of Honourable Court. The matter is subjudice; a claim will be instituted, praying for orders for realization of additional expenditure incurred in making the plant functional.

The work of PS II was also a part of turnkey tender of the contractor. It is the responsibility of the turnkey tender to make the well water tight before the installation of the equipments. However, the balance works have been executed under the directions of the Hon'ble Court under the supervision of the receiver appointed by the Court. As such, there was no other alternative to CMDA but to abide by the directions of the Hon'ble Court. The expenditure incurred on this account will also be claimed in due course at the time of hearing.”

**(b) Avoidable expenditure due to failure to undertake soil investigation**

14.16 Audit had brought out that the PHED (Public Health Engineering Directorate) entrusted the work of laying of sewer line at Nabadwip in 1989, without undertaking soil investigations, even though the sub soil of Nabadwip town was sandy in nature. It commissioned the scheme in January 1994. Soon after, in June 1994, it noticed defects in sewer lines. The PHED had to repair the damaged pipeline thrice from July 1994 to October 1996 at a cost of Rs 11.10 lakh. It also had to abandon 385 metre pipe line costing Rs 6.10 lakh laid in the sand boiling zone in December 1996. The PHED incurred avoidable expenditure of Rs 17.20 lakh, because it did not do the basic work of soil investigation

beforehand. In their comments on the Audit observation, Ministry of Environment & Forests stated:

“As per the Govt. of West Bengal, it is a fact that no soil inspection was done prior to taking up the work of sewer laying at Nawadwip at a depth of 6 m below ground level (GL). With a view to minimizing the operation and maintenance cost burden, emphasis was always on minimizing the number of pumping stations and laying gravity sewers as deep as possible. As a result, the State Govt. took a conscious decision to go beyond 6 m deep for laying gravity sewers and in the process avoiding pumping stations. Detailed soil investigations upto a depth of 10 mts may even cause expenditure more than such eventualities as has happened in Nabadwip.”

14.17 During evidence, replying to the Committee’s enquiry, the representative of the Government of West Bengal Stated:

“So far as Nabadweep is concerned – the hon. Member has raised a point about Nabadweep – I am not a technical person, but let me explain what I have understood of it. When we lay a sewerage line, in Bengal, at least, it is not a practice to have a detailed soil testing for the entire stretch. Normally, you have soil testing at one or two places and see how the layer of the land lies. This phenomenon of sand boiling, often I understand, is a very localized phenomenon and we do not encounter it often either. In our case, we encounter this in Nabadweep and also in two or three other places. So, even if we had done soil testing, the presence of sand boiling would be revealed or not was only a matter of chance. However, as a matter of abundant caution, in all the GAP-2 projects we have asked for soil testing before laying of a sewerage line. I may state here that the repair of the damaged pipelines in Nabadweep has since been completed and it is operational now.”

He also stated:

“About, Nabadweep, may I just humbly point out that it was regarding the sewerage line that I had mentioned that comment about soil testing. So far as STPs and pump houses are concerned, soil testing is invariably done. We do not do it without any soil testing. Since sewerage lines are spread over large areas, kilometers after kilometers soil testing was not done in any other programme also. This was the small point that I was making.”

**(c) Avoidable expenditure due to approval of defective design**

14.18 Audit had stated that the CMW&SA (Calcutta Metropolitan Water and Sanitation Authority) awarded the work of construction of lifting station at Howrah in July 1990 at Rs 51.93 lakh, for completion by July 1991, and approved a

design without conducting soil test, not suitable to sand boiling nature of soil. It made the site available to the contractor only in September 1992. It found huge leakages in October 1994, which the contractor failed to rectify. The CMW&SA terminated the contract in October 1995, after paying Rs. 25.85 lakh. Another contractor completed the balance work in March 1997 at Rs 85.04 lakh, including Rs. 38.50 lakh for rectification of defects and Rs. 21.27 lakh towards cost escalation. The CMW&SA thus incurred avoidable expenditure of Rs 59.77 lakh because it had earlier approved defective design. The Ministry of Environment & Forests in their comments on the Audit observation stated in a note submitted to the Committee as under:

"Tender was invited during 1988-89, work order was issued on 17.9.1990 but the work could not be commenced before August 1992 due to land constraints which originally belong to Calcutta Port Trust a different organization from CMW&SA.

As regards to design part it may be mentioned that there was nothing wrong of its approval and it was done very rightly considering the concept of sub-soil water pressure to counteract the standard design procedure as done for other completed more than 29 lifting stations and main pumping stations at different locations.

In the instant case the working site adjacent to river Ganga behaved very uncommonly. In spite of continuous pumping with the requisite Nos. of pumps the water level in the well could not be lowered below Low tide level and remained within the High tide level and Low tide level all the times. The contractor failed to bring the site under control and stopped the work. Considering the time over-run, the CMW&SA terminated the contract and went for fresh tender for the balance work with due formalities. Meanwhile the earlier Tenderer prayed for an injunction before the Hon'ble Civil Court to restrain the CMW&SA from taking any follow up actions on the left out works. The CSW&SA watched it very carefully and hastily issued work order to the fresh Tenderer (lowest) prior to awarding of injunction order and in order to avoid further delay in completion of the work. The CSW&SA also moved with the competent Authority to file money suit against the earlier contractor.

All possible methodologies were applied to counter act the water pressure within the well, but all efforts went into vain. Subsequently the Department thought best to undertake the opinions from the technical experts in order to materialize the project and to avoid 8 MLD of waste water going to Ganga untreated vis-à-vis to utilize the sewer lines already laid to and from this lifting stations and expenditures incurred thereon.

As advised by the technical experts, the under water concerning with the help of divers had been done successfully and the project could be

completed satisfactorily. It is fact that additional expenditure had been incurred to complete the project successfully due to unforeseen and unpredictable site condition happened as a course of natural phenomenon and was clearly beyond anybody's control.

Hence the expenditure of Rs.38.50 lakh + Rs.21.27 lakh as pointed out by Audit can neither be considered as infructuous nor as extra."

**(d) Defective laying of sewer lines**

14.19 Audit had brought out that the PHED commissioned interception & diversion and STP schemes at Behrampore for treatment of 4 MLD sewage at the total cost of Rs 2.32 crore. The sewer line collapsed in different stretches in 1996 as the soil was sand boiling, and the STP remained non-functional. The PHED could not restore the damaged sewer line till March 2000 due to encroachment on its alignment. Clearly, failure to do necessary spadework such as proper soil investigation has resulted in wasteful expenditure of Rs 2.32 crore. In another case, the CMDA commissioned an interception & diversion scheme at Hooghly-Chinsurah at a cost of Rs 4.91 crore in June 1994. It noticed severe depression of road surfaces along the alignment of sewer lines in June 1997, due to displacement of the sewer line from the alignment. The defects occurred, as the CMDA did not cast bed concrete before laying the sewer lines. Thus, technical flaws in execution of work, led to failure of the sewer lines. The CMDA noticed similar road subsidence during 1998-99 along different alignments of sewer lines in Bhatpara. Though CMDA took up repairing of damaged sewer lines as well as surface roads, the work remained incomplete as of March 2000. In their comments on the Audit observation, the Ministry of Environment & Forests, stated in a note as under:

"Substandard quality of construction had been carried out while laying sewer lines in the implementation of Interception and Diversion Schemes in some of the towns of West Bengal under GAP-I. The CMDA, which implemented the se works, had constituted an enquiry committee in March 1999 for such sub-standard quality of execution of works in towns of Bhatpara and Hooghly – Chinsura Municipal Areas. The report was received in MOEF in April 2000. The report has confirmed the allegation and concluded that the lapses were on account of negligence and failure on the part of supervisory staff engaged in execution of these works. The Central Government has asked the State Govt. to get the report of Enquiry Committee examined at an appropriate level in the State Government and order for necessary action against those who were responsible for these lapses. The State Government has also been asked to issue instructions to all implementing agencies to ensure that such lapses do not occur in future in the second phase of GAP.

However, the implementing agency has taken up further action with the local bodies and district administration to solve the problem in rectification

due to unauthorized construction of hutments on both sides of the drain. The Government of West Bengal has informed that the problem can be overcome and restoration of the damaged Sewer section can be completed in the next dry season between February to June 2001 to recommission the scheme.”

14.20 When the Committee asked about the responsibility fixed in this regard, the representative of West Bengal government during evidence stated:

“So far as the Hugli-Chinsura part is concerned, as you know, an inquiry committee was set up and the Report was sent to the Government of India. The Government of India has directed us that since negligence has been brought out in that inquiry report, we should fix up the responsibility. We did set up a body to fix up the responsibility but unfortunately the members of that committee which was to fix up responsibility, retired before they could submit the report. We have asked for another body and asked them that this should be done expeditiously. I will admit frankly before you that this was not pursued properly.”

**(ii) Sewage Treatment Plants**

14.21 Audit had pointed out that to tackle 750.23 MLD of sewage in West Bengal, the NRCD sanctioned 15 STPs of 371.60 MLD under the GAP-I. The implementing agency completed 14 STPs of 341.60 MLD by March 2000. The NRCD did not sanction any STP under the GAP-II as the State Government did not confirm the availability of land. Test check revealed the following instances of mismanagement:

**(a) Non-completion of Sewage Treatment Plant**

14.22 Audit had pointed out that the CMDA awarded the construction of 30 MLD STP at South Suburban East in Calcutta in January 1994 for completion by June 1994. West Bengal Government did not however, provide total required land reportedly due to resistance from the owners. The CMDA had to change the alignment of approach road and embankment of the ponds, involving an extra liability of Rs 12.94 lakh. Further, it terminated the contract in August 1996 and entrusted the balance work of Rs. 29.31 lakh at an escalated cost of Rs 39.99 lakh in February 1997, which resulted in total extra expenditure of Rs 23.62 lakh, besides delay. The work remained incomplete till March 2000. There was also a mismatch in the execution of schemes as the CMDA had already completed the 2 interception & diversion schemes for Tollygunge-Jadavpur area in March 1994 at a cost of Rs 6.45 crore and that of South Suburban East in March 1997 at a cost of Rs. 9.06 crore. Due to non-completion of the STP, the 30 MLD sewage, though diverted, remained to be treated. The Ministry of Environment & Forests in their comments on the Audit observation stated:

“The original proposal for STP at South Sub-urban East was of conventional type (Mechanical). This type of STP is not only costly but also the maintenance cost including the energy cost is enormous. Accordingly, the decision was taken to go for ponding system where the running cost was minimal. The acquisition of large portion of land is necessary for 30 MLD STP. The proceeding of land acquisition is a lengthy process, which also includes rehabilitation of the effective families. While 74.13 per cent works had been completed, connections of effluent channel to the Nikashi canal could not be completed due to non-availability of small portion of land, which is still under process of acquisition. Moreover there is a dispute of title of land where the effluent channel is to be constructed. The deposition of land cost by the Collector to the Court has further created problem for disbursement of fund to the reluctant owners at present. The STP being on a low-lying area, there is always accumulation of waste and storm water for the major part of the year. Thus hardly 4-5 months are available for execution of problems. It is expected that by the next year STP will be in operation.”

