

CHAPTER 2

Chapter 2

Department of Environment

2.1 Performance Audit on 'Implementation of Environmental Rules and Laws by Uttar Pradesh Pollution Control Board.'

Executive Summary

Uttar Pradesh Pollution Control Board (UPPCB) was set up by the Government of Uttar Pradesh (GoUP) in the year 1975 under the Water (Prevention & Control of Pollution) Act, 1974. UPPCB is the nodal agency of the State Government for planning, coordination, prevention and control of pollution and also protection of environment in accordance with environmental regulations.

Major Audit findings that emerged during audit are discussed below:

Planning

Inventory of polluting sources not prepared

UPPCB did not have comprehensive and complete inventory of existing industrial units. In absence of inventory, polluting sources and the type and quantity of pollutants discharged into environment could not be identified.

(Paragraph 2.1.7.1)

Financial Management

Water Cess

- UPPCB failed to assess and raise water cess bills of the municipal authorities on a regular basis and even failed to realise an amount of ₹ 146.43 crore being the amount of bills raised during 2005-2014. Moreover, unrecovered Water Cess from industries also increased from ₹ 384.75 crore as on March 2012 to ₹ 1,050.13 crore as on March 2016.

(Paragraph 2.1.8.4)

- As per section 8 of the Water Cess Act, water cess is collected by the UPPCB and deposited with the Government of India (GoI). Eighty *per cent* of the amount realised and deposited by UPPCB is reimbursed back to it by the GoI. UPPCB could not receive its share of water cess from Government of India amounting to ₹ 193.32 crore as it failed to utilise the water cess received earlier.

(Paragraph 2.1.8.4)

Water Pollution

Inadequate analysis of quality of water

UPPCB did not monitor six out of nine core parameters for assessment of quality of water in rivers and other water bodies due to insufficient testing facilities in the laboratories.

(Paragraph 2.1.9.1)

High pollution in rivers/water bodies in the State

The water quality of all 12 major rivers and six water bodies in the State including river Ganga and Gomti was not as per prescribed standard. BOD level and Total Coliform content was above the prescribed standard of equal or below 3 mg/l and equal or below 500 Most Probable Number/100 millilitre

(MPN/100 ml) respectively. The main reason was the inadequate sewage/industrial effluent treatment facilities and malfunctioning of existing treatment facilities. UPPCB failed to take appropriate action against the defaulters i.e. municipal authorities and industries.

(Paragraph 2.1.9.1)

Air Pollution

Inadequate monitoring of air pollutants

UPPCB was monitoring only three parameters of the air quality against prescribed 12 parameters notified by Central Pollution Control Board due to insufficient testing facilities.

(Paragraph 2.1.9.2)

Emission of Particulate Matter in excess of standard

Annual average level of PM₁₀ in six major cities i.e. Allahabad, Ghaziabad, Kanpur, Lucknow, NOIDA and Varanasi was generally very high ranging from 87 to 347 microgram per cubic metre as compared to the standard of 60 microgram per cubic metre. UPPCB failed to take adequate measures in this regard.

It could not monitor and ensure 100 *per cent* utilisation of fly ash generated at Thermal Power Plants at Aligarh, Raerbareilly and Sonbhadra. It did not record any reason for not monitoring the same.

(Paragraph 2.1.9.2)

Municipal solid waste (MSW) management

Partial treatment of municipal solid waste (MSW)

The MSW generation in the State was approximately 15,403 Metric Tonne (MT) per day. Out of this, only 1,521 MT per day was being treated as 620 municipal authorities did not have MSW treatment facility. UPPCB failed to take any action against defaulters under Environment (Protection) Act, 1986.

(Paragraph 2.1.9.3)

Contrast in pollution level in Varanasi and Lucknow

Audit studied the pollution levels in two important cities of the State i.e. Varanasi and Lucknow in regard to water, air and municipal solid waste during 2011 to 2015. Studies revealed that though population density in Varanasi was more than that of Lucknow, the water pollution in river Ganga near Varanasi was lesser than water pollution in river Gomti at Lucknow. Air pollution was also lesser in Varanasi than in Lucknow. Vehicular population in Lucknow was more than double that of Varanasi which contributed to enhanced air pollutant levels in Lucknow. As regards MSW management, treatment facility in Varanasi has been started whereas in Lucknow it is still under trial run.

(Paragraph 2.1.9.4)

Bio-medical waste management

Inadequate facility of bio-medical waste (BMW) treatment

There were 8,366 Health Care Establishments (HCEs) out of which 3,362 HCEs were operating without authorisation. Total BMW generated in the State was 37,498 kg/day out of which only 35,816 kg/day was treated and disposed off. BMW of 1,682 kg/day was being disposed off untreated due to inadequate treatment facility. But UPPCB failed to monitor unauthorised operation and untreated disposal of BMW and did not take any action against the defaulters.

(Paragraph 2.1.9.5)

Other Wastes***Illegal dump sites of Hazardous Waste***

There were five illegal dump sites (four at Kanpur and one at Deva Road, Barabanki) in the State where hazardous waste of approx 1,41,432 MT had been found dumped since many years but no effective action has been taken by UPPCB so far, resulting in contamination of ground water and air quality.

(Paragraph 2.1.9.6)

E-waste

Out of 27 E-waste recycling/collection/generation units in the State (total capacity of 89,886 Metric Tonne per Annum), 11 units (42,840 MTA comprising 48 *per cent* of total capacity) were operating without authorisation. However, UPPCB did not initiate any action against them.

(Paragraph 2.1.9.7)

Monitoring***Inadequate inspection of industrial units***

The mechanism of inspection of industries by UPPCB was deficient as the selection of the industries for inspection of Red (highly polluting), Orange (moderately polluting) and Green (least polluting) categorisation of industries was done in arbitrary manner and against norms. Moreover, there was shortfall in fixation of target of inspection against the norms prescribed by the Ministry of Environment and Forest, GoI and its achievement.

(Paragraph 2.1.10.2)

2.1.1 Introduction

Uttar Pradesh Pollution Control Board (UPPCB) is the nodal agency of the State Government for planning, coordination, prevention and control of pollution and also protection of environment in accordance with environmental regulations. UPPCB was set up by the Government of Uttar Pradesh (GoUP) in the year 1975 under the Water (Prevention & Control of Pollution) Act, 1974. UPPCB was also entrusted with the responsibility of enforcement of the Air (Prevention & Control of Pollution) Act, 1981 and the Environment Protection (EP) Act, 1986.

The Environment Acts provide UPPCB a predominant role in monitoring of compliance with the provisions of these Acts by industrial units, municipal bodies, hospitals, etc. To enable it to discharge the mandated functions effectively, UPPCB is vested with powers to obtain information from the persons in charge of any establishment; inspect and collect samples of effluents/emissions; grant/reject/withdraw consent to establish/ consent to operate of any industry, operation or process, etc. The role of UPPCB has been detailed in **appendix 2.1**.

2.1.2 Organisational Set up

UPPCB is an autonomous body under the administrative control of Department of Environment, GoUP. UPPCB consists of 17 members who are nominated by the State Government. Besides the Chairman and the Member Secretary, there are seven official members representing various State

Government departments and eight members representing corporations, local authorities and other institutions. UPPCB functions with one Head Office at Lucknow, seven Circles and 28 Regional Offices (ROs). The organogram of UPPCB is given in **appendix 2.2**.

2.1.3 Audit Objectives

The objectives of this Performance Audit were to assess whether:

- Proper planning has been done by the UPPCB to ensure compliance of environmental Laws and Acts;
- Financial management by UPPCB is efficient to secure optimum utilisation and that mechanism for internal control was in place and functioning effectively;
- Mechanisms have been put in place by the UPPCB for effective implementation of the Water, Air, EP Acts and various Rules framed there-under for prevention, control and abatement of pollution; and
- There is adequate mechanism for monitoring the various provisions of Air, Water, EP Acts and various Rules framed there under and as per norms of Central Pollution Control Board.

2.1.4 Audit Criteria

The audit criteria for achievement of audit objectives were derived from the following sources:

- The Water (Prevention and Control of Pollution) Act, 1974 as amended in 1978 (Water Act);
- The Water (Prevention and Control of Pollution) Cess Act, 1977 (Water Cess Act);
- The Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Air Act);
- The Environment (Protection) Act, 1986 (EP Act) and various Rules¹ under EP Act;
- Directions and notifications issued by the Central/State Government, Central Pollution Control Board (CPCB) and UPPCB.
- General Financial Rules, 2005 (GFR) as amended.
- Environmental Standards evolved by CPCB.

2.1.5 Scope and Methodology of Audit

Performance Audit on the “Implementation of Environmental Rules and Laws by Uttar Pradesh Pollution Control Board” was conducted between February 2016 and July 2016 covering the period from 2011-12 to 2015-16. The focus areas of audit were to examine implementation of environmental rules and laws to address environmental pollution, adequacy of measures adopted and the efficiency with which they have been executed and to assess the

¹ The Environment (Protection) Rules, 1986; The Bio-Medical Waste (Management and Handling) Rules, 1998; The Municipal Solid Waste (Management and Handling) Rules, 2000; The E-waste (Management and Handling) Rules, 2011; and The Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008.

effectiveness in funds management and internal control in respect of programmes relating to pollution and compliance with relevant statutes. Audit also assessed whether the measures adopted in addressing pollution had the desired impact in abatement or control of pollution in the State.

The audit methodology comprised examination of reports and records, analysis of documents at UPPCB headquarter office, two² out of seven circle offices and seven³ out of 28 regional offices. Besides, records of various waste treatment facilities⁴ and four rivers⁵ were also selected for examination.

Audit also conducted beneficiary survey in five cities⁶ in November 2016 to get the views of public about the pollution and role of UPPCB in prevention, control of pollution and protection of environment. The written opinion of a total 256 people in five cities was taken through a questionnaire regarding pollution of Water, Air, Municipal Solid Waste, Bio-Medical Waste and E-waste. The result of the survey has been suitably incorporated in the report.

An Entry Conference was held on 16 February 2016 with the Chairman, UPPCB cum Principal Secretary and Member Secretary of UPPCB wherein audit objectives, scope of audit, audit criteria and methodology were discussed.

The draft Report on audit findings was sent to the management and the Government in July 2016. Audit findings were discussed with the Chairman, UPPCB cum Principal Secretary and Member Secretary in the Exit Conference held on 31 August 2016 in which the Government and the management agreed with the recommendations given by Audit. Replies to the draft Report received (October 2016) from Government and the management have been incorporated at appropriate places in the Report.

2.1.6 Acknowledgement

The cooperation extended by the Member Secretary, UPPCB along with staff is hereby acknowledged.

Audit Findings

Audit finding are discussed in succeeding paragraphs:

2.1.7 Planning

2.1.7.1 Inventory of polluting sources not prepared

As per section 17 of Water and Air Acts, UPPCB was required to plan comprehensive programmes for prevention and control of water and air pollution. For this purpose, polluting sources and the type and quantity of pollutants discharged into environment were to be identified.

² Circle I & II located at HQ, Lucknow

³ Aligarh, Bareilly, Ghaziabad, Greater Noida, Kanpur, Lucknow and Noida

⁴ Two out of five Common Effluent Treatment Plants, 21 out of 59 Sewage Treatment Plants, all 20 Common Bio-medical Treatment Facilities, four out of 14 Municipal Solid Waste Treatment Facilities, all 20 E-waste Treatment Facilities, all four Hazardous Waste Treatment Facilities and 18 out of 180 Slaughter houses.

⁵ Ganga, Gomti, Hindon and Yamuna out of 12 rivers

⁶ Bareilly, Ghaziabad, Greater Noida, Kanpur and Lucknow

Under the existing environmental laws⁷, all types of industrial units are required to obtain 'Consent for Operation' (CFO) from UPPCB.

Audit noticed that UPPCB did not have inventory of 220 categories of small-scale industries (except polyethylene and plastic industries) which submit their application for establishment directly to General Manager, District Industrial Centre. As per the provisions of the Water Act and Air Act, these industries were required to submit the applications for consent of the UPPCB for operation and submission of application was to be deemed as consent. However, no such application was submitted to UPPCB by these 220 categories of small-scale industries. Thus, in absence of inventory of existing industrial units, polluting sources and the type and quantity of pollutants discharged into environment could not be identified.

In reply, the Government and the management stated (October 2016) that the inventerisation of industries was being prepared. The fact remained that inventory of polluting sources with UPPCB is incomplete and not comprehensive.

2.1.7.2 Preparation of Comprehensive programme

As per section 17 of Water and Air Acts, UPPCB was required to prepare comprehensive programme for the prevention, control or abatement of pollution of streams, wells and air in the State and to ensure the execution thereof.

Audit noticed that UPPCB did not prepare any comprehensive programme until 2013-14. In 2014-15, UPPCB prepared a five year Action Plan (Action Plan) for the period 2014-15 to 2018-19. Further, the physical and financial targets in the Action Plan were also largely unachieved as discussed in following paragraphs.

2.1.7.3 Environmental laboratories

Failure in establishment and upgradation of laboratories as per action plan

UPPCB could not establish and upgrade its laboratories as per action plan

As on March 2011, UPPCB had 16 laboratories⁸ which increased to 21 laboratories⁹ as on 31 March 2016. Besides, two ROs¹⁰ had laboratory for conducting air quality tests only. Audit noticed that UPPCB could establish only five laboratories¹¹ (₹ 7.00 crore) against the target for establishment of eight laboratories¹² (₹10.50 crore) up to 2015-16 as per the comprehensive plan. Moreover, UPPCB could not upgrade eight B-category laboratories¹³ (₹ 6.00 crore) to A-category laboratories in 2014-15 for recognition under EP Act/NABL. Also, UPPCB could not upgrade seven regional laboratories¹⁴ (₹ 1.75 crore) to B-category. Thus, in the absence of the required numbers of laboratories and not up-grading the laboratories as contemplated in the Comprehensive Plan (July 2014), UPPCB was not fully equipped to analyse the samples for water/ air pollutants.

⁷ Water Act, Air Act and concerned Rules as detailed in Audit Criteria.

⁸ 15 laboratories in Regional Offices and one central laboratory at headquarter office

⁹ 20 laboratories in Regional Offices and one central laboratory at headquarter office

¹⁰ Firozabad and Unnao

¹¹ Bijnore, Bulanshahar, Faizabad, Muzaffarnagar, and Sonbhadra in 2015-16

¹² Bijnore, Bulandshahar, Muzaffarnagar and Sonbhadra in 2014-15 and Banda, Basti, Faizabad, and Kanpur Dehat in 2015-16.

¹³ Allahabad, Ghaziabad, Gorakhpur, Kanpur, Moradabad, Meerut, Noida and Varanasi.

¹⁴ Bareilly, Agra and Saharanpur in 2014-15 and Aligarh, Jhansi, Mathura, and Raebareilly in 2015-16.

In reply, the Government and the management stated (October 2016) that for further strengthening of Regional Laboratories of UPPCB, the specification of instruments had been finalised. However, the management did not furnish reasons for not establishing/up-gradating the laboratories as per action plan. Moreover, the fact remains that the UPPCB has inadequate in-house infrastructure facility for testing.

Insufficient equipment/instruments and testing facilities in the laboratories

UPPCB failed to equip its labs with facilities of analysing hazardous waste and sediments

As per CPCB guidelines issued in June 2008, every laboratory should have facilities for a minimum of six categories of tests, viz. physical, inorganic, organic, microbiological, toxicological and biological tests for water analysis. Similarly, for air analysis, the laboratory should have facilities for five categories of tests. An environmental laboratory should provide for facilities for hazardous waste and soil/sludge/sediment/solid waste analysis.

Audit noticed that none of the laboratories except central laboratory had the capacity for conducting all the mandatory tests. The existing equipment/instruments were not in conformity with the mandatory equipment/instruments required for water, air and waste analysis as per CPCB guidelines (**Appendices 2.3 and 2.4**). The details of vital equipment which were missing at regional laboratories especially at NOIDA, Ghaziabad, Kanpur, Aligarh and Bareilly have been given in **appendix 2.5 (a)**. In absence of such vital equipment, the regional laboratories were unable to test and monitor biological, toxicological and hazardous pollutants.

It was further noticed that:

- As per Action Plan, the UPPCB decided to equip its five labs¹⁵ with the facility of analysing hazardous waste in a phased manner during the period from 2014-15 to 2018-19. Out of these, central laboratory and regional laboratory at Ghaziabad were to be equipped by 2015-16 with this facility at a cost of ₹ three crore but it was not done. Equipment/instruments required for hazardous waste analysis such as bomb chlorometer, elemental analyser, etc. are detailed in **appendix 2.5 (b)**.

UPPCB failed to establish system for linking regional lab with central lab for online monitoring the air pollution by grossly polluting industries

- As per Action Plan, for evaluating quality of sediments in the water bodies, UPPCB was to develop sediment analysis facilities (estimated cost ₹ 50 lakh) in the central laboratory in 2015-16. However, facility for checking nine parameters against required fifteen parameters was only developed as of March 2016 (**Appendix 2.3**).

- For the purpose of enabling online exchange of data between regional laboratories and central laboratory, an Integrated Laboratory Management Software was to be implemented at a cost of ₹ 8.70 lakh by 2014-15. However, the same could not be implemented till March 2016.

- CPCB directed for online monitoring of air pollution of 17 categories of grossly polluting industries by March 2015. Accordingly, UPPCB planned to purchase central computer system and server (₹ 10 lakh) to be installed at the central laboratory by 2014-15. The benefits of the software were immediate availability of data for monitoring purpose and taking timely action, timely updation of data, saving of manpower etc. However, the same could not be installed till March 2016.

¹⁵ Central and regional laboratories at Ghaziabad, Kanpur, Moradabad and Varanasi.

In reply, the Government and the management stated (October 2016) that for further strengthening of Regional Laboratories, UPPCB had prepared specification documents for purchase of sophisticated instruments. It was also stated that hazardous waste analysis was being outsourced. However, the management did not furnish reasons for not establishing/up-grading the laboratories as per action plan. The fact remains that due to inadequate planning, testing facilities and equipment in the laboratory, UPPCB was not fully equipped to analyse the samples of pollutants. This also shows that UPPCB could not implement the action plan despite availability of funds and a huge amount of ₹ 21.68 crore remaining unutilised as of March 2016 (**Table 2.1.2 of paragraph 2.1.8.1**).

