



**STATE
ENVIRONMENT
PLAN
for
UTTAR PRADESH**



June, 2023

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1.0 Profile

Hon'ble National Green Tribunal orders in OA No- 360/2018; "Shree Nath Sharma vs Union of India and others order to the State for preparation of District Environment Plans for each district-vide dated 26.09.2019, 19.03.2020, 29.01.2021 & 05.07.2021. As per the Hon'ble NGT order dated 05.07.2021 "**Chief Secretaries of all the States/UTs may ensure completion of District Environment Plans (DEPs) for all the districts, in the light of orders of this Tribunal dated 26.09.2019, 19.03.2020, 29.01.2021 and the observations in the present order and upload the same on their respective websites positively by 31.10.2021**".

Issue for consideration is desirability of District Environment Plans in terms of Articles 243 G, 243 W, 243 ZD, read with 11th and 12th Schedules to the Constitution of India, to be operated by the District Planning Committee under article 243ZD and based thereon State Environment Plans and also National Environment Plan to help protection of the environment, public health and environmental rule of law in the country.

The said Order also directs that the Department of Environment in respective States/UTs should collect district plans to prepare a State Environment Plan, which shall be monitored by respective Chief Secretaries of State/UT.

Uttar Pradesh is a state in northern India. With over 200 million inhabitants, it is the most populated state in India as well as the most populous country subdivision in the world. The two major rivers of the state, the Ganges and its tributary Yamuna meet at the Triveni Sangam in Allahabad, a Hindu pilgrimage site. Other notable rivers are Gomti and Saryu. The forest cover in the state is 6.1% of the state's geographical area. The cultivable area is 82% of the total geographical area and net area sown is 68.5% of the cultivable area.

Uttar Pradesh is bounded by Uttarakhand and Himachal Pradesh on the north-west, Haryana and Delhi on the west, Rajasthan on the south-west, Madhya Pradesh on the south, Chhattisgarh and Jharkhand on south-east and Bihar on the east. Situated between 23°52'N and 31°28'N latitudes and 77°3'E and 84°39'E longitudes, this is the fourth largest state in the country in terms of area, and the first in terms of population. Uttar Pradesh can be divided into four distinct hypsographical regions:

- The Shivalik foothills
- Terai in the North
- The Gangetic Plain in the centre - Highly fertile alluvial soils; flat topography broken by numerous ponds, lakes, and rivers; slope 2 m/km
- The Vindhya Hills and plateau in the south - Hard rock Strata; varied topography of mountains, hills, plains, valleys, and plateau; limited water availability.
- The Shivalik Range which forms the southern foothills of the Himalayas, slopes down into a boulder bed called Bhabar.



Fig 1: District map of Uttar Pradesh

UP and Climate Change Vulnerability

UP, India's fifth largest state and its most populous, is diverse in geography and culture. The population is largely rural and its occupation is agrarian. The climate sensitivity of agriculture is very high in the state and high level poverty, rapid urbanization coupled with flood, heat waves and cold waves makes it one of the most vulnerable areas in India. As per the projection, annual rainfall is predicted to increase by 15% to 20% in the 2050's as compared to the baseline and the increase is higher towards 2080's (25% to 35%). Inter annual variability is higher towards 2080's. There is also predicted increase in maximum temperature 1.8 deg C to 2.1 deg C during that period. Combined vulnerability index that is largely linked to natural resource driven sectors shows all the districts in the Bundelkhand and Vindya regions are highly vulnerable to climate change, as is Kaushambi from the central plains and two districts of the north-eastern plains. The less or moderately vulnerable districts were observed mainly in the western plains, Midwestern plains, Bhabhar and Tarai zones, and the south-western semi-arid regions. Mixed pattern is seen in the central, eastern, and north-eastern plains.

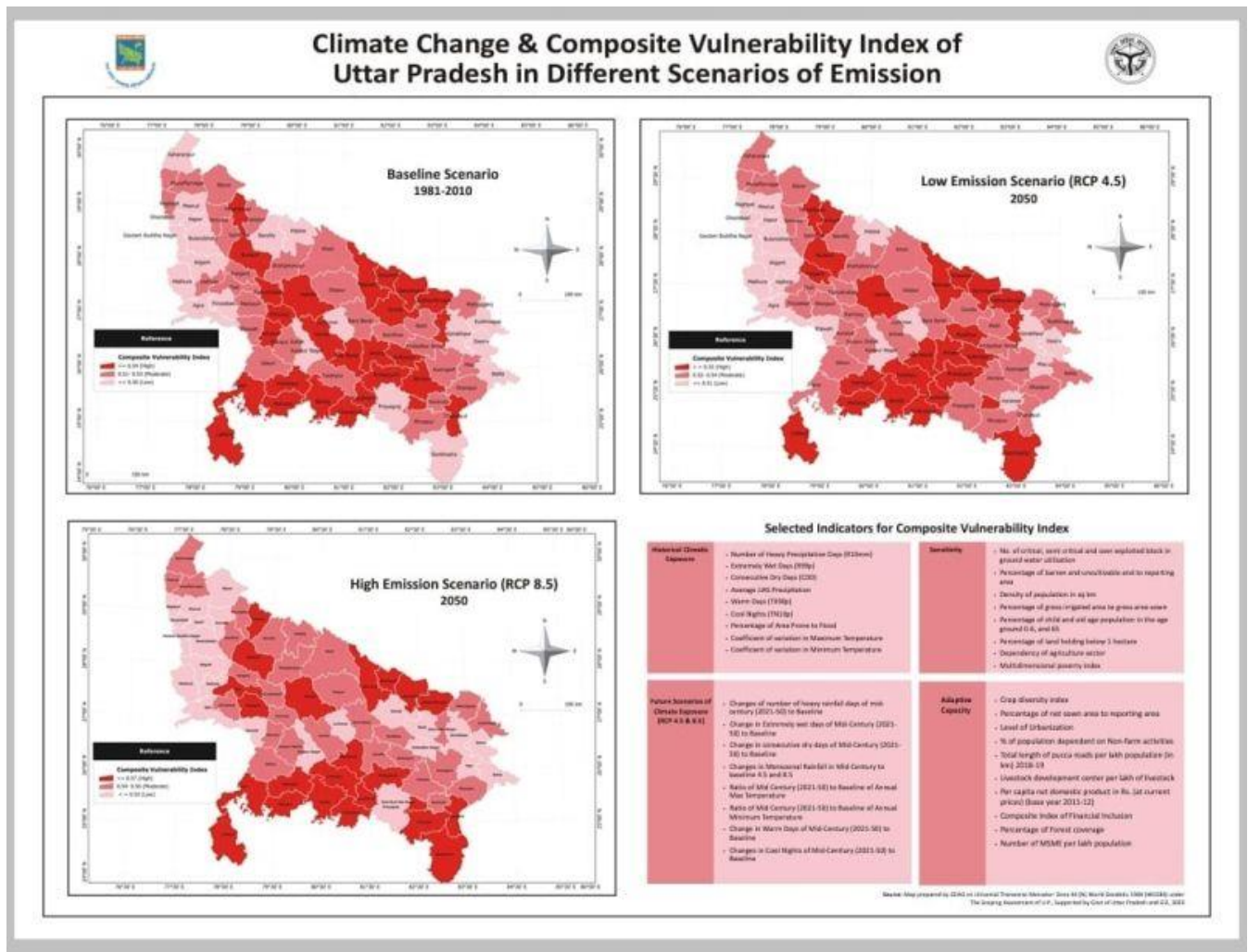


Fig 2: Composite Vulnerability Index of Uttar Pradesh

Programmes for Environment: Land, Air and Water

1. National Mission for Clean Ganga

The Act envisages five-tier structures at the national, state and district levels to take measures for prevention, control and reduction of environmental pollution in river Ganga and ensure an adequate continuous flow of water to rejuvenate the river Ganga.

Key Points:

- National Mission for Clean Ganga, an implementing arm, is declared an Authority under Environment Protection Act, 1986 (Oct 2016).
- Establishment of state and District Ganga Committees. (June 2017).
- NMCG has notified minimum environmental flows in river Ganga from its origin to Unnao, Uttar Pradesh (Oct. 2018).
- Collaborative action was taken for converging multiple agencies under one roof - Central Ministries and State Governments.
- A comprehensive approach, bringing Ganga and its tributaries under one umbrella.
- Ganga River Basin Management Plan developed by a consortium of 7 Indian Institute of Technology (IITs) (Jan 2015).

- NAMAMI GANGE is approved as a flagship programme with a budget outlay of ₹ 20,000 crores (May 2015).

The main pillars of the programme are:

- Sewerage Treatment Infrastructure & Industrial Effluent Monitoring,
- River-Front Development & River-Surface Cleaning,
- Biodiversity & Afforestation,
- Ganga Gram
- Public Awareness

2. Jal Jeevan Mission

Jal Jeevan Mission is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India. The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through greywater management, water conservation, rainwater harvesting. The Jal Jeevan Mission will be based on a community approach to water and include extensive Information, Education, and Information as a vital component. JJM looks to create a Jan andolan for water, thereby making it everyone's priority.

- To provide FHTC to every rural household.
- To prioritise the provision of FHTCs in quality affected areas, villages in drought-prone and desert areas, Sansad Adarsh Gram Yojana (SAGY) villages, etc.
- To provide functional tap connection to Schools, Anganwadi centres, GP buildings, Health centres, wellness centres and community buildings.
- To monitor the functionality of tap connections.
- To promote and ensure voluntary ownership among local community by way of contribution in cash, kind and/ or labour and voluntary labour (shramdaan)
- To assist in ensuring the sustainability of the water supply system, i.e. water source, water supply infrastructure, and funds for regular O&M.
- To empower and develop human resources in the sector, the demands of construction, plumbing, electrical, water quality management, water treatment, catchment protection, O&M, etc., are taken care of in the short and long term.
- To bring awareness on various aspects and significance of safe drinking water and involvement of stakeholders in a manner that makes water everyone's business.

3. National Clean Air Program (NCAP)

The Central Government launched National Clean Air Programme (NCAP) as a long-term, time-bound, national-level strategy to tackle the air pollution problem across the country in a comprehensive manner with targets to achieve 20% to 30% reduction in Particulate Matter concentrations by 2024, keeping 2017 as the base year for the comparison of concentration. Under NCAP, 122 non-attainment cities have been identified across the country based on the Air Quality data from 2014-2018.

Key Points:

- The timeline to reduce air pollution by 20-30% by 2024 needs to be reduced.

- The target of reduction needs to be increased.
- It suggested that the Ministry review and action shift to e-vehicles and CNG vehicles, intensifying public transport system, mechanical cleaning of roads, enhancement of public parking facilities, improvement in fuel quality, and traffic management.
- It directed the state pollution control boards to ensure the assessment and installation of the requisite number of real-time online continuous Ambient Air Quality Monitoring Systems within six months.
- It also directed an expert team of the Central Pollution Control Board to design a model for source apportionment and to carry capacity assessment within two months, which may be replicated for all the non-attainment cities.
- Source Apportionment: It is the practice of deriving information about pollution sources and their contribution to ambient air pollution levels.
- Carrying Capacity: The concept of “carrying capacity” addresses the question of how many people can be permitted into any area without the risk of degrading the environment there.

4. Swachh Bharat Mission

To accelerate the efforts to achieve universal sanitation coverage and to put the focus on sanitation, the Prime Minister of India had launched the Swachh Bharat Mission on 2nd October 2014. Under the mission, all villages, Gram Panchayats, Districts, States, and Union Territories in India declared themselves "open-defecation free" (ODF) by 2 October 2019, the 150th birth anniversary of Mahatma Gandhi, by constructing over 100 million toilets in rural India. To ensure that the open defecation free behaviours are sustained, no one is left behind, and that solid and liquid waste management facilities are accessible, the Mission is moving towards the next Phase II of SBMG, i.e. ODF-Plus. ODF Plus activities under Phase II of Swachh Bharat Mission (Grameen) will reinforce ODF behaviours and focus on providing interventions for the safe management of solid and liquid waste in villages. In Rural India, this would mean improving the levels of cleanliness through Solid and Liquid Waste Management activities and making villages Open Defecation Free (ODF), clean and sanitised. Some Initiatives take under the SBM.

1. Swachh Iconic Places (SIP)

Through its Swachh Bharat (Clean India) Mission, the Government of India has proposed a multi-stakeholder Initiative focusing on cleaning up 100 places across the country that are “iconic” due to their history, heritage and religious and/or religious cultural significance with high visitor’s footfall.

The objective is to achieve a distinctly higher level of sanitation/ cleanliness at these places, especially on the peripheries and in approach areas. Given the scale of the task, its success lies in the active collaboration of central, state and local stakeholders at all government and private sector levels. To this end, the Initiative is being coordinated by the Department of Drinking Water and Sanitation, Jal Shakti Mantralay, in close coordination with partner ministries – Housing and Urban Development, Tourism and Culture – and state and state municipal corporations and the selected sites’ trusts and committees. The World Bank has provided support in making action plans by the selected Iconic Sites.