**(b) Construction of STPs not related to GAP**

14.23 Audit had pointed out that the CMDA constructed Matkal and Bangur STPs at a total cost of Rs 26. 46 crore in March 1994 and December 1998 respectively. These STPs have capacity to treat 85 MLD sewage. The treated sewage flows in to Bajgola Khal, which is an arterial drainage channel carrying the bulk of raw sewage and spoils of Calcutta and adjoining Municipalities. It flows eastwards, joins river Bidyadhari which flows into the Bay of Bengal through Kulti Gang. The river Ganga lies to the west of STPs. Bagjola Khal, into which the treated sewage flows, does not join River Ganga. The construction of 2 cited STPs from the GAP funds was, therefore, not correct, as it did not control the pollution of Ganga. The Ministry of Environment & Forests in their reply on the Audit observation commented as under:

“By setting up STPs of 45 MLD capacity for Cossipur-Chitpur and Baranagar- Kamarhati respectively, the pollution load of Bagjola cannal is relieved to the extent of 85 MLD which the urbanization developed in and around the Bagjola basin is less exposed. In the near future when House connections are to be done, the residents of the municipalities residing on the Bagjola will not be allowed to flow the wastewater of different basin to transfer to Bagjola basin to increase the environmental hazards. Both sides of upper Bagjola is densely populated. Calcutta sewage canal runs through the open land and wetland having very little residential population. The two cases are not identical. As such, fund was properly utilized for the purpose for which it was allocated and no fund was diverted as pointed out by the audit. “



14.24 On being enquired by the Committee, the representative of West Bengal stated during evidence;

“This Bangur and Matkal scheme caters to Cossipore-Chitpur, Baranagar and Kamarhati areas. You are aware that they are in a very congested locality. Earlier, all the wastewater and effluents were going into the Ganga. Therefore, the scheme was to have an STP constructed to take care of the wastewater as well as sewage water of this area. We could not find any suitable land near the Ganga. The hon. Members who were from West Bengal would know that it is a very congested area. We ultimately selected a plot for setting up the STP, which is slightly away from the Ganga. Now, the option before us was that the treated effluents from the STP could have been taken to the Ganga and discharged there or taken to a nearby canal, that is, to discharge it in Bagjola Canal. Since it would have been more costlier to divert it to the Ganga, we diverted it to the Bagjola Canal through Udaipur Canal. Effectively, what we have done is to prevent pollution of the Ganga. That is what I believe the Ganga Action Plan was all about.”

14.25 When the Committee pointed out that unless the Bagjola Khal itself was drained, widened and some treatment was offered to that itself the whole object of GAP-I to carry sewage would be a futile exercise, the representative during evidence stated:

“So far as the point regarding Bagjola Khal treatment is concerned, about two to three years back we had taken a loan from HUDCO to re-excavate Bagjola canal. That work is going on and it has been completed to some extent. That was precisely for improving the drainage of the areas. So, I believe that a part of the work has already been completed and the drainage has also improved to a certain extent. But this can be verified.”

14.26 Asked whether permission was taken from the authorities of the Ganga Action Plan, the witness added:

“As you are aware, all the schemes which are funded under the Ganga Action Plan are sent to the Ministry for sanction because these are hundred per cent Central Government funded projects. They give the sanction to each and every project.”

14.27 On being asked to state the details of correspondences with the Ministry in this regard, the representative of West Bengal, during evidence stated;

“....., we will submit to the Committee the whole series of correspondence with the NRCD regarding the Matkal things. He has raised a very fundamental point that whether we have taken the sanction

of the NRCD after giving them all the details. So we will try to send you all the papers relating to this. Then, we can take a decision on this.”

**-No reply in this regard was received by the Committee from the State Government till January 2004.**

**(c) Delay in awarding the work of construction of 40 MLD STP**

14.28 Audit para had stated that the CMDA awarded the work of construction of 40 MLD STP at Baranagar, Kamarhati West Bengal in November 1990 after delay of 10 months. The tenders received in September 1989 were valid for 4 months. The price escalation was payable to the contractor from the first day of the second year from the date of submission of price bid. The CMDA paid escalation of Rs 38.10 lakh, of which Rs 8.47 lakh accrued on account of the delay of 10 months in award of the work. West Bengal Government stated, in August 1999, that it approached the NRCD in March 1990 for expenditure sanction but the NRCD accorded the sanction only in October 1990 after which the CMDA awarded the work. The reply is not tenable as the State Government took action after the expiry of validity period in January 1990. The NRCD also further delayed the matter. Thus, both the CMDA and the NRCD were responsible for the delay.

14.29 In their comments on the Audit observation, Ministry of Environment & Forests stated:

“An administrative approval was accorded for an amount of Rs.767 lakhs on 24.06.87. The CMDA was directed to submit firmed up costs for obtaining financial sanction. Administrative approval was subsequently revised to Rs.1259.70 lakhs on 15/20 February 1990, which included financial sanction for Rs.282.28 lakhs for the supply, laying and joining of rising main and pumping stations land. The balance financial sanction was kept pending for C/o Main Pumping Station and STP for firmed cost to come up on the basis of negotiations of tendered cost which were assessed to be high. After negotiations a firmed up cost for all the three components was conveyed by CMDA and was scrutinized in NRCD and AA&ES was accorded on 04/10/94 for an amount of Rs.1153.61 lakhs. As a result of scrutinizing the cost estimates on the basis of tenders. AA&ES has been revised from Rs.232.93 lakhs to Rs.217.13 lakhs for C/o MPS and from Rs.669.08 lakhs to 585.75 lakhs for the C/o STP. The scrutiny in NRCD has resulted a saving of Rs.111.18 lakhs. The saving in the cost of STP is much more than the amount paid to contractor on the part of price escalation for this 10 months (time required for scrutinizing and negotiating the tenders in CMDA and subsequently for accordance of AA&ES in NRCD is necessary and justified) delay i.e. Rs.8.47 lakhs.

On receipt of the revised price bids from the tenders on 8.9.89 Works-cum-tender Committee (WTC) for GAP was moved for a decision on the

tenders on 20.10.89. WTC clearance was obtained on 14.2.90. The NRCD was moved thereafter in March 1990, for issue of AA&ES of the project but for which neither any award of contract nor incurring any expenditure was possible. AA&ES was accorded by NRCD on 4.10.90 on receipt of which only LOI could be issued on 5.11.1990. All these facts speak of the delay which could not be avoided.”

**(d) Acquisition of excess land**

14.30 As per Audit report, the CMDA acquired 112.69 acres of land valued at Rs 45 lakh in June 1990 for construction of the STP and the MPS at Garden Reach, Calcutta from the GAP funds. It utilized only 50.997 acres in construction work. The surplus land valued at Rs 24.64 lakh remained unutilised with the CMDA. In their comments on the Audit observation, Ministry of Environment & Forests stated in a note submitted to the Committee as under:

“Of the total land of 112.69 acres transferred to GAP Project the area of land utilized for the STP and MPS at Garden Reach including that required for maintenance of the force-main and effluent channel is 50.997 acres. The balance land has been kept reserved for accommodating the schemes of GAP Phase-II. There will be substantial savings in the cost of schemes to be taken up in future.”

14.31 During evidence, when the Committee enquired about the matter, the representative of West Bengal Government stated:

“So far as the Garden Reach land is concerned, it is a fact that we had acquired land for the STP that we had created there. We had an impression that we would require the land for the future use in GAP-II. The GAP-II project could not use much of that land. A very small land may be required.

But there is a new project coming up with the Kolkata Corporation aided by the ADB. I understand that they will need much of this land. So, it will not remain idle.”

In Kolkata, normally whenever we do a project, we try to acquire land slightly in excess because it is very difficult to get land there in future after we construct something. So, I would request the Committee to consider this point sympathetically.”

14.32 The Committee drew the attention of the officials on the need to address the problem of soil erosion which has threatening various schemes being implemented in the State. In his reply the representative of the West Bengal government, during evidence stated:

“Actually erosion is a problem that has been troubling the West Bengal Government for a very long time. Sir, you are aware in Malda and Murshidabad districts.....”

14.33 On being asked whether they had at any point of time, brought it to the notice of the Central Government, Ministry of Environment and Forest, the representative added:

“There are three pronounced areas where erosion is occurring. One is in the Malda district. Another is in Murshidabad district and the third is in the downstream areas of Hooghly district. There are cases of erosion in other areas also like Howrah and Uluberia. There are cases of erosion in some other districts also. We have taken it up with the Planning Commission and the Ministry of Water Resources also. They had appointed a high powered Committee. The Committee had recommended a scheme of over Rs.900 crore. I do not remember the exact figure now. This was supposed to be funded by a Central sponsored scheme. Then the funds were not coming as promised. We really could not proceed with the work in a systematic manner. In upper reaches, Malda and Murshidabad, problem has been complicated further by the erratic nature of the flow of Padma. It is a mighty river. It is a very-very complicated problem.”

### **Non-Core Schemes**

#### **(i) Electric Crematoria**

##### **(a) Non following of population and death rate criteria**

14.34 Audit had brought out that the MED (Municipal Engineering Directorate) in West Bengal did not uniformly follow population and death rate criteria while constructing ECs (Electric Crematoria). It constructed 1 electric crematorium in each of the towns of Bhatpara, Nabadwip, Hooghly-Chinsurah and Barrackpore with a population of 2.65 lakh, 1.30 lakh, 1.29 lakh and 1.16 lakh respectively; and, 2 at Behrampore, which had a population of only 1.02 lakh. The Ministry of Environment & Forests in their comments on the Audit observation stated in a note submitted to the Committee as under:

“Provision of two crematoria at Behrampore can not be just equated with that of the Calcutta Metropolitan Area towns, which are located adjacent to each other with the people having the option to move over the nearby ones in case of any break-down or crowding. Moreover, the CMDA towns are linked with one corridor to facilitate easier traffic maneuvering from one town to another. The two crematoria were proposed at Behrampore as it was the only town at that time in that region having a vast hinter land all round. It was anticipated during the project proposal in 1987 that the population of the adjoining areas of Birbhum and Malda districts as well as other areas in the district could be served by those two crematoria.”