Accreditation of laboratories not obtained

None of the labs of UPPCB was accredited

As per Central Pollution Control Board (CPCB) guidelines (June 2008), laboratory accreditation provides recognition of technical competence including quality system management of the laboratories. Such recognition is considered the first essential step towards mutual acceptance of test results and test certificate.

Further, according to instructions issued (August 2011) by the Ministry of Environment and Forests (MoEF), GoI, UPPCB was required to acquire accreditation under the Environment Protection Act, 1986, ISO 17025 (NABL¹⁶ Accreditation) or ISO 9001 certification along with OHSAS¹⁷ 18001 certification within a period of one year for its laboratory.

Audit noticed that none of the 22 Regional laboratories (including newly established five laboratories) were accredited by CPCB/NABL/ISO 9001 due to not fulfilling of required infrastructure and other equipment/instruments as detailed in **appendix 2.5 (a)** and scientists/technicians as detailed in **appendix 2.20**.

Only the central laboratory of UPPCB was recognised by CPCB. NABL accreditation of central laboratory expired in 2014 on account of change in location of the laboratory. Thus, test results and test certificate issued by UPPCB's laboratories may not be considered for mutual acceptance as per CPCB guidelines/instructions as UPPCB did not obtain accreditation for its laboratories.

In reply, the Government and the management stated (October 2016) that the accreditation of central laboratory was in process as the criteria for recognition have been fulfilled by UPPCB. It was also stated that directions have been issued to respective ROs to initiate the process of accreditation of five regional laboratories in the first phase. The fact remains that none of the regional laboratories of the UPPCB is technically updated and accredited even after the expiry of one year timeframe fixed by MoEF and remains pending even after five years of MoEF's instructions (August 2011).

Recommendation

UPPCB should prepare complete and comprehensive inventory of polluting sources. It should ensure to achieve the targets of its action plan and

¹⁶ National Accreditation Board for Testing and Calibration of Laboratories

¹⁷ Occupational Health and Safety Assessment Series

upgrade its laboratories to have latest testing equipment and facilities for proper monitoring and get it accredited.

2.1.8 Financial Management

2.1.8.1 Financial Status

The receipts of UPPCB consist of grants received from the Government of India (GoI) for Water Cess, fees for issuing consent and authorisation, and other miscellaneous receipts including interest on investments. The total fund available with UPPCB during 2011-12 to 2015-16 was ₹ 298.86 crore¹⁸ (Table 2.1.1).

Table 2.1.1: Detail of total receipts of UPPCB during 2011-12 to 2015-16
(₹ in crore)

Year	Opening balance*	Fund received from				Total Fund received in the year	Total funds available
		Reimbursement of water cess from GoI	Consent fee	Authorisation fee	Others including interest earned		
2011-12	22.06	49.25	26.45	0.07	5.54	81.31	103.37
2012-13	40.14	21.49	25.23	0.07	9.16	55.95	96.09
2013-14	52.62	0	33.74	0.28	12.84	46.86	99.48
2014-15	41.81	0	30.24	0.12	9.38	39.74	81.55
2015-16	26.07	3.16	41.90	0.15	7.73	52.94	79.01
Total		73.90	157.56	0.69	44.65	276.80	-

(Source: Unaudited figures provided by UPPCB)

Note: *Figures of opening balance since 2009-10

The receipts would have been more had the amount of water cess of approximately ₹ 1,395.90 crore (₹ 1,050.13 crore against 429 industries, ₹ 146.43 crore against Municipal Authorities and ₹ 6.02 crore against NOIDA Authority and ₹ 193.32 crore as reimbursement from GOI) been realised as discussed in subsequent paragraphs. The total expenditure during the same period was ₹ 277.18 crore (Table 2.1.2).

Table 2.1.2: Detail of total expenditure of UPPCB during 2011-12 to 2015-16

(₹ in crore)

Year	Total Fund available	Expenditure				Total Expenditure	Unspent Balance
		Admin related	Pollution Control related				
			Creation of Capital Assets	Laboratory Equipment	Programme Implementation		
2011-12	103.37	44.27	16.79	1.84	0.35	63.25	40.12
2012-13	96.09	41.25	0.38	1.69	0.14	43.46	52.63
2013-14	99.48	45.05	9.48	2.76	0.37	57.66	41.82
2014-15	81.55	50.40	0.34	4.02	0.72	55.48	26.07
2015-16	79.01	53.03	0.35	3.67	0.28	57.33	21.68
Total		234.00	27.34	13.98	1.86	277.18	

As is evident from above, despite availability of sufficient funds, UPPCB incurred inadequate expenditure on pollution control measures as discussed in paragraph 2.1.8.5.

Audit noticed that UPPCB invests its surplus fund in fixed deposits with the banks after inviting quotations from them. However, it has not maintained any fixed deposit register. Moreover, UPPCB has also not obtained year end or

¹⁸ ₹ 22.06 crore being the opening balance plus ₹ 276.80 crore being the fund received during the last five years.

periodical reports from the concerned banks for confirmation of balances in fixed deposits.

2.1.8.2 Annual Financial Statements not prepared

Section 40 of the Water Act and section 36 of the Air Act stipulate that UPPCB shall maintain proper accounts and other relevant records and prepare an annual statement of accounts in such form as may be prescribed by the State Government. Further, the accounts of UPPCB was to be audited by an auditor duly qualified to act as an auditor of companies under section 226 of the Companies Act, 1956 and appointed by the State Govt.

Annual Accounts were not prepared since 2008-09 and not audited since 1992-93

It was, however, noticed that UPPCB did not prepare its Annual Financial Statements (Balance Sheet, Profit and Loss account and other Financial Statements) since 2008-09. Also, the accounts of the UPPCB had not been audited since 1992-93.

In reply, the Government and the management stated (October 2016) that efforts are being made for preparation and audit of accounts of subsequent years.

2.1.8.3 Bank Reconciliation not done

UPPCB maintains 16 bank accounts (six operational and ten un-operational) at Headquarter. The cash books of the Board in respect of six accounts were not reconciled with bank accounts. Audit scrutinised the balances as per bank accounts statements and cash book and noticed that there was difference of ₹ 1.11 lakh to ₹ 1.62 crore as detailed in **appendix 2.6**. Audit analysis revealed that the bank balances were in excess of the cash book balances. It was mainly due to not accounting for the interest earned on bank balances.

In reply, the Government and the management stated (October 2016) that directions have been issued to reconcile the remaining bank accounts. The fact remains that bank reconciliation was not done which reflects weak financial control and potential risk of undetected defalcation.

2.1.8.4 Deficiencies in compliance of the Water (Prevention and Control of Pollution) Cess Act, 1977 (Water Cess Act)

Water cess is a cess levied and collected under Water Cess Act and utilised there under. This cess shall be payable by every person carrying on any industry and every local authority, and shall be calculated on the basis of the water consumed by such person or local authority, at such rates specified by the Central Government from time to time.

Arrears of water cess against industries

Audit noticed that there was an arrear of water cess (₹ 1,050.13 crore) against 429 industries as detailed in the table given below:

Table 2.1.3: Statement showing arrears and recovery of water cess

(₹ in crore)

Year	No. of industries to whom bill raised	Amount of bills raised	No. of industries who paid	Amount recovered	Amount to be recovered
2011-12	1570	427.96	1086	43.21	384.75
2012-13	1793	737.87	1257	46.52	691.35
2013-14	1388	824.06	1027	53.28	770.78
2014-15	1545	806.78	1110	53.45	753.33
2015-16	1368	1092.61	939	42.48	1050.13

(Source – Information provided by UPPCB)

Lack of effort in realising water cess has resulted in accumulation of unrealised water cess upto ₹ 1050.13 crore as on March 2016

As is evident from the above table, the amount of arrears increased from ₹ 385 crore in 2011-12 to ₹ 1,050.13 crore¹⁹ in 2015-16. The same has not been realised till date. This indicates lack of efforts on the part of UPPCB.

In reply, the Government and the management stated (October 2016) that unrealised amount of water cess shall be collected through special drive from defaulting industries. The fact remains that due to lack of adequate efforts of UPPCB, the amount of unrealised water cess has accumulated enormously.

Arrears of water cess against municipal authorities and NOIDA

UPPCB failed to raise bills of water cess to municipal authorities regularly and realise the same

There are 636 municipal authorities²⁰ (March 2016) in the State. Audit noticed that UPPCB did not have system of raising bills of water cess regularly from the municipalities. Even the occasionally raised bills amounting to ₹ 146.43 crore (217 municipalities) during 2005-2014 could not be realised from any of the municipalities till date (March 2016). Besides, there was an arrear of water cess ₹ 6.02 crore against NOIDA for the period January 2004 to July 2005. It was noticed that the bills raised for the subsequent period were paid by NOIDA Authority. However, no efforts were made to recover the arrears of ₹ 6.02 crore for the period from January 2004 to July 2005.

In reply, the Government and the management stated (October 2016) that directions have been issued (September 2016) to all regional offices for assessment and raising of water cess bills regularly. The fact remains that UPPCB failed to assess and raise water cess bills regularly to municipal authorities. Moreover, no specific reply was furnished for realisation of arrear of water cess from NOIDA.

Less re-imburement of water cess to UPPCB

GOI did not reimburse ₹ 193.32 crore of water cess due to not utilising funds already reimbursed

One of the major sources of UPPCB's income is its share of water cess collected from industries/municipal bodies under Water Cess Act, 1977. As per section 8 of the Water Cess Act, water cess is collected by the UPPCB and deposited with the Government of India (GoI). Eighty *per cent* of the amount realised and deposited by UPPCB is reimbursed back to it by the GoI.

Audit noticed that UPPCB was not able to utilise the funds received from the GoI and there was an unspent balance of ₹ 7.72 crore as on March 2016. Due to under utilisation of the funds, UPPCB could not receive its share of water cess up to March 2016 aggregating ₹ 193.32 crore as on March 2016.

In reply, the Government and the management stated (October 2016) that necessary follow up action has been taken by UPPCB and GoUP. The fact remains that UPPCB could not receive due water cess from GoI as it failed to utilise the water cess funds received earlier.

2.1.8.5 UPPCB could not utilise funds earmarked for abatement of pollution

Audit noticed that UPPCB made provision every year in its budget for strengthening and widening of its activities attributable to abatement and control of pollution such as expenditure on pollution control measures, laboratory expenses, mass awareness programmes, laboratory equipment, etc. However, it incurred the budgeted expenditure ranging from 9 to 21 *per cent* only during 2011-12 to 2015-16 despite availability of funds. Further, due to

¹⁹ Includes ₹ 1029.87 crore of UP Rajya Vidyut Utpadan Nigam. Arrears include interest also.

²⁰ 14 Nagar Nigam, 198 Nagar Palika Parishad and 424 Nagar Panchayat.

Only 9 to 21 per cent of budgeted expenditure on pollution control measures was incurred during 2011-12 to 2015-16

delay in procurement process, UPPCB could not incur any expenditure on heads such as installations of air, sound and water monitoring stations, construction of mobile laboratories and regional labs, etc. despite making provision in the budget (**Appendix 2.7**).

Short utilisation of the funds resulted not only in failure of UPPCB in achievement of its mandated activities, but also resulted in less realisation of UPPCB's share in water cess from the GoI amounting to ₹ 193.32 crore till 2015-16.

In reply, the Government and the management stated (October 2016) that in compliance of the action plan, procurement of equipment was under process. The fact remains that UPPCB could not utilise funds fully earmarked for pollution control measures.

Recommendation

UPPCB should prepare the financial statement up to date and get it audited, reconcile bank accounts, ensure proper assessment and recover the water cess from industries/local bodies and its utilisation for pollution control measures.

2.1.9 Implementation of Acts and Rules

2.1.9.1 Water Pollution

Water pollution is the presence of harmful and objectionable material in water in sufficient concentrations to make it unfit for use. The Water Act empowers UPPCB to issue any orders for the prevention, control or abatement of discharge of waste into streams or wells and requires any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such existing system or to adopt such remedial measures as are necessary to prevent, control or abate water pollution.

Inadequate analysis of water

As per National Water Quality Monitoring Programme, there are nine core parameters²¹ for assessment of quality of water. Audit noticed that UPPCB was monitoring only three parameters, i.e., Dissolved Oxygen (DO), Bio-chemical Oxygen Demand (BOD), and Total Coliform (bacterial contamination). The impact of unmonitored other six parameters is given in **appendix 2.8 (a)**.

Sewage/industrial effluent treatment facilities

- *Absence of sewage/industrial effluent treatment facilities*

Out of 72 STPs, 18 STPs were not complying BOD standard

Sewage emanating from populated areas is one of the major sources of water pollution. As per section 25 of Water Act, the municipal bodies have to ensure that the sewage emanating from their jurisdictional areas is not released untreated and are responsible for management of the sewage under their jurisdiction.

Audit noticed that out of 75 districts in the State, 72 Sewage Treatment Plants (STPs) and five Common Effluent Treatment Plants (CETPs) were constructed in 20 districts. Out of these 72 STPs, 43 STPs (capacity of

²¹ pH, temperature, conductivity, Dissolved Oxygen, Bio-chemical Oxygen Demand, Nitrate, Nitrite, Faecal Coliform and Total Coliform.

The sewage treatment capacity in the State was only 11 per cent of sewage generated

1,501.305 MLD) were treating sewage as per standards while 18 STPs²² (capacity of 686.285 MLD) were not complying with the BOD standards and 11 STPs²³ were not operational yet (March 2016). Out of five CETPs, only three (capacity of 42.55 MLD) were operational. None of the STPs/CETPs had obtained consent from UPPCB.

Further, against total sewage generation of 20,380²⁴ MLD, total capacity of the installed, commissioned and operational STPs was 2,187.59 MLD only (11 *per cent*) (March 2016). Thus, the remaining 18,192.41 MLD (89 *per cent*) sewage was being discharged untreated into rivers/streams/lakes/open lands, notably at Aligarh, Bareilly, Jhansi, Gorakhpur and Moradabad, thereby causing extreme pollution. Besides, 686.285 mld of treated sewage was also being discharged was not as per prescribed standard.

The total budget requirement for creating sewage treatment capacity for 18,192.41 MLD will be ₹ 39,124.36 crore, considering ₹ 2.06 crore being the latest cost of STP for one MLD of sewage.

Thus, UPPCB failed to impress upon the local bodies the need for increasing the STPs, utilisation of the existing STPs to their full capacity and quality treatment of the sewage as per standards prescribed. The UPPCB also failed to take action against local bodies under Water Act.

In reply, the Government and the management stated (October 2016) that directions have been issued (April 2016) to seven Municipal Authorities²⁵ regarding treatment and utilisation of sewage for restoration of water quality of the river under section 33A of the Water Act. The fact remains that Municipal Authorities did not take appropriate action and therefore there is inadequate sewage treatment facility in the State which unless increased, will continue to affect the water quality of rivers. Moreover, UPPCB did not impose any penalty on Municipal Authorities under section 41(2) of the Water Act for not complying with the directions issued under section 33A.

Audit selected 21 STPs and two CETPs for test check. However, it was noticed that the concerned records were not available with the UPPCB as none of the STP/CETP had obtained consent from UPPCB. Hence, the records of U.P. Jal Nigam²⁶ were test checked to examine the functioning of STPs/CETP at Kanpur and Lucknow. The findings on functioning of STPs at Kanpur and Lucknow have been discussed in succeeding paragraphs.

• ***Inadequate/malfunctioning of sewage/industrial effluent treatment facilities at Kanpur***

The total generation of sewage is 462.14 Million Litres per Day (MLD)²⁷ at Kanpur out of which 24.14 MLD of industrial effluent is treated by individual industrial effluent treatment plants. The Ganga Pollution Control Units (GPCUs) of UP Jal Nigam operated three STPs of 345 MLD²⁸ capacity and

²² at Allahabad (03 STPs), Etawah (01 STP), Farrukhabad (01STP), Ghaziabad (04 STPs), Kanpur (03 STPs), Mathura (03 STPs), Sultanpur (01 STP) and Varanasi (02 STPs).

²³ at Allahabad (01 STP), Agra (01 STP), Bulandshahar (01 STP), Etawah (01 STP), Ghaziabad (01 STP), Kanpur (02 STP), Mathura (01 STP), NOIDA (01 STP) and Rampur (02 STP).

²⁴ As per CPCB, sewage generation of 102 litres /capita /day for population of 19.98 crore of UP

²⁵ Agra, Ghaziabad, Lucknow, Allahabad, Kanpur, Meerut and Varanasi

²⁶ UP Jal Nigam operates STPs/CETP on behalf of municipal authorities.

²⁷ as per UP Jal Nigam Report 2016; sewage generation is 412 MLD domestic sewage, 26 MLD tanneries waste water and 24.14 MLD industrial waste water

²⁸ 130 MLD STP at Jajmau ; 5 MLD at Jajmau and 210 MLD STP at Bhingawan

one CETP of 36 MLD at Kanpur in which sewage water/tanneries waste water from 23 drains out of 26 drains is fed for treatment.

Audit noticed following deficiencies during the test-check of records of STPs/CEPT at Kanpur:

Sewage treatment capacity at Kanpur was only 381 MLD against the sewage of 438 MLD. Moreover, against the capacity of 381 MLD, only 213.14 MLD was treated

- There was a gap of 57 MLD²⁹ in the total domestic and industrial sewage generated) and sewage treatment capacity. In this regard, Audit noticed that construction of additional three sewage treatment plants of 100 MLD³⁰ capacity was started in 2008-09 to 2009-10 but was yet to be completed (March 2016). Out of three STPs, construction of two STPs (43 mld – 90 per cent completed and 15 mld - 15 per cent completed) is held up due to protest of farmers. The third STP of 42 MLD capacity is in progress and it is 89 per cent complete (March 2016).