2. Namami Gange

Namami Gange is the umbrella programme coordinated by the Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD &GR), Jal Shakti Mantralay that involves multiple Ministries. Under Namami Gange, the assigned responsibilities of the Department of Drinking Water and Sanitation (DDWS), MoJS are:

- To prioritise initiatives in establishing Open Defecation Free (ODF) gram panchayats along the banks of River Ganga in convergence with the efforts of DoWR, RD & GR.
- To the extent, possible it may take up the programme in rural areas for solid and liquid waste management in the development of model villages/Ganga grams in convergence with DoWR, RD and GR.

The 4,465 villages have declared ODF in 1,662 Gram Panchayats in 52 districts of five states, namely, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal, along the 2,510 Km long River on 12th August 2017 at Prayagraj, Uttar Pradesh. Post ODF, activities related to SLWM, tree plantation and convergence based wholesome development are being taken up.

3. Swachh Swasth Sarvatra (SSS)

- A Joint initiative between the Department of Drinking Water and sanitation, M/o Jal Shakti and the Ministry of Health and Family Welfare (MoHFW).

Objective :

- To build on and leverage the achievements of two complementary programmes – SBM and Kayakalp (MoHFW)
- The initiative focuses on WASH parameters in selected hospitals, priority ODF action in areas around identified health centres, and advanced sanitation training for doctors and health workers.
- D/o Drinking Water and Sanitation has mapped those GPs where these PHCs are situated to complete ODF on priorities basis.
- UNICEF will train health Workers of Kayakalp Award-winning CHCs/PHCs on WASH parameters.

4. Gobardhan

Gobardhan was launched to ensure cleanliness in villages by converting bio-waste, including cattle waste, kitchen leftovers, crop residue and market waste, to improve the lives of villagers. This will provide economic and resource benefits to farmers and households.

Department of Drinking Water and Sanitation is working with concerned Departments/ Ministries/ State Governments, public and private sector institutions and village communities to give this a shape of 'Janandolan' so that collective community action on Gobardhan is achieved.

Gobardhan will benefit rural people in general and women in particular from clean fuel, improved cleanliness in villages, and improved health. This initiative will support biodegradable waste recovery and conversion of waste into resources, reduction of GHG emission, reduction in import of crude oil, boost entrepreneurship, and promote organic farming.

Objective:

- To support villages safely manage their cattle waste, agricultural waste, and all organic waste in the long run.
- To support communities, convert their cattle and organic waste to wealth using decentralised systems.
- Promote environmental sanitation and curb vector-borne diseases through effective disposal of waste in rural areas.
- Convert organic waste, especially, cattle waste to biogas and fertiliser for use in rural areas.

"Comprehensive Environmental Pollution Index" (CEPI)

In 2009, the Ministry of Environment & Forests (MoEF), Govt. of India in association with Central Pollution Control Board (CPCB), New Delhi and Indian Institute of Technology (IIT), New Delhi have carried out an environmental assessment of industrial clusters across the country named "Comprehensive Environmental Pollution Index" (CEPI) with the aim of identifying polluted industrial clusters & prioritizing planning needs for intervention to improve the quality of environment in these industrial clusters and the nation as a whole. The CEPI criteria was revised in 2016 and based on the CEPI-2016 criteria, CPCB carried out further monitoring in the year 2017-18, these clusters numbers went upto 100 in whole country, These clusters as may referred to order issued by Hon'ble National Green Tribunal for Original Application No. 1038/2018 dated 10.07.2019. The industrial clusters/areas having aggregated CEPI scores of 70 and above were considered critically polluted clusters/areas and those with scores less than 70 and more than 60 were classified as Severely Polluted; further detailed investigations were carried out in terms of the extent of environmental damage and formulation of appropriate remedial action plan. There are total 13 Polluted Industrial Areas (PIAs) which includes 9 critically polluted Areas(CPA) namely Mathura, Kanpur, Moradabad, Varanasi-Mirzapur, Bulandshahar-Khurja, Firozabad, Gajraula area, Agra, Ghaziabad and 4 severely Polluted Area viz. Noida, Meerut, Aligarh, Singrauli (UP & MP)

a. Government and administration

The state is governed by a parliamentary system of representative democracy. Uttar Pradesh is one of the seven states in India, where the state legislature is bicameral, comprising two houses: the Vidhan Sabha (Legislative Assembly) and the Vidhan Parishad (Legislative Council).

For purpose of administration, the state is divided into 18 divisions and 75 districts. The administration in each district is headed by a District Magistrate.



Fig 3: Uttar Pradesh Legislative Assembly (Vidhan Sabha), the lower house of the bicameral legislature.

The judiciary in the state consists of the Allahabad High Court in Allahabad, the Lucknow Bench of Allahabad High Court, district courts and session courts in each district or Sessions Division, and lower courts at the tehsil level. The President of India appoints the chief justice of the High Court of the Uttar Pradesh judiciary on the advice of the Chief Justice of the Supreme Court of India as well as the Governor of Uttar Pradesh. The district court of Etawah and the district court of Kanpur Dehat of the judiciary in Uttar Pradesh are controlled by the District Judge.

Uttar Pradesh is divided into 75 districts under these 18 divisions.

	Division	District		Division	District
1	Agra division	Agra	10	Gorakhpur division	Deoria
		Firozabad			Gorakhpur
		Mainpuri			Khushinagar
		Mathura			Maharajganj
2	Aligarh division	Aligarh	11	Jhansi division	Jalaun
		Etah			Jhansi
		Hathras			Lalitpur
		Kasganj			
3	Allahabad division	Allahabad	12	Kanpur division	Auriya
		Fatehpur			Etawah
		Kaushambi			Farrukhabad
		Pratapgarh			Kannauj
4	Azamgarh division	Azamgarh	13	Lucknow division	Kanpur Dehat
		Balia			Kanpur Nagar
		Mau			Hardoi
5	Bareilly division	Badaun			Lakhimpur
		Bareilly			Kheri
		Pilibhit			Lucknow
					Raebareli
					Sitapur

		Shahjahanpur			Unnao
6	Basti division	Basti	14	Meerut division	Baghpat
		Sant Kabir Nagar			Bulandshahar
		Siddharth Nagar			Gautam Buddha Nagar
7	Chitrkoot division	Banda	15	Mirzapur division	Ghaziabad
		Chitrakoot			Meerut
		Hamirpur			Hapur
		Mahoba			Mirzapur
8	Gonda division	Bahraich	16	Moradabad division	Bhadohi
		Balrampur			Sonbhadra
		Gonda			Bijnore
		Shravasti			Amroha
9	Faizabad (Ayodhya) division	Ambedkar Nagar	17	Saharanpur division	Moradabad
		Barabanki			Rampur
		Faizabad			
		Sultanpur			Sambhal
		Amethi			Muzaffarnagar
			18	Varanasi division	Saharanpur
					Shamli
					Chandauli
					Ghazipur
					Jaunpur
					Varanasi

b. Local institutions

Uttar Pradesh is now divided into 75 districts under 18 divisions, 822 blocks, 52021 Panchayat, and 107452 villages. Districts are administered by District Magistrates, and divisions are administered by Divisional Commissioners. Districts are divided into administrative units such as subdivisions and blocks, administered by SDO and BDO, respectively. The Panchayati Raj has a three-tier structure in the state. The atomic unit is called a Gram Panchayat, which is the Panchayat organization for a collection of villages. The block-level organizations are called Panchayat Samiti, and the district-level organizations are named Zilla Parishad.

c. Natural Resources

Irrigated areas

Source of irrigation and irrigated area

The total irrigated area of the state is 133.13 lac. ha. Source-wise Irrigation status of the state as indicated in the Table below shows that canal irrigation is 19.63%, State

Tube well irrigation is 2.80% and Private tube wells have a maximum share of irrigation which is 68.57%.

Table 1: Source-wise irrigated area in U.P. (In lac. ha)

	Irrigation Source	Area	Percentage (NAS)	Percentage (Irrigated)
	Net Area Sown	165.74		
1	Canal	26.13	15.77	19.63
2	State Tube Wells	3.73	2.25	2.80
3	Private	91.29	55.08	68.57
4	Other Sources	11.98	7.22	9.0
	Net Irrigated Area	133.13(80.32%)		

Forest

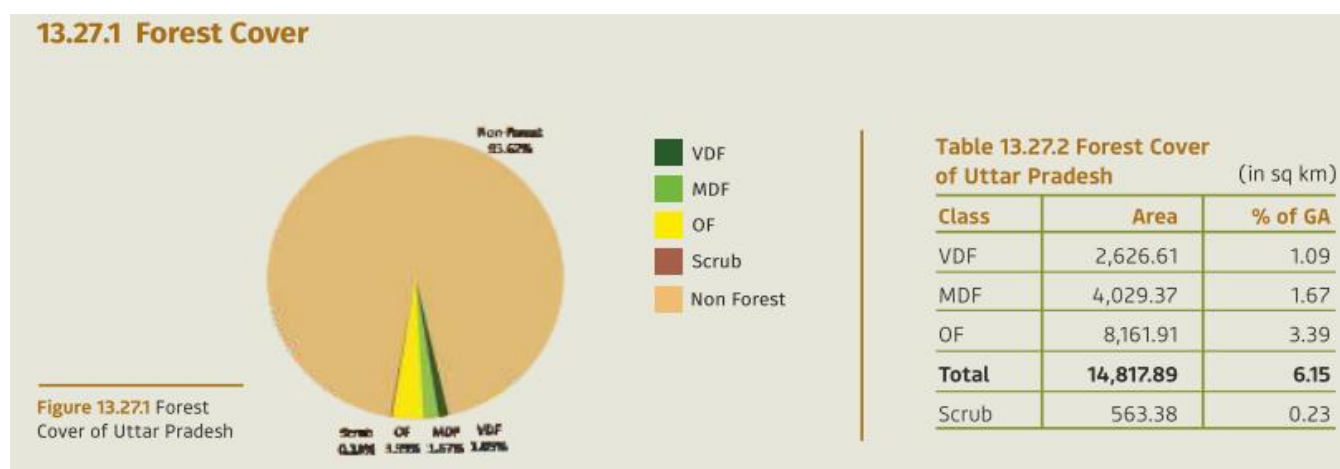
Uttar Pradesh largely consists of fertile Gangetic plains in the Northern part of the country. The major rivers flowing through the State are the Ganga, the Yamuna, the Ramganga, the Gomti and the Ghaghra. The terai and bhabhar area in the Gangetic Plain have most of the forests while the Vindhyan forests consists mostly of scrub.

The existing flora in Uttar Pradesh can be classified into three categories-

1. Wet tropical deciduous forests.
2. Dry tropical deciduous forests.
3. Tropical thorny forests.

On 9 August 2019, 220 million trees were planted in Uttar Pradesh with the vision of increasing green area, and conserving forest area and its animals. Planting was carried out in 1,430,381 places, including 60,000 villages and 83,000 sites in forest ranges.

Table 2: Forest Cover of U.P. (2021)



13.27.1.1 Forest Cover Inside and Outside Recorded Forest Area (or Green Wash)

The Forest Cover inside and outside Recorded Forest Area (RFA) has been analysed in different categories and presented in Table given below.

Table 13.27.4 Forest Cover Inside and Outside Recorded Forest Area (or Green Wash) in Uttar Pradesh (in sq km)

Forest Cover Inside the Recorded Forest Area (or Green Wash)				Forest Cover Outside the Recorded Forest Area (or Green Wash)			
VDF	MDF	OF	Total	VDF	MDF	OF	Total
2,463	3,002	3,678	9,143	164	1,027	4,484	5,675
26.94%	32.83%	40.23%		2.89%	18.10%	79.01%	

**in case of Uttar Pradesh, Green Wash boundaries have been used.*

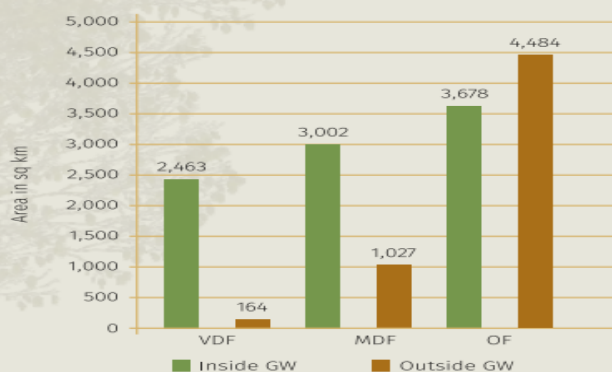


Figure 13.27.2
Forest Cover Inside and Outside of Green Wash in Uttar Pradesh

Table 13.27.5 Forest Cover Change Matrix for Uttar Pradesh

(in sq km)

Class	2021 Assessment					Total
	VDF	MDF	OF	Scrub	NF	ISFR 2019
Very Dense Forest	2,612	3	1	0	1	2,617
Moderately Dense Forest	13	4,011	31	0	25	4,080
Open Forest	1	12	7,853	19	224	8,109
Scrub	0	0	31	531	25	587
Non Forest	1	3	246	13	2,25,272	2,25,535
Total ISFR 2021	2,627	4,029	8,162	563	2,25,547	
Net Change	10	-51	53	-24	12	

Table 13.27.6 Altitude-wise Forest Cover in Uttar Pradesh

(in sq km)