**(b) Extra expenditure due to diversion of GAP funds**

14.35 Audit had revealed that the BMA (Behrampore Municipal Authority) awarded electrical and mechanical works of construction of 2 electric crematoria at Khagra and Gorabazar in May 1988 for Rs 20.89 lakh; and, civil works in July 1989 for Rs 25.31 lakh. The scheduled time for completion of the project was March 1990. The BMA diverted the GAP funds for payment of staff salary and did not supply cement and steel to the contractor for civil works. The State Government withdrew the works from the BMA in November 1990 and entrusted those to the MED in November 1992. The MED completed the scheme in March 1997 after incurring a total extra expenditure of Rs 9.36 lakh on civil, electrical and mechanical works through fresh contracts. In their comments on the Audit observation, the Ministry of Environment & Forests, in a note submitted to the Committee stated as under:

“The two Electric Crematoria were constructed in two different parts of the town i.e. at Gora Bazar and Khagra. The Gora Bazar crematorium will serve the need of adjoining area of Birchum. Malda District and the areas of Western and Nothers parts of the District of Murshidabad. While the Khagra crematorium will serve the population of Behrampur town and the eastern part of the district. Provision of only one crematoria could have turned the aforesaid objective futile. Moreover, the installation of two crematoria was the demand of the Behrampur Municipality. The observation of Executive Engineer, Behrampur Division, ME Directorate as noted by audit was only on the basis of situation prevailing at that point of time. Both the crematoria are functioning well.”

**Operation and Maintenance of Assets**

14.36 Audit had pointed out that the NRCD did not show due diligence to ensure the optimum utilisation of assets created under the GAP. The state agencies also neglected their operation and maintenance. Audit observations on operation and maintenance of assets in West Bengal are as follows:

**(a) *Underperforming of 14 STPs due to failure to provide direct house connection***

14.37 Audit had pointed out that the CMDA commissioned 14 STPs of 341.60 MLD in West Bengal, during the period from December 1991 to December 1997 at a total cost of Rs 69.36 crore, under the GAP-I. The STPs treated only 181.98 MLD of sewage, as the municipal authorities did not provide direct house connection to the intercepting sewers and existing sewerage net work was inadequate. Ministry of Environment & Forests in their reply to the Audit observation commented in a note as under:

“The estimated volume of sewage in town covered under GAP-I is on the basis of per capita water supply and not by actual measurement.

Therefore, it appears that the GAP-I estimated sewage quantity is much on the higher side in 15 towns under GAP-I. The sewage quantity in 15 towns under GAP-I generate 527.5 MLD sewage whereas 26 towns under Phase II generate only 247.18 MLD.

Therefore, the sewage actually treated is 181.98 MLD against sewage actually intercepted and diverted of 215.98 MLD i.e. more than 84 per cent of the sewage actually intercepted and diverted are treated before falling into the river. Capacity created for treatment is 342.10 MLD against the target for interception and diversion and treatment of 371.60 MLD i.e. capacity created for treatment is more than 92 per cent of the target.

As soon as the Phase II works are completed, the targeted treatment will be fulfilled.”

**(b) Idling of staff quarters**

14.38 Audit had revealed that 31 quarters constructed by the CMDA for operation & maintenance staff, within STP premises at Baranagar-Kamarhati, Garden Reach and Chandannagar at a cost of Rs 38.66 lakh between March 1987 and September 1994, remained idle, as the CMDA engaged private agencies for the upkeep of the STPs. In their reply, the Ministry of Environment & Forests in a note submitted to the Committee stated:

“Some of the staff quarters in question have been allotted to CMDA employees and some to the agency entrusted with the augmentation of Garden Reach Water Treatment Plant all on rental basis. As such it is not a fact that construction of the staff quarters have been an improper planning.”

**(c) Infertuous expenditure on construction of a laboratory**

14.39 According to Audit report, the CMDA constructed a laboratory at Garden Reach STP in December 1995. Cost of the laboratory including test equipment was Rs 11.16 lakh. The CMDA, however, entrusted the testing performance of the STP to an outside agency; and, the expenditure on the laboratory proved infertuous. In their comments on the Audit observation, the Ministry of Environment & Forests in a note submitted to the Committee stated as under:

“CMDA has constructed a laboratory at Garden Reach. However, the evaluation of the performance of the STP has been entrusted to All India Institute of Hygiene and Public Health, a Government of India Organisation being an expert in the field of Public Health Engineering. The requisite sample testings for the purpose are done by them using the laboratory set up at Garden Reach STP. The fees charged by AIH&PH is Rs. 90, 000/- per annum i.e. Rs.7,500/- per month only including the cost of chemical reagents also as required for such testings. The cost would

have been much more should a suitably qualified chemist and assistants been employed for the purpose.”

14.40 When asked about State Government’s contribution in operationalising the assets created under GAP, the representative stated during evidence:

“The State Government is providing funds for operation and maintenance. As far as operational and maintenance problems are concerned, sometime some fault occurs and we repair it.”

14.41 On being asked about the operational status of the STPs created under GAP-I, he further added:

“In GAP-I, we constructed 15 STPs. So far, all of them are in operation. Sometimes breakdowns occur but we do repair them with State Government funds.”

Another representative further stated:

“About the status of STPs and electric crematoriums, as I told you, my information is that they are functioning. “

He also stated that in West Bengal, electric crematoriums are very popular.

14.42 On being specifically asked about the cost of power consumed by the crematoriums in the State, the witness stated:

“The average cost of power supply comes to nearly Rs.75,000 to Rs.80,000 per month.”

### **Public Participation**

14.43 Audit Report had pointed out that eventhough the CGA had laid great emphasis on the need to maximise public participation, particularly of people living on banks of river Ganga, and of the local bodies, social organisations and Non-Government Organisation through wider publicity the NRCD and the State Governments continued to give only routine attention to that aspect, as may be evinced from the paltry total expenditure of only Rs. 38.60 lakh during the period from 1995 to 2000 by the participating States on the activities relating to enhancing public participation.

**No reply on the Committee’s list of points in this regard was received from government of West Bengal till January 2004.**

## Water Quality Monitoring under the GAP

14.44 Audit had pointed out that during 1999 BOD exceeded the permissible limit at Palta, Dakshineshwar and Uluberia.

**No reply on the Committee's list of points in this regard was received from government of West Bengal till January 2004.**

## Industrial Pollution

14.45 Audit had pointed out that the NRCA issued directives in July 1997 to all grossly polluting industries discharging their effluents into the river to install the requisite ETPs within 3 months, failing which closure notices should be issued. According to Audit, the status of installation of ETPs in West Bengal:

State	Number of Units				
	Grossly polluting units	ETPs installed	Closed	ETPs under construction	ETPs not functioning properly
West Bengal	96	77	16	3	33

14.46 The following paragraphs narrate the instances noticed by audit in the State:

- (a) ETPs in 33 out of 77 grossly polluting industrial units in West Bengal, discharged 2007 MLD effluents.
- (b) The Supreme Court of India, in a public interest litigation case, directed in April 1995 that 538 tanneries located in 3 clusters in Calcutta generating about 30 MLD of effluents be shifted from the city to a leather complex and a CETP (Common Effluent Treatment Plant) be provided to treat the effluent generated from the complex. The CCEA approved construction of CETP at Calcutta in August 1995 for completion in November 1997. The Central and the State governments were to equally share the cost of Rs 65 crore of CETP. The West Bengal Government was yet to submit the DPR for CETP to the satisfaction of the NRCD.

14.47 Ministry of Environment & Forests in their reply stated as under:

“As per the directions of the Hon'ble Supreme Court of India, all the tanneries are required to shift to new Leather Complex located at outskirts of the Kolkata city. The CETP has been included as a part of the proposed CLC. The total wastewater estimated from CLC is 30 MLD and 6 modules, each of 5 MLD are to be constructed as CETP. On 27<sup>th</sup> April 2000, the Supreme Court of India has directed the State Government to



take immediate measure for shirting of tanneries. The court inter-alia has issued the following directions:

- Delivery of physical possession to the tanneries in respect of Zones 2,3,4 and 5. It will be completed within 30 days thereafter and the tanneries are directed to take possession forthwith upon intimation; and Ministry of Environment & Forests to give its final approval to the DPR of CETP to the Government of West Bengal within one month.
- The Sub-Committee of the Steering Committee of the Environment Ministry has approved an amount of Rs.22.82 crore for two modules of CETP MLD each for the construction of the CETP.”

**No reply on the Committee’s list of points in this regard was received from government of West Bengal till January 2004.**

### **Financial Management**

14.48 Audit report had pointed out the following irregularities in execution of GAP schemes by implementing agencies in West Bengal:

- (a) **Diversion/misuse of funds:** The implementing agencies in West Bengal diverted Rs 26.46 crore on construction of STPs not affecting the water quality of river Ganga.
- (b) **Loss of interest:** The implementing agencies in West Bengal incurred loss of interest of Rs 71.11 lakh by not investing the unspent balances in interest bearing accounts.
- (c) Besides, the implementing agencies in West Bengal did not report to the NRCD the interest of Rs 66.40 lakh earned on the GAP funds despite pointing out in the previous Audit Report.

**No reply on the Committee’s list of points in this regard was received from government of West Bengal till January 2004.**

### **Monitoring Mechanism**

14.49 Audit report had highlighted that the constituted CMCs in West Bengal met only infrequently. West Bengal government constituted a High Powered Committee in May 1998 under the Chairmanship of Chief Minister, to monitor the implementation of the programme. The High-powered committee in West Bengal met only twice in January 1999 and January 2000.