- Against the total sewage treatment capacity of 381 MLD, only 213.14 MLD was treated and remaining 167.86 MLD was directly drained in the river Ganga and its tributary. The untreated sewage (167.86 MLD) includes 17 MLD of Tanneries Waste Water (TWW) as only nine MLD of TWW against the 26 MLD of total TWW is being treated by CETP.



Sisamau nala containing domestic sewage and industrial waste falling in river Ganga at Gwal Toli, Kanpur

- It was further noticed that even the treated water was not as per norms. As per test reports of UP Jal Nigam, the treated water from CETP being discharged for irrigation purposes contained very high Bio-chemical Oxygen Demand (BOD³¹), TSS³² and chromium³³ against the norms during 2013-15. Thus it was not fit for irrigation purposes. Similarly, the treated affluent from 130 MLD STP, Kanpur, 5 MLD STP, Kanpur do not conform to the norms. This indicates that CETP and STPs are not functioning well and even the treated water was not as per norms. This defeated the purpose of installation of CETP/STPs. The operator of the CETP (U P Jal Nigam) should ensure its proper functioning.

- Treatment of tannery waste by CETP generates sludge which is of hazardous nature. Handling of this sludge requires authorisation from UPPCB under the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 which was not obtained by Kanpur Nagar Nigam who owns this CETP.

²⁹ 462.14 - 24.14 - 381 = 57 MLD

³⁰ 43 MLD and 15 MLD STPs in Part I of Kanpur district and 42 MLD STP in Part IV of Kanpur district

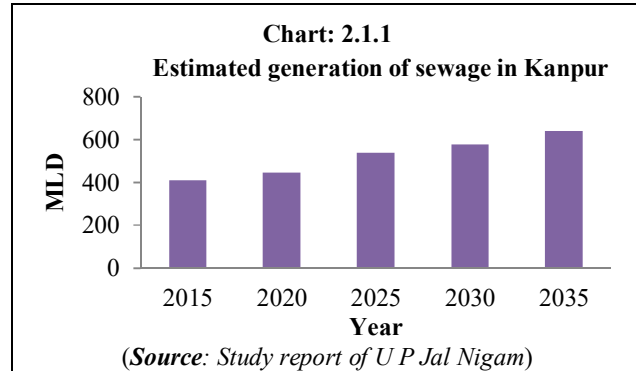
³¹ BOD ranged from 172 to 292 mg/l against the norm of ≤ 100 mg/l

³² TSS ranged from 172 to 616 mg/l against the norm of ≤ 200 mg/l and

³³ Chromium ranged from 100mg/l to 216 mg/l against the norm of ≤ 2 mg/l

Although treatment plants were being operated without consent, UPPCB failed to exercise its power under the Act to issue legal notices to all concerned. Thus, UPPCB did not take effective action for the prevention, control or abatement of water pollution as envisaged in section 17 of the Water Act.

Management accepted the audit observation and stated (July 2016) that the State Government has proposed (April 2016) a new CETP of 25 MLD for treatment of tannery effluent/domestic effluent. However, the approval of the UPPCB has not yet been sought for. The facts remains that there is an inadequate treatment facility, STPs are running below their capacities and even treated effluent/sewage



is not as per norm. However, UPPCB did not furnish the reason for not imposing penalty on the defaulters. Moreover, there is no action plan for treatment of increase in sewage in future as depicted in the chart 2.1.1:

• **Physical inspection of Common Effluent Treatment Plant**

Joint physical inspection of CETP at Kanpur showed that there was unbearable odour due to TWW sewage and the flow meters were not operational.



The level of BOD and Total Coliform was above the prescribed standard in all 12 major rivers and six water bodies

High pollution in rivers/water bodies in the State

UPPCB monitors the level of pollution in the rivers and water bodies of the State at 53 places by collecting sample once a month. Audit obtained and analysed the test reports (2013-15) of the water samples of 12 major rivers and six water bodies.

The prescribed norms of these three parameters for bathing water in rivers is – DO should be equal or above 5 milligram/litre (mg/l); BOD should be equal or

below 3 mg/l and Total Coliform³⁴ should be equal or below 500 Most Probable Number³⁵/100 millilitre (MPN/100 ml).

Audit noticed that BOD level and Total Coliform content were above the prescribed standard as per the test reports of UPPCB for 12 major rivers and six water bodies for the years 2013 to 2015 **{(Appendix 2.8 (b))}**. Audit analysis revealed that the level of BOD in rivers Kali east and Hindon were up to 66.50 mg/l and 254.08 mg/l respectively in 2015 against the norm of equal to or below 3 mg/l. The level of Total Coliform exceeded the maximum permissible limit of 500 MPN/100 ml in all major rivers and water bodies during 2013 to 2015.

As per the Water Act, UPPCB has powers to issue notices to all concerned for installation of treatment plants. If not complied with the notice, UPPCB could install the treatment plants at its expenses and recover the same from local bodies. UPPCB also has the power to take legal action against these bodies. However, the details of action taken against the local bodies/industries operating without consent were not available on record.

There are 12 major rivers flowing in the State³⁶. Audit test checked the records relating to level of pollution in four rivers namely Ganga, Gomti, Yamuna and Hindon. The quality of water of rivers Ganga and Gomti during 2011 to 2015 was as below:

• ***Pollution in river Ganga***

According to the Study Report of CPCB (2006-2011) on “Pollution Assessment: River Ganga”, the major sources of pollution in river Ganga are discharge of untreated/partially treated sewage from urban centres; discharge from open drains carrying sewage, industrial waste water, returned storm water; discharge from major tributaries; and discharge of untreated/partially treated/treated waste water from industrial units.

In order to assess water quality of river Ganga monthly, UPPCB has set up 24 water quality monitoring stations on the main stem of river Ganga in the State.

Audit analysed the data of the test reports of UPPCB (2011 to 2015) at nine major places **{(Appendix 2.9(a))}**. Audit noticed that the water quality of river Ganga in Uttar Pradesh was not healthy³⁷ as BOD and Total Coliform (TC) were not as per norms³⁸ of healthy water as depicted in the charts below:

³⁴ Total coliform includes bacteria that are found in the soil, in water that has been influenced by surface water, and in human or animal waste.

³⁵ Most Probable Number is a unit for measurement of coliform bacteria in turbid water sample

³⁶ Rivers Ganga, Gomti, Ghagra, Hindon, Kali, Ramganga, Rapti, Rihand, Sai, Saryu, Sharda and Yamuna

³⁷ A river is called healthy if its water is potable without conventional treatment but after disinfections.

³⁸ For a healthy river, the water quality standard parameters are - pH between 6.5 and 8.5; Dissolved Oxygen (DO) \geq 6mg/l; Biochemical Oxygen Demand (BOD) \leq 2mg/l and Total Coliform MPN/100 ml shall be \leq 50

Chart: 2.1.2 BOD level in river Ganga in U.P. during the years 2011 to 2015

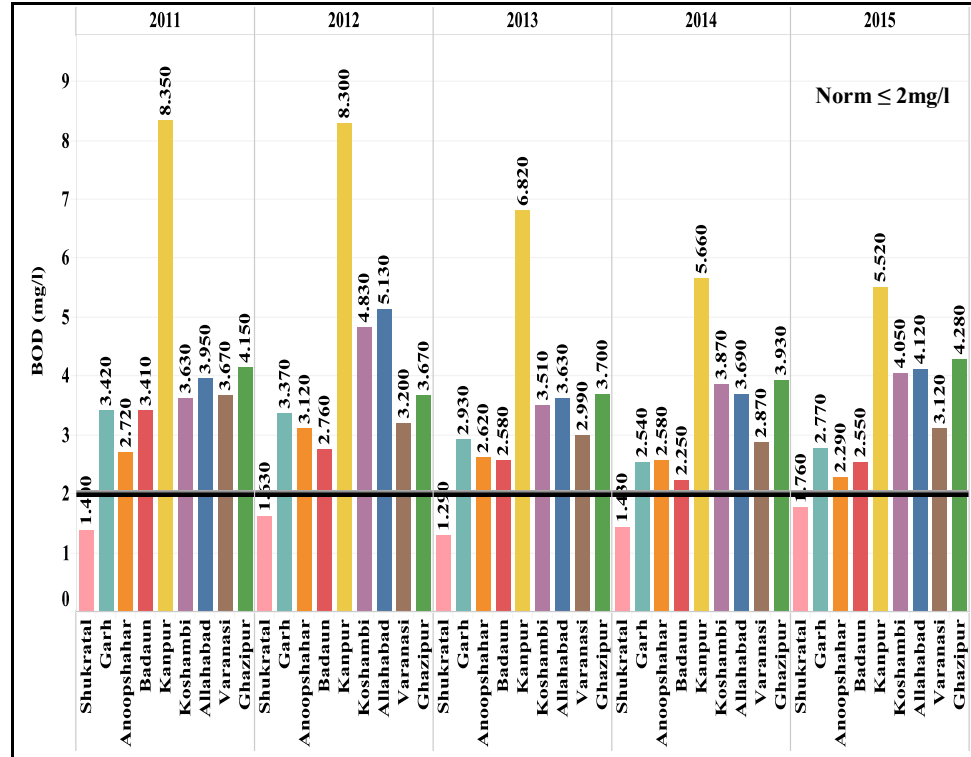
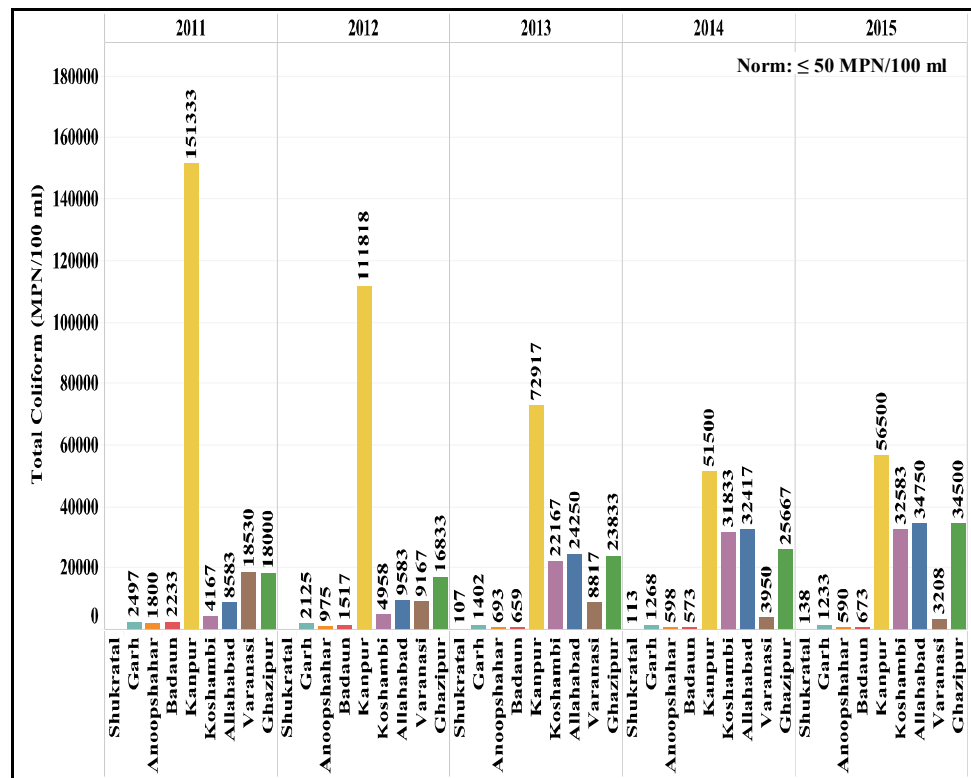


Chart: 2.1.3 TC content in river Ganga in U.P. during the years 2011 to 2015



Following observations emerged from analysis of the test reports:

- The annual average value of DO was meeting the criteria (≥ 6 mg/l) for healthy river) at all monitoring locations.
- The level of BOD exceeded the norm (≤ 2 mg/l) of a healthy river at all points except at one place, i.e., Shukratal. The minimum level³⁹ of BOD was 1.29 mg/l and maximum level⁴⁰ was 8.35 mg/l.
- The level of Total Coliform exceeded the norm (≤ 50 MPN/100 ml) of a healthy river at all points. The minimum level⁴¹ of Total Coliform was 107 MPN/100 ml at Shukratal and maximum level⁴² was 1,51,333 MPN/ 100 ml at Kanpur.
- The average data of BOD and Total Coliform content of 2015 indicates slight decrease of BOD and Total Coliform in river Ganga at Kanpur and Varanasi compared to the data of 2011 due to closure of 181 grossly polluting industries by UPPCB who were discharging untreated effluent in river Ganga and its tributaries. There was no significant decrease of level of pollution at other places mentioned in the graph.

In reply, the management stated (July 2016) that water quality of the river Ganga is affected due to domestic sewage and industrial effluent. It was stated that 1,218.30 MLD of untreated sewage is discharged in river Ganga and its tributaries. Efforts are being made to monitor and control the same. Government did not furnish any reply to this point. The fact remains that UPPCB failed to exercise its power provided in the Water Act and take legal action against the bodies that are discharging untreated sewage and industrial effluent directly in the river.

• ***Pollution in the river Gomti at Lucknow***

Test reports of the UPPCB for the year 2011 to 2015 shows that water quality (DO, BOD and Total Coliform) of the river Gomti was not within the prescribed standards i.e. DO should be equal or above 5 milligram/litre (mg/l); BOD should be equal or below 3 mg/l and Total Coliform⁴³ should be equal or below 500 Most Probable Number⁴⁴/100 millilitre (MPN/100 ml). The main reason for pollution in the river Gomti, as analysed by Audit was that the sewage generation in Lucknow was 675 Million Litres per Day (MLD) which was far higher than the total capacity of two STPs (401 MLD⁴⁵). Hence, excess of 274 MLD of untreated sewage is drained in the river Gomti at Lucknow.

Moreover, the level of pollution at the end of down-stream at Lucknow is worse than the water quality at the entry point of Lucknow as shown in **appendix 2.9 (b)** and in chart 2.1.4, 2.1.5 and 2.1.6.

Sewage
treatment
capacity of
Lucknow was
inadequate

³⁹ At Shukratal in 2013

⁴⁰ At Kanpur in 2011

⁴¹ At Shukratal in 2013

⁴² At Kanpur in 2011

⁴³ Total coliform includes bacteria that are found in the soil, in water that has been influenced by surface water, and in human or animal waste.

⁴⁴ Most Probable Number is a unit for measurement of coliform bacteria in turbid water sample

⁴⁵ 56 MLD STP at Daulatganj constructed in 2002 and 115 MLD and 230 MLD STP at Bharwara were constructed in May 2015 and March 2016 respectively.