Altitude Zone (m)	Geographical Area	VDF	MDF	OF	Total	Scrub
0-500	2,40,458	2,627	3,844	7,955	14,426	562
500-1000	470	0	185	207	392	1
Total	2,40,928	2,627	4,029	8,162	14,818	563

(based on SRTM, Digital Elevation Model, 30 m, 2016)

Table 13.27.7 Forest Cover in different slope classes in Uttar Pradesh

(in sq km)

Slope (in degrees)	Geographical Area	VDF	MDF	OF	Total	Scrub
0-5	2,35,259	2,397	3,103	7,136	12,636	482
5-10	4,405	159	492	629	1,280	56
10-15	730	41	216	206	463	15
15-20	300	16	115	104	235	6
20-25	143	9	61	52	122	3
25-30	60	4	28	22	54	1
>30	31	1	14	13	28	0
Total	2,40,928	2,627	4,029	8,162	14,818	563

(based on SRTM, Digital Elevation Model, 30 m, 2016)

Source: Indian State of Forest Report 2021

d. Geography and Demography

Uttar Pradesh, with a total area of 2,43,290 square kilometers (93,935 sq mi), is India's fourth-largest state in terms of land area and is roughly of the same size as the United Kingdom. It is situated on the northern spout of India and shares an international boundary with Nepal. The Himalayas border the state on the north,

but the plains that cover most of the state are distinctly different from those high mountains. The larger Gangetic Plain region is in the north; it includes the Ganges-Yamuna Doab, the Ghaghra plains, the Ganges plains and the Terai. The smaller Vindhya Range and plateau region are in the south. It is characterised by hard rock strata and varied topography of hills, plains, valleys and plateaus. The Bhabhar tract gives place to the terai area which is covered with tall elephant grass and thick forests interspersed with marshes and swamps. The sluggish rivers of the bhabhar deepen in this area, their course running through a tangled mass of thick undergrowth. The terai runs parallel to the bhabhar in a thin strip. The entire alluvial plain is divided into three sub-regions. The first in the eastern tract consisting of 14 districts that are subject to periodical floods and droughts and have been classified as scarcity areas. These districts have the highest density of population which gives the lowest per capita land. The other two regions, the central and the western, are comparatively better with a well-developed irrigation system. They suffer from waterlogging and large-scale user tracts. In addition, the area is fairly arid. The state has more than 32 large and small rivers; of them, the Ganges, Yamuna, Saraswati, Sarayu, Betwa, and Ghaghara are larger and of religious importance in Hinduism.

Uttar Pradesh is India's fourth-largest and most populated state in India. It has a population of about 199,581,477 as per the 2011 census.

With an area of 93,933 sq mi (243,290 km²), Uttar Pradesh covers a large part of the highly fertile and densely populated upper Gangetic plain. There is an average population density of 828 persons per km² i.e. 2,146 per sq meters. Uttar Pradesh shares an international border with Nepal to the north. Other states along Uttar Pradesh's border include Uttarakhand, Haryana, and Delhi to the north and northwest; Rajasthan on the west; Madhya Pradesh on the south; Chhattisgarh and Jharkhand on the southeast; and Bihar on the east. As this state shares an international boundary it assumes strategic importance as far as its defense is concerned.

The administrative and legislative capital of Uttar Pradesh is Lucknow. Some of the major commercial cities of the state include Kanpur, Meerut, Bareilly, Noida, Ghaziabad, and Agra.

e. LAND USE PATTERN:

The state has a total reported geographical area of about 24170 thousand hectares out of which 16573 thousand hectares are under cultivation. More than half (8635 thousand hectares) of the cultivated area is sown more than once. The Gross cropped area is 25414 hectares in the state. The state shares in the total geographical area, net sown area and gross cropped area of the country are 7, 12, and 14 percent, respectively. Per capita land area of the state is 0.14 hectare as compared to 0.33 hectare for the country as a whole. Thus, the state has to support more people with lesser land.

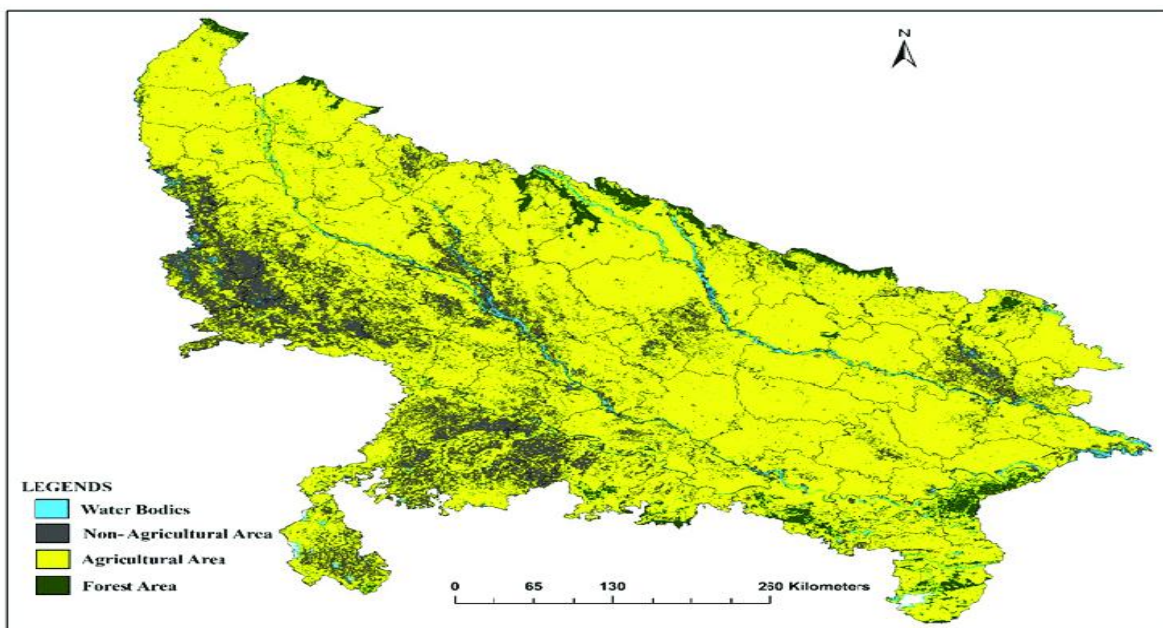


Fig 4: Map of Land Use Pattern in U.P.

Table 3: Land Use Pattern in U.P.

Particulars	Area (lakh ha)*
Reporting area for Land utilization	241.70
Forest	16.71
Barren Unculturable Land	5.07
Land under non-agriculture use	27.29
Culturable waste	4.39
Pasture	0.64
Miscellaneous trees etc	3.73
Current fallow	12.85
Other fallow	5.42
Net Area sown	165.73
Area sown more than one time	88.41
Gross cropped area	251.14
Cropping intensity	153.34
Kharif	118.52
Rabi	126.51
Zaid	8.69

*Source: Department of Land Development and Water Resources Government of U.P (State Annual Plan 2009-10).

f. Climate

Uttar Pradesh has a humid subtropical climate and experiences four seasons. The winter in January and February is followed by summer between March and May and the monsoon season between June and September. Summers are extreme with temperatures fluctuating anywhere between 0°C and 50°C in parts of the state coupled with dry hot winds called the Loo. The Gangetic plain varies from semiarid to sub-humid. The mean annual rainfall ranges from 650 mm in the southwest corner of the state to 1000 mm in the eastern and south-eastern parts of the state. Primarily a summer phenomenon, the Bay of Bengal branch of the Indian monsoon is the major bearer of rain in most parts of the state. After summer it is the southwest monsoon which brings most of the rain here, while in winters rain due to the western disturbances and north-east monsoon also contribute small quantities towards the overall precipitation of the state.

The rain in Uttar Pradesh can vary from an annual average of 170 cm in hilly areas to 84 cm in Western Uttar Pradesh. Given the concentration of most of this rainfall in the four months of the monsoon, excess rain can lead to floods and shortages of droughts. As such, these two phenomena, floods and droughts, commonly recur in the state. The climate of the Vindhya Range and plateau is subtropical with a mean annual rainfall between 1000 and 1200 mm, most of which comes during the monsoon. Typical summer months are from March to June, with maximum temperatures ranging from 30 to 38 °C (86 to 100 °F). There is low relative humidity of around 20% and dust-laden winds blow throughout the season. In summer, hot winds called Loo blow all across Uttar Pradesh.

The scope of the Environment Plan (SEP) will be based on 7 thematic areas unless there is any other specific environmental factor in the district that needs to be covered as part the of State Environment Plan (SEP).

1. Profile
2. Indicative Gap Analysis and Action Plans for complying with Waste Management Rules
 - a. Solid Waste Management Plan
 - b. Plastic Waste Management Plan
 - c. C&D Waste Management Plan
 - d. Biomedical Waste Management Plan
 - e. Hazardous Waste Management Plan
 - f. E-Waste Management Plan
3. Air Quality Management Plan

4. Water Quality Management Plan
5. Water Quality Monitoring
 - 5.1 Domestic Sewage
 - 5.2 Industrial Wastewater Management Plan
6. Mining Activity Management plan
7. Noise Pollution Management plan

Hon'ble National Green Tribunal vide order dated 05.07.2021 in O.A. No. 360/2018 filed by Shree Nath Sharma Vs Union of India and Others directed that, The State Environment Plan (SEP) must be timelines for the accomplishment of task backed up with the budgetary support and the officers entrusted with the job, with contact details of the nodal officers at various levels in the district.]

2.0 Indicative Gap Analysis and Action Plans for complying with Waste Management Rules

The Ministry of Environment, Forest and Climate Change, Government of India has notified various rules regarding the management of Solid Waste, Plastic waste, E-waste, etc. By doing Indicative gap analysis, we can assess the situation about waste management on a local level and gauge how far we are from the target set by different set of waste management rules. Indicative gap analysis shows the gap between existing and target conditions on various agendas or action points.

Based on this gap analysis, an action plan can be designed to meet the target, which complies with waste management rules by involving various stakeholders such as local bodies, private sector, government offices, civil society and NGOs. A target-based approach can be designed which defines the implementation agency and time-line of completion of various action plan.

(i) Solid Waste Management

Solid Waste Management may be defined as the discipline associated with the control of generation, collection, storage, transfer and transport, processing and disposal of solid wastes in a manner that is in accord with the best principles of public health, economics, engineering, conservation, aesthetics and other environmental considerations.

The most recognized methods for the final disposal of solid wastes are:

- a. Dumping on land
- b. Ploughing into the soil
- c. Incineration

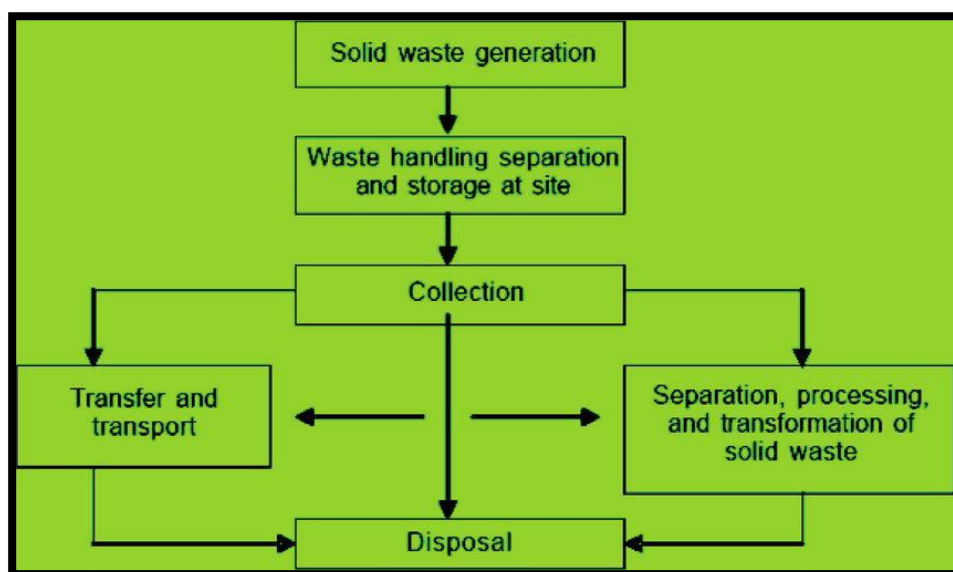


Fig 5: Disposal of Solid waste generation

The Ministry of Environment, Forest and Climate Change, Government of India has notified the Solid Waste Management Rules, 2016 (as amended). Role of the local body has been defined as the Rule 15 of Solid Waste Management Rules, 2016 and as per Rule 16, Uttar Pradesh Pollution Control Board has been given the responsibility to enforce these rules through local bodies. Municipal Solid Waste (Management and Handling) Rules, 2000 (as amended) apply to every municipal authority responsible for collection, segregation, storage, transportation, processing and disposal of municipal solid waste.

Due to the rapid increase in the production and consumption processes, societies generate as well as reject solid materials regularly from various sectors – agricultural, commercial, domestic, industrial and institutional.