**No reply on the Committee’s list of points in this regard was received from government of West Bengal till January 2004.**

## **XV. CONCLUSIONS/RECOMMENDATIONS**

### **Ministry of Environment & Forests**

**15.1 The Ganga River alongwith its tributaries is the lifeline for 40% of the population of our country. Its waters are used for drinking and irrigation purposes mainly, in addition to navigation and development of flora and fauna in and around the river-system. A number of large, medium and small towns have come up on the river-banks, which release their sewage waste directly into the river system, water of which over a period of time became unusable, non-drinkable and even unsuitable for irrigation purposes. Consequentially the aqualife also started becoming extinct due to pollutants in the water. Many environmental studies proved this effect on the flora & fauna of the areas, which irrigated or otherwise used this water system. It was the vision of the then Prime Minister, who decided to launch Ganga Action Plan. Action Plan-I was launched in 1985 to cleanse the River Ganga in the first instance and later on Ganga Action Plan-II was launched in 1993, which included the tributaries of River Ganga namely, Yamuna, Gomati and Damodar. States of Uttar Pradesh, Bihar and West Bengal were to implement GAP-I and States of Uttranchal, Haryana, Delhi, Uttar Pradesh, Bihar and West Bengal were to implement GAP-II. Major task was to tackle pollution from municipal sewage which accounted for about 75% of the river pollution, by creating facilities like Sewage Treatment Plants, Industrial Effluent Treatment Plants (ETPs), toilet complexes, electric crematoria, improvement of bathing ghats, river front developments etc.**

**15.2 The Committee made on the spot study visits to a number of places in various States and found that the pace of developing infrastructure to control river water pollution was very slow and the money released was either not commensurate with the requisite facilities or have been diverted for some other purposes and the work remained standstill or incomplete. The GAP-I which was to be completed by March 1990 has been extended till March, 2000 when it was declared complete, and GAP-II which was to be**

completed in 2001 was extended till December 2008, which clearly reflects the extremely slow knee jerk pace of development work being done for the last 18 years under GAP-I and II. Phase I of the Plan is not yet fully complete, even after delay of over 13 years. It speaks volumes of the inefficiency and lack of foresight on the part of the implementing agencies, viz. Central, State Governments and contracted agencies.

**15.3** The Audit in their review covering the period of 1993-2000 had stated in their Report that Ganga Action Plan has met only 39% of its primary target of sewage treatment, according to the performance reported by the participating States. There were heavy shortfalls in the achievement of targets set for creation of assets and facilities under the Plan. Even the achievements made, were poor indicators of the extent of success of the Ganga Action plan schemes, as most of them had not functioned either fully or functioned only partially for varied reasons.

**15.4** The Committee note that the Ministry of Environment and Forests left to the State Governments, the crucial determinants of sewage characteristic and downstream water quality for selection of towns for phase II of the GAP, which lead to non-uniformity in selection of towns by the States. The Ministry also lacked a mechanism to evaluate the estimations of sewage by the States which, in the opinion of the Committee, is rather strange and highly deplorable in terms of controlling water pollution of the river system in the country.

**15.5** The Committee also note that the Ministry did not fix any time schedule for submission of Detailed Project Reports (DPRs), the basic document for expenditure sanction needed from the States for phase-II of the Plan. Even though Supreme Court has fixed a time frame of 3 months for submission of DPRs by the States to the Ministry and 30 days for the Ministry to sanction the projects, the Committee note that no monitoring mechanism was in place in the Ministry which could ensure the adherence

to the time frame fixed by the Hon'ble Supreme Court. They are astonished to note that the monitoring system of such a prestigious and important plan is the weakest link. There is no detailed record of the outcome of the field visits, and review meetings with implementing agencies by the National Rivers Conservation Directorate (NRCD) and also of the follow up action as has been envisaged in the Plan itself. State Governments of Haryana, Bihar and Delhi did not constitute Citizen Monitoring Committees (CMCs) in any of the towns situated on the banks of the Rivers. West Bengal Government had constituted these Committees only in 5 of 42 towns selected for implementation of GAP. Even the constituted CMCs of Uttar Pradesh and West Bengal met only infrequently and not periodically. The Committee, therefore, strongly recommend that the monitoring Committees should be set up at every level, starting from Citizen Monitoring Committees to the Apex Monitoring Committees and there should be periodical monitoring of all the schemes of GAP. These Committees should oversee the progress of work of all the schemes under GAP and ensure their timely completion. They should also fix responsibility for any diversion of funds of GAP or unnecessary delay in execution of its work.

15.6 The Committee note that out of total target of 1912 MLD Treatment of sewage waste under GAP-II only 13.7% of the capacity could be achieved till December 2001 and only 780 MLD sewage treatment capacity has been created till October 2003 which is less than 45% of the targeted capacity. Out of approved cost of GAP-II of Rs.2285.48 crore excluding establishment charges, an amount of Rs.792.38 crore has been released till 30 November 2003. The dates for completion of GAP-II are being revised again and again. Earlier the revised completion date was fixed as December 2005 but now the Ministry has informed the Committee that as the second phase of Gomati Action Plan and Yamuna Action Plan have been approved for completion by March 2007 and September 2008

respectively, so the GAP-II is now targeted to be completed by December 2008. The Committee observe that the considerable time overruns in the execution of schemes in a time bound manner is indicative of failure of the States and the NRCD to work together for implementation of various schemes of GAP-I and II.

15.7 The Committee find that GAP, as is being implemented, has been more of a piecemeal solution for tackling a complex problem and fails to treat the river eco-system entirely. The Committee, therefore, feel that there should be a provision of the creation of river regulation zone under an autonomous body with the NGOs and panchayats/ local bodies executing its target based plans and programmes. Another area which the Committee liked to draw the attention of the Ministry, is the problem of soil erosion which has been posing a serious threat to the very survivability of the pumping stations, STPs in areas like Malda, Murshidabad, Hooghly, Howrah and Uluberia in West Bengal. The Committee therefore, desire that the Ministry should take concrete measures in this regard in GAP.

15.8 The Committee are constrained to note that Bihar Government could not obtain any sanction for the core schemes of interception and diversion scheme of sewer lines in phase II of GAP, because it did not submit Detailed Project Reports as per NRCD's guidelines. Also, Bihar and West Bengal Government could not obtain sanction for any core schemes of Sewage Treatment Plant in the Phase II of the Plan. The reasons for Bihar were stated to be because of unsatisfactory operation and maintenance of assets created during phase-I and for West Bengal, because the State Government did not confirm the availability of land. Many instances have come to the notice of Audit of avoidable delays leading to cost escalation, idling of the plants, mismatch with interception & divergence of schemes, technical flaws, diversion of resources etc. which showed lackadaisical approach in the conception and execution of Plan Schemes by Implementing Agencies. It also speaks volumes of the inefficiency of the

**GAP implementing agencies of the State Governments, which gave no importance to such schemes, which is the lifeline of majority of Bihar and Bengal population in terms of drinking water, irrigation facilities, navigational importance and pisciculture etc. The Committee strongly recommend that such matters should be taken up at the highest administrative levels of the State Governments to expedite the completion of GAP-I & II both as per their schedules.**

**15.9 The non-core schemes, such as river front development, setting up of electric crematoria, public toilets etc. are to cater to the peripheral environmental concerns of river pollution, instances have come to notice regarding impairment of assets created at much public expense because of neglect and lack of maintenance, besides delays in their setting up. Even in Delhi, Yamuna River Front is yet to take any shape. The Committee suggest that the Ministry of Environment and Forests and the respective State Governments should take up the non-core schemes also on priority basis, as over a period of time, these schemes are becoming very important, as human excreta, Gaushala, cow dungs, half burnt bodies being thrown into the river system are becoming the major causes of water pollution.**

**15.10 The Committee observe that only about 45% of the grossly polluting industrial units have installed Effluent Treatment Plants. Out of these, over 18% did not function properly and also did not meet the technical standards. The NRCD also have no mechanism to ensure that the installed Effluent Treatment Plants function properly. The Committee, therefore, recommend that NRCD should be vested with powers to take punitive action against the violators of norms in this regard and defaulting industrial units should either be closed down or allowed to function only after they install ETPs and ensure their proper functioning. The Committee observe that the contribution to the pollution load by various sources was estimated at 75% and 25% each for domestic effluent and industrial waste**

water by the CPCB survey in 1984. The CPCB identified a grossly polluting industry as one which handled hazardous substances or industries discharging effluent having BOD load of 100 kg. per day or more. The Committee find that the CPCB pollution studies assessed the health of the river mainly on the basis of one parameter i.e. Biochemical Oxygen Demand (BOD) leading to the assumption that officials tend to under-report levels of toxic waste in the river by focusing more on the parameters of dissolved oxygen and biological oxygen demand that say nothing about heavy metals and other toxins in the river. BOD is a measure of the quality of oxygen depleted by decaying organic matter in the water. The Committee are of the view that while BOD is an important indicator of health of water systems, it is inadequate as an index to total pollution in the river, as it only accounts for decaying organic matter, it also tells us little about the presence and effects of persistent toxins including metals which do not degrade in the environment and are long lived organic poisons. The Committee, therefore, are of the opinion that this questionable assessment led to the development of Ganga Action Plan as an action plan that focussed mainly on domestic effluents and does precious little to prevent industries from polluting and thus not solving the potential & long term problem of toxic chemical build up in the river. Even the few steps that are being taken to address industrial pollution such as effluent treatment plants rely on end -of- pipe treatment technologies that are not fool proof which at best relocates metals from the liquid medium to the bottom sludge of the effluent treatment plants and at worst escape the treatment and end up polluting the river as in the case of protests of Sadhus in Allahabad on the occasion of 'Makar Sankranti' (14.1.2003) and 'Mauni Amavashya' (01.2.2003) against coloured discharged of effluents from agro-based industries and distilleries up stream of Kanpur side at Sangam. As a matter of fact, the sludge studied by A Markandey and M.N. Murthy in their research project "Cost Benefit Analysis of Ganga Action Plan" funded by Overseas Development Administration (ODA), UK through the Ministry of

environment and forests, Government of India, had neurotoxic cadmium, chromium and nickel levels above tolerable levels as per prescribed norms for agricultural land application at places like Kanpur, and Varanasi. The Committee, therefore, desire that the Ministry of Environment & Forests should conduct a comprehensive study into the pollution of Ganga and its tributaries by metals, pesticides and organic pollutants to ensure that all potentially polluting industries do not discharge polluted waste into the river. Further, the Committee desire that end- of-pipe pollution control methods as is being currently used in ETPs, should be replaced by pollution elimination-at source technologies. The Committee would also like the Ministry of Environment & Forests to co-ordinate with other Ministries/Departments with a view to mandating zerotoxic discharge into water ways, guaranteeing communities right-to-know and emphasizing clean production and pollution prevention by the industrial units.