Sample collection points of river Gomti



Chart: 2.1.4 DO level in river Gomti at Lucknow during the years 2011 to 2015

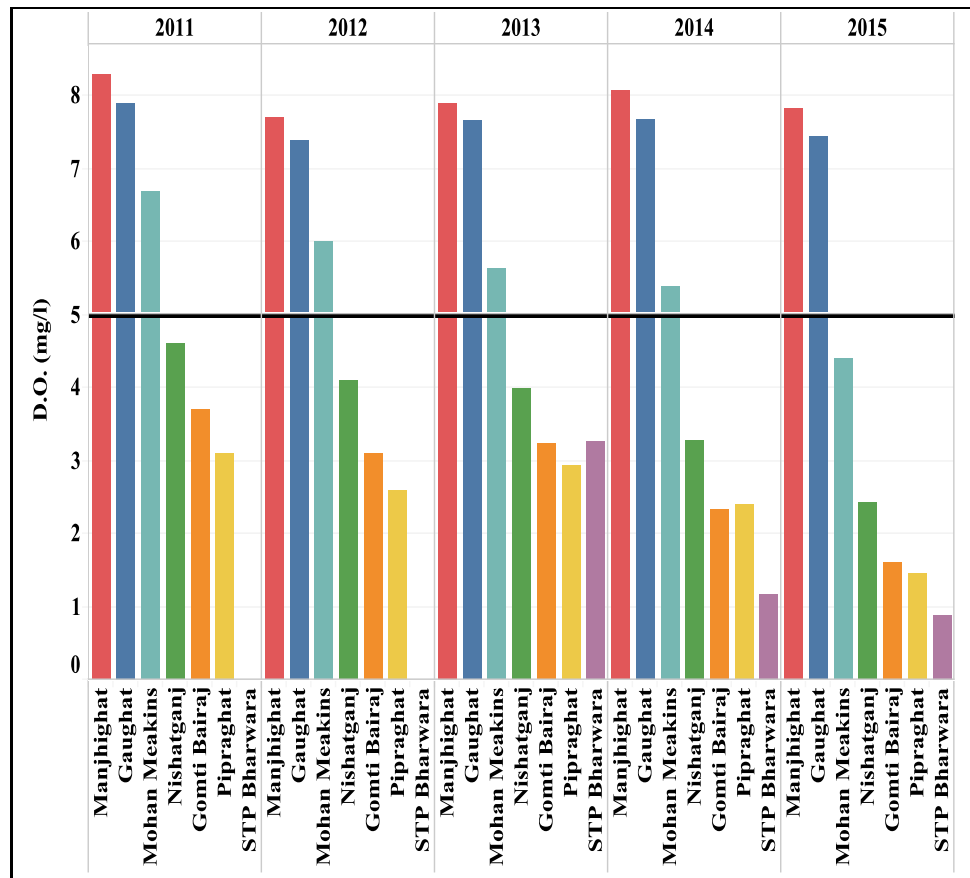


Chart: 2.1.5 BOD Level in river Gomti at Lucknow during the years 2011 to 2015

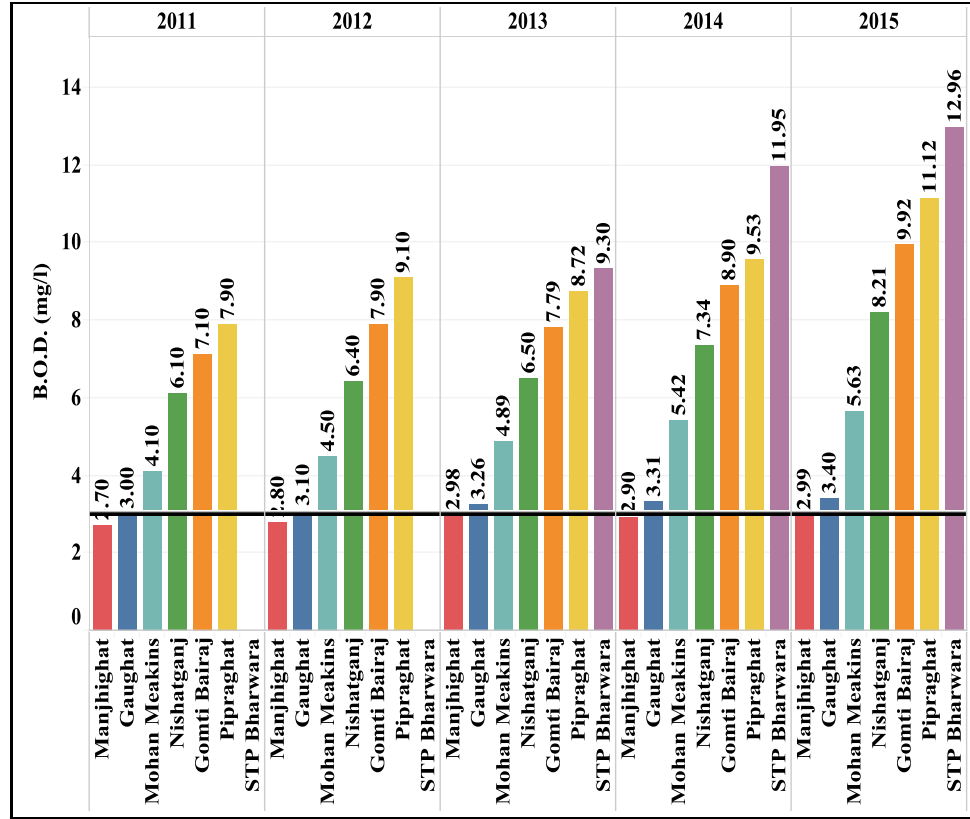
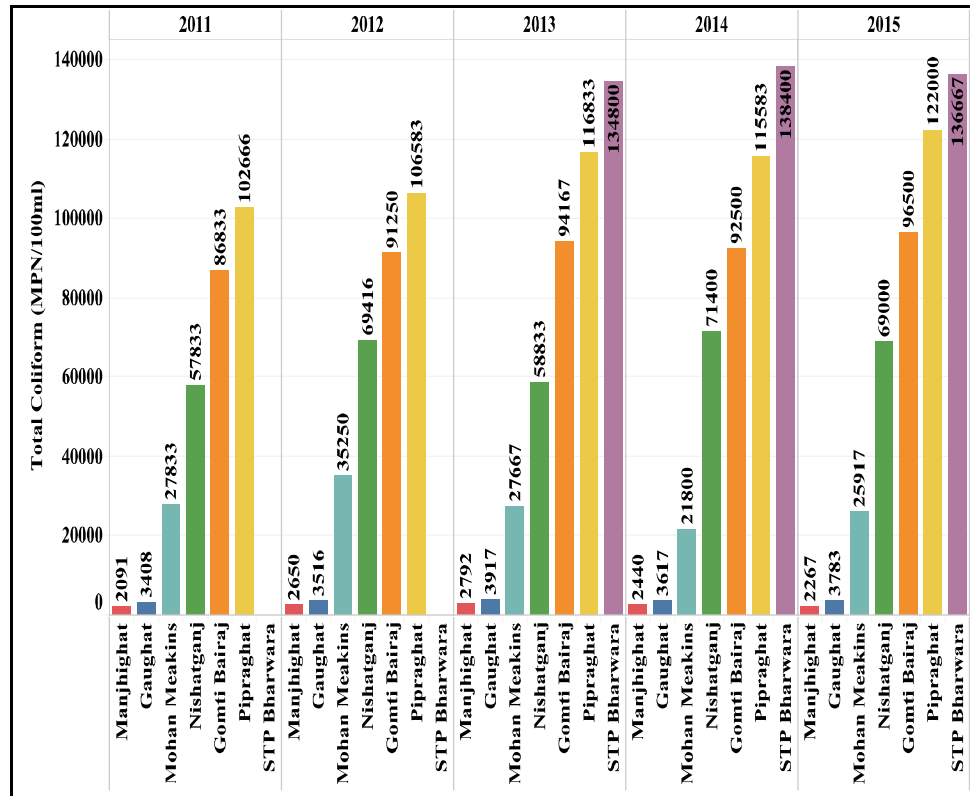


Chart: 2.1.6 TC content in river Gomti at Lucknow during the years 2011 to 2015



Audit, further, noticed the following deficiencies:

- As per test reports⁴⁶ (December 2013 to June 2015), effluent water of STP Daulatganj showed that the parameters were not up to the mark and coliform⁴⁷ was constantly found much higher (above 1600 MPN/100 ml during December 2013 to June 2015) than the norms of 700 MPN/100 ml for STP. No reasons were found on record for mal-functioning of STP Daulatganj.



Haider canal nala containing domestic sewage falling in river Gomti at Lucknow

- One stream of 115 MLD capacity of Bharwara STP was commissioned by UP Jal Nigam in May 2015 and remaining capacity of 230 MLD was commissioned in March 2016. Audit noticed that no Consent for Operation was obtained for the STP from UPPCB. Moreover, all three main parameters (DO, BOD and Total Coliform) of water quality of river Gomti after merging with the treated water of Bharwara STP drain remained below standard⁴⁸. The quality of water was of the worst category “E” at downstream of river Gomti which was not fit for drinking or bathing.



STP Bharwara at Lucknow

The water quality of river Gomti at downstream was not fit for drinking or bathing

In reply, the Government and the management stated (October 2016) that directions have been issued (April 2016) to Nagar Nigam, Lucknow regarding treatment and utilisation of sewage for restoration of water quality of river Gomti under section 33A of the Water Act. The fact remains that Nagar Nigam, Lucknow is still discharging untreated sewage in the river Gomti and UPPCB failed to take legal actions against Nagar Nigam under section 41(2) of the Water Act which provides for imprisonment and fine. Moreover, the effluent discharged after treatment by STP Daulatganj was also not up to the standard.

⁴⁶ Indian Institute of Toxicology Research, Lucknow

⁴⁷ Coliform is the commonly used bacterial indicator of sanitary quality of food and water

⁴⁸ DO was in the range of 0.30 to 1.80 mg/l against the norm of ≥ 3 ml/l; BOD was in the range of 12.00 to 12.50 mg/l against the norm of ≤ 5 ml/l; and Total Coliform was in the range of 1,40,000 to 1,70,000 MPN/100 ml against the norm of ≤ 500 MPN/100ml (source – the test reports of UPPCB for January 2016 to March 2016)

• ***Physical inspection of Sewage Treatment Plant of Lucknow***

Joint physical inspection of the STP, Bharwara at Lucknow showed that the sludge was lying dumped in drying beds as it was not being sold as manure as shown in the picture below:



Failure to install Real Time Water Quality Monitoring Stations

As per Water Act pollution control boards both at States and Central level should restore and maintain the wholesomeness of water bodies in India. Water quality monitoring is therefore an imperative prerequisite in order to assess the extent of maintenance and restoration of water bodies.

UPPCB failed to install the Real Time Water Quality Monitoring Stations as planned

UPPCB is monitoring manually the water quality in the State at 53 points of 12 rivers and six water bodies under National Water Quality Monitoring Programme (NWMP). For the purpose of implementing real time monitoring of the principal tributaries of river Ganga and river Gomti, UPPCB targeted in the Action Plan (2014-15) to install 14 Real Time Water Quality Monitoring Stations (RTWQMS) at the rivers Kali, Ram Ganga, and Gomti during the period 2014-15 to 2015-16 at a cost of ₹ 9.80 crore. However, it was noticed that no such RTWQMS was procured and installed till date (March 2016) due to delay in finalisation of tendering procedure.

In reply, the Government and the management stated (October 2016) that the preparation of tender document for procurement of equipment for RTWQMS was in process. The fact remains that in absence of RTWQMS, real-time monitoring of water quality of rivers could not be done by UPPCB.

Beneficiary Survey

In beneficiary survey of 256 persons in five cities, 230 persons were of the opinion that the water quality of rivers was polluted; 219 persons were of the opinion that main reasons for pollution were sewage and industrial pollution; 203 persons stated that the sewage treatment facility was poor and 235 persons felt that steps taken by UPPCB/GoUP for pollution control were insufficient.

Pollution of ground water in Uttar Pradesh

GoUP prepared a comprehensive policy (February 2013) for 'Ground water management, Rain water conservation and Ground water re-charge' considering that the quality and availability of ground water situation in Uttar Pradesh is very stressful due to excessive withdrawal and pollution.

Only 348 units out of 17801 units had the ground water conservation system

To fulfill the objective of the GoUP policy, UPPCB decided (June 2013) to monitor and issue necessary instructions for ground water conservation⁴⁹ and recharge in industrial areas. This was to be done through an intensive monitoring and control system of ground water pollution, enforcement of mandatory installation of peizometer in industrial units to monitor ground water level and quality, comprehensive mapping of ground water quality as per Geographic Information System (GIS) technique and compilation of data/information through inter-coordination with other departments for use/exploitation of ground water, etc.

Audit noticed that only 348 out of 17,801 units who had been issued CFO had installed roof-top rainwater harvesting, recharge pit, recharge trench, storm water harvesting facility during 2013-14 to 2015-16.

Thus, UPPCB failed to ensure implementation of the measures for ground water conservation and recharge as per the Policy and Water Act.

In reply, the management stated (July 2016) that directions had been issued (April 2015) for recycling of treated effluent and its reuse, installation of peizometer and rain water harvesting system in industrial units to achieve zero liquid discharge. The Government did not furnish specific reply. The fact remains that no monitoring is being done for compliance of implementation of above directions and no reply was given in regard to GIS mapping of ground water quality. Moreover, UPPCB failed to impose penalty on the defaulting industries under section 41(2) of the Water Act for not complying with directions.

Recommendation

UPPCB should make a plan to improve the quality of water and maintain an up to date data base of industrial units operating without sewage treatment plants and those operating with not functioning/partly functioning sewage treatment plants so that action can be taken against them under Water Act. Penalties on defaulting agencies should be levied for strict enforcement of laws.

2.1.9.2 Air Pollution

The Air Act empowers UPPCB to make any order for the prevention, control or abatement of emission of air pollutants into the atmosphere from industrial plants or for the discharge of any air pollutant into the atmosphere from any other source whatsoever not being a ship or an aircraft.

Inadequate monitoring of air pollutants

CPCB notified National Ambient Air Quality Standard (NAAQS) in 2009 under section 16 of the Air Act. As per the notification, 12 parameters⁵⁰ were to be monitored. Audit noticed that UPPCB was monitoring only three parameters of the air quality, i.e., nitrogen dioxide (NO₂), particulate matter 10 (PM₁₀) and sulphur dioxide (SO₂) at 54 points in 20 cities of the State.

Emission of Particulate Matter in excess of standard

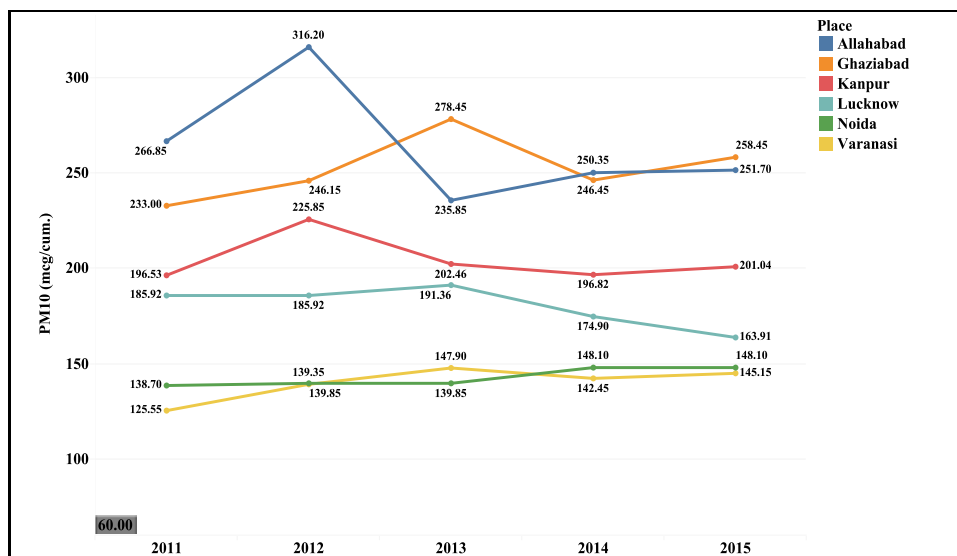
On scrutiny of test reports of 54 points in 20 cities for the years 2011 to 2015,

⁴⁹ through roof-top rainwater harvesting, recharge pit, recharge trench, storm water harvesting mandatory reuse (recycle) of treated effluent of industrial units;

⁵⁰ SO₂, NO₂, PM₁₀, PM_{2.5}, O₃, Pb, CO, NH₃, C₆H₆, BaP, As and Ni

it was noticed that the annual average level of PM₁₀ was very high ranging from 87 to 347 microgram per cubic metre as compared to the standard of 60 microgram per cubic metre. Major cities with higher level of PM₁₀ against required standard were Allahabad, Ghaziabad, Kanpur, Lucknow, NOIDA, Varanasi {**Appendix 2.10(a)**} as depicted in the chart 2.1.7 below:

Chart 2.1.7: Level of PM₁₀ in major cities of U.P. during the years 2011 to 2015



As per the report of CPCB, the air quality index value of Lucknow, Kanpur and Varanasi was higher than that of Delhi in some of the months during 2015-16. However, the annual average of sulphur dioxide and nitrogen dioxide in these cities was within the prescribed standard of 50 microgram per cubic metre and 40 microgram per cubic metre respectively.

UPPCB failed to take adequate measures to control the level of PM₁₀ and to monitor the remaining nine parameters as it did not have facility to monitor all parameters of air quality under NAAQS.

In reply, the Government and the management stated (October 2016) that UPPCB is ensuring installation of adequate air pollution control system in all air polluting units. After being pointed by Audit, UPPCB had directed (September 2016) all RTOs/Development Authorities/ Nagar Nigams to prepare an action plan for prevention and control of air pollution in various cities/towns and to control the level of PM₁₀ by installing adequate air pollution control systems. The fact remains that the level of PM₁₀ was above the prescribed limit in all 20 cities being monitored by UPPCB which indicates that monitoring done by UPPCB was inadequate.

Failure to install Continuous Ambient Air Quality Monitoring Stations

UPPCB was operating Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in four cities⁵¹. As per the directions of CPCB to install CAAQMS in critically polluted areas⁵² and in the cities having population of more than 10 lakh, UPPCB decided (April 2011) to install CAAQMS in eight other major cities⁵³ (at a cost of ₹ 8.80 crore) of the State by 2015-16.

⁵¹ Agra, Kanpur, Lucknow, Varanasi.

⁵² Agra, Ghaziabad, Kanpur, Noida, Singrauli, and Varanasi – Mirzapur.

⁵³ Allahabad, Ghaziabad, Moradabad, Meerut, Noida and Sonbhadra (in 2014-15) and Bareilly and Saharanpur (in 2015-16)

UPPCB could not install CAAQMS in critically polluted cities even after lapse of five years of direction of CPCB

However, Audit noticed that the process of procurement of CAAQMS was started only in three cities (Ghaziabad, Noida and Moradabad). Audit checked the procurement files and found that process of procurement was started only in July 2014. No reason for this delay for more than three years was however found on records. Thus, UPPCB could not install CAAQMS in all the eight cities as envisaged in the action plan (March 2016).

In reply, the Government confirmed the audit finding and stated (October 2016) that the procurement of equipment for CAAQMS in three cities is in initial stage (purchase order placed). However, it did not furnish any reason for delay in procurement of CAAQMS in three cities and reasons for not initiating the procurement of CAAQMS in five cities. The fact remains that procurement of equipment was not done by the UPPCB as per action plan inspite of availability of funds even after a lapse of five years which shows its administrative lethargy. Thus, UPPCB has failed to install the CAAQMS resulting in online monitoring of the air quality not being done in critically polluted areas as required by CPCB.

Online continuous emission and effluent monitoring mechanism not implemented by highly polluting industries

UPPCB failed to install the system for centralised data collection from online emission/effluent system installed by highly polluting industries

To strengthen the monitoring mechanism for effective compliance through self regulatory mechanism, the CPCB instructed (February 2014) all State PCBs to issue directions for installing online continuous emission and effluent monitoring system to industries belonging to 17 categories⁵⁴ of highly polluting industries, Common Effluent Treatment Plants (CETPs) and Common hazardous waste and biomedical waste incinerators by 31 March 2015. The online emission and effluent monitoring data were to be uploaded at State PCBs and CPCB server.

Simultaneously, the CPCB also instructed the State PCBs to install the necessary software and hardware in their headquarters for centralised data collection, analysis and taking corrective action. Test-check of records revealed that UPPCB directed 469 highly polluting industries; out of which only 84 units had installed online continuous emission monitoring mechanism for emission and 175 for online continuous effluent monitoring mechanism by March 2016.

It was further noticed that UPPCB had not installed the necessary software and hardware at its headquarter for centralised data collection and its analysis so far (March 2016). As a result, UPPCB could not link online even with the industries that have installed online monitoring devices.

Thus, UPPCB did not take adequate measures for compliance of the order of the CPCB for online continuous emission and effluent monitoring of all highly polluting industrial units in the State.