Fig 6: Solid Waste Management

The increasing volume and complexity of waste associated with the modern economy are posing a serious risk to ecosystems and human health. Every year, an estimated 11.2 billion tonnes of solid waste is collected worldwide and the decay of the organic proportion of solid waste is contributing about 5 percent of global greenhouse gas emissions. Every year, an estimated 11.2 billion tons of solid waste are collected worldwide. Of all the waste streams, waste from electrical and electronic equipment containing new and complex hazardous substances presents the fastest-growing challenge in both developed and developing countries.

Poor waste management - ranging from non-existing collection systems to ineffective disposal -causes air pollution, water and soil contamination. Open

and unsanitary landfills contribute to contamination of drinking water and can cause infection and transmit diseases. The dispersal of debris pollutes ecosystems and dangerous substances from electronic waste or industrial garbage puts a strain on the health of urban dwellers and the environment.

The solution, in the first place, is the minimisation of waste. Where waste cannot be avoided, recovery of materials and energy from waste as well as remanufacturing and recycling waste into usable products should be the second option. Recycling leads to substantial resource savings. For example, for every tonne of paper recycled, 17 trees and 50 percent of water can be saved. Moreover, recycling creates jobs: the sector employs 12 million people in Brazil, China and the United States alone.

Compliance by Bulk Waste Generators:

- About the total waste generation is 6132000 MTPA in U.P.

Compliance by Bulk Waste Processing:

- About the total waste Processing is 57% in U.P.
- Total number of Urban Local Bodies and their Population

Urban Local Bodies- 651

Urban Population – 4.5 Crore

- Current Municipal Solid Waste Generation- **14710 TPD approx.**
- Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing eg- Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), bio methanation, MRF etc

No. of MSW processing facilities- 17 Plants (all are compost plant) + 500 TPD (150 TPD & amp; 350 TPD) plants are functional at Ghaziabad Nagar Nigam.

MSW facility installed & operational in Nagar Nigam - 08 (Kanpur, Agra, Lucknow, Moradabad, Aligarh, Varanasi, Allahabad & Bareilly).

No. of MSW facility under construction (Nagar Nigam Jhansi)

No. of MSW facility installed & operational in Nagar Palika-08 (Muzaffarnagar, Mainpuri, Etawah, Raebareli, Barabanki, Fatehpur, Kannauj & Mathura).

No. of MSW facility installed & operational in Palika-02 (Sambhal & Mirzapur)

Installed Capacity- 6020 TPD.

- Total no. of wards, no. of wards having the door to door collection service, no. of wards practicing segregation at source

Total no. of wards - 12022

No. of wards having door to door collection service - 12022 (100%)

No. of wards practicing segregation at source – 8294

Table 4: Details of MSW treatment facilities proposed and under construction (No., Capacity, and Technology)

Proposed Completion Date	Number, Place and Capacity
Plants to be made operational by 31.12.2022	05 Plants with 325 TPD (Fatehpur, Sambhal, Badaun, Mirzapur, Balia)
Plants under land dispute/ non-availability of land to be resolved and commissioned	04 Plants with 195 TPD (Kasganj, Bhadohi, Sikandrabad and Basti) The land identified in Basti was not suitable, hence other Land has to be selected by ULB.
New plants sanctioned to be completed by December, 2022	36 Plants of the 4305 TPD Capacity are under construction and to be made functional by December 2022. In which the Kasganj, Bhadohi, Sikandrabad ULBs are also included.

- ✓ It is targeted that all smaller ULBs (approximately 450) that generate less than 10 TPD of solid waste establish composting facility for processing by December, 2022.

a. Current status related to solid Waste management

	Urban Local bodies	No of Wards	No of Households	Population	Solid Waste Generated per day
1	Municipal corporations (Nagar Nigam or Mahanagar Palika)	980	2169456	9656602	14710 TPD
2	Municipalities (Nagar Palikas/ Panchayats)	10186	2874493	15121411	
3	Nagar panchayats (Town area Councils)	421			
	Local Bodies				
1	Block /Taluk / Mandal Tehsils	630		32645840	

b. Identification of gaps and Action plan:

S. No.	Action points For villages / blocks/ town municipalities / City corporations	Identificati on of gap	Action Plan			Responsi ble agencies	Timelin e for complet ion of action plan
			Action Point	Bud get Req uire d	Budget Availabl e		
1	Segregation						
(i)	Segregation of waste at source	Segregation at source practiced by households and other waste generators. IEC activities are needed for the capacity building.	Vehicles of Nagar Nigam/ ULBs are operational for the process of Segregation of waste at source and source practiced by households and other waste generators.	-	-	Nagar Nigam/ ULBs	complying
2	Sweeping						
(i)	Manual Sweeping	There is a no gap, its is regular process and sweeping tools/ equipment Available.	Manpower as per specifications, 28 workers per 10000 population, is being managed in all the wards as well as new area.	-	-	Nagar Nigam/ ULBs	Ongoing
(ii)	Mechanical Road Sweeping & Collection	Mechanical Road Sweeping is being done.	Mechanical Road Sweeping Vehicle available for the mechanize road sweeping in major district and for small district yet to started.	-	-	Nagar Nigam/ ULBs	By March 2024
3	Waste Collection						

S. No.	Action points For villages / blocks/ town municipalities / City corporations	Identification of gap	Action Plan			Responsible agencies	Timeline for completion of action plan
			Action Point	Budget Required	Budget Available		
(i)	100% collection of solid waste	100% collection Achieved.	Collection of Solid waste is being done in district.	-	-	Nagar Nigam/ ULBs	Complying
(ii)	Arrangement for door to door collection	100% collection Achieved in all wards.	Vehicles are deploying for the coverage of Door to Door MSW collection including primary commercial coverage vehicles in the morning shift. Additional some tricycles are on procurement stage to cover 100% door to door collection	-	-	Nagar Nigam/ ULBs	Complying
(iii)	Waste Collection trolleys with separate compartments	Waste Collection trolleys with separate Compartments is being done.	Adequate Nos of trolleys with Separate compartments have been deployed in zones.	-	-	Nagar Nigam/ ULBs	Complying
(iv)	Mini Collection Trucks with separate compartments	Mini Collection Trucks with separate compartments required for wards also there is a requirement	Some additional vehicles have been already procured with separate compartments to ensure 100% door to door collection.	-	-	Nagar Nigam/ ULBs	Regular Activity

S. No.	Action points For villages / blocks/ town municipalities / City corporations	Identification of gap	Action Plan			Responsible agencies	Timeline for completion of action plan
			Action Point	Budget Required	Budget Available		
		of maintenance for these vehicles.					
(v)	Waste Deposition centres (for domestic hazardous wastes)	Chief medical officer District having a mechanism for disposal of domestic hazardous waste.	Centres/PCTS in different wards to cover all the zones. Some more points are to be started within few months to deal with all zones waste.	-	-	Nagar Nigam/ ULBs	By March 2025
4.	Waste Transport						
(i)	Review existing infrastructure for waste Transport.	Vehicles needed for waste transportation	1. More fleet are to be procured in coming days and some more transfer station are to be installed to improve and facilitate the present transportation system. 2. Segregation at source are being done and for awareness many different IEC activities are also planned. So that total segregated waste can be transported in future.	-	-	Nagar Nigam/ ULBs	By March 2025
(ii)	Bulk Waste Trucks	Procurement of additional bulk waste trucks are done	Procurement of additional bulk waste trucks are to be done in future.	-	-	Nagar Nigam/ ULBs	By March 2025

S. No.	Action points For villages / blocks/ town municipalities / City corporations	Identification of gap	Action Plan			Responsible agencies	Timeline for completion of action plan
			Action Point	Budget Required	Budget Available		
(iii)	Waste Transfer points	Waste transfer Points available	There are many waste transfer Points available Zone wise but needs some more and new Transfer Stations are to be installed in coming days.	-	-	Nagar Nigam/ ULBs	Before March 2025
5	Waste Treatment and Disposal						
(i)	Wet-waste Management: On-site composting by bulk waste generators (Authority may decide on requirement as per Rules)	IEC activities are required for onsite composting.	Machinery system setup for manage the wet waste treatment by the Department.	-	-	Nagar Nigam/ ULBs	Complying
(ii)	Wet-waste Management: Facility(ies) for central Biomethanation / Composting of wets waste.	Wet- waste processing plant will be constructed	we are working on improving the compost production with the new trommel installation.	-	-	Nagar Nigam/ ULBs	Before March 2025
(iii)	Dry-Waste Management: Material Recovery for dry-waste fraction	MRF facilities are needed for dry waste management.	Already Procurement of the Dry RDF with the EPR and some proposed WTE project to the management	-	-	Nagar Nigam/ ULBs	Before March 2025

S. No.	Action points For villages / blocks/ town municipalities / City corporations	Identification of gap	Action Plan			Responsible agencies	Timeline for completion of action plan
			Action Point	Budget Required	Budget Available		
			which is under observation.				
(iv)	Disposal of inert and non-recyclable wastes: Sanitary Landfill	Disposal of inert and non-recyclable wastes: Sanitary Landfill are operational	Disposal of inert and non-recyclable wastes: Sanitary Landfill are operational and for recyclable facility few are under process.	-	-	Nagar Nigam/ ULBs	Before March 2025
(v)	Remediation of historic / legacy dumpsite	To cater this legacy waste a plan has been prepared and Biomining technique is considered appropriate for the same	To cater this legacy waste a plan has been prepared and Biomining technique is considered appropriate for the same. The work of biomining/ remediation of the legacy waste in under progress through contractor's agreement at the site. plan for remediation of legacy / historic dumpsite is under process.	-	-	Nagar Nigam/ ULBs	Dec 2024
(vi)	Involvement of NGOs	Yes, involvement of NGOs envisaged	NGOs can be involved for management of solid waste campaign on the regular basis.	-	-	Nagar Nigam/ ULBs	Regular Activity
(vii)	EPR of Producers: Linkage with Producers / Brand Owners	As per rules, producers and brand-owners should facilitate in collection of packaging waste	Preparation of action plan for linkage of all producers/brand owners or their PROs for collection of plastic waste is under process.	-	-	Nagar Nigam/ ULBs	Regular Activity

S. No.	Action points For villages / blocks/ town municipalities / City corporations	Identification of gap	Action Plan			Responsible agencies	Timeline for completion of action plan
			Action Point	Budget Required	Budget Available		
(viii)	Authorisation of Waste Pickers	Yes	Authorized waste pickers is available with Nagar Nigam.	-	-	Nagar Nigam/ ULBs	Regular Activity
(ix)	Preparation of own by-laws to comply with SWM Rules 2016	Yes	Yes	-	-	Nagar Nigam/ ULBs	Complying

Conclusion & Recommendations

1. The above planned action should be implemented in time-based manner.
2. Actions-on model city/town/villages to be taken on priority.
3. Strengthen waste collection, storage and transportation system. Set up surveillance squads/ Task Forces at Ward/Circle level. Attend vulnerable sites/locations and clean them.
4. Special attention to slums and settlements near Railway tracks to maintain hygienic conditions.
5. Install bio-mining activities for clearing legacy waste dump sites.
6. Prohibiting burning of garbage.

Dry waste collected from the city is further segregated into paper, plastic, glass, metal etc. through secondary segregation process at transfer stations or the designated material recovery facility (MRF) in the city or at solid waste treatment facility. After secondary segregation of dry waste into paper, plastic, glass, metal etc. is being recycled through local sellers in the city, to recyclers in the region or to the waste processing plants in nearby metro cities through prescribed processes.

(ii) Plastic waste Management

Plastic products become an integral part of our daily life. That's why Plastic became menace worldwide as plastic polymer is produced at massive scale worldwide. On an average, production of plastic crosses 150 million tones globally per year. It has wide application in packaging, films, wrapping materials, shopping and garbage bags, fluid containers, clothing, toys, household and industrial products and building materials.

According to a report of Central Pollution Control Board (CPCB) of 2017-18, it is estimated that India generates approximately 9.4 million tones/ annum plastic waste (which amounts to 26000 tones of waste per day) and out of this approximately 5.6 million tones per annum plastic waste is recycled (i.e. 15600 tones per day) and 3.8 million tones per annum plastic waste is left uncollected or littered (9400 tones per day). The Government of India notified Plastic Waste Management (PWM) Rules, 2016 on 18th March, 2016. These rules were further amended and named as "Plastic Waste Management (Amendment) Rules, 2018". These rules shall apply to every Waste Generator, Local Body, Gram Panchayat, Manufacturer, Importer, Producer and Brand Owner. At domestic level, plastic waste constitutes a part of municipal waste and segregation is a very important issue in order to effectively handle it.



Fig 7: Component of Plastic Waste

Environmental issues on disposal of Plastic Waste:

- Indiscriminate littering of unskilled recycling/reprocessing and non-biodegradability of plastic waste raises the following environmental issues:
- During polymerization process fugitive emissions are released.
- During product manufacturing various types of gases are released.
- Indiscriminate dumping of plastic waste on land makes the land infertile due to its barrier properties.
- Burning of plastics generates toxic emissions such as Carbon Monoxide, Chlorine, Hydrochloric Acid, Dioxin, Furans, Amines, Nitrides, Styrene, Benzene, 1, 3- butadiene, CCl₄, and Acetaldehyde.
- Lead and Cadmium pigments, commonly used in LDPE, HDPE and PP as additives are toxic and are known to leach out.
- Non-recyclable plastic wastes such as multilayer, metalized pouches and other thermoset plastic poses disposal problems.
- Littered plastics give unaesthetic look in the city, choke the drain and may cause flood during monsoon.
- Garbage mixed with plastics interferes in waste processing facilities and also cause problems in landfill operations.
- Recycling industries operating in non-conforming areas are posing threat to environment to unsound recycling practices.