15.11 The Committee observe that for such a mass oriented programme as Ganga Action Plan, a crucial aspect like public participation which could have been a deciding factor in the successful implementation GAP has not been given adequate attention despite this being mentioned from the very first sitting of NRCA (then CGA). From the Ministry's submissions and their first hand experience during study visits to different sites of Ganga Action Plan, the Committee are of the firm opinion that at present the general people at large are either ignorant of or totally alienated from objectives of Ganga Action Plan thereby creating a gulf between public and the schemes/projects. This ignorance also prevents them from playing an active role in assisting regulatory authorities in the implementation of GAP schemes. As is evident from the submission of States like Bihar that they have been waiting NRCD's guidelines for launching public awareness campaigns, the Committee observed that even after 18 years of its operation, Ministry of Environment & Forest have failed to come out with a concrete vision plan to make people aware of the consequences of living



in a hazardous polluted river eco-system. The Committee, in order to ensure effective public participation in GAP, urge the Ministry of Environment and Forests to make energetic mass awareness efforts to establish a pattern of co-operative relationship between the Government, NGOs, V.Os and associations. Further the Committee observe that the Ganga and its bigger tributaries like Yamuna possess more than enough scope for contributing a major chunk towards self-financing their action plans by way of fisheries, water sports, recreational zones, amusement park, pilgrimage etc. on its riverine area but what requires is a co-ordinated vision plan amongst such Ministries as the Ministry of Environment & Forests, the Ministry of Tourism, the Ministry of Water Resources etc. The Committee therefore would like the NRCA to look into the feasibility of such a project, and if necessary, open such schemes to private sector. The Committee also emphasise the need for devising a methodology wherein setting up and holding of regular meetings, of Citizen Monitoring Committees in all the cities covered under the Ganga Action Plan becomes a permanent feature in the implementation of GAP.

15.12 The Committee find that while on one hand, States have complained of lack of funds being a main reason for delay and failure to achieve the target of schemes, on the other, many of the implementing agencies have failed to even spend the money and fair amount is left unutilized. The Committee are surprised to note many instances of financial mismanagement by the State level implementing agencies, such as diversion of funds to the tune of Rs.36.07 crores to unauthorized activities, incorrect reporting to the tune of Rs.6.75 crore, parking of funds by Bihar Rajya Jal Parishad in its own personal account amounting to Rs. 1.17 crore and unutilized funds with the implementing agencies to the tune of Rs.72.62 crore, etc. The Committee feel that there are serious shortcomings in financial management of the funds earmarked for various schemes under GAP at the level of States as well as NRCD. This has resulted in

development of laxity in the working of various implementing agencies of the respective State Governments. The Committee are of the view that the apt formula for success in rectifying the functioning of GAP is the willingness to introduce reasonable user charges, which make the scheme financially viable. Even then the Committee are of the firm believe that no amount of additional resource will rejuvenate the GAP until the system stops tolerating the officials who do not perform. This nonetheless entails amelioration in governance through improved performance and accountability through public participation. The Committee endorse the proposal to introduce “beneficiaries pay” and “polluters pay” principles and other collective fine system to bear the cost of river cleaning programmes. Further provisions may be made to accept donations from willing contributors to boost the resources of GAP. To help make ever delicate financial condition of GAP schemes viable, the Committee urge the Ministry of Environment & Forests to streamline the mechanism of earning revenues by utilising the manure rich treated sewage water and other byproducts etc for irrigation purposes on payment basis.

15.13 While going through the operational profile of implementation of core schemes of GAP-II upto March 2000, the Committee find that in Uttar Pradesh out of the targeted sewage treatment of 1098.14 MLD, only 13.00 MLD could be achieved. In West Bengal out of 4 schemes of interception and diversion of sewer lines, not a single scheme has been implemented and against an STP target of 373.63 MLD, there is no progress at all. As far as Bihar is concerned, not a single scheme for interception and diversion of sewer lines was proposed and against the target of 92.18 MLD of sewage treatment, the achievement shown was nil. In Haryana, out of 19 schemes of interception and diversion of sewer lines, only 9 schemes have been completed and out of 12 schemes of Sewage Treatment Plant only 8 were completed. The Committee after observing delays in completion of core-schemes feel that river water pollution is not being taken seriously by the

respective State Governments and their implementing agencies. The Government spend huge amount of money on the treatment of water-borne diseases and other communicable diseases caused by polluted water, but water pollution is not taken seriously by various States and their implementing agencies, which at times, causes lot of human loss. The Committee, therefore, recommend, that the State Governments and their implementing agencies should recognize the importance and seriousness of various schemes being implemented under GAP and complete them in a time frame for the benefit of the people at large.

15.14 The Committee have observed that for GAP-II, the NRCD did not fix any clear parameters in terms of sewage characteristics or downstream water quality for selection of towns and had left this work to State Governments. The Expenditure Finance Committee, however, later on recommended that States might not include towns with BOD (Bio-Chemical Oxygen Demand) less than 3 milligram per litre downstream of the river. The Committee note that Uttar Pradesh Government excluded Kannauj where BOD levels was always above 3 mg/l during 1994-99 and even touched 4.8 mg/l in 1999. In Bihar, Danapur city, which discharged 8 drains with 0.6 MLD of raw sewage direct into Ganga, also was not selected. Likewise, Uluberia in West Bengal with a BOD of 43.07 mg/l also remained excluded. The respective State Governments did not send their names in their proposals. In this connection, the Committee are happy to note that these towns have been included in GAP-II on the directions of Supreme Court in its order dated 01 November 1995. The Committee feel that it was erroneous on the part of The State Governments not to have included these towns in the first place and advised NRCD accordingly on their own instead of intervention by the Supreme Court in this regard.

15.15 The Committee note that as per guidelines circulated by NRCD to all the State Governments, four actual samples of water were to be taken in a month, with 3 samples on weekdays and the 4<sup>th</sup> sample on a 0/6 day (i.e.

Sunday). The measured sewage flow of a town should also be crosschecked with the water supply rate, population and interception factor to ensure that the assessment is as realistic as possible. It was noticed by Audit that the Ministry discontinued the water quality monitoring due to constraints of funds. Collateral findings revealed further deterioration of water quality in all its parameters. The coliform level exceeded in 17 out of 60 stations sampled during 1999. The Committee wonder as to how without water quality test checks, the schemes can be declared successfully implemented. The main task of GAP was to reduce the pollution load on the Ganga water but if the samples for checking the quality of water at different stations are stopped then the NRCD will not be able to monitor the quality of water. In the opinion of the Committee this will, in turn, further deteriorate the quality of water and the pollutants will not be measured to the safety level and hence, will defeat the very purpose of implementing the Ganga Action Plan. Apart from ensuring proper operationalisation of assets created under the scheme, the Committee feel the need to strengthen mechanism and the capacity of institutions for effective control of water pollution and waste from point source by emphasizing socio-economic measures at the same time as using law enforcement measures. The Committee, therefore, desire the Ministry of Environment & Forests to monitor, check and evaluate water quality of water sources and management of water pollution continuously and systematically by collaboration and co-operation amongst concerned agencies.

#### **General Observation**

15.16 The Committee are concerned to observe that GAP even after more than 18 years of its operation, is still in its trial and error exercise which invariably suggest that the GAP has been formulated without proper assessment of actual ground realities. Not only the parameters have been fixed for selection of towns under GAP-II, the estimation of sewage

generated along the towns has also been done based on an inaccurate methodology leading to many cases of overloading and underloading of sewages in the STPs. Even the estimations that might have been accurate at the time of initiating the scheme run the risk of being obsolete in view of time overruns which in some cases stretches upto ten years as in the case of East Zone STP, Patna and Munger STP in Bihar. Taking note of this fact, the Committee further express their concern over designing of schemes under GAP especially the reported overflowing of sewers in Bihar which according to state government are not due to defective designing as the Audit has pointed out, but due to Ministry of Environment & Forests' instructions to prepare the DPRs considering 5 years only. The Committee feel that such time overruns would ultimately render the STPs created under the scheme incapable of containing the sewages when they are operationlised in view of growth in population and town structure. The Committee also express their displeasure over the submission of the Ministry of Environment & Forests that GAP compares favourably in comparison with Rhine, Thames and Danube Action Plans. The Committee view that the Ministry, instead of evolving a methodology for realistic planning of schemes and proper utilization of funds have let themselves to set complacency in their implementation of GAP.

15.17 The Committee deplore the actions of the Ministry and participating State Governments for having failed to work in tandem as per the mutual agreement. While the State Governments, especially Uttar Pradesh, Bihar and West Bengal could not provide matching share for schemes, prominent being failure to acquire land, non- supply of power etc. the Ministry of Environment & Forests have no effective mechanism to deal with such situations putting a serious challenge to the success of the plan. In the absence of an effective control mechanism, the States took full advantage to divert and misutilise funds. Thus, by solely relying on the goodwill of the states and their implementing agencies, the Ministry have

treaded on an uncertain path for guaranteed failure. Putting on hold funds released to the States like Bihar for GAP-II, in view of State Government's lackadaisical attitude, even though a necessity is a remedy worse than disease so far as achieving the targets of GAP is concerned. During their study visits, the Committee noticed that the implementing agencies were more concerned in the creation of the pumping stations and Sewage Treatment Plants (STPs) rather than ensuring optimum utilization of these assets. The Committee observe that such a mammoth scheme like GAP should have been on the basis of a system that would leave no room for the States to take an uncooperative stance. As per the current scheme, the responsibility of the Ministry of Environment and Forests seems to have ended at approving DPRs, sanctioning money and issuing direction with no follow-up action being taken. The Committee thereby urge the Ministry to devise a suitable mechanism whereby States become a willing partner in the implementation of the scheme.

15.18 Further, the Committee do not buy the argument of the Ministry that delay in the implementation of GAP has been due to its being the first of its kind of project in the country, for not only delays had been experienced in GAP- I but also in the case of GAP-II and its components like YAP, GOAP & Damodar Action Plans; rather they are of the view that with no clear-cut standards or basis or yardstick or parameter for fixing responsibilities in GAP provisions, a multiple of irregularities have cropped up in the operation of GAP. A peculiarity the Committee had come across during their examination of the subject is that in spite of the lacunae and shortcomings being pointed out by expert reviews and the Ministry's assessment and when the Ministry themselves were aware of the solutions, no significant remedial action has been initiated till date. The Committee observe that no adequate attention is being given to the urgency that has been demanded by GAP, thereby compromising the health of about 40 per cent of population of India living in the Ganga Basin. As a matter of fact, a

study by a team of environmentalist from the Netherlands, the United Kingdom and India have, in a World Bank sponsored study, concluded that in spite of the massive Rs. 1500 crore plan launched in the 80s to clean up the Ganga, the pollution levels in the mighty river continue to be alarmingly high and are contributing to about 9 to 12 per cent of the total disease burden in Uttar Pradesh. The Committee find that provisions/ mechanism of the scheme as a system of anticipating coming events and planning responses in advance have failed which nevertheless has led the Committee to observe that GAP has become un-coordinated and directionless amalgam of different department/agencies despite existence of various Committees like NRCA, Steering Committee, Monitoring Committee etc. The Committee therefore urge the Ministry to reconstitute NRCA as an autonomous body like National River Linking Project.