In reply, the Government and the management stated (October 2016) that (October 2016) that UPPCB is developing a master control room in consultation with NIC. Further, it was also stated that the installation of online continuous emission/effluent monitoring systems in highly polluting industries

⁵⁴ Distillery including Fermentation industries, Sugar (excluding khandsari), Fertilizer, Pulp and Paper, Chlor Alkali, Pharmaceuticals (basic) (excluding Formulation), Dyes and Dye intermediate, Pesticides (Technical) (excluding Formulation), Oil Refinery (Mineral Oil and Petro Refineries), Tanneries, Manufacture of Petrochemicals, Cement, Thermal Power Plants, Iron & Steel (Involving processes from ore/scrap, and Integrated Steel Plants), Zinc Smelter, Copper Smelter and Aluminium Smelter.

is in progress. The fact remains that the online continuous emission monitoring mechanism and online continuous effluent monitoring mechanism have not yet been installed by 385 and 294 units respectively out of 469 highly polluting industries. However, UPPCB has adopted lenient approach towards such highly polluting industries and has not imposed any penalty on them. Moreover, UPPCB has not established master control room even after one year of the schedule date by which it should have been installed.

Beneficiary Survey

In beneficiary survey of 256 persons in five cities, 179 persons were of the opinion that the air was polluted; 183 persons stated that the main reasons for pollution were vehicles and industries and 215 persons felt that steps taken by UPPCB/GoUP for pollution control were insufficient.

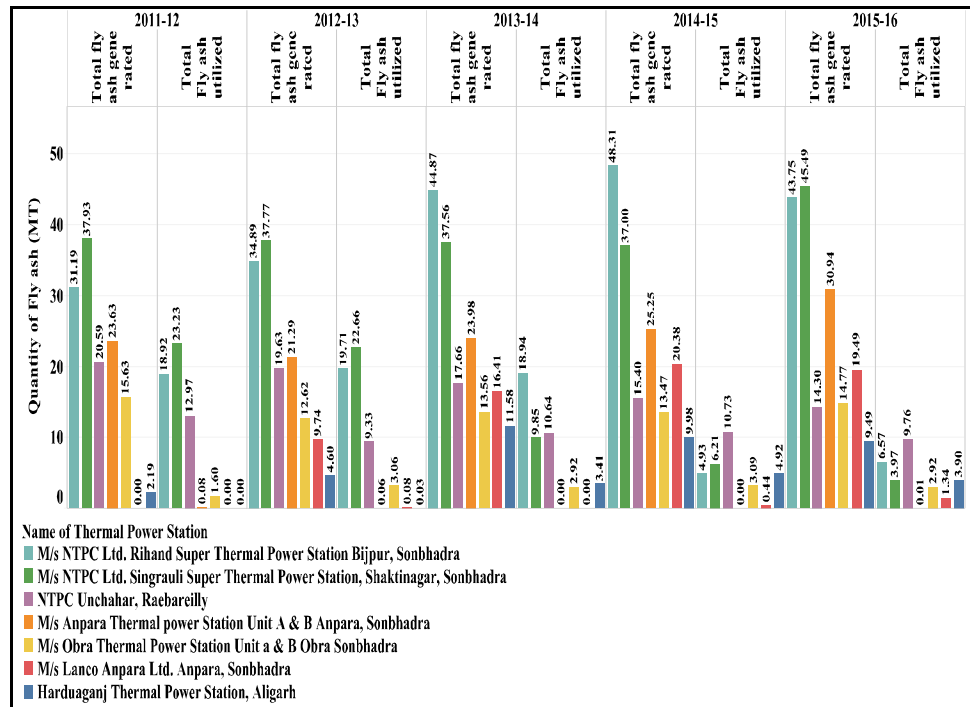
Short utilisation of fly ash generated by thermal power plants

MoEF, GoI issued (September 1999) a notification under EP Act making it mandatory to utilise fly ash in the manufacture of building materials and construction activities within 100 Km radius of the thermal power plants (TPPs) with an objective to minimise environmental pollution caused due to fly ash. MoEF issued amended notification in November 2009, which *inter alia* stipulated that all the existing coal/lignite based TPPs/expansion units shall ensure 100 per cent utilisation of fly ash generated by them within five years of issue of notification. Hence, existing TPPs had to ensure full utilisation of fly ash generated by 2014-15. The aforesaid notification also stipulates that the State PCBs would monitor the compliance of the notification by thermal power plants.

UPPCB failed to monitor the utilisation of fly ash by TPPs as per order of MoEF. The actual utilisation was only 28 per cent in the last five years

As per information received from seven TPPs, Audit noticed that 785.34 Metric Tonne (MT) of fly ash was generated during 2011-12 to 2015-16 against which utilisation of fly ash was 216.28 MT only (28 per cent) {Appendix 2.10(b)} which abets air pollution.

Chart: 2.1.8 Status of fly ash generated/utilised by TPPs during 2011-12 to 2015-16



It was also noticed that no monitoring was being done and no directions were issued by UPPCB in this regard, though consents for operation were invariably being issued by UPPCB every year to the TPPs. A questionnaire was issued to construction agencies in NOIDA and Ghaziabad through UPPCB regarding utilisation of fly ash which was not replied till November 2016.



Fly-ash dump of NTPC Power Plant, Sonbhadra

In reply, the Government and the management stated (October 2016) that GoUP issued order (June 2016) regarding compulsory use of fly ash in government constructions projects within 300 KM of TPPs. The fact remains that UPPCB failed to monitor the existing orders on full utilisation of the fly ash resulting in abatement of pollution.

Recommendation

UPPCB should take necessary measures to improve the quality of the air, install Continuous Ambient Air Quality Monitoring Stations, continuous emission and effluent monitoring mechanism and monitor full utilisation of fly ash as directed by CPCB/MoEF.

2.1.9.3 Municipal solid waste management

Rules for municipal solid waste management not followed

As per Rule 4 of Municipal Solid Waste (Management and Handling) Rules, 2000 (MSW Rules) notified by the Central Government under EP Act, every municipal authority is responsible for implementation of the provisions of MSW Rules and for any infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes within its territory. The municipal authority or an operator of a facility should obtain authorisation from UPPCB for setting up waste processing and disposal facility including landfills. Further, Rule 6 of MSW Rules provides that the UPPCB shall monitor the compliance of the standards regarding ground water, ambient water, leachate⁵⁵ quality and the compost quality including incineration standards. UPPCB was also required to issue directions under section 5 of EP Act to municipal authorities for ensuring full coverage of

⁵⁵ Leachate means liquid that seeps through solid wastes or other medium and has extracts of dissolved or suspended material from it.

waste collection, segregation, transportation, treatment and disposal in accordance with the Rules.

Audit noticed that:

• ***Authorisation not obtained for setting up waste processing and disposal facility***

Out of 636 municipal authorities, 634 municipal authorities (including 12 Nagar Nigams⁵⁶, 198 Nagar Palika Parishads and 424 Nagar Panchayats as on March 2016) in the State did not obtain authorisation from UPPCB for setting up waste processing and disposal facility including landfills. MSW was being dumped at open places without any treatment which was hazardous to eco-system. In absence of any such authorisation, these important activities of municipal authorities could not be monitored by UPPCB. Moreover, UPPCB also failed to take legal action against defaulters.

• ***Absence of facilities for treatment of MSW in 620 municipal authorities***

In the State, there was a generation of approximately 15,403 Metric Tonne (MT) per day of MSW, out of which only 1,521 MT per day was being treated at present (March 2016).

620 municipal authorities did not have MSW treatment facility. Out of 15403 MT of MSW only 1521 MT was treated per day

Every municipal authority was required to set up waste processing and disposal facilities in their municipal area by December 2003. However, only eight Nagar Nigam⁵⁷ and eight Nagar Palika Parishad⁵⁸ had installed MSW treatment facility. Thus, 620 municipal authorities did not have MSW treatment facility and therefore were dumping 13,882 MT of MSW per day at open places in the State without any treatment which was hazardous to human beings and eco-system. UPPCB did not take any action against defaulters under Environment (Protection) Act, 1986.

• ***Failure to obtain annual reports***

UPPCB failed to obtain the annual reports from the municipal authorities for MSW and send the compiled annual reports to the CPCB during the period 2011-12 to 2015-16 except for 2013-14 as required under rules 4 and 8 of MSW Rules respectively.

In reply, the Government and the management stated (October 2016) that directions had been issued (April 2016) under MSW Rules to municipal authorities from time to time. No reply regarding the issues of municipal authorities functioning without authorisation of UPPCB and not providing annual reports was furnished. The fact remains that there is inadequate facility of treating MSW to the extent of 90 *per cent* of the MSW generated.

• ***Physical inspection of MSW Treatment Facility of Lucknow***

Joint Inspection of MSW treatment facility, Shivri at Lucknow showed that the MSW facility is being operated⁵⁹ without NOC and with expired CFO/authorisation. The mandatory laboratory was not established and its landfill site was under construction.

⁵⁶ Nagar Nigam Bareilly and Allahabad obtained authorisation.

⁵⁷ Agra, Aligarh, Allahabad, Bareilly, Kanpur, Lucknow, Moradabad, and Varanasi.

⁵⁸ Barabanki, Fatehpur, Etawah, Kannauj, Mainpuri, Mathura, Muzaffarnagar & Raebareilly.

⁵⁹ M/s Jyoti Envirotech, Lucknow



Defunct laboratory at Shivri, Lucknow



Incomplete landfill site at Shivri, Lucknow

Beneficiary Survey

In beneficiary survey of 256 persons in five cities, 200 persons were of the opinion that the municipal solid waste management of the municipalities was poor and 209 persons stated that steps taken by UPPCB/GoUP for pollution control were insufficient.

Recommendation

UPPCB should issue directions to the municipal bodies and other establishments for compliance of the rules regarding handling and management of municipal solid waste and also take action against defaulters under the provisions of EP Act.

2.1.9.4 Contrast in pollution level in Varanasi and Lucknow

The city of Varanasi is situated on the banks of the holy river Ganga. It is the oldest living city and regarded as spiritual city of India as well. Lucknow is the capital city of the State and situated at the banks of the river Gomti which is the tributary of holy river Ganga. It has always been a multicultural city.

The city of Varanasi has a density of 2,395 inhabitants* per square kilometre. The city of Lucknow has a lower density of 1816 inhabitants* per square kilometre.

Despite this, Audit studies revealed that the pollution levels in Varanasi compared favourably against that of Lucknow (with regard to water, air and municipal solid waste). It was noticed that the water pollution in river Ganga near Varanasi and air pollution in Varanasi during the period from 2011 to 2015, was lesser than Lucknow as compared below:

**(Source: Census Data for 2011)*



River Ganga at Varanasi



River Gomti at Lucknow

<i>Varanasi</i>	<i>Lucknow</i>
<p>Water pollution (downstream of river Ganga):</p> <p>The total sewage generation of the city was 404 mld. Water quality of the river Ganga at Varanasi has improved as detailed below:</p> <ul style="list-style-type: none"> • DO level increased from 7.14 mg/l in 2011 to 7.40 mg/l in 2015 against the prescribed level of 6 mg/l or more; • BOD level decreased from 6.22 mg/l in 2011 to 5.09 mg/l in 2015 against prescribed level of 2 mg/l or less; • Total Coliform content decreased from 48,000 MPN/100 ml in 2011 to 44,000 MPN/100 ml in 2015 against the prescribed level of 50 MPN/100 ml or less. <p>The main reason for improvement in the water quality was closure of 181 grossly polluting industries along the bank of river Ganga.</p> <p>Air Pollution:</p> <p>UPPCB has established Continuous Ambient Air Quality Monitoring Station at Varanasi for real time monitoring of air quality.</p> <ul style="list-style-type: none"> • The yearly average value of PM₁₀ was 125.55 mcg/cum to 147.90 mcg/cum during 2011-2015. Although the PM₁₀ level in Varanasi was better than Lucknow but it was above the prescribed level of 60 mcg/cum. <p>The efforts of UPPCB in prevention of air pollution was inadequate as it has very lately (September 2016) issued directions to all concerned to prepare an action plan.</p> <p>Municipal Solid Waste (MSW) Treatment Facility:</p> <p>Total MSW generation in the city was 928.84 MT/day against which 600 MT/day is being treated in treatment plant.</p>	<p>Water Pollution (downstream of river Gomti):</p> <p>The total sewage generation of the city was 675 mld. The water quality of river Gomti worsened as detailed below:</p> <ul style="list-style-type: none"> • DO level decreased from 3.1 mg/l in 2011 to 0.88 mg/l in 2015; • BOD level increased from 7.9 mg/l in 2011 to 12.96 mg/l in 2015; • Total Coliform content increased from 102666 MPN/100 in 2011 to 136667 MPN/100 in 2015. <p>Air Pollution:</p> <p>UPPCB has established Continuous Ambient Air Quality Monitoring Station at Lucknow for real time monitoring of air quality.</p> <ul style="list-style-type: none"> • The yearly average value of PM₁₀ was 163.91 mcg/cum to 191.36 mcg/cum during 2011-2015. • Vehicular population was 16,76,584, more than double that of Varanasi which contributed to the enhanced air pollutant levels. This was unchecked by UPPCB. Efforts of UPPCB were inadequate as it has only recently (September 2016) issued directions to all concerned to prepare an action plan. <p>Municipal Solid Waste Treatment Facility:</p> <p>Total MSW generation in the city was 1670 MT/day against which a treatment plant of 1300 MT/day is still under trial run. Thus, Lucknow is lacking behind from Varanasi in respect of treatment of MSW.</p>

(Source: Information provided by UPPCB and UP Jal Nigam)

2.1.9.5 Bio-medical waste management

According to Rule 8 of the Bio-Medical Waste (Management and Handling) Rules, 1998 (BMW Rules) notified by the GoI under EP Act, every occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and/or handling bio-medical waste (BMW) in any manner (except clinics, dispensaries, pathological laboratories, blood banks providing treatment/service to less than 1,000 patients per month) should make an application to UPPCB for grant of authorisation. Besides, Schedule I of Rule 5 of BMW Rules provides treatment and disposal options of different categories of bio-medical wastes (BMW). On not complying of the provisions of BMW Rules, legal action under section 15 of the EP Act shall be taken by the UPPCB against the defaulting establishments.

Health Care Establishments functioning without authorisation

Audit noticed that 8,366 Health Care Establishments (HCEs) in the State were required to obtain authorisation from UPPCB. Only 5,086 HCEs applied for authorisation and remaining 3,280 HCEs did not apply for it. UPPCB granted authorisation to 4,254 HCEs and 750 applications were pending for authorisation. Notable defaulters were Primary Health Centres/Community Health Centres at Etah, Aligarh, Maharajganj; District Women Hospital at Azamgarh; private nursing homes at Lucknow/Lakhimpur.

3362 HCEs were operating without authorisation

Thus, unauthorised operation of 3,362⁶⁰ HCEs left the scope of collecting, receiving, storing, transporting, treating, disposing and/or handling BMW in a manner, which was not being monitored by UPPCB.

The management confirmed (July 2016) the facts in reply. The Government did not furnish any reply (October 2016). The fact remains that UPPCB failed to take action against the unauthorised HCEs as required under the EP Act.

Inadequate facility of bio-medical waste treatment

1682 kg/day of BMW was disposed off without treatment

Total BMW generated by these 8,366 HCEs was 37,498 kg/day out of which only 35,816 kg/day of BMW was treated and disposed while 1,682 kg/day of BMW was being disposed untreated which was an open threat to the environment.

Audit noticed that total number of authorised Common Bio-Medical Waste Treatment Facilities (CBMWTFs) in the State was 20 with total installed incinerator capacity of 3,325 kg/hr i.e. 79,800 kg/day (3,325 kg x 24 hrs.). However, authorisation of 10 CBMWTFs (installed capacity being 1,675 kg/hr) had expired as on date. Further, three CBMWTFs having capacity of 300 kg/hr had been self closed (**Appendix 2.11**). Thus, at present, only seven facilities with total installed capacity of 1,350 kg/hr, i.e., 32,400 kg/day were authorised to continue operation against the total waste generation of 37,498 kg/day.

The management confirmed (July 2016) the facts in reply. The Government did not furnish any reply. The fact remains that there was inadequate facility of treatment of BMW which is a serious threat to the environment but UPPCB did not take any action against the defaulters.

⁶⁰ 8,366 – 4,254 – 750 = 3,362

Beneficiary Survey

In beneficiary survey of 256 persons in five cities, 135 persons were of the opinion that the BMW management was poor; 101 persons stated that BMW was not being disposed by maximum HCEs through authorised Bio-Medical Waste Treatment Centres and 145 persons felt that steps taken by UPPCB/GoUP for pollution control were insufficient.

Absence of monitoring of veterinary institutions and animal houses

According to the Rule 4 of BMW Rules, it shall be the duty of every occupier of an institution generating BMW to take all steps to ensure that such waste is handled without any adverse effect to human health and environment. BMW Rules are also applicable to veterinary institutions and animal houses.

Under Rules 7 of BMW Rules, UPPCB was responsible for enforcement of the provisions of BMW Rules.

Audit noticed that UPPCB did not have any information regarding the veterinary institutions and animal houses running in the State as well as waste being generated by them. In absence of any such information, UPPCB failed to monitor disposal of BMW by veterinary institutions and animal houses.

In reply, the Government and the management stated (October 2016) that Indian Veterinary Institute, Bareilly has established incinerator which is authorised by the UPPCB. It was also stated that GoUP had directed (July 2016) all Regional Officers to implement BMW Management Rules in their area. The fact remains that overall status of BMW generated in the State by veterinary institutions/animal houses was not available with UPPCB. Moreover, if the UPPCB had the data, it could monitor BMW disposal by these veterinary institutions and could take appropriate action by issuing notices to the institutions for not complying with the provisions of the BMW Rules.

Physical inspection of Bio-medical Treatment Facility at Lucknow

Joint physical inspection of a Bio-Medical Treatment facility⁶¹ at Lucknow showed that BMW was kept without segregation and hazardous waste produced was kept in an enclosure without doors as shown below:



BMW kept without segregation near Chak Ganjaria at Lucknow



Hazardous waste storage without doors near Chak Ganjaria at Lucknow

Recommendation

UPPCB should issue directions to the health care establishments for compliance of the BMW Rules regarding handling and management of Bio-

⁶¹ M/s Spectrum Solutions Pvt. Ltd., Lucknow

Medical Waste and also take action against defaulters under the provisions of EP Act.