City	Total Municipal Solid Waste	Plastic waste (%of MSW)	Plastic Waste (Tonnes /Day)
Meerut	52	6.42	3.34
Prayagraj	350	5.39	18.86
Varanasi	450	5.76	25.92
Agra	520	7.86	40.89
Lucknow	1200	5.90	70.84
Kanpur	1600	6.67	106.66

Conclusion & Recommendations

1. Plastic Waste Management Rules, 2016 must be implemented on priority basis.
2. Actions-on city/town/villages to be taken on priority.
3. Recycling facilities must be developed at district levels.
4. Strengthen waste collection, storage and transportation system. Set up surveillance squads/ Task Forces at Ward/Circle level. Attend vulnerable sites/locations and clean them.

The Department of Environment, Forest and Climate Change and Urban Development Department, Government of Uttar Pradesh in collaboration with GIZ India is launching a mass movement RACE (Reduction, Awareness, Circular Solutions and Mass Engagement) for plastic free Uttar Pradesh culminating with UP Plastic Conclave 2022.

Objective

- To identify and synergise potentials of implementing technical solutions for
- Eliminating gaps and leakages in the plastic value chain by promoting environment friendly lifestyles (LiFE)
 - Mitigating challenges and exploring opportunities in state's action plan on single use plastic
 - Implementation of EPR framework.
 - Promoting models on circular systems for plastics
 - Showcasing viable solutions for sustainable plastic waste management
 - Exploring B2B partnership opportunities

Single Use Plastic is banned from 01 July.2022 in U.P.

Category defined below:

- i. Plastic carry bags.
- ii. Earbuds with plastic sticks.
- iii. Plastic flags.
- iv. Candy sticks.

- v. Ice-Cream Sticks.
- vi. Polystyrene (thermocol) for decoration.
- vii. Disposable crockery-plate, cups, glasses, cutlery such as forks, spoons, knives, straws, trays.
- viii. Wrapping or packing films around sweet boxes.
- ix. Invitation cards and cigarette packets.
- x. Plastic or PVC banners less than 100 micron, stirrers.

(a) Current status related to Plastic waste management

	Urban Local bodies	Estimated quantity of Plastic Waste Generated per day
1	Municipal corporations (Nagar Nigam or Mahanagar Palika)	161147.5 TPA
2	Municipalities (Nagar Palikas)	
3	Nagar panchayats (Town area Councils)	
	Local Bodies	
1	Block /Taluk / Mandal Tehsils	

(b) Identification of gaps and Action plan:

S.No.	Action points For village panchayats/ blocks/ municipalities /corporations	Identification of gap	Action plan			Agencies Responsible	Target time for Compliance
			Action Point	Budget Required	Budget Available		
1.	Door to Door collection of dry waste including PW	100% door to door collection	Vehicles are Deployed for the coverage of Door to Door collection of PW under MSW collection including primary commercial coverage vehicles in the morning shift. Additionally some tricycles are on procurement stage to cover 100% door to door collection	-	-	Nagar Nigam / ULBs	Complying
2.	Facilitate organized collection of PW at Waste transfer point or Material Recovery Facility	<ul style="list-style-type: none"> • This infrastructure is linked to SW management. May check gaps with respect to: • Availability of transfer points and material recovery facility • Involvement of informal sector / NGO. • Registering waste pickers • Linkage with PW recyclers Involvement of producers and brand-owners 	Agencies should be identified in the district level to implement and monitor progress respectively	-	-		Mar 2023
3.	PW collection Centres	Local Bodies may set-up own centres and also involve producers and	Plastic waste collection centre should be established in District.	-	-	Nagar Nigam / ULBs	Complying

S.No.	Action points For village panchayats/ blocks/ municipalities /corporations	Identification of gap	Action plan			Agencies Responsible	Target time for Compliance
			Action Point	Budget Required	Budget Available		
		brand-owners or their PROs to facilitate setting up of collection centres.					
4.	Awareness and education programs implementation	Review existing gaps in creating awareness among public for minimizing and recycling PW	Education through mass media, schools, Producer / brand owner campaigns and other channels on regular basis.	-	-	Nagar Nigam / ULBs	Complying
5.	Access to Plastic Waste Disposal Facilities	Yet to Develop PW recycling / utilization or disposal facilities.	Yet to Develop PW recycling/utilization or disposal facilities.	-	-	Nagar Nigam / ULBs	Mar 2025

(iii) C & D Waste Management

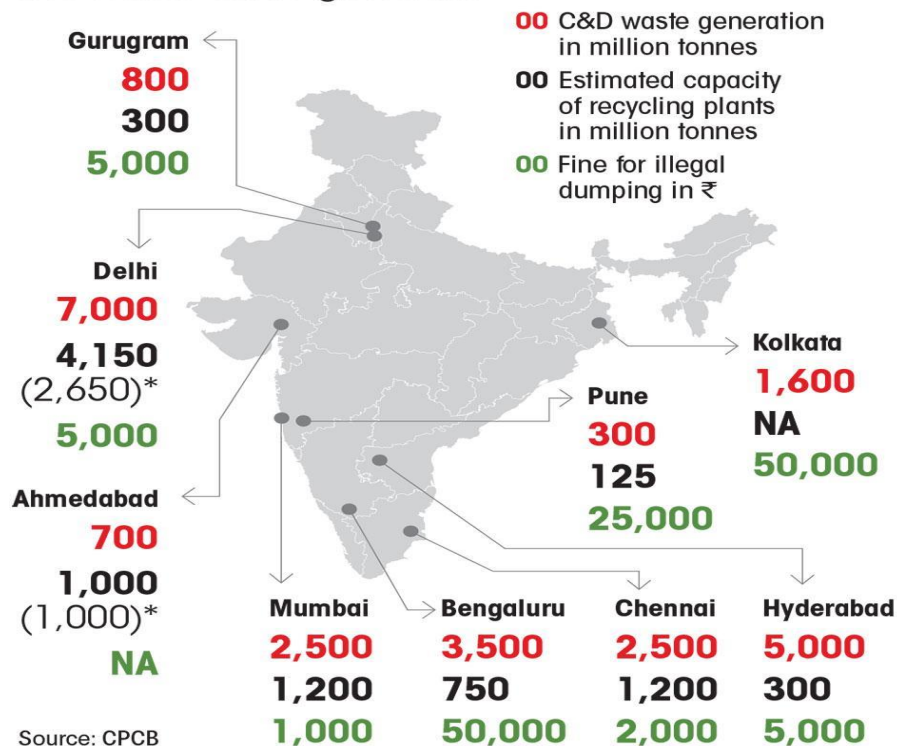
Safe and cost-effective management of construction & demolition wastes is a significant environmental challenge for modern society. Due to rapid urbanization is changing the nature of construction & demolition wastes management from a low priority, localized issue to a pervasive social and environmental problem with risks to public health and environment. Inadequately managed waste disposal has the potential to affect the health and environment. Construction and demolition waste" means waste comprising of building Materials, debris and rubble resulting from construction, re-modeling, repair and demolition of any civil structure". The construction and demolition waste generated is about 530 million tonnes annually. The Ministry of Environment, Forest and Climate Change notified the Construction & Demolition Waste Management Rules, 2016 on 29, March 2016. The rules are an initiative to effectively tackle the issues of pollution and waste management.

India recycles just one per cent of its construction and demolition (C&D) waste, a new report released by Delhi-based non-profit, Centre for Science and Environment (CSE) on August 25, 2020, has shown.

The country generates an estimated 150 million tonnes of C&D waste every year, according to the Building Material Promotion Council. But the official recycling capacity is a meagre 6,500 tonnes per day — just about one per cent.

Ill-equipped to recycle

Plants do not have the capacity to manage the waste cities generate



*Additional capacity of plants in the pipeline.

All figures are based on the capacity of the proposed recycling plants except for Delhi and Ahmedabad, which have already set up their plants.

The Bureau of Indian Standards has allowed the use of concrete made from recycled material and processed C&D waste. The Construction and Demolition Waste Rules and Regulations, 2016 have mandated reuse of recycled material.

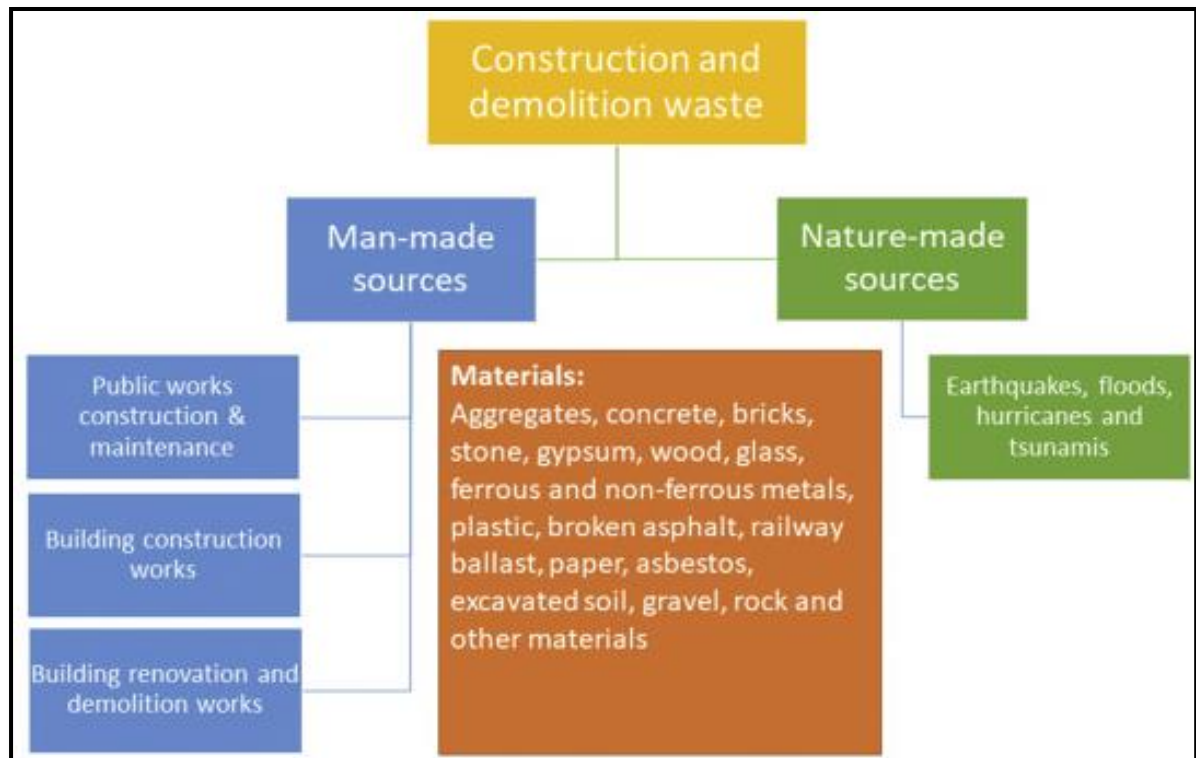


Fig 7: Component of C&D Waste

Even the Swachh Bharat Mission has recognised the need for C&D waste management. Ranking points for C&D waste management for Swachh Survekshan 2021 have been doubled to 100 points, divided equally between management infrastructure and waste processing efficiency.

Cities will need to have a C&D waste collection system in place; notified charges for C&D services and segregation of waste in five streams. Under waste processing efficiency criteria, ranking points will be awarded based on the percentage of collected waste that is processed and reused.