## **STATE GOVERNMENTS**

### **A. UTTARANCHAL (RISHIKESH- HARDWAR)**

15.19 The Committee in their examination of the delay in implementation of the GAP, have noticed the failure of Uttaranchal government in achieving targets under GAP-II schemes. While acknowledging the fact that the creation of new Uttaranchal State and consequential shortage of Engineers in Uttaranchal Peyjal Nigam was one of the hindrances in their activities, the Committee are of the view that much responsibility for this failure lies on Ministry of Environment & Forests' action of approving the PFRs of the towns included in GAP-II in the year 1996-97 based on the rates of the year 1993-94 and change of norms for treated effluent parameters in view of latest faecal coliform design parameter of the treated effluent fixed by the NRCD. The Committee deplore the insensitive reaction of the Ministry of Environment & Forests to the genuine problems faced by a newly created State. The Committee are displeased to find that even if the State

Government has been putting up efforts in ensuring optimum utilization of the 3 STPs constructed under GAP-I & II at Hardwar, Rishikesh and Swargashram holy pilgrim centers frequented by lakhs of people, these STPs are being overloaded due to excess generation of sewage and therefore need to be upgraded. The Committee are particularly anguished to note the fact that the Union Government had let lakhs of devotees dip in highly polluted waters of the Ganga at Rishikesh by not releasing funds for schemes submitted under special assistance from the Government of India for pollution abatement works required to be done for on going “Ardh Kumbh”.

15.20 The Committee, during their study visit found that not only the Sewage Treatment Plant (STP) at Hardwar was functioning properly; the condition of the pumping stations at Aryanagar, Kankhal and Jagjitpur was also far from satisfactory. Pollutants like plastic bags & night soil was seen freely floating in the nalas, which was being directly discharged into the River. The Committee express serious concern over the plastic waste being thrown into nalas thereby choking sewer lines as well as enormous quantities of cowdung swept out into the river from various Gaushalas situated on the banks of the river. Having, thus, noticed the total absence of coordination among multiple State and local agencies responsible for implementing the GAP, the Committee observe that there is hardly any mechanism to monitor effectively the implementation of GAP works. During their study visit, the Committee were informed that before GAP works were undertaken, the City's functioning sewerage system was the one introduced in the year 1938 with 72 km long sewer lines and 5 pumping stations to divert part of the sewage polluting river Ganga. The Committee also observe that in Rishikesh, no sewage treatment facility was available earlier at Laxman Jhula, Swarga- Ashram and Muni-ki-Reti. The Committee are also informed that under GAP Phase-I, 11 drains were intercepted and diverted in Hardwar and around, 18 drains were diverted in Rishikesh to the



3 STPs constructed under GAP-I having total capacity of 24.33 MLD (million litre per day). The Committee are, however, informed that due to limited resources, the works under GAP-I could only partially abate the pollution of river Ganga. The Committee further observe that the old sewage system of Hardwar was incapable of handling the total sewage discharge of the city as the population of the city had increased manifold since 1938. The Committee are of clear and unmistakable impression that the civic authorities were unable to treat the total sewage discharge of the two cities particularly that of the floating population in these two cities as Hardwar – Rishikesh, being cities of prime religious significance, had lakhs of pilgrims coming from all over the country. Further, the Committee desire that the Ganga Pollution Control Unit should have proper coordination with the Irrigation Department to enable and to encourage the farmers of that area to make good the use of the treated sewage water for irrigation purposes and fertilising the agricultural fields with the treated solid waste as manure. The Committee are of the view that such a usage, would in due course, not only provide revenue to the Government but would also help the farmers to get manure-rich water for cultivation.

15.21 Taking note of the fact that the old sewer line was unable to take the sewage load of 1 lakh 18 thousand population (which becomes manifold during Kumbh season), the Committee suggest that its capacity should be enhanced and new sewer lines be laid. The Committee would also like to take proactive initiatives to ensure that Citizens' Monitoring Committees' should be set up and made to meet regularly at these places so that the general public could also be involved in abating further pollution of the river.

15.22 On Hardwar-Rishikesh road stretch, big hoardings should be put up drawing the attention of the pilgrims and local population to keep the Holy-Ganga clean. Some kind of warnings should be written down on these hoardings and other prominent places that violators would be punished

with fine if they pollute the river-waters. Public participation will be an asset for this purpose. Local bodies, social organizations and non-governmental organizations should also be involved in this publicity campaign.

15.23 The Committee also express serious concern over the issue of dumping of dead bodies/animal carcasses and consequential worst pollution caused by such a practice. They are of the opinion that no worthwhile efforts have been initiated so far for optimum operationalisation of the already established electric crematoria at Hardwar to prevent such pollution. In this context the Committee do not share the view that modern crematoria set up have not been used by the people due to their faith and belief in the traditional manner of cremation. In their view, adequate public awareness was required for the use of modern crematoria and the popular awareness of people varies from city to city and changes with the passage of time. The Committee, therefore, also stress the need for setting up improvised wood crematoria in Hardwar to prevent this environmentally challenging phenomenon of letting dead bodies/carcasses polluting the holy river.

## **B. HARYANA**

15.24 The Committee observe that overall, the implementation of GAP is far more satisfactory in Haryana than any other states. The Committee find that, against the target of treating 323 MLD of sewage under GAP, YAP under GAP-II to be precise, the achievement as of March 2000 and March 2003 were 293 MLD and 306.50 MLD respectively. The Committee observe that better result might have been achieved in the state had the Government of India not accord approval of DPRs of STPs in six additional towns as late as 10/2000. Furthermore, the Committee find that Government of India have held up the work of construction of balance 50% of sewer at Palwal for want of approval of revised DPR. The delay of approval of DPRs

by Ministry of Environment & Forests has become such a chronic feature that although the State Government had submitted all the DPRs complete in all respects within the time, NRCD delayed in approving them, with some of them pending since September 1999.

15.25 The Committee are, however, concerned to note that no appreciable vigil was taken by the PHD (Public Health Division) in one case of Interception and Diversion Scheme at Gurgaon canal wherein laying of RCC (Reinforced cement concrete) pipe sewer in place of brick circular sewer due to failure to obtain permission for cutting trees from Ministry of Environment and Forests, Haryana in time cost an extra expenditure of Rs. 1.99 core that was much higher than the originally envisaged cost for brick circular sewer. The Ministry's reply of August 1999 to audit justified Haryana's action to time constraints arising out of the Court orders. According to Audit, this should be viewed in the light of the facts that there were avoidable delays prior to the Court orders because of which the work could not be completed as contemplated and in time at the first place.

15.26 The Committee find that out of target of constructing 12 STPs for treating 306.5 MLD capacity in between May 1996 to November 1997, Haryana Government could complete only 8 STPs of 226 MLD by March 2000, the delay of which according to NRCD in August 1999, was due to non-release of the matching share during the year 1997-98 by the State. The Committee however find this reply untenable as the implementing agency had surplus unspent funds ranging between Rs 20.17 crore and Rs 27 crore during 1997-98 to 1999-2000 and also in view of the submission of the State Government that in 1997-98 they spent Rs. 46.10 crore which was the earlier year's balance, much more than combined amount of the Central Government releases i.e. Rs 25.85 crore. The Committee observe that most of the delay in implementation of the scheme in the State was on account of non-availability of funds following Government of India's practice of releasing funds towards the end.

**15.27 In yet another case, the Committee are concerned to note that Faridabad (Zone II) STP processed only 15 to 20 MLD sewage against the installed capacity of 45 MLD as of December 1999 as the anticipated quantity of sewage from areas developed by the HUDA (Housing and Urban Development Authority) did not reach the STP. The Committee deplore the action of Housing and Urban Development Authority, Haryana and the Municipal Corporation, Faridabad for not completing ancillary works meant for transporting the sewage which has still not been completed in spite of repeated efforts by holding meetings at the level of Financial Commissioner Public Health on 19.3.1999, 17.9.1999, 5.7.2003, 28.11.2000, 13.4.2001 and 15.7.2002. The Committee are concerned to note that Haryana government had not got the defective mechanical screen bars of 30 MLD MPS at Sonapat and in the STP at Gurgaon constructed in June 1997 at the cost of Rs 2.53 crore and Rs 10.58 crore respectively repaired or replaced as of March 2000, thereby impairing the functioning of the MPS and the STP even after the detection of the defects in September 1998. Because of this defect, bulk material and polythenes got easily passed into pumping stations choking the pumps and the STP. The Committee are informed that the agency attended to the defects by deputing their staff many times but the screen did not work upto the mark. Going by this trend, the Committee are doubtful of the selection of contractors for schemes implemented in the State.**

#### **C. DELHI**

**15.28 The Committee have been informed that sewage estimates are based on population and water supply rates, with the sewage generation taken as 80% of the water supplied. Though NRCD found the criterion flawed and fixed its own criterion of actual flow of drains at the outfalls to estimate the generation of sewage in the town in the GAP-II. But Committee have noted that the NRCD had no mechanism to evaluate and check the estimations of**

sewage by the States. It was found that the sewage estimation of 70MLD in NOIDA Town of Uttar Pradesh was incorrect, as it did not include the sewage of Shahdara drain, which discharges 404 MLD sewage in the river Yamuna at Okhla Barrage in Uttar Pradesh. The Committee were informed that Shahdara drain was not included in the proposals of NOIDA because, its sewage discharges generated from Delhi. The Committee desire that Delhi Government should take up the treating of Shahdara drain sewage waste and other drainage systems falling in Yamuna River at different places in and around Delhi on top priority basis so that the waters of Yamuna could be treated to the bathing level as has been envisaged in GAP-II. Delhi being a fastest growing city in terms of population, new STPs should be set up keeping in view the next 30 years demand of sewage disposal in respective areas of Delhi.