Other Wastes

2.1.9.6 Hazardous waste management

Implementation of Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008

According to Hazardous Waste (Management, Handling and Trans-boundary) Rules, 2008 (HWMHT Rules) notified by the Central Government under EP Act, the State PCBs are to perform inventorisation of hazardous wastes⁶² (HW), grant and renew authorisation, register and renew registration of recyclers/re-processors, monitor compliance of various provisions and conditions of authorisation, implement programmes to prevent/reduce/minimise the generation of hazardous wastes and initiate action against the violators. Further, the HWMHT Rules also provides that the occupier⁶³ generating hazardous wastes and operator of the facility for disposal of hazardous waste (HW) shall maintain records of such operations and the occupier/operator of a facility shall send annual returns to the State PCB.

Hazardous Waste generating industries functioning without authorisation

327 hazardous waste generating industries were operated without authorisation

Audit noticed that total number of industries generating hazardous waste, as identified by UPPCB, was 2,470 out of which only 1,830 were operational. Audit, further, noticed that 327 industries were being operated without authorisation. As per UPPCB, 1.38 lakh Metric Tonne per Annum (MTA) of HW is generated every year.

Under Rule 23, UPPCB was to take action against violation of HWMHT Rules. The management did not furnish detail of action taken, if any, in regard to unauthorised HW industries operating in the State. The fact remains that UPPCB did not initiate any action as required under the Rules against the industries operating without authorisation.

Illegal dump sites

Audit noticed five illegal dump sites of 1,41,432 MT approx. (four at Kanpur and one at Deva Road, Barabanki) in the State where waste of hazardous nature had been found dumped since many years which



Illegal hazardous waste (chemical industries waste) dump at Khanpur, Kanpur

⁶² Hazardous waste means any waste which by reasons of any of its physical chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment

⁶³ As per HWMHT Rules, "occupier" in relation to any factory or premises, means a person who has, control over the affairs of the factory or the premises and includes in relation to any hazardous waste the person in possession of the hazardous waste

required rehabilitation and sanitation.

However, no effective action was taken by UPPCB (March 2016) and the waste is still lying dumped resulting into contamination of ground, water and air quality.

In reply, the Government and the management stated (October 2016) that CPCB has selected two illegal dump sites (one at Kanpur and one at Deva Road, Barabanki) for redemption under Clean Energy Fund Project of Government of India. The fact remains redemption of dumps of hazardous waste are yet to be done.

Escrow account not opened for maintenance of landfill sites

According to the CPCB circular of 2009, every authorised Hazardous Waste Treatment, Storage and Disposal Facility (TSDF) is required to maintain the landfill site at the facility for at least 30 years after the sites are completely capped. For this purpose, it was directed by CPCB that every operator of such facility shall open and maintain an escrow account in a nationalised bank by contributing five *per cent* of its turnover (revenue) from landfill-able waste. It shall be a tripartite account in joint name of the TSDF operator, concerned State Pollution Control Board and a Public Sector bank acting as escrow agent. The proceeds of such bank account shall only be utilised for maintenance of the land fill sites.

Two TSDFs did not open ESCROW accounts required to maintain the landfill site

UPPCB made available information in respect of two⁶⁴ out of three operating TSDFs. Audit noticed that these two TSDFs had not opened escrow account yet. No direction had been issued by UPPCB in this regard. Thus, the UPPCB failed to implement the compliance of the provisions of the HWMHT Rules.

In reply, the Government and the management stated (October 2016) that UPPCB was in the process of opening of Escrow account and tripartite agreement with all three TSDFs. The fact remains that escrow account have yet not been opened and in absence of escrow account, the maintenance of landfill site cannot be ensured.

Physical inspection of HW Treatment, Storage and Disposal Facility

During joint physical inspection of the two TSDFs⁶⁵ at Ramabai Nagar, it was noticed that neither of the TSDF had opened escrow account for post-closure maintenance and monitoring of landfill sites yet (March 2016).

2.1.9.7 E-waste management

Implementation of E-waste (Management & Handling) Rules, 2011

E-waste (Management and Handling) Rules, 2011, notified under EP Act, apply to every producer, consumer or bulk consumer involved in the manufacture, sale, purchase and processing of electrical and electronic equipment or components as specified in the rules and define the role and responsibility of all collection centres, dismantler and recycler who may be involved in handling, generation, collection, reception, storage, segregation, refurbishment, dismantling, recycling, treatment or/and disposal of e-waste.

⁶⁴ M/s Bharat Oil and Waste Management Ltd. and M/s UP Waste Management Project both at Kumbhi, Ramabai Nagar, Kanpur Dehat.

⁶⁵ M/s Bharat Oil and Waste Management Ltd. and M/s UP Waste Management Project both at Kumbhi, Ramabai Nagar, Kanpur Dehat

As per duties listed in Schedule III of the Rules, the duties of every State Pollution Control Board were - inventorisation of e-waste; grant and renewal of authorisation; registration of recyclers of e-waste; monitoring compliance of authorisation and registration conditions; maintain information on the conditions imposed for authorisation, initiate action against violations of these rules and any other function delegated by the Ministry under these Rules.

Audit noticed that:

11 E-waste recycling/collection/generation units were operating without authorisation

- Total number of E-waste recycling/collection/generation units in the State as on March 2016 was 27 with total capacity of 89,886 Metric Tonne per Annum (MTA). Of these, 24 were registered/authorised with UPPCB. Of these 24 units, validity of 8 units (total capacity: 37,090 MTA) expired as on March 2016. Thus, 11 units out of 27 units were operating (42,840 MTA comprising 48 *per cent* of total capacity) without authorisation (**Appendix 2.12**).

UPPCB did not take any action against the unauthorised operation of E - waste recycling/collection/generation units. It also did not ensure to obtain annual returns from the authorised/registered/producers/collectors/dismantlers/recyclers as required by the Rules resulting in failure to monitor compliance of authorisation and registration conditions.

In reply, the Government and the management stated (October 2016) that UPPCB is regularly monitoring of registered E-waste recyclers and notices are sent to not complying units. The fact remains that UPPCB had not taken effective action against unregistered/unauthorised e-waste recycling/collection/generation units. Besides, UPPCB did not obtain annual returns from registered/authorised e-waste units and did not have latest data on the inventory.

Beneficiary Survey

In beneficiary survey of 256 persons in five cities, 169 persons were of the opinion that the E-waste management was poor; 169 persons stated that they disposed their E-waste to unauthorised *kabadiwala* and 151 persons felt that steps taken by UPPCB/GoUP for pollution control were insufficient.

Recommendation

UPPCB should issue directions to the concerned establishments for compliance of the rules regarding handling and management of Hazardous/E-waste and also take action against defaulters under the provisions of EP Act.

2.1.10 Monitoring

The Environmental Acts empowered UPPCB to take all such measures which are necessary for prevention, control and abatement of environmental pollution, to take appropriate action for regulation and control of any industry, operation or process and to initiate legal proceedings in the cases of infringement of environmental laws. Under the EP Act, various waste management and handling rules were also framed by GoI requiring UPPCB to control and abate the pollution emanated by various types of wastes. The power to issue directions includes the power to direct closure of any industry, operation or process under section 33 A of Water Act, section 31A of Air Act and section 5 of EP Act. The Acts have provision for prosecution and

imprisonment of the convicted up to three months to seven years and/or a penalty ranging from ₹ 10,000 to ₹ 1,00,000 for violation of provisions of environmental laws and not complying with directions of the Board.

2.1.10.1 Lack of effective consent administration

Industries/Local Bodies/Workshops operating without consent

Under section 25 of Water Act and section 21 of Air Act, consent of UPPCB was required to establish any industry, operation or processes which were likely to discharge sewage or trade effluent into a stream, well, sewer or on land and/or pollute the air by emission. These Acts empowered UPPCB to issue consent for establishment' (NOC) and 'consent for operation' (CFO) to industrial units and local bodies and carry out its periodical renewal. UPPCB grants CFO for two years, three years and five years to the industries under Red, Orange and Green categories respectively. Audit noticed following deficiencies in this regard:

- UPPCB does not have any computerised data bank of the industries in regard to CFO issued, expiry and renewal thereof. There was also no system to watch the industries which were issued NOC but had not obtained/renewed CFO.

UPPCB failed to take action against 635 local bodies which were operational without obtaining CFO

- Out of 636 Local Bodies⁶⁶ in the State, 635 Local Bodies (13 Nagar Nigams⁶⁷, 198 Nagar Palika Parishads and 424 Nagar Panchayats) were operating without obtaining CFO from UPPCB. There were 13 slaughter houses operated by these local bodies without obtaining CFO from UPPCB and without effluent treatment plant.

- Locomotive workshops of Railways and workshops of UP Road Transport Corporation were in operation without NOC/CFO from UPPCB and without effluent treatment plant. It was noticed that the institutions had not even applied for the CFO.

As per the Water Act, UPPCB has powers to issue notices to local bodies for installation of treatment plants. In case of the notices are not complied with, UPPCB could install the treatment plants at its expenses and recover the same from local bodies. UPPCB also has the power to take legal action against these bodies. However, the action taken by UPPCB against the local bodies/industries operating without consent was not available on records.

The above irregularities indicate that UPPCB did not exercise its power against the local bodies/industries which were running without consent.

The Government and the management stated (October 2016) that UPPCB has initiated the process to develop in house online consent management system. No reply was furnished for operation of local bodies, locomotive workshop and roadways workshop without consent.

The fact remains that the computerised system for consent management is yet to be developed. Moreover, local bodies, locomotive workshop and roadways workshop are still operating without consent.

⁶⁶ Source – *Karyapurti Digdarshika* 2016-17 of Directorate of Urban Local Bodies, GoUP

⁶⁷ Nagar Nigam Allahabad obtained CFO

Delay in issue of consent

Section 25 of Water Act and section 21 of Air Act stipulate that the industrial units and local bodies were to be granted consent by UPPCB within 120 days from the date of application.

As on March 2016, 251 applications were pending for NOC with UPPCB out of which 94 applications were pending for more than 120 days. During 2015-16, UPPCB granted 26 NOCs in which 16 NOCs were issued with delay of one to 11 months beyond 120 days (**Appendix 2.13**). Further, 11 applications were rejected/returned/closed in which five application were rejected after 120 days. The reasons for such delay were pending final decision, pending inspection/verification, etc.

In reply, the Government and the management stated (October 2016) that in-house online consent management system was under development for timely disposal of all consent applications.

Recommendation

UPPCB should strengthen consent administration system and take action against the industries operating without consent.

2.1.10.2 Inadequate inspection of industrial units/samples collection and testing

As per instructions issued by Ministry of Environment and Forest (MoEF), GoI in December 1999, industrial units should be regularly inspected with frequency depending on their classification *viz.*, Red (highly polluting), Orange (moderately polluting) and Green (least polluting) (**Appendix 2.14**).

UPPCB has fixed (2013) the frequency of inspection by its officials for Red, Orange and Green categories of industries every three, four and six months respectively in normal circumstances to check compliance of Water and Air Acts. Audit noticed following deficiencies in this regard:

UPPCB did not follow any norm for fixation of inspection target

- In disregard to the MoEF's order and its own order (2013), UPPCB had fixed region-wise yearly targets for inspection in number for sample collection and analysis in respect of industrial effluent, surface water and industrial emission. Test check of the records of RO Bareilly revealed that there was short fixation of targets as compared with norms of MoEF by 286 numbers (21 *per cent*) for the period from April 2011 to March 2016 (**Appendix 2.15**). No reply was furnished for short fixation of targets as compared with norms.

There was shortfall in finalisation of targets of inspection and its achievement

- Test checks of seven regions showed that some regions could not achieve even the target of inspection of industries fixed by UPPCB during 2011-12 to 2015-16. There was shortfall in achievement of targets by three to 56 *per cent* by two to four regions in respect of industrial effluent (**Appendix 2.16**), four to 88 *per cent* by one to three regions in respect of surface water (**Appendix 2.17**) and 20 to 95 *per cent* by one to five regions in respect of industrial emission (**Appendix 2.18**). In reply, the management stated (July 2016) that targets of inspection could not be achieved due to shortage of staff in regional laboratories.

- In RO Bareilly 28 out of 61 red category industries were not visited for inspection even once during the year 2015-16. Out of remaining 33 industries, 21 industries were visited less than four times while 11 industries were visited five to fourteen times as against the visits of four times in a year as prescribed

by UPPCB. Similarly, in RO Aligarh, 78 out of 120 red category industries could not be visited even once during the year 2015-16.

Out of remaining 42 industries, 34 industries were visited less than four times while 8 industries were visited five to eight times as against the visits of four times in a year as prescribed by UPPCB.

This indicates that selection and inspection of industries was done in arbitrary manner and was not as per norms.

In reply, the Government and the management stated (October 2016) that inspection of seriously polluting industries are done regularly on quarterly basis and action is taken on regular basis against the defaulter units as per the Acts. The reply is not acceptable as the selection of the industries for inspection of red and other categories of industries was done in arbitrary manner and against norms. Moreover, target of inspections could not be achieved.

Recommendation

UPPCB should regularly inspect the industries as per norms and penal action should be initiated against defaulting industries.

2.1.10.3 Internal control mechanism

In order to strengthen the decision making process, the UPPCB has two tier system of working consisting of Head Office & Regional Offices (**Appendix 2.19**).

Lack of internal Audit

Internal auditing is an independent appraisal function established within an organisation to examine and evaluate its activities as a service to the organisation. The objective of internal audit is to assist members of the organisation in the effective discharge of their responsibility.

It was noticed that internal audit was not done by UPPCB, in the absence of which, shortcomings in the activities of the UPPCB could not be brought to the notice of the management.

In reply, the Government and management accepted the fact and stated (October 2016) that it could not be done in the past due to constraint of staff. However, it has now deputed dedicated staff for internal audit. The fact remains that the important function of internal audit was not being carried out till date.

Recommendation

UPPCB should have a separate internal audit wing which is liable to report directly to the top management.

Inadequate number of Board meetings

Section 8 of the Water Act stipulates that the Board of UPPCB shall meet at least once in every three months and shall observe such rules of procedure in regard to the transaction of business at its meetings as may be prescribed.

Scrutiny of the records revealed that UPPCB failed to comply with the above provision of meeting at least once in every three months as it had held only ten

meetings during the period from April 2012 to December 2015, against 15 meetings that should have been held during this period.

In reply, management stated (July 2016) that adequate number of Board meetings could not be held due to unavoidable circumstances like election etc. The reply is not acceptable as Water Act stipulates that adequate Board meetings should be held and election process cannot be a persistent hindrance in the conduct of meetings of the Board. The Government did not furnish any reply.

Man-power management

Efficient functioning of an organisation depends upon the availability of requisite manpower and proper management of available manpower. Out of 819 sanctioned post, 172 posts remained vacant as on 31st March 2016 as detailed in **appendix 2.20**. The shortage of manpower under different cadres ranged from eight to 66 in the respective groups. The overall shortage of manpower was 21 *per cent*.

In reply, the management stated (July 2016) that UPPCB has started (April 2016) the recruitment process through UPPSC/UPSSC which will be completed in due course of time. The Government did not furnish any reply.

The fact remains that UPPCB has not fixed any time frame for completion of recruitment process.

Recommendation

UPPCB should expedite the process of recruitment for effective discharge of its functions under the Environmental Acts and Rules.

2.1.11 Good Practices

The State Government has banned (October 2015), under sub-section 5 of section 19 of the Air Act, the burning of left-over straw after harvesting of crops for abatement of air pollution in consultation with UPPCB.

2.1.12 Conclusion

- Uttar Pradesh Pollution Control Board (UPPCB) is the nodal agency of the State Government for planning, coordination, prevention and control of pollution. It had not drawn up a comprehensive plan for preventing and controlling water and air pollution in the State upto 2013-14 and could not achieve the targets of establishment/upgradation of laboratories as envisaged in the action plan for 2014-15 to 2015-16. UPPCB's laboratories at regional offices were functioning without accreditation and without required testing facilities.
- Financial management of UPPCB was deficient. The financial statements were not prepared from 2008-09 and was not audited since 1992-93. It could incur only 9 to 21 *per cent* of the budgeted expenditure during 2011-12 to 2015-16 on pollution control measures despite availability of funds. There was no proper assessment and realisation of Water Cess. Huge amount of ₹ 1,050.13 crore of Water Cess was lying unrecovered from industries as on March 2016. The funds received from Government of India could not be fully utilised resulting in re-imbursement of further amount of Water Cess of ₹ 193.32 crore not done.

- UPPCB was monitoring only three parameters out of nine core parameters as required under National Water Quality Monitoring Programme. The quality of water in rivers and water bodies were not as per prescribed norms due to lack of sewage treatment facilities. However, no action plan as required under Water Act was prepared by UPPCB for restoring the water quality of the rivers and water bodies. Real Time Water Quality Monitoring Stations were not installed as contemplated in the Action Plan.
- UPPCB was not monitoring all the parameters of air quality as notified by Central Pollution Control Board. The level of PM₁₀ in air in major cities such as Allahabad, Ghaziabad, Kanpur, Lucknow, NOIDA, Varanasi etc. was very high. UPPCB could not install the Continuous Ambient Air Quality Monitoring Stations.
- The municipal bodies did not comply with the provision of Municipal Solid Waste (Management and Handling) Rules, 2000 and UPPCB did not take any action under Environment (Protection) Act, 1986.
- Out of identified 8,366 Health Care Establishments (HCEs), 3,362 HCEs were operating without authorisation from UPPCB and there were inadequate bio-medical waste treatment and disposal facilities.
- Out of 1,830 hazardous waste generating industries, 327 were operating without authorisation. However, UPPCB did not initiate any action against them.
- Out of 27 E-waste recycling/collection/generation units, 11 were operating without authorisation. However, UPPCB did not initiate any action against them.
- All local bodies and many other industries were running without consent from UPPCB. The mechanism of inspection of industries was deficient and substantial shortfall was noticed in conducting inspections of even highly polluting 'red' category industries. UPPCB had no internal audit wing.

Department of Tourism

2.2 Audit on 'Up-gradation and Extension of Facilities in the State Tourism Circuits.'

2.2.1 Introduction

Department of Tourism (Department), Government of Uttar Pradesh (GoUP) is primarily responsible for development of tourism in State. Department works through Directorate of Tourism (Directorate) which was created by the GoUP in 1972. The Department is headed by Principal Secretary who is also the Director General (DG) of the Directorate. DG is assisted by one Finance Controller, one Director, two Joint Directors, seven Dy. Directors and 10 Regional Tourist Officers.