Compliance of C & D Waste:

Total C & D waste generation in (As per data from Municipal Corporations / Municipalities) is 12760.31384 MT per day in U.P. and Also the district has access to C&D waste Recycling facility.

a. Current status related to C & D Waste

Details of Data Requirement	Present Status
Total C & D waste generation in MT per day (As per data from Municipal Corporations / Municipalities)	12760.31384 MT per day
Does the State has access to C&D waste recycling facility?	yes

b. Identification of gaps and Action plan:

S.No.	Action points For village panchayats/ blocks/ municipalities / corporations	Identification of gap	Action plan			Agencies Responsible	Target time for Compliance
			Action Point	Budget Required	Budget Available		
1.	Arrangement for separate collection of C&D waste to C&D waste deposition point.	Yes, Separate collection point of C&D Waste.	The Concessionaire is expected to use a combination of mechanical processes technologies/systems that include crushing, screening and separation which would maximize waste treatment and ensure only 10% rejects The concessionaire will separate mixed C& D waste from different parts of the city and from various activities needs to be separated after crushing and screening.	-	-	Nagar Nigam/ ULBs	Complying
2.	Whether local authority have fixed user fee on C&D waste and introduced permission	Implementation of a system to permit bulk generators	Issue directions with regard to proper management of construction and demolition waste within its jurisdiction	-	-	Nagar Nigam /ULBs	Complying

S.No.	Action points For village panchayats/ blocks/ municipalities / corporations	Identification of gap	Action plan			Agencies Responsible	Target time for Compliance
			Action Point	Budget Required	Budget Available		
	system for bulk waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month?		in accordance with the provisions of these rules of construction and demolition waste. Nagar Nigam have fixed penalty/user.				
3.	C&D recycling Facility	Yes, district has any C&D waste recycling facility	Action plan for setting up C&D recycling facility in the District or tie-up with any other district or ULB for setting up common facilities.	-	-	Nagar Nigam /ULBs	Complying
4.	Usage of recycled C&D waste in non-structural concrete, paving blocks, lower layers of road pavements, colony and rural roads	Is there any policy on usage or promotion on usage of C&D waste?	The concessionaire should maximize the recycling, reusing as well reducing the waste at the end of the treatment cycle. Recycle products will include concrete/stone/tile aggregate in different sizes, recycled manufactured.	-	-	Nagar Nigam /ULBs	Complying
5.	ICE on C & D waste management	Is there any sustained system of creating awareness among local communities.	Educating the public through various public awareness programs about the advantage associated with the C&D waste handling and processing towards making it successful is on going.	-	-	Nagar Nigam /ULBs	Complying

Budget Available: Allotted budget for the financial year 2021-22 used for committed activities. In order to undertake activities outlined in this plan, fresh budget will be required which is under preparation. Budget is being prepared by field units.

Budget Required: Fresh demand is being prepared by field units and it will be updated soon in this section.

Conclusion & Recommendations

1. Public notices may be issued that construction and demolition waste should only be disposed at pre-identified/notified sites.
2. Set up more construction and demolition waste processing facilities.

“Self Declaration/Audit System for Dust Control Management” in Construction units- Dust particles, often referred to as particulate matter (PM), in the atmosphere arise from a wide variety of sources. In the time of Infrastructure development, Dusts from construction sites are the major source of particulate matter, especially PM10. Lately, the state of Uttar Pradesh is observing high values of PM10 due to the increasing pace of construction and infrastructure development activities. Therefore, in September 2020, Uttar Pradesh Pollution Control Board developed an Online System for dust control i.e. Self Declaration: Dust Control Audit, as a part of Air Pollution Control Policy. Directions U/s-31A of Air Act issued by UPPCB for mandatory uploading of self declaration by project proponents. The Audit system is mainly for all construction activities like buildings, roads, infrastructure, area development, Industrial construction and construction of common activities. Construction Department/Agency has been directed by CS, UP to constitute the Dust Monitoring Cell for regular monitoring of dust control measures through the Dust Control App

(iv) Biomedical Waste Management

Biomedical waste is defined as “any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biological”. The biomedical waste management and handling has been assuming increasing significance for the past few years. The responsibility of medical administrators as regards proper handling and disposal of this category of waste has now become a statutory requirement with the promulgation of Government of India.

Categories of Biomedical Waste

Due to the competition to improve quality and so as to get accreditation from agencies like ISO, NABH, JCI, many private organizations have initiated proper bio-medical waste disposal but still the gap is huge.

The latest guidelines for segregation of bio-medical waste recommend the following colour coding:

- **Red Bag** – Syringes (without needles), soiled gloves, catheters, IV tubes etc. should be all disposed of in a red coloured bag, which will later be incinerated.
- **Yellow Bag** – All dressings, bandages and cotton swabs with body fluids, blood bags, human anatomical waste, body parts are to be discarded in yellow bags.
- **Cardboard box with blue marking** – Glass vials, ampules, other glass ware is to be discarded in a cardboard box with a blue marking/sticker.
- **White Puncture Proof Container (PPC)** – Needles, sharps, blades are disposed of in a white translucent puncture proof container.
- **Black Bags** – These are to be used for non-bio-medical waste. In a hospital setup, this includes stationary, vegetable and fruit peels, leftovers, packaging including that from medicines, disposable caps, disposable masks, disposable shoe-covers, disposable tea cups, cartons, sweeping dust, kitchen waste etc.



SEGREGATION OF SOLID BIO-MEDICAL WASTE

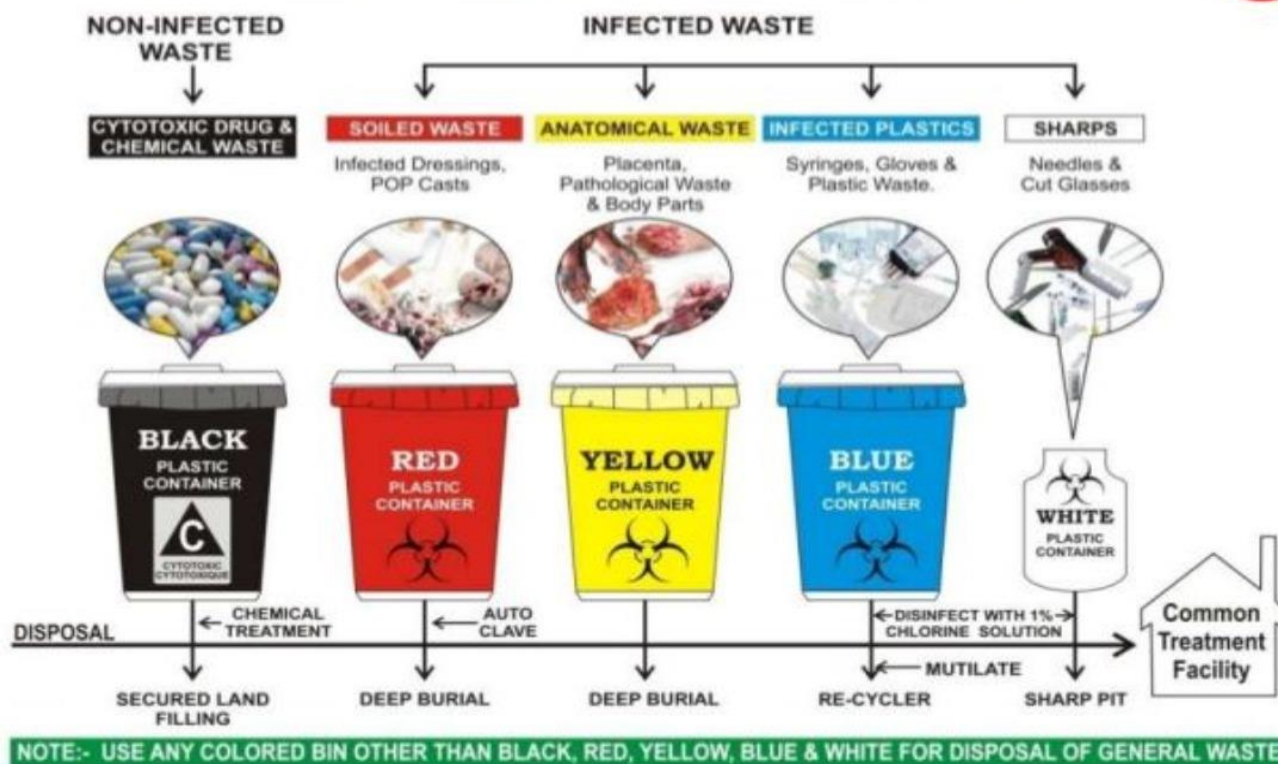


Fig 9: Segregation of the Bio-Medical Waste

Improper management of health care waste can have both direct and indirect health consequences for health personnel, community members and on the environment. Indirect consequences in the form of toxic emissions from inadequate burning of medical waste, or the production of millions of used syringes in a period of three to four weeks from an insufficiently well planned mass immunization campaign.

Biomedical waste is not limited to medical instruments; it includes medicine, waste stored in red bio-hazard bags, and materials used for patient care, such as cotton and band-aids. The most serious effect that biomedical waste has on our seas is the discharge of poisons into the waters that could then be consumed by ocean life creatures. Toxins would interject into the food chain and eventually reach humans who consume sea creatures. Human exposure to such toxins can stunt human growth development and cause birth defects.

a. Status related to biomedical waste

Inventory of BMW in the District	Quantity
Name of Districts generating COVID-19 waste	23
No of HCFs having Isolation wards	251
No of Quarantine Camps/Homes or Home Care Facilities	254

No. of Sample Collection Centre	106
No. of Laboratories	62
Quantity of COVID waste generated (Kg/day)	603
Quantity of COVID-19 waste disposed Kg per day	603

Installed Capacity of Common Bio-Medical Waste Treatment Facility

S.N.	Name of the CBWTF operator connect No. & Address	Total No. of HCFs Being Covered	Covered District	Treatment facility available			BMW Treatment Capacity (Kg/day)*	Number of Vehicles	Status of Authorization
				Incinerator	Auto Clave	Shredder			
1	2	3	4	5	6	7	8	9	10
1	M/s Synergy Waste Management (P) Ltd. Plot No. 36,37,72 Vill-Mohammadpur Nawabganj, Barabanki.	383	Barabanki Lucknow Sitapur Hardoi	250 kg/hr	75 kg/shift	50 kg/hr	3100	8 with GPS	Authorisation upto 31.12.2017
2	M/s Envirad Medicare Pvt. Ltd. Parsakhera, Bareilly.	650	Bareilly Pilibheet Moradaba Rampur Amroha J.P. Nagar Shajahanpur	150 kg/hr	180 ltr/shift	200 kg/hr	2100	6 with GPS & hologram	Authorisation upto 31.12.2017
3	M/s J.R.R Waste Management Pvt. Ltd (Formerly Name M/s Dutt Interprises Ltd. (Office)-29, Alkapuri Hirabag, Dayalbag, Agra-282003, (Plant)- Khasra No.- 670, Mauja-Darhera, Tahsil- Atmadpur, Agra	981	Agra Hathras Firozabad Mainpuri	200 kg/hr	50 kg/shift	100 kg/hr	2500	11 with GPS	Authorisation upto 31.12.2017
4	M/s Synergy Waste Management (p) Ltd. 011-26933371 Subharti Medical College, Subharti Puram, Meerut	1537	G.B. Nagar Gaziabad Hapur Bulandshaher Bijnor Meerut Shamli Bagpat Muzaffarnagar sharanpur	300 kg/hr	300 ltr/shift	300 kg/hr	4000	20 with GPS & hologram	Authorisation upto 31.12.2017
5	M/s S.M.S.watergrase Mediawaste Management Pvt.Ltd.Mohanlal Ganj Lucknow	656	Lucknow Lakheempur Unnao Sultanpur Hardoi	520 kg/hr	1000 ltr/shift	100 kg/hr	8000	10 with GPS	Authorisation upto 31.12.2017
6	M/s Spectrum Waste Solutions Pvt. Ltd. Khasra No.- 597, Jawar Nagar Mastemau, Sultanpur Road, Mohanlal Ganj Lucknow	414	Lucknow, Sultanpur, Gonda, Baharich, Balrampur, Amethi, Faizabad, Lakhimpur	250 kg/hr	200 kg/shift	50 kg/hr	3400	10 (GPS not working)	Authorisation reject
7	M/s Ferro Build Hard (India) Pvt. Ltd. 83-A Maheba Purab Patti, Naini, Allahabad.	347	Allahabad , Raibareilly , Pratapgarh	200 kg/hr	720 kg/day	400 kg/day	3800	9 with GPS	Authorisation upto 31.12.2017
8	M/s Willword Environmental Inc.- Chaudhrypur Mandhava, Kanpur	344	Kanpur Nagar, Farokkhabad, Mainpuri, Etawa	100 kg/hr	250 ltr/shift	50 kg/hr	1700	4 with GPS & hologram	Authorisation, upto 31.12.2017
9	M/s Bio Medical Waste, Disposal Agency- Khasra No.- 622, Vill. Padrona Raya- Maat Mathura	432	Mathura, Eta Aligarh Kashganj Firozabad, Sambhal, Hathrash	200 kg/hr	50 kg/shift	100 kg/hr	2500	5 (GPS in 1 vehicle)	Authorisation Applied
10	M/s Sangam Medicare, Handiya Allahabad	158	Allahabad , Varanasi, Kaushambi, Sonbhadra, Mirzapur, Jaunpur, Pratapgarh, Chitrakot	250 kg/hr	500 ltr/shift	400 kg/day	4300	10 without GPS	Authorisation upto 31.12.2017