#### **D. UTTAR PRADESH**

##### **LUCKNOW**

15.29 During their study visit the Committee had noticed that inspite of the existence of Ghasiyari Mandi and Wazirganj Sewage Pumping Stations under the Gomti Action Plan (GoAP) in Lucknow, which comes under Phase-II of Ganga Action Plan, the pollution level in the river further increased due to direct discharge of sewage in the river from the partial sewerage system of the city. The GoAP was approved in the year 1993 for three towns, namely, Lucknow, Sultanpur and Jaunpur situated along the banks of river Gomti. The main cause of pollution of river Gomti at Lucknow, was untreated sewage of 26 drains discharged directly into the river Gomti that flow right in the heart of Lucknow. The Committee had learnt that presently the quantity of sewage effluents being discharged in the river was about 345 MLD. The Gomti Action Plan was started with British assistance in the year 1995. During the first phase of the plan, diversion of one nala, cleaning of a few trunk sewers alongwith some surveys and nala improvement works at the cost of Rs.7 crores was done

and a Master Plan for the sewage treatment & disposal of solid waste management was prepared. After the British Assistance was withdrawn in the year 1997, the project was converted into a 100% centrally funded scheme. Pollution abatement works under Gomti Action Plan Phase I amounting to Rs.26.94 crore were under different stages of implementation which included diversion of sewage of five nalas and construction of a 42 MLD capacity Sewage Treatment Plant at Daulatganj. After completion of Phase I works, about 10% of the total pollution reaching the river would be prevented. The Committee noticed that although the wastewater flow to the STP during peak hours touched 105 MLD, the STP at Daulatganj could only treat sewage upto 42 MLD. The Committee express serious concern over the submission of MD, UPJN that the STP plant could however tackle the peak flow of 105 MLD, which lasts for a few hours every day which nevertheless is a mammoth task for an STP installed to treat sewage upto 42 MLD. For remaining works of pollution control in the Lucknow City, as the Committee were informed, a comprehensive project report for Phase II of GoAP for creating additional treatment capacity of 375 MLD was awaiting approval from the Government of India which was reported to have been sanctioned only on 30.06.2003. The Committee, express serious concern over the fact that the Ministry of Environment & Forests have inordinately delayed a project that would mitigate the sufferings of the people affected by one of the worst polluted river. The Committee also observe that as the supply of power in the STPs was generally disrupted for around 2 ½ hours and due to non-availability of back up generator sets, the untreated sewage water was going straight into the river during those hours. The Committee therefore urge Ministry of Environment & Forests to prevail upon Uttar Pradesh government and their implementing agency, UPJN to take up concrete and alternative measures to ensure adequate power supply to the STPs and ECs and other assets created under GAP.

**15.30 The Committee are dismayed to note that even though Uttar Pradesh government had agreed to send a detailed report on the reasons for irregular diversion of funds of Rs.36 crore to the PAC, no such report had been submitted to the Committee so far.**

**15.31 The Committee express their serious concern over the amount of caustic soda flowing directly into the river Gomati from 30 dhobighats along the river in Lucknow and directed that the matter should be studied seriously to prevent flowing of chemical pollution into the river. The Committee do not agree with the submission of the Uttar Pradesh government that caustic soda affects the pH value of river water which do not have direct effect on pollution load especially when the very purpose of GAP is to maintain the Ganga waters at bathing class the pH value of which must be in between 6.5 to 8.5. The Committee would therefore urge the Ministry of Environment & Forests to take up this issue with the implementing agencies concerned and devise appropriate measures to contain effluents being discharged into the river from numerous dhobighats. The Committee further observe that as STPs are not designed to treat plastic waste, adequate facilities should be devised to prevent plastic waste from polluting the river water.**

## **KANPUR**

**15.32 The Committee have noted that though around 360 MLD sewage water was flowing into the river Ganga in Kanpur city, the existing arrangement could tap only 171 MLD waste water including 9 MLD of (tannery waste water) in Jajmau under GAP-I. The Committee during their study visit learnt that due to various operational problems in the 130 MLD. Jajmau STP, only 55 MLD was being treated at the moment due to various operational problems like choked sewer, erratic power supply & O&M problems of STPs. Having seen the site position and quality of effluent being treated there, the Committee desire that the sample of the treated**

water from Jajmau STP may be got tested again in an independent competent laboratory to check authenticity of the claims by the UPJN. The Committee express grave apprehension that with 354 tannery units in Kanpur, there is danger of the wastewater in the city having alarming levels of heavy metals like chromium. Out of these as per the latest information given by Uttar Pradesh government, while the 210 chrome tanning tanneries are required to instal chromium recovery plants to save them from closure, only 57 tanneries had installed such plants and in 12 tanneries, the Chromium recovery plants were since under construction. The Committee took serious view of the fact that though 93 tanneries were ordered to be closed by the UPPCB but none had been closed so far. The Committee are concerned to note that even the existing STPs in the city, have been facing problems of chemical erosion of mechanical parts due to untreated tannery waste mixing into domestic sewer lines. What has perturbed the Committee is that a project for resolving this problem amounting to Rs. 1.34 crore for Common Effluent Treatment Plant (CETP) for group of small tannery units devised by Central Leather Research Institute has not yet been approved by the Government of India. The Committee therefore reiterate that the Ministry of Environment & Forests, the Central Pollution Control Board, the UPPCB and as well as District Administration must act fast to prevent deadly chemicals from further polluting the river and the surrounding areas the severity of which has reach such alarming proportions that due to presence of chromium in the irrigation water, the crops grown in Kanpur area were not getting good remuneration in the market. The Committee express grave concern over the fact that the tannery-owners were not complying with the directive to set up Chromium recovery plants and the orders of the Hon'ble Supreme Court for bearing 50 per cent operation and maintenance cost of the 36 MLD CETPs, causing unabated pollution in the river.



**15.33 On the issue of electric crematoria, the Committee noticed that though Kanpur city had two such crematoria, only one crematorium was functioning right now. The other was said to be non-functional due to non-payment of electricity bills worth Rs.52 lakh. The Committee express their dissatisfaction over the idling of assets created under GAP in the city and are of the view that Uttar Pradesh Government have failed to keep their commitments of contributing matching share to GAP. Another issue, which the Committee would like to highlight, is the plight of working conditions of the manual labourers who were seen working in the sludge without protective gear. The Committee have also come to know that some of the workers were not paid salaries for the last 3-4 months and desired that responsibility should be fixed for such lapses.**

#### **ALLAHABAD**

**15.34 The Committee are informed that in Allahabad, against 210 MLD (2002) total domestic sewage being generated, treatment capacity of only 60 MLD had been created under GAP-I with the completion of all the 19 schemes costing Rs. 30.12 crore that had been started in the year 1986 in the city. The Committee, however, have taken a serious view for the Ministry of Environment & Forests' inapt handling of Naini STP issue which had not only cost Rs. 1.20 extra but also resulted in time overrun of five years though one of the reason was that the contractors, M/s Driplex, New Delhi could not complete the work as per agreement. The Committee take a strong view of the fact that Ministry of Environment & Forests' policies have not been strong and convincing enough to ensure timely completion of schemes and would like them to be very strict while dealing with such matters in future and fix responsibility for the delay in implementation of various schemes under GAP-I & II. Further, the Committee observe that at the STPs at Allahabad, the full flow of waste water was not coming in due to long hours of power cuts as well as worn-out condition of sewer lines which nonetheless lead to nonfunctioning of STPs thereby nullifying the**

very objectives of installing them. The Committee, therefore, urge the Ministry of Environment & Forests and Uttar Pradesh State Government, implementing agencies and local bodies to assess the gravity of such a situation and take remedial action on priority basis in a time bound manner.

15.35 During their study visit, as an unpleasant experience, the Committee caught sight of many non-cremated dead bodies freely floating in the river waters giving a distasteful spectacle to the visitors coming from far and wide. The Committee were apprised that due to religious significance of the city, many cremations were taking place on the bank of the river which was a major cause of pollution. The Committee observe that this is because of ineffective public awareness campaign being initiated by any of the civic authorities to dissuade people from doing so. The Committee would like the Ministry of Environment & Forests and agencies concerned in the State to come out with a concrete plan for an awareness campaign, even with the help of law enforcing agencies and religious seers, if necessary, to inculcate a scientific temper in the people, alongwith religious point of view so that people do not become a compulsive partner in polluting a river they revere as 'holy'.

15.36 The Committee have also noted that there was a direct discharge from a drain coming from the Army establishment carrying polluted water directly into the Sangam Area. They, therefore, urge the officials to take up this matter with the Defence Ministry on priority basis so that they could install a STP to treat their wastewater prior to its release into the river. Furthermore, the Committee desire that elaborate arrangements should be made for compulsory and effective sewage water treatment in the new and upcoming residential colonies by means of formulating plans to set up more STPs, Oxidation ponds and fishponds to keep the river pollution under control. The Committee also observe that the Ministry of Environment & Forests and the State Government officials had erred in not

having taken enough cautious steps in installing a pumping station at Lukarganj whose inadequately installed outgoing sewer has been causing over flow from manholes. The Committee would like the Ministry of Environment & Forests to be more careful while approving DPRs in future.

## **VARANASI**

15.37 The Committee notice that the cause of the pollution of river Ganga at Varanasi is due to different activities along the ghats such as bathing, washing of clothes, open defecation, cattle wallowing, disposal of dead bodies, dust and garbage and disposal of flowers and leaves and other “pooja Samagree” from various temples, which is estimated to be nearly 10 tonnes per day. The Committee have been informed that under GAP-I, pollution abatement efforts were taken in Varanasi with the objective to intercept and divert 122 MLD domestic waste water and set up treatment capacity of 102 MLD. Accordingly 34 schemes were devised which covered interception, diversion and treatment of sewage, low cost sanitation, river front development, water quality monitoring etc. Under GAP Phase-I, the UPJN undertook renovation of existing 5 SPS, rehabilitation of Assi and Konia MPS, construction of dhobighats, lanes and by lanes, cleaning of sewers and construction of Sulabh Complexes at the sanctioned cost of Rs.45.11 crore. The Committee are of the view that a realistic study of the actual ground situation was not undertaken at the time of drafting of the Ganga Action Plan which led to escalation of costs in all the cities in UP where the works under GAP were implemented. The Committee observe that the GAP schemes should have been formulated anticipating the sewerage conditions prevailing in the cities at least 25 years later. Even though the representatives of the Ministry of Environment informed that the existing sewerage manual, pertaining to GAP, directed that the sewer lines, once laid, should be able to handle waste water load upto next 30 years. Due to time and cost overruns, the implementation of GAP as a measure to keep water of river Ganga at bathing standards is

going to be a never-ending exercise. The Committee observe that the cost of maintaining STPs in Varanasi at Rs.7.5 crore per annum is quite high and without devising a mechanism for making STPs and other assets as a source of revenue by way of “users pay” and “beneficiaries pay” principles and also by way of selling its useful by-products, there is no other way for the States to bear such huge operating cost of assets. As in the case of Varanasi, the Committee urge that sewer tax may be levied in other cities as well, under a sound mechanism. Taking note of inadequate monitoring of GAP works in almost every place, the Committee desire that at the State level, Governments should find out the snags that have been hampering constitution and effective functioning of Citizens Monitoring Committees (CMCs) for each town, as per the direction of the NRCD issued in March, 1995, which could monitor the execution and timely completion of the schemes and also generate public awareness and participation.