Regional Tourist Officers (RTO) of the Directorate submit the proposals for the tourism development works in State for areas, randomly selected by the Member of Legislative Assembly or Member of Parliament etc., with estimates prepared by any of the executing agencies of the State. Directorate examines such proposals and forwards it to the Department. The Department issues administrative approval for the proposals of State funded schemes and forwards the proposals of Centrally funded schemes to Ministry of Tourism (MoT) Government of India (GoI) for approval. After obtaining approval of GoI, the Department issues administrative sanctions for the centrally funded schemes. Thereafter, financial sanctions are issued and funds are released by the Department to the Directorate who transfers the same to the executing agency. Initially, the Department releases financial sanctions for the first instalment of the total outlay of the scheme and later on financial sanctions for the remaining funds are released after receipt of utilisation certificates from the executing agencies through Directorate. Directorate monitors the work done by the executing agency. After completion of the scheme, it is handed over to concerned local *samities*.

GoUP formulated Tourism Policy in 1998 which identified seven tourism circuits¹. The responsibility of preparation and implementation of tourism development schemes for up-gradation and extension of facilities in State tourism circuits lay with Tourism Directorate.

The present audit covered the activities of the Directorate relating to up-gradation and extension of the facilities in the State tourism Circuits during the period 2011-12 to 2015-16. The audit was conducted (October 2015 to April 2016) with an objective to assess whether proper planning was made, whether financial management was sound and that the execution and monitoring of the schemes were effective.

¹ Avadh circuit, Buddhist circuit, Bundelkhand circuit, Brij circuit, Eco Tourism & Adventure Sport Circuit, Vindhya circuit, Water cruise circuit.

Audit selected a sample of all 27 schemes with a sanctioned cost of ₹ five crore and above (100 per cent) and 27 schemes (50 per cent) with sanctioned cost between ₹ two crore and ₹ five crore on Random Table Method. Works test checked were in the nature of minor development activities of existing facilities at religious and historical places and infrastructure at tourist destination.

Though the Directorate did not make any categorisation of the schemes as up-gradation and extension activities, audit categorised the selected schemes as up-gradation or extension of facilities on the basis of nature of work involved (**Appendix-2.21**).

Audit findings that emerged during audit are discussed in succeeding paragraphs:

Audit findings

2.2.2 Planning

For planned development of the tourism facilities in the State, a tourism policy was framed by the GoUP in the year 1998. Tourism Policy (1998) of the State has defined seven Tourism Circuits in the State. The broad objectives of the State Tourism Policy of 1998 were as under:

- Preparation and implementation of integrated plan for all circuits of the State along with the master plan,
- Development of new tourism attractions,
- Strengthening the organisational structure of the Department and modernise the operating systems.

Audit examined implementation of the Tourism Policy by the State and the findings are discussed in the following paragraphs:

2.2.2.1 Integrated/Master plan not prepared

Tourism policy (1998) of the State has defined seven tourism circuits in the State. For planned development of each circuit; an integrated plan of all circuits along with the preparation of master plan was a pre-requisite.

Construction of Kinaram Ghat on the right bank of the River Ganges, Ghazipur



Installation of Facade Light at Kaiser Bagh Gate Lucknow



Directorate failed to prepare circuit wise master plan and integrated plan despite lapse of 18 years after framing of the Tourism Policy

Audit noticed that despite lapse of 18 years after framing of the Tourism Policy, Directorate did not prepare any circuit wise master plan and integrated plan for balanced and justified development of tourism circuits. Directorate selected the tourism development areas based on random/arbitrary suggestions of the local Member of Legislature/ Member of Parliament etc. Thus, the tourism circuits were developed in an adhoc manner. It was also noticed that plan for development of water cruise circuit envisaged in the policy document in 1998 has not been done till date and also the envisaged policies were not executed.

In reply, Department stated that compliance of the audit observation will be ensured in future.

2.2.2.2 Absence of manual or laid down procedure

As per tourism policy of the State, organisational structure of the Department was to be strengthened and operating systems were to be modernised. Audit noticed that Department failed to strengthen the organisational structure of the Department and modernise the operating system as there was no defined process or manual for the same.

In reply, Department stated that process of preparing the manual for strengthening the organisational structure and operating systems will be considered.

2.2.2.3 Specific targets for the schemes not defined

In all 54 schemes selected, it was noticed that Department did not fix any quantifiable target of the schemes for augmenting tourist arrivals in the State. In the absence of quantifiable targets and master plan (para 2.2.2.1), there was no mechanism in the State to ensure fulfilment of the objectives of tourism development schemes and the same could also not be ascertained in audit. Thus effectiveness of tourism development done remained unmeasured.

In reply, it was stated that target fixing the benefits to be derived from the tourism development schemes shall be specified and incorporated in the schemes in future.

2.2.3 Financial Management

During the period 2011-12 to 2015-16, financial budget of the State provided ₹ 583.33 crore as the capital budget of the Department. This represented only 0.19 per cent of the total budget of the State (**Appendix-2.22**). Out of the total budget provision of ₹ 583.33 crore an amount of ₹ 440.33 crore (GoI ₹ 136.16 crore and GoUP ₹ 304.17 crore) was released for up-gradation and extension of tourist facilities in the State in respect of 424 schemes. Against this an amount of ₹ 339.51 crore (GoI ₹ 135.36 crore and GoUP ₹ 204.15 crore) was spent. The actual expenditure was only 77 per cent of the fund released (**Appendix-2.23**).

The sanctioned cost of total 424 schemes pertaining to the period 2011-12 to 2015-16 was ₹ 786.49 (GoI ₹ 289.74 crore and GoUP ₹ 496.75 crore). Fund status of sampled 54 schemes up to March 2016 is given in table 2.2.1 below:

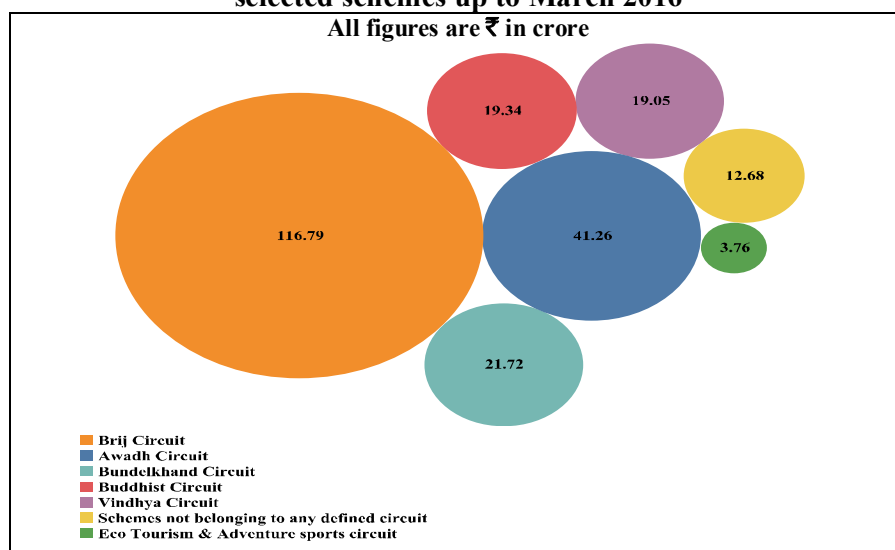
Table 2.2.1: Fund status of sampled 54 schemes up to March 2016

(₹ in crore)					
S. No.	Funds	Number of schemes	Sanctioned cost	Fund released	Expenditure incurred
1	Central	29	209.39	126.98	98.44
2	State	25	370.68	209.71	136.16
Total		54	580.07	336.69	234.60

Table above indicates that actual release against the sanctioned cost was only 58 per cent and the actual expenditure against the fund released was only 70 per cent. The reasons for less utilisation of funds, as analysed by Audit were mainly land disputes, lands not available and slackness on the part of executing agencies in execution of works. This resulted in delay in submission of utilization certificates and consequently less release of fund. Out of 54 schemes, 34 schemes are incomplete and under execution even after lapse of 6 months to 43 months of their scheduled date of completion. Physical and financial status of these selected schemes are detailed in **appendix-2.24**. Circuit wise expenditure for the selected schemes is depicted in the chart 2.2.1 below:

Chart 2.2.1

Detail of total circuit wise expenditure of ₹ 234.60 crore incurred on 54 selected schemes up to March 2016



2.2.3.1 Forwarding of proposals to Government of India without approval of Government of Uttar Pradesh

As per procedure followed in Directorate for centrally funded schemes, proposal is routed through the GoUP for approval of Ministry of Tourism, Government of India. Audit noticed that in 11 schemes valuing ₹ 64.38 crore, out of 29 sampled centrally funded schemes, proposals for approval were directly forwarded by the Directorate to MoT, GoI (**Appendix-2.25**). Consequently, justification of the schemes remained unexamined by the GoUP.

In reply, it was stated that the procedure was not followed due to shortage of time and will be followed in future. The fact remains that justification of the schemes was not examined at the Government level.

2.2.3.2 Release of fund in excess of the administrative approval

As per para 316(1)Vol VI, of the financial hand book of GoUP, financial sanctions of the scheme/work must remain within the ceiling of administrative approval granted by the Department. Department accorded administrative approval (November 2014) for ₹ one crore for each of three works under the scheme 'Construction of *Ghat* at River Ganga, Ghazipur'. However, Department released (November 2014 to May 2015) the financial approval of ₹ two crore each for the three works of the scheme. Department accepted this as a clerical mistake and assured to rectify the same. The fact remains that financial approval of two crore was irregularly issued in violation of the administrative approval and there were no checks to monitor the financial approvals with the administrative sanctions.

2.2.3.3 Cash book and vouchers not prepared

As per Para 27-A of Financial Hand Book VOL V Part I of GoUP, 'A cash-book was to be kept in every office for recording all moneys received by the government servants in their official capacity and their subsequent disbursements. The cash-book should be closed and balanced each day and the balance of each column initialed by the head of the office or the officer authorised by him, in token of having checked all the entries of the day.

It was noticed that the Directorate was operating a current bank account which was not authorised by the Government. The reasons for operating the bank account were not on record.

Audit noticed, from the bank statements, that an amount of ₹ 14.64 crore was withdrawn from the bank during 2011-12 to 2015-16. However, no vouchers and cash book were maintained by the Directorate for keeping records of transactions made from the above bank account. Department accepted the facts and stated that cash book and vouchers will be maintained in future. It further stated that the said bank account was being maintained to keep the funds of salaries and some tourism schemes. The fact remains that in absence of such records audit could not vouchsafe the transactions made from the bank account. Further, due to unaccounted transactions chances of misappropriation of GoUP funds can also not be ruled out.

2.2.4 Deficiencies relating to execution of schemes

Out of 54 sampled schemes, 29 schemes were funded by GoI and 25 schemes were funded by GoUP. The physical status of these schemes is depicted in chart 2.2.2 below:

Directorate was operating the bank account which was not authorised by the Government and has not maintained any record of transactions therefrom

Chart 2.2.2
Physical status of 29 sampled Central Government funded schemes

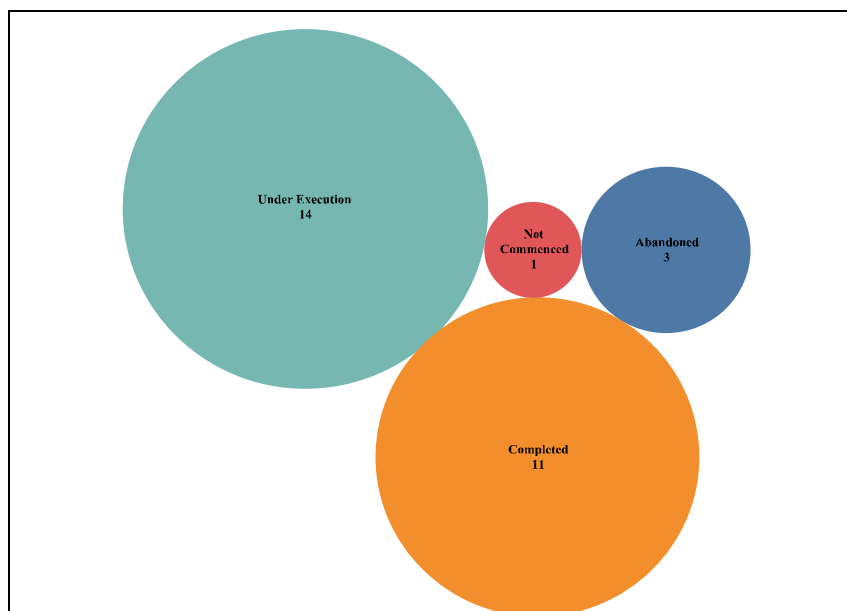
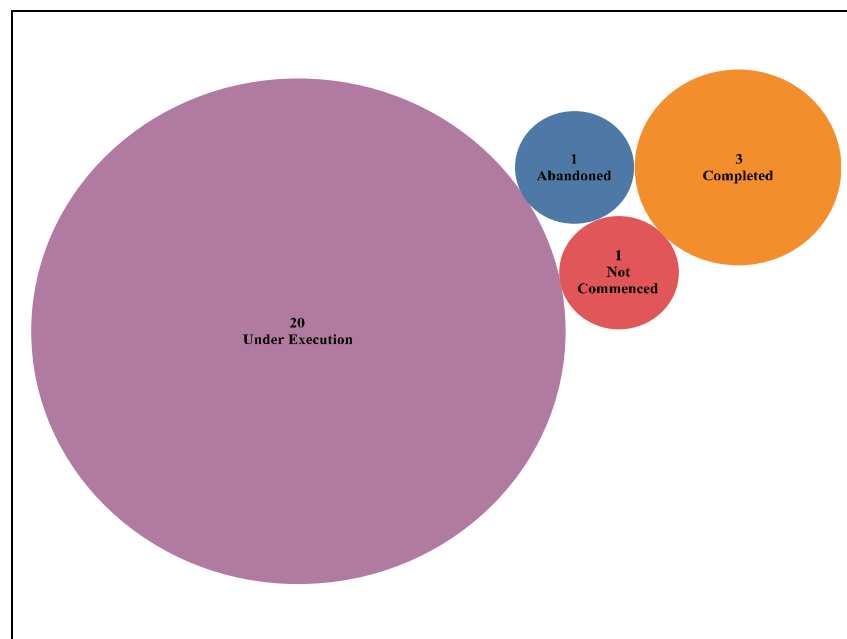


Chart 2.2.3
Physical status of 25 sampled State Government funded schemes



2.2.4.1 Delay in completion and handing over of the schemes

As can be seen from the above graphics, out of 54 selected schemes, only 14 were completed that too with a delay of six months to 88 months (**Appendix 2.26**). Remaining 40 schemes were under various stage of execution/abandoned/not commenced. Out of 14 completed schemes, six schemes (four funded by GOI and two funded by GoUP) are lying pending for handing over for more than 12 months to 49 months since their date of completion to March 2016. The Directorate did not record any specific reasons for delay in completion of the schemes and reasons for not handing over the completed schemes by the executing agencies. The reasons as analysed by

Audit were mainly land disputes (two cases), land not available (five cases) and slackness on the part of executing agencies (37 cases) in execution of works. As a result of not handing over the works to the respective user agencies the future maintenance of the works was hampered.

2.2.4.2 Schemes funded by Government of India

Product/Infrastructure Development for Destination and Circuits (PIDDC), a centrally sponsored scheme, focuses on integrated infrastructure development of the tourist sites. The aim of the scheme was to provide all infrastructure facilities like illumination of tourist destinations, improvement of road connectivity of tourist destinations, signage and display boards on tourist places, way side public conveniences etc. required by the tourists within such destinations and circuits. GoI provided financial assistance under the PIDDC scheme to the State Government.

Delay in execution of schemes

MoT, GoI while sanctioning the schemes provided the time line for commencement and completion of work. However, the Department while providing administrative approval for the centrally funded schemes did not mention timeline fixed by the GoI to the executing Agency. Audit noticed that out of 29 test checked schemes, 14 schemes were still under execution as on March 2016. Of these 14 schemes, scheduled dates of completion for 12 schemes are already over upto 43 months as on 31 March 2016. This resulted in blockade of funds of ₹ 46.40 crore in these 12 schemes (**Appendix-2.27**). The delay in execution of these schemes also resulted in lapse of Central Financial Assistance (CFA) amounting to ₹ 31.25 crore, loss of interest of ₹ 0.85 crore and loss of ₹ 15.20 lakh due to change of executing agency. The resultant loss of delay in execution are discussed in succeeding paragraphs.

Lapse of Central Financial Assistance due to delayed execution of work

Ministry of Tourism (MoT), GoI provided Central Financial Assistance (CFA) for development of tourism schemes of the States under the scheme named 'Product/Infrastructure Development for Destinations and Circuits' (PIDDC). As per conditions of sanction, first instalment was to be released with sanctions and balance fund was to be released as reimbursement only after completion of work. Audit noticed that in 10 schemes (sanctioned cost ₹ 50.30 crore), Department failed to execute the schemes within time frame as fixed by the MoT, GoI. As a result, demands for the balance instalments of funds already sanctioned could not be raised. The PIDDC scheme was closed since March 2015 and GoI stopped funding under the same. Presently, out of ten schemes, one scheme is complete with GoUP assistance of ₹ 0.33 crore, one scheme is abandoned and eight schemes are under progress with financial assistance of ₹ 11 crore provided by GoUP. Thus, Directorate failed to obtain the CFA amounting to ₹ 31.25 crore and also caused avoidable burden of ₹ 11.02 crore on capital expenditure of GoUP (**Appendix-2.28**).

In reply, Department stated that closure of PIDDC scheme of GoI was not expected and efforts were made to complete the schemes in given period but could not be completed in time. Reply is not acceptable as the schemes were

Providing administrative approval for the centrally funded schemes without mentioning time line resulted in blockade of funds of ₹ 46.40 crore in uncompleted schemes

Delay in execution of schemes resulted in lapse of CFA of ₹ 31.25 crore and also caused avoidable burden of ₹ 11.02 crore on capital expenditure of GoUP due to failure in timely execution of schemes

to be completed before March 2015 which has resulted in avoidable burden of ₹ 11.02 crore to the State exchequer.