S.N.	Name of the CBWTF operator connect No. & Address	Total No. of HCFs Being Covered	Covered District	Treatment facility available			BMW Treatment Capacity (Kg/day)*	Number of Vehicles	Status of Authorization
				Incinerator	Auto Clave	Shredder			
1	2	3	4	5	6	7	8	9	10
11	M/s MPCC Bhelamau, Bhavti, Kanpur	887	Kanpur Nagar, Kanpur Dehat Hamirpur, Fatehpur Unnao, Kannauj	200 kg/hr	800 ltr/shift	100 kg/hr	4000	10 with GPS & hologram	Authorisation upto 31.12.2017
12	M/s MPCC, Khalilabad Industrial Area, Sant Kabir Nagar	596	Sant kabeer Nagar Basti Siddharth Nagar Kusinagar Maharajganj Gorakhpur	100 kg/hr	414 kg/shift	100 kg/hr	2000	7 with GPS & hologram	Authorisation Applied
13	M/s MPCC Bijauli, Jhansi	235	Jhansi jalon Lalitpur Mahoba	100 kg/hr	500 ltr/shift	50 kg/hr	2000	5 with GPS	Authorisation upto 31.12.2017
14	M/s Center for Pollution Control, Mohansarai, Varanasi.	488	Varanasi Bhadohi Jaunpur	150 kg/hr	100 ltr/shift	50 kg/hr	2000	6 with GPS	Authorisation upto 31.12.2017
15	M/s Royal pollution control services, Vill-Chaspur saduwahi, Suitanpur	184	Bhadohi Jaunpur Azamgarh Gorakhpur	150 kg/hr	500 kg/day	200 kg/day	2800	2 with GPS	Authorisation Applied
16	M/s Silicon welfare society Vill-Banka Distt- Ghazipur	130	Ghazipur Baliya Devariya Azamgarh Amedkar Nagar Varanasi Mau Chandauli	100 kg/hr	200 ltr/shift	150 kg/hr	1600	7 without GPS	Authorisation upto 31.12.2017
17	M/s Semb Remky. Environmental Management Pvt. Ltd. C-21 Phas-1 Masuri Gulowthi Road, UPSIDC, Ghaziabad, Phone no.- 91203250674, Fax no- 0120 2678917	905	Ghaziabad, Noida Hapur, Moradabad, Meerut, J.P. Nagar, Chandausi, Sambhal	150 kg/hr	430 ltr/shift	50 kg/hr	2600	11 (GPS in 9 vehicles)	Authorisation Applied

52100 (Approx. 52000 kg/day)

Note * The Treatment capacity of CBWTF is calculated based upon average daily operation period of 12 hours for Incinerators and average 02 cycles/day for Autoclaves.

b. Identification of gaps and Action plan:

S. No.	Action points	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
1.	Inventory and Identification of Healthcare Facilities	Yes, all HCFs including, clinics, hospitals, Veterinary hospitals, Aayush	All the HCF to whom we are providing Permission to cater their services are	UPPCB/ CMO	-

		hospitals, animal houses, etc generating biomedical waste area identified and authorised by SPCBs/PCCs.	registered under SPCB authorization.		
2.	Adequacy of facilities to treat biomedical waste	Quantity of Biomedical Waste treated and disposed in the District regularly.	Adequacy done by CBWTF	Yes	Complying
3.	Tracking of BMW	Check whether bar code system is implemented by all HCFs and CBWTFs	Bar Code system by BMW Agencies is to be implemented.	No	Complying
4.	Awareness and education of healthcare staff	Yes, training has been organised for all stakeholders?	Awareness programs and training to healthcare staff and ULB officials are ongoing on regular basis	Yes	Complying
5.	Adequacy of funds	Yes	Yes, adequate funds is being allocated to Government health care facilities for biomedical waste management by State Govt.	Yes	-
6.	Compliance to Rules by HCFs and CBWTFs	Yes	Prepared action plan to monitor compliance of HCFs and CBWTFs through SPCBs/PCCs.	Yes	Action Plan made by DQAC
7.	District Level Monitoring Committee	Yes	Quarterly basis reviews and follow-up by every DLMC.	Yes	complying
8.	Wastewater Treatment	Yes	Yes, HCFs where applicable.	Yes	complying

Biomedical wastes categories and their segregation, collection, treatment, processing and disposal options

Category	Type of Waste	Type of Bag or Container to be used	Treatment and Disposal options
Yellow	(a) Human Anatomical Waste: Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time). (b) Animal Anatomical Waste : Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospitals or colleges or animal houses.	Yellow coloured non-chlorinated plastic bags	Incineration or Plasma Pyrolysis or deep burial*
	(c) Soiled Waste: Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.		Incineration or Plasma Pyrolysis or deep burial* In absence of above facilities, autoclaving or micro-waving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery
	(d) Expired or Discarded Medicines: Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.	Yellow coloured non-chlorinated plastic bags or containers	Expired cytotoxic drugs and items contaminated with cytotoxic drugs to be returned back to the manufacturer or supplier for incineration at temperature >1200 OC or to common bio-medical waste treatment facility or hazardous waste treatment, storage and disposal facility for incineration at >12000C Or Encapsulation or Plasma Pyrolysis at >12000C. All other discarded medicines shall be either sent back to manufacturer or disposed by incineration.
	(e) Chemical Waste: Chemicals used in production of biological and used or discarded disinfectants	Yellow coloured containers or non-chlorinated plastic bags	Disposed of by incineration or Plasma Pyrolysis or Encapsulation in hazardous waste treatment, storage and disposal facility.
	(f) Chemical Liquid Waste : Liquid waste generated due to	Separate collection	After resource recovery, the chemical liquid waste shall be

	use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc	system leading to effluent treatment system	pre-treated before mixing with other wastewater. The combined discharge shall conform to the discharge norms given in Schedule III.
	(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid.	Non-chlorinated yellow plastic bags or suitable packing material	Non-chlorinated chemical disinfection followed by incineration or Plasma Pyrolysis or for energy recovery. In absence of above facilities, shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery or incineration or Plasma Pyrolysis.
	(h) Microbiology, Biotechnology and other clinical laboratory waste: Blood bags, Laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures.	Autoclave safe plastic bags or containers	Pre-treat to sterilize with non-chlorinated chemicals on-site as per National AIDS Control Organisation or World Health Organisation guidelines thereafter for Incineration.
Red	Contaminated Waste (Recyclable) (a) Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes) and vacutainers with their needles cut) and gloves.	Red coloured non-chlorinated plastic bags or containers	Autoclaving or micro-waving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent to registered or authorized recyclers or for energy recovery or plastics to diesel or fuel oil or for road making, whichever is possible. Plastic waste should not be sent to landfill sites.
White (Translucent)	Waste sharps including Metals: Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and	Puncture proof, Leak proof, tamper proof containers	Autoclaving or Dry Heat Sterilization followed by shredding or mutilation or encapsulation in metal container or cement concrete; combination of shredding cum autoclaving; and sent for final

	cuts. This includes both used, discarded and contaminated metal sharps		disposal to iron foundries (having consent to operate from the State Pollution Control Boards or Pollution Control Committees) or sanitary landfill or designated concrete waste sharp pit.
Blue	(a) Glassware: Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Cardboard boxes with blue colored marking	Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydroclaving and then sent for recycling.
	(b) Metallic Body Implants	Cardboard boxes with blue colored marking	

*Disposal by deep burial is permitted only in rural or remote areas where there is no access to common bio-medical waste treatment facility. This will be carried out with prior approval from the prescribed authority and as per the Standards specified in Schedule-III. The deep burial facility shall be located as per the provisions and guidelines issued by Central Pollution Control Board from time to time.

(v) Hazardous Waste Management

Hazardous waste is those that may contain toxic substance generated from industrial, hospital, some type of household waste. The improper handling, collection, treatment and disposal of hazardous waste material may cause substantial harm to human health or environment. Hazardous wastes can take the form of solids, liquids, sludges or contained gases and they are generated primarily by chemical production, manufacturing, and other industrial activities.



Fig 10: Prediction of Hazardous waste for Year 2019-27

They may cause damage during inadequate storage, transportation, treatment or disposal operations. Improper hazardous-waste storage or disposal frequently contaminates surface and groundwater supplies. People living in homes built near old and abandoned waste disposal sites may be in a particularly vulnerable position. Hazardous wastes are classified on the basis of their biological, chemical, and physical properties. These properties generate materials that are toxic, reactive, ignitable, corrosive, infectious, or radioactive.

a. Current Status related to Hazardous Waste Management

Details of Data Requirement	Present Status
Total Units	2639
Closed Units	420
Operational Units	2219

Details of Data Requirement	Authorized Quantity (MTA)	Generated quantity (MTA)
Total Hazardous Waste (MTA)	962539.223	585682.531
Land fillable Waste (MTA)	82888.127	74110.416
Incinerable Waste (MTA)	51286.490	48819.140
Recyclable Waste (MTA)	364045.644	154000.354
Utilizable Waste (MTA)	464318.961	308752.621

Status of Common TSDF in U.P.

The Status of operation of Common hazardous waste treatment, storage and disposal facility (TSDF) for disposal of hazardous waste is enlisted as following: -

- Total No. of TSDF 04
- Capacity exhausted 01
- Operational TSDF 03

S.No.	TSDF Detail	Operator
1	Kanpur Rooma on 36 acre land. (Capacity exhausted)	The TSDF at Rooma, Kanpur with capacity of 20000 cubic metre, was built for hazardous waste disposal of CETP Jajmau, and Tanneries of Jajmau, Kanpur and was operated by Kanpur Nagar Nigam. Its capacity is exhausted.

2	Kanpur Dehat (Kumbhi) on 7 hectare land.(Operational)	<p>M/s U.P. Waste Management Project, (A Division of Ramky Enviro Engineers Ltd.) Kanpur Dehat with installed Approximate capacity of 4.0 lakh MT is operational since February 2007. Total land fillable hazardous waste disposed up to 31st December 2021 is 393957.336 MT.</p> <ul style="list-style-type: none"> • Cell-1 to 4 have been permanently capped. • Cell 5 is Operational. (Approx. Capacity 3 Lakh MT). • The Facility has been upgraded to Integrated Facility having landfill capacity of 685 TPD and Incineration Capacity 48 TPD, BMW Capacity 10 TPD and AFRF 49 TPD. <p><i>Note: The Operator is expanding its current facility in 31.5 Acre.</i></p> <p><i>The capacity of Integrated Common Hazardous Waste Treatment, Storage and Disposal Facilities will be Direct Landfill (DLF) 273.9 TPD and Landfill After Treatment (LAT) 411 TPD, Incineration 47.3 TPD, Bio-medical waste management facilities- 10 TPD & Other recycling infrastructures are under progress.</i></p>
3	Kanpur Dehat (Kumbhi) on 3 hectare land.(Operational)	<p>M/s Bharat Oil & Waste Management, Kanpur-Dehat, UP with installed capacity of 209,000 MT for Landfillable HW and is operational since 2010. Two cell(s) of TSDF have been capped and 3rd SLF Cell is in operation as of date. Approximately 141977 MT landfillable hazardous waste is disposed in all three SLF Cells as on 30th December, 2021. The TSDF operator is also in the process of expanding its capacity as UPPCB has recently leased additional 10 Acre land to the operator.</p>
4	Unnao (Banthar) on 33 acre land. (Operational)	<p>M/s Industrial Infra Structure (India) Ltd. Unnao with installed capacity of 3.00 lac MT is operational since 2008. One cell of TSDF is in operation. Approximate 107832.00 MT (upto 31.12.2021) of landfillable hazardous waste is stored in it till now.</p>

Common TSDF with Integrated facility of Incineration

- M/s U.P.Waste Management Project Ltd., At Kumbhi, Kanpur Dehat has installed common incinerator of 2 T/hr. as the part of TSDF constructed on 7 hectare of land provided by Board at Kumbhi Kanpur Dehat.
- M/S Bharat Oil & Waste Management Ltd. has installed common incinerator of 2 T/hr as the part of TSDF constructed on 3 hectare of land provided by Board at Kumbhi Kanpur Dehat.

Board has given direction to all the TSDF operators to transport hazardous waste through GPS enabled vehicles and maintained its record and send manifest as per provisions of HoWM Rule 2016. The officials of the Board inspect the TSDF sites on regular basis and cross checked their records.

One common incinerator in lieu of spare capacity in Uttar Pradesh

M/s Bharat Oil Co. (I) Regd, E-18, Site-IV Sahibabad Ind Area Ghaziabad is operational since 2005. The capacity of Incinerator is 250 Kg/hr.

b. Identification of gaps and action plan:

S.No.	Action points For village panchayats/ blocks/ municipalities / corporations	Identification of gap	Action plan	Agencies Responsible	Target time for Compliance
1.	Regulation of industries and facilities generating Hazardous Waste	Check whether all hazardous waste industries are identified and authorised by SPCBs/PCCs	SPCB/PCC ensures that facility for all hazardous waste in Industries are available.	SPCB/PCC/UPPCB	comply
2.	Establishment of collection centres of collection centres	Check district has collection centres for hazardous wastes with linkage to common TSDFs / recyclers	Comply (All hazardous waste Industries are send waste to TSDF)	Local authority/UPPCB	Comply (All hazardous industries are send waste to TSDF)
3.	Training of workers involved in handling / recycling / disposal of HW	Identify facilities / industries engaged in recycling / pre-processing / disposal of hazardous waste in the district.	Action plan to train the workers on safety aspects through Department of Industries as per provisions under HOWM Rules, 2016	Industry/UPPCB	Comply (Industries have been train workers on safety aspects)
4.	Availability / Linkage with common TSDF or disposal facility	Check if the generators of HW have access to common TSDF in the State?	Action plan to ensure all generators are linked to TSDF / Action plan in case there is no TSDF in the State – in such	Industry/UPPCB	Comply

			case evaluate existing storage and captive disposal facilities through SPCBs/PCCs		
5.	Contaminated Sites	Are there any sites where soils / sediments/ groundwater contaminated due to dumping of industrial wastes	Identification of probable contaminated site, incidents of HW dumping, responsible parties for Contaminated site etc. and to remediate Contaminated sites	UPPCB /CPCB	No any Contaminated Sites detected

(vi) E-Waste Management

Waste electrical and electronic equipment (WEEE) is becoming major threat to the whole world. Rapid growth of technology, up-gradation of technical innovations and a high rate up-gradation by exchanging old electronic items have led to one of the fastest growing waste in the world.