**E. BIHAR**  
**PATNA**

15.38 Despite claims and counter claims regarding Bihar government's inability to ensure optimum utilization of assets created under GAP, the Committee are concerned to note that Bihar government have not been able to complete two schemes under GAP-I, STPs at East Zone Patna and Munger, though financed 100 per cent by the Central government till date, after a lapse of more than 13 years of its schedule date of completion ostensibly due to land acquisition disputes, even though GAP-I was officially declared closed on 31.03. 2000. The Committee are shocked to know that Rs.1.17 crore out of the GAP funds had been deposited in a personal account of the Managing Director, Bihar Rajya Jal Parishad between the period 1986 – 2000 despite the fact that Bihar government have a suitable mechanism to ensure effective utilization of funds released to the implementing agencies. The Committee, therefore, observe that by claiming that no financial irregularity exists in the expenses incurred by

implementing agencies, Bihar government, unfortunately though, are trying to conceal glaring financial irregularities committed by its implementing agencies instead of bringing the offender to book. The Committee, therefore, desire that responsibility be fixed for such a lapse and the Committee be apprised of the action taken in this regard. The Committee also desire that a detailed report on the reasons for non-functioning of GAP schemes and those responsible for the same as well as other financial irregularities may be sent to them alongwith the provisions made or contemplated for the proper O&M of the STPs, ECs and other assets created in the State. What has caused more concern to the Committee is that no sewage treatment scheme has been sanctioned to the State under GAP-II as yet particularly when GAP-II was originally scheduled for completion by December 2001. In this context the Committee are perturbed to have the contradictory statements made by Ministry of Environment & Forests and Bihar government. While Ministry of Environment & Forests are insisting that State governments are very slow in the preparation of DPRs and very often that too, not as per the norms prescribed by them; Bihar government have submitted that they were able to submit DPRs within the time limit without any major problem but schemes could not be sanctioned due to frequent observations made by NRCD from time to time. This is almost the same in the case of Uttar Pradesh also. The Committee therefore, while urging Ministry of Environment & Forests to issue clear cut parameters and guidelines for ensuring proper preparation of DPRs by States at one go, would like to be apprised of the comprehensive details as to what has gone wrong in the case of DPRs submitted by Bihar government.

15.39 The Committee have taken a very serious view of the fact that Bihar Government has violated the NRCD guidelines on construction of community toilets in 9 towns namely Chapra, Patna, Hazipur, sonapur, Mokama Barauni, Buxar, Munger, Bhagalpur and Sultanganj built with a

cost of Rs.1.09 crore. The toilets were built in the campuses of Government/semi-Government/Private institutions instead of at places, which contribute sewage pollution to the river. The reply of the Government is that in the absence of toilet facilities, people go for open defecation and the wastes so generated ultimately reach river Ganga through open drains. This argument is not at all tenable and the State Government cannot allow the open drainage directly leading to the River Ganga, more so when the guidelines are clear that the STPs should be set up at major drainage systems and no untreated sewage-waste should be allowed to pollute the Ganga directly. It is a clear violation of GAP guidelines and the funds should not be allowed to be misused any more and the funds already spent, should be adjusted against sanctions that may be made for other schemes in future.

#### **F. WEST BENGAL**

15.40 The Committee are concerned to note that as of March 2000, against a target of treating 373.63 MLD sewage, no achievement had been made by West Bengal government, the total achievement under GAP in the State is in treating 341.60MLD against a target of 750.23MLD. The Committee are informed that in GAP-II, the state government had identified 191 schemes out of which NRCD had sanctioned 93 schemes so far and 27 schemes are yet to be sanctioned. Another 62 more schemes are yet to be formulated and sent to NRCD. Out of these 62 schemes, 50 schemes relate to public participation for which the Ministry of Environment & Forests are supposed to give the state governments the guidelines. The Committee, therefore, once again, attribute the responsibility for delay in achieving targets in the State to the Ministry of Environment & Forests who have so far failed to process the DPRs and formulating/forwarding the guidelines for public participation in the implementation of GAP schemes.

**15.41 The Committee are concerned to note that selection of towns in the State were carried out in a questionable manner. The Committee are surprised to find the exclusion of Uluberia with a BOD of 43.07 mg/l of wastewater when 8 towns with BOD levels below 3 mg/l, the only parameter for selecting towns, were approved by the NRCD in West Bengal. The Committee find that the State Government's had even violated their own adapted parameters for selection of towns with 30 mg/l BOD of wastewater.**

**15.42 The Committee are perturbed to find that execution of GAP schemes in the State had been carried out in a very arbitrary manner. Out of the 4 schemes of interception & diversion sanctioned by NRCD under the GAP-II, the implementing agencies could complete none till March 2000. The stipulated dates for 3 schemes were already over. The Committee are also concerned to note that Calcutta Metropolitan Development Authority (CMDA), now known as Kolkata Metropolitan Development Authority, did not furnish the details of targeted and laid sewer lines under the GAP-II to Audit in the absence of which no proper evaluation of works under taken in this sector could be done. KMDA had indulged in a series of avoidable financial losses in the construction of 3 pumping stations at Cossipore-Chitpur, laying of sewer line at Nabadwip in 1989 without undertaking soil investigations even though the sub soil of Nabadwip town was sandy in nature and in approving of a defective design, the construction of lifting station at Howrah. Further, the Committee find that in the case of laying of sewer lines of interception & diversion and STP schemes at Behrampore for treatment of 4 MLD sewage at the total cost of Rs 2.32 crore, no necessary spadework such as proper soil investigation were carried out which has resulted in wasteful expenditure of Rs 2.32 crore. In another case of substandard execution of an interception & diversion scheme at Hooghly-Chinsurah at a cost of Rs 4.91 crore in June 1994, the Committee noticed that the CMDA did not cast bed concrete before laying the sewer lines. Ultimately, this technical flaw in execution of work led to failure of the**

sewer lines. The CMDA noticed similar road subsidence during 1998-99 along different alignments of sewer lines in Bhatpara. Though CMDA took up repairing of damaged sewer lines as well as surface roads, the work remained incomplete as of March 2000. The Committee are perturbed that no responsibility has been fixed even after the enquiry Committee report had concluded that the lapses were on account of negligence and failure on the part of supervisory staff engaged in execution of these works. The Committee while admonishing West Bengal government to strictly adhere to the financial norms and other guidelines of the scheme, desire them to be fully accountable for the schemes implemented in the State.

15.43 The Committee are concerned to note that the NRCD had not sanctioned any STP under the GAP-II as West Bengal Government did not confirm the availability of land. The Committee observe that the State government had not taken a serious approach to address this issue as a result of which the construction of 30 MLD STP at South Suburban East in Calcutta work remained incomplete till March 2000. The Committee also take a serious note of the construction of Matkal and Bangur STPs, which are not originally included under GAP schemes. Taking a cue from the Ministry of Environment & Forests and as well as State government's submission, the Committee are of the view that since the treated effluents from the STPs have been taken to a nearby canal, that is Bagjola Canal, the same untreated sewage could have been discharged into that canal and hence there was no need for diverting GAP funds.

#### **General Observations**

15.44 The Committee called for evidence of Chief Secretaries of State Governments of Uttranchal, Haryana, Uttar Pradesh, Bihar and West Bengal to have an appraisal of the GAP-I & II scheme's implementation, with due permission of Hon'ble Speaker, Lok Sabha. However, to the astonishment of Committee none of the Chief Secretaries turned up and only the



Secretaries of concerned department attended the sitting of the Committee. But in case of Bihar, neither Chief Secretary nor any State Government representative turned up and nor any difficulty explained to the Committee. The Chief Secretary of Bihar did not even respond to the queries raised by the Committee. The Committee strongly deplore the attitude of State Governments official and particularly of Bihar Government and recommend that responsibility should be fixed on the erring officials of the State Government.

NEW DELHI;  
4 January, 2004  
15 Magha 1925 (Saka)

SARDAR BUTA SINGH,  
Chairman,  
Public Accounts Committee

## Organisational structure

## ANNEXURE-I

The organizational structure and composition of each of the bodies for implementation of the Ganga Action Plan are as follows:

S.No.	Body	Functions	Chairman	Members
1.	NRCA	Policies, Programmes, Approval & Review	Prime Minister	Concerned Chief Ministers, Central Ministers and MPs
2.	Standing Committee	Progress review of Ganga Action Plan	Minister for Environment and Forests	Planning Commission, Secretary- Ministry of Environment and Forests, Director Centre for Science and Environment  Member Secretary- Additional Secretary and Project Director NRCD
3.	Steering Committee	Fund allocation and Programme formulation	Secretary Environment and Forests	Chief Secretaries of the Concerned states, representatives of Central Ministries, Specialised Organisations and Action Plan Approval experts
4.	Monitoring Committee	Technical monitoring, progress review and feedback to Steering Committee and the NRCD	Member (Environment), Planning Commission, New Delhi	Secretary ( Environment and Forests), Special Secretary (Planning Commission), Specialists/Experts of some organisations
5.	National River Conservation Directorate	Monitoring and servicing the NRCA and Steering Committee	Project Director	-
6.	Central Government	Study reports and technical inputs	-	Specialised Department and Central Pollution Control Board, Central Water Commission and Ministry of Non-Conventional Energy Sources
7.	State Governments	Programme formulation and coordination	-	Nodal Departments: Public Health Department, PWD, Urban Development Department
8.	State Agencies	Execution and maintenance of schemes	-	Water and Sewage Boards, Pollution Control Boards, Development Authorities, Local Bodies.
9.	Research Committee	-	Dr. M.S. Swaminathan	-