Failure to arrange the land

Clause 8 (1) of Guidelines of 'Product/Infrastructure Development for Destinations and Circuits (PIDDC) scheme provided that the Directorate will be fully responsible for making the land available for tourism development scheme. In two centrally funded schemes (sanctioned cost ₹ 6.40 crore) ₹ 5.06 crore was released by GoI (**Appendix-2.29**). Audit noticed that the Department, despite confirming the availability of land to GoI in proposal sent for approval of schemes, failed to arrange the land for execution of work under the schemes. Consequently schemes could not be implemented and an amount of ₹ 5.06 crore received (July 2010 and September 2012) for these schemes remained blocked for 32 to 42 months. It was noticed that the amount of ₹ 1.85 crore was refunded to GoI (February 2013). In reply, Department stated that matter will be investigated. Fact remains that the Directorate failed to ensure the availability of land prior to sending the proposal.

Loss of interest due to delay in commencement of schemes

As per conditions of the approval of GoI, State Government was not allowed to keep the fund unutilised for more than six months. In case funds remained unutilised within six months of its release, they were to be surrendered to GoI or their formal approval was to be taken to transfer/adjust the amount against other centrally funded projects.

Delay in implementation of Central Government funded scheme by executing agencies resulted in blockade of fund of ₹ 30.46 crore and loss of interest of ₹ 0.85 crore

Audit noticed that in 18 centrally financed schemes (sanctioned cost ₹ 150.30 crore, released ₹ 65.74 crore by GoI) the work could not commence within six months of the sanctions of the GoI. The reasons of not commencing the work within six months were not on records. The reason as analysed by Audit was deficient monitoring in follow-up of time line fixed by GoI. Hence, the funds of ₹ 65.74 crore provided by the GOI remained unutilised from six months to 92 months (March 2016) due to delay on part of Department in 11 schemes and from 1 to 29 months on part of EAs in 11 schemes. Out of ₹ 65.74 crore released by GoI the Department released ₹ 30.46 crore to the EAs for the implementation of the schemes. It was however noticed that due to delay by the EAs in implementation of the schemes (1 months to 29 months), funds amounting to ₹ 25.13 crore was blocked resulting in interest loss of ₹ 0.85 crore (**Appendix-2.30**). The Directorate did not make any efforts to realise the interest earned by EA on unutilised government funds. In reply, Department stated that efforts will be made to speed up execution of the schemes.

Avoidable expenditure on execution of work due to change of executing agency

GoI accorded the approval (December 2011) for the scheme 'Development of Mathura Vrindaban as Mega Destination Mathura', for ₹ 31.79 crore. Out of 10 works in the scheme, Department allotted (September 2012) the work of 'Construction of Gokul Ghat, Vishram Ghat, Hansiarani Ghat and Chintaharan Mahadev' at a sanctioned cost of ₹ 11.81 crore, to Uttar Pradesh Rajkiya Nirman Nigam (UPRNN) without obtaining 'No Objection Certificate'(NOC) from Irrigation Department. UPRNN commenced the work in anticipation of obtaining NOC and spent ₹15.20 lakh on the works but NOC could not be obtained. Instead of obtaining NOC from Irrigation Department,

Directorate changed (May 2013) the executing agency and awarded the work to Irrigation Department itself. Subsequently, on suggestion of Irrigation Department (September 2013), Department awarded (October 2013) the work to UPPCL, a public sector undertaking of Irrigation Department. UPPCL discarded the work costing ₹ 15.20 lakh carried out by the UPRNN. Thus, expenditure incurred by the UPRNN amounting to ₹ 15.20 lakh became unfruitful.

No reasons were on record for the change of executing agency. Also, the Department did not provide any specific reply for decision to change the executing agency.

2.2.4.3 Schemes funded by State Government

Out of 54 schemes selected for test check, 25 schemes (Sanctioned cost ₹ 370.68 crore) were funded by the State Government. Audit noticed that the Department did not prescribe any timeline for commencement and completion of these schemes. Out of these 25 schemes, only three schemes were completed that too after 30 to 34 months of their sanctions. One scheme (sanctioned cost ₹ 5.58 crore) has yet not commenced even after 12 months of its sanction due to not obtaining permission of Archaeological survey of India as discussed in subsequent paragraph. One scheme is abandoned. Remaining 20 schemes (sanctioned cost ₹ 345.67 crore) are under execution without any timeline (**Appendix-2.31**). Reasons for delay were not on record. Two completed schemes² are pending for formal handing over even after two to four years of completion of work. Audit findings in this regard are discussed below:

Loss of interest due to delay in commencement of works

₹ 22.85 crore released by State Government to executing agencies remained unutilised for two to 40 months due to delay in commencement of works

As per GoUP order (December 1993) the interest earned by the Executing Agency (EA) on unutilised government fund is to be refunded to the GoUP. Audit noticed that in eight out of 25 State funded schemes, an amount of ₹ 22.85 crore released by the State Government remained unutilised with EAs for two to 40 months due to delay in commencement of works. The Department did not make any efforts to quantify and realise the interest earned by EAs on unutilised government funds in terms of GoUP order (December 1993). This resulted in loss of interest amounting to ₹ 0.99 crore to GoUP (**Appendix-2.32**).

In reply, Department stated that efforts will be made to get the schemes completed by fixing time lines for completion in future. Fact remains that Directorate failed to ensure timely commencement of the works which led to the blockage of funds of ₹ 22.85 crore and loss of interest of ₹ 0.99 crore.

Loss due to dismantling of executed work

In two cases³, Department decided (December 2015) to dismantle the structures (Dormitory and Toilet block at Shilpgram) constructed during 2010

² Construction of Lucknow haat and Construction of 150 bed dormitory at Agra

³ Centrally funded Scheme named Construction of 150 bedded Dormitory and State funded scheme named Development of Shahjahan Park, Fatehpur Sikri and Shilpgram at Agra

Decision of dismantling of structure constructed during 2010 to 2014 will result in loss of ₹ 2.99 crore

to 2014 (costing ₹ 2.99 crore) for implementation of new scheme named Construction of Taj Orientation Centre, Shilpgram Agra. The decision of demolition was taken by cabinet (August 2015) due to the fact that these structures were built randomly over a different period of time. However, it was observed that these structures were constructed only in the recent past (2010 to 2014). Dismantling work has also started since June 2016 hence no beneficiary (Artisan) was found (November 2016) on the site for conducting the beneficiary survey.

In reply, Department stated that decision of dismantling was taken as it was unavoidable for execution of new project. The fact remains that earlier structure were built randomly without proper planning.

Excess expenditure incurred by the executing agencies

Under the State funded scheme for ‘Construction of Satsang Bhawan and Rain Basera’ (sanctioned cost ₹ 4.67crore) in district Faizabad, the work was constructed only on ground. However, Executing Agency⁴ (EA) prepared the estimate applying UPPWD, SOR rate applicable for framed RCC structure of construction up to six floor in place of UPPWD SOR rates applicable for the work for ground floor. This resulted in excess expenditure of ₹10.97 lakh. In reply, Department stated that action in this regard, is proposed to be taken after obtaining the reply of EA. The fact remains that there is absence of proper scrutiny of estimates prepared by EA.

Unutilised funds not recovered from executing agency

Administrative approval accorded by the Department invariably provided a condition that saved/unutilised funds on execution of work, was to be returned to the GoUP. However, administrative approval (April 2009) of the scheme ‘Tourism Development of Barsana, Mathura’ (sanctioned cost ₹ 3.56 crore) did not include any such condition. Audit noticed that the work was awarded (January 2011) to Uttar Pradesh State Tourism Development Corporation (UPSTDC) which completed and handed over the work in January 2014 with a saving of ₹ 86 lakh. But, UPSTDC did not refund the balance funds to the Department. In reply, Department stated that efforts are being made to get the funds back from UPSTDC along with interest. Audit further noticed that Department has issued (December 2016) a letter to UPSTDC, balance fund is still lying pending for returning to the Department. The fact remains that due to inaction of the Department, funds amounting to ₹ 86 lakh and interest (₹ 7.45 lakh) are lying with executing agencies for more than two years.

Modernisation of a scheme proposed for disinvestment

In continuation of disinvestment process of units of Uttar Pradesh State Tourism Development Corporation, GoUP enlisted (October 2011) *Rahi* Tourist Guest House at *Sonauli, Maharaj Ganj* (sanctioned cost ₹ seven crore) for operating on lease/development agreement/ management contracts. In violation of above GoUP order, Directorate sent (January 2015) a proposal for modernisation of the existing tourist guest house at *Sonauli Maharajganj*. The Department accorded (March 2015) administrative/financial approval for the same and released ₹ two crore. Directorate released (March 2015) ₹ two crore after deducting TDS of ₹ four lakh from the same to EA (UPAVP).

⁴ Uttar Pradesh Rajkiya Nirman Nigam

Thereafter, the scheme was cancelled in July 2015 on proposal of Directorate (April 2015). The EA refunded (August 2015) the entire amount of ₹ 1.96 crore. In reply, the Department stated that explanation from the responsible officers have been called for. Thus, the proposal of the Directorate for modernisation of the existing tourist guest house which was planned for disinvestment by the Department and the subsequent approval of the Department for the same indicates lack of follow up and monitoring of its own orders issued.

Works not taken up

GoUP sanctioned (June 2015) a scheme of 'Light and Sound Show' at Lucknow Residency, (₹ 5.58 crore). It was noticed that even after lapse of almost one year from the date of sanction, the work was yet to be taken up (March 2016). Audit noticed that Lucknow Residency is presently under Archeological Survey of India (ASI) and not with the Tourism Department of the State. Hence, permission of ASI is necessary for organising the light and sound show. The permission was sought (August 2015) which is yet to be obtained (March 2016). As per the sanction order, a Committee was to be formed by Directorate. It was however noticed that the Committee was yet to be formed. Resultantly, the work could not be commenced. Specific reply for not taking up the work and not forming the Committee was not provided.

2.2.4.4 Other Deficiencies in execution of schemes

The implementation of the schemes is done by the Directorate through executing agency notified by GoUP. The executing agency executes the work after obtaining technical sanction from the competent authority. Audit noticed following deficiencies in this regard:

- Appointment of Executing Agencies (EA) is done by the Department on the proposal sent by the Directorate. There was absence of laid down procedure for nomination of EA in Directorate for works assigned on deposit work basis. As a result nomination of EA for the works was done arbitrarily without following any process and without obtaining comparative offers from EA to execute the work.

Further, GoUP notified (March 2006 and February 2013) names of the Executing Agencies (EA) for execution of deposit works. Audit noticed that in 10 schemes (sanctioned cost ₹ 110.30 crore) the Department irregularly appointed executing agencies in violation of the GoUP orders (**Appendix-2.33**).

In reply, Department stated that EAs other than notified ones were selected based on technical experience. Reply is not acceptable as no such exceptions were allowed by the GoUP order.

- As per para 318 of Vol VI of Financial Hand Book, technical sanction was to be obtained from competent authority for every work proposed to be carried-out before commencement of work. Audit noticed that Directorate had no mechanism to ensure that technical sanctions were obtained by the EA before commencement of work. Further, on a test check of records of six

executing agencies⁵ in respect of 27 schemes (sanctioned cost ₹ 398.32 crore), Audit noticed that in 10 schemes (sanctioned cost ₹ 77.46 crore), work was commenced by the concerned executing agencies before obtaining technical sanction (**Appendix-2.34**). No specific reply was provided by the Department.

- As per Building and Other Construction Worker's Welfare Cess (Cess) Rules, 1998 (Rules) where the levy of cess pertains to building and other construction work of a Public Sector Undertaking (PSU), such PSU shall deduct cess payable at the notified rates from the bills paid for such works. The said Rules were made applicable in the State from 4 February 2009 and the rate of cess was notified at one *per cent* of the cost of construction. Audit noticed that in two schemes, concerned EAs failed to deduct and deposit the labour cess amounting to ₹ 3.17 lakh with the state exchequer (**Appendix-2.35**).

2.2.5 Monitoring

2.2.5.1 Deficient Internal Audit

Internal audit works as independent unit within the Department for evaluation of the workings of the Department. As per GoUP order (January 2001), Internal audit of at least one month working of an office out of the 12 months should be done each year.

The internal audit of eight RTOs out of 10 RTOs and of Directorate was not done

The Directorate has an internal audit wing to conduct periodical audit of Tourism Directorate and 10 Regional Tourist Offices (RTO's) working under it. However, it was noticed that audit of only two RTOs against 10 RTOs were conducted during 2011-12 to 2015-16. No internal audit of the tourism directorate by its internal audit wing had taken place during the audit period. In reply, Department stated that internal audit work was not done due to shortage of staff and will be conducted in future. Facts remains that monitoring through internal audit was deficient.

2.2.5.2 Failure in formation of monitoring committee

Despite the order of the MoT, GoI, no monitoring committee was framed

As per guidelines of the scheme sanctioned by Ministry of Tourism (MoT) GoI, a State Level Monitoring Committee under the chairmanship of Secretary, Tourism of the State, was to be formed for monitoring physical and financial progress of centrally funded schemes. It was, however, noticed that no such committee was formed. In the absence of regular committee the schemes could not be monitored. In reply, Directorate/ Department stated that since the monitoring was being done from the head quarter/RTOs, no specific committees were formed. Reply is not acceptable as Directorate has not followed the GoI guidelines and monitoring done by headquarter/ RTOs remained deficient as it failed to complete the schemes in time.

2.2.5.3 Absence of Quality Control Mechanism

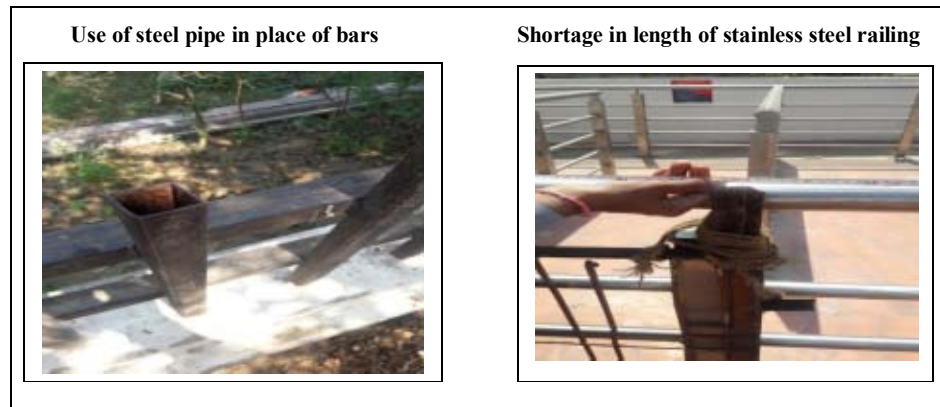
It is necessary to have a quality control mechanism for the work executed under the tourism development schemes. Audit noticed that Directorate/ Department did not put in place any such quality control mechanism. Absence of quality control mechanism has deprived the GoUP for assessing the quality

⁵Uttar Pradesh Rajkiya Nirman Nigam (UPRNN), Uttar Pradesh Avast and Vikas Parishad (UPAVP), Department of Forest (DoF), Construction and Design services (C and DS), Uttar Pradesh Project Corporation (UPPCL), Uttar Pradesh State Tourism Development Corporation (UPSTDC)

In the absence of quality control mechanism the quality of work done could not be ensured

of work done. During joint physical verification of schemes, Audit noticed deficiencies in the quality of work done under three schemes as discussed along with photographs in succeeding paragraphs.

- During joint physical verification of one completed scheme ‘Development of *Maa Chandrika Devi Dham*, Lucknow’ (₹ 3.04 crore), Audit noticed that work was not done as per specifications. It was noticed that in place of steel bars approved, steel pipes were used and stainless steel railing was found short in length.



- Joint physical verification of another scheme under execution ‘Urban *Haat* Varanasi’ revealed that work of children park valuing ₹ 15.70 lakh and spot development work valuing ₹ 19.60 lakh was lying incomplete, however the same were shown as complete by EA. Besides, there was shortage in length of main gate, GI pipe, wall lining and air conditioner valuing ₹ 8.98 lakh.



- In one scheme under execution ‘Development of Tourist sites at Raibareilly, there were shortages of kota stone and marble flooring worth ₹ 2.25 lakh as compared to approved estimates.

In reply, Department stated that shortcomings found in joint physical verification will be got rectified from the executing agencies.

2.2.6 Conclusions and Recommendations

- Directorate failed to comply with the Tourism Policy of Government of Uttar Pradesh (GoUP) and did not prepare circuit wise master plan and integrated plan for balanced and justified development of tourism circuits. It did not develop ‘Water Cruise Circuit’ as envisaged in the Tourism Policy. Moreover, Department did not fix quantifiable targets of the schemes for augmenting tourist arrival in the State. In absence of quantifiable targets and master plan, State had no mechanism to ensure fulfilment of its objectives.

Directorate should comply with tourism Policy of GoUP and should prepare master plan and integrated plan. The Department should fix quantifiable targets of the schemes.

- Proposals were sent to GoI without examination at the GoUP level; financial sanctions were in excess of administrative approvals and funds were kept outside the Government account without authorisation.

Proper financial mechanism for necessary checks to be exercised has to be evolved.

- There was considerable delay in execution of schemes and also in handing over of the completed schemes. Due to delayed implementation of centrally funded schemes, central financial assistance amounting to ₹ 31.25 crore could not be availed. Moreover, there was absence of quality control mechanism for assessing the quality of work done.

The Directorate should ensure execution of schemes in a timely and effective manner and put in place a quality control mechanism.

- Directorate failed to form committee for monitoring the physical and financial progress of the schemes and failed to conduct internal audit. There was absence of quality control mechanism for the works executed under the various schemes.

The Directorate should form the committee to monitor the physical and financial progress and also get the internal audit done. It should also put in place a mechanism for ensuring the quality of the works executed.