Its toxic emissions mixed with virgin soil and air and causing harmful effects to the entire biota either directly or indirectly. Direct impacts include release of acids, toxic compounds including heavy metals, carcinogenic chemicals and indirect effects such as bio magnification of heavy metals. Many private firms are involved in collecting, dismantling, separation and exporting e-wastes for recyclers. However, strict regulations are currently being followed as on approval of such firms such as e-steward certification by Basel action network in US, they also involved in public awareness programs. E-

Waste consists of end of electrical and electronic equipment's and products such as: Refrigerator, Washing machines, Computers and Printers, Televisions, Mobiles, I-pods etc.



Fig 11: Component of E-Waste

The Ministry of Environment, Forest and Climate Change notified the E-Waste Management Rules, 2016 on 23 March 2016 in supersession of the e-waste (Management & Handling) Rules, 2011. The amendment in rules has been done with the objective of channelizing the E-waste generated in the country towards authorized dismantlers and recyclers in order to formalize the e-waste recycling sector. The collection targets under the provision of Extended Producer Responsibility (EPR) in the Rules have been revised and targets have been introduced for new producers who have started their sales operations recently.

a. Status related to E-Waste Management

Status of E-waste Collection/Dismantler/ Recycling/Refurbishing Units in the State of U.P.

S No.	Name & Address of Unit	Regional Office	Status of Authorisation	Type	Capacity (T/Annum)
1	M/s Auctus -E Recycling Solutions Pvt. Ltd., F-637, M.G. Road, Industrial Area, Ghaziabad.	Ghaziabad	Grant	Collection, Dismantle	1800
2	M/s Mahaluxmi Metal Alloys (India) Pvt. Ltd., Modinagar, Ghaziabad.	Ghaziabad	Grant	Collection, Dismantle, Recyclers	30000
3	M/s N.K. Products, 58-59, M.G. Road, Ghaziabad.	Ghaziabad	Not Applied	Collection, Dismantle	9000
4	M/s Bharat Oil Co., E-18, Site-IV, Sahibabad, Industrial Area, Ghaziabad.	Ghaziabad	Grant	Collection, Dismantle	4000
5	M/s Planet Green Recycling Pvt. Ltd., G-129, Phase -1, M.G. Road, Ghaziabad.	Ghaziabad	Grant	Collection, Dismantle, Recyclers	1500
6	M/s Rocket Sales, Plot No. 1-12, I/A, M.G. Raod, Hapur.	Ghaziabad	Grant	Collection, Dismantle	300
7	Ariglon ton Information System Pvt. Ltd., Plot No C-13, Site-4 Sahibabad Industrial Area, Ghaziabad	Ghaziabad	Grant	Collection, Dismantle	40000
8	M/s FIZ TRADING COMPANY, C- 55, SECTOR-B-3, TRANS DELHI SIGNATURE CITY TRONICA CITY, LONI, GHAZIABAD,	Ghaziabad	Grant	Collection, Dismantle	365

9	M/s. TELE SUPAR ELECTRONICS INDIA PVT LTD, B-15, ROOP NAGAR INDUSTRIAL AREA, LONI ,GHAZIABAD,201102	Ghaziabad	Grant	Collection, Dismantle	730
10	M/s R.R. Recycler Pvt. Ltd., Khasra No.-115, M, Vill-Achraunda, Tehsil & District- Meerut	Meerut	Grant	Recycling, Dismantling, Segregation, Collection, Storage, Disposal, Refurbishing,	8000 MT/A
11	M/s. 6R Recycling, Plot No-272, MG Road industrial area, Hapur	Ghaziabad	Grant	Collection, Dismantle, Recyclers	12000
12	M/s 3R Recycler Pvt Ltd. Plot No- 257, MG Road industrial area,Hapur	Ghaziabad	Grant	Collection, Dismantle, Recyclers	1440
13	M/s Circularity Solutions Private Limited (M/s. Karo Sambhav Pvt. Ltd.,) Khasra 95-96, Village - Sikhera, Hazazari Industrial Area, Modinagar, Ghaziabad	Ghaziabad	Grant	Collection, Dismantle	30000
14	M/s OZONE WASTE LLP Plot No.-C-25, UPSIDC, M.G. Road, Industrial Area, Hapur	Ghaziabad	Grant	Collection, Dismantle	6000 MT/Year
15	M/s Arsh Recycling Pvt. Ltd., Plot No. 203, UPSDIC, I/A, M.G. Road, Ghaziabad.	Ghaziabad	Grant	Collection, Dismantle	15000
16	M/s Auctus Recycling Solutions Pvt. Ltd.Habibpur, Greater Noida.	Greater Noida	Grant	Collection, Dismantle, Recyclers	20000
17	M/s Khan Traders, B-5, site4, Panki Industrial Area, Kanpur.	Kanpur	Grant	Collection, Dismantle	7190

18	M/s Green Tech Recycling, Khasra No.- 645, Acchraunds, Bahdaurpur Road, Partapur, Meerut .	Meerut	Grant	Dismantal, Collection, Refurbishing, Storage, Disposal collection, Recycling	9000
19	M/s Narora Atomic Power Station, Narora, Bulandshahar.	Bulandshahar	Grant	Collection, Dismantle, Recyclers	10
20	M/s Metal Alloys, E-46, Industrial Area, Ramnagar, Varanasi	Varanasi	Grant	Collection, Dismantle	1825
21	M/s Comwen Information Technologies Pvt.Ltd., 127/35B, ChakRagunath, Naini, Allahabad.	Prayagraj	Grant	Collection, Dismantle	300
22	M/s Dasia ECo E-Waste Recyclers E-160 Industrial area, Khalilabad, SantKabairnagar.	Basti	Grant	Collection, Dismantle	3000
23	M/s Sims Recycling Solutions Plot no.1 Udyog KendraII Ecotech-III Greater Noida.	Greater Noida	Grant	Collection, Dismantle	1250
24	M/s J.A.O. E-Waste Recycling Co, Vill- Jaitpur, Distt- Moradabad.	Moradabad	Grant	Collection, Dismantle	720
25	M/s HIN Green E-waste Recycling (P) Ltd, B-19/1, Summer Garden Colony, Meerut.	Meerut	Grant	Collection, Dismantle	750
26	M/s S.R. Metcast India (P) Ltd 11.8 Km.Agra Mathura Road, Agra.	Agra	Grant	Collection, Dismantle	600
27	M/s K.M. Metals Suppliers 9/270,271, Mathura Agra.	Agra	Not Applied (Closed)	Collection, Dismantle	5000
28	M/s Prakash Metal House 39/223, Karwan Lohamandi, Agra.	Agra	Grant	Collection, Dismantle	1500

29	M/s Shree MahaveerJi Trading Company, 30/127, Chippitala, Agra.	Agra	Not Applied	Collection, Dismantle	4500 375
30	M/s E-Waste Recyclers Industries K- 40, UPSIDC Industrial area, NH-2 Kosikalan, Mahura.	Mathura	Grant	Collection, Dismantle	150
31	M/s E-Waste Recyclers India E-50, UPSIDC Industrial area, NH-2 Kosikalan, Mahura.	Mathura	Grant	Collection, Dismantle	6000
32	M/s Supar Trading Company, Plot No.-3 Govt. Industrial Estate, Talkatora Road, Lucknow.	Lucknow	Not Applied (Closed)	Collection, Dismantle	365
33	M/s V.R. Techno Enviro Services pvt. ltd. khasra No. 440, indira Priyedarshni ward, jarhra Indira Nagar, Lucknow.	Lucknow	Not Applied (Closed)	Collection, Dismantle	365
34	M/s Greezon Recycling Pvt. Ltd., R 30, UPSIDC, Industrial Area, Sikandrabad, Bulandshahar.	Bulandshaha	Grant	Collection, Dismantle, Recyclers	16.5
35	M/s Sachin Enterprises, 123/751, block-T 74 pratapganj Gadariyan Purwa, Fazal gang, Kanpur.	Kanpur	Grant	Collection, Dismantling, Refurbishing	2500
36	M/s Greeniva Recycler Pvt. Ltd., Plot No. G-284, M.G. Road, Industrial Area, Hapur.	Ghaziabad	Grant	Collection, Dismantle, Recyclers	12000
37	M/s S. Malik Traders, Plot No.-93, 94 Vill-Budhera Jahidpur, Meerut.	Meerut	Grant	Collection, Dismantle	365

38	M/s Royal Faiz Recycling (p) Ltd. , I-22, I.A. M.G. Road, Hapur.	Ghaziabad	Grant	Collection, Dismantle, Recyclers	12000
39	M/s 3 C Recycler, F-326, I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Collection, Dismantle	9000
40	M/s Life E- Recycling (P) Ltd., F- 435, UPSIDC I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Collection, Dismantle	9000
41	M/s Hind Recycling (P) Ltd., Plot No. F-203, M.G. Road, Hapur.	Ghaziabad	Grant	Collection, Dismantle	9000
42	M/s Hayat Recycler, F-53, 54, I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Collection, Dismantle, Recyclers	15000
43	M/s B.R.P. Infotech Private Limited, F-394, Phase-I, M.G. Road, Industrial Area, Hapur	Ghaziabad	Grant	Dismantal, Collection, Segregation, Recyclers	9000
44	M/s Sky Green Waste Recycling Management , Khasra No.- 174, Alipur Jijmana, Meerut, U.P.	Meerut	Grant	Collection, Dismantle, Recyclers	5475
45	M/s Swachh Bharat Recycling Company, Gali-N0-4, 2083, Saipuram Insutrial Area, Delhi Road, Meerut, U.P.	Meerut	Grant	Collection, Dismantle, Recyclers	4800
46	M/s Rudra Interprises, Plot No. A- 96, Sector-A-4, Tronica City, Loni, Ghaziabad	Ghaziabad	Grant	Collection, Dismantle, Recyclers	500
47	M/s Avgree Recycling Pvt. Ltd, KH No.-549, Vill-Tiyala, Merrut-Bulandshahar Road, Hapur Bypass, Hapur.	Ghaziabad	Grant	Collection, Dismantle	11000
48	M/s Faiz Recycling, G-235, MG Road, Industrial Area, Hapur	Ghaziabad	Grant	Collection, Dismantle	36.67

49	M/s Malik Recycling, 25-A, Anand Ind. Estate, Mohan Nagar, Ghaziabad.	Ghaziabad	Grant	Collection, Dismantle	10000
50	M/s U.W.M. Recycling Pvt Ltd. Plot No.-F-331, UPSIDC, M.G. road, Ind Area, Hapur.	Ghaziabad	Grant	Collection, Dismantle, Recyclers	12
51	M/s Safdar E- Recycling Pvt Ltd. Plot No.H-69, M.G. road, Ind Area, Hapur.	Ghaziabad	Grant	Collection, Dismantle, Recyclers	12000

b. Identification of gaps and action plan:

S. No.	Action points	Gaps in implementation	Action Plan	Responsible agency	Timeli ne for comple tion of action plan
1	Inventory / Generation of E-Waste / Bulk-waste generators	No Inventory	No Inventory	SPCB/ PCC/UPP CB/Depa rtment of Industrie s.	Regular Activity.
2	E-Waste collection points	No E-waste collection points.	No E-waste collection points.	E-waste Recyclers/Pr oducers/Loc al Bodies.	Immediat e
3	Linkage among Stakeholders to channelize E-Waste	No linkage among stakeholders.	No linkage among stakeholders.	Local Bodies/UPPC B/District Administratio n.	Regular Activity.
4	Regulation of Illegal E- Waste recycling / dismantling	Prevalence of informal trading, dismantling, and recycling of E-waste is in District	Action plan in coordination with SPCBs/PCCs and District Administration to check this activity.	UPPCB	Regular Activity.

5	Integration of informal sector	Whether mechanism exists for bringing informal sector into main stream in collection and recycling of E-Waste	Evolve mechanism by involving producers / PROs.	UPPCB/Department of Industries.	Regular Activity.
6	Awareness and Education	Are there any programs at district level for awareness about E-waste management?	Plan special workshops and awareness campaigns through Producers / PROs	E-waste Producers/UPPCB	Regular Activity

Conclusion & Recommendations

1. E waste (Management) Rules 2016 should be stringently complied.
2. All E waste generator, processor, user etc. should take proper permission/ authorization from UPPCB.
3. All the E waste should be stored as per CPCB guidelines and Form 2 & 3 must be maintained by generator.
4. All the E-Waste should be channelized to dispose to board authorized agencies only.

3.0 Air Quality Management

Air quality affects our health our liveability of our cities and towns, and our environment. Air pollution, particularly from human activity, can cause health problems that's affect the heart and lungs, and can cause cancer. Even short-term exposure to air pollution can cause health problems. Children, the elderly and people with existing heart and lung condition are especially affected by air pollution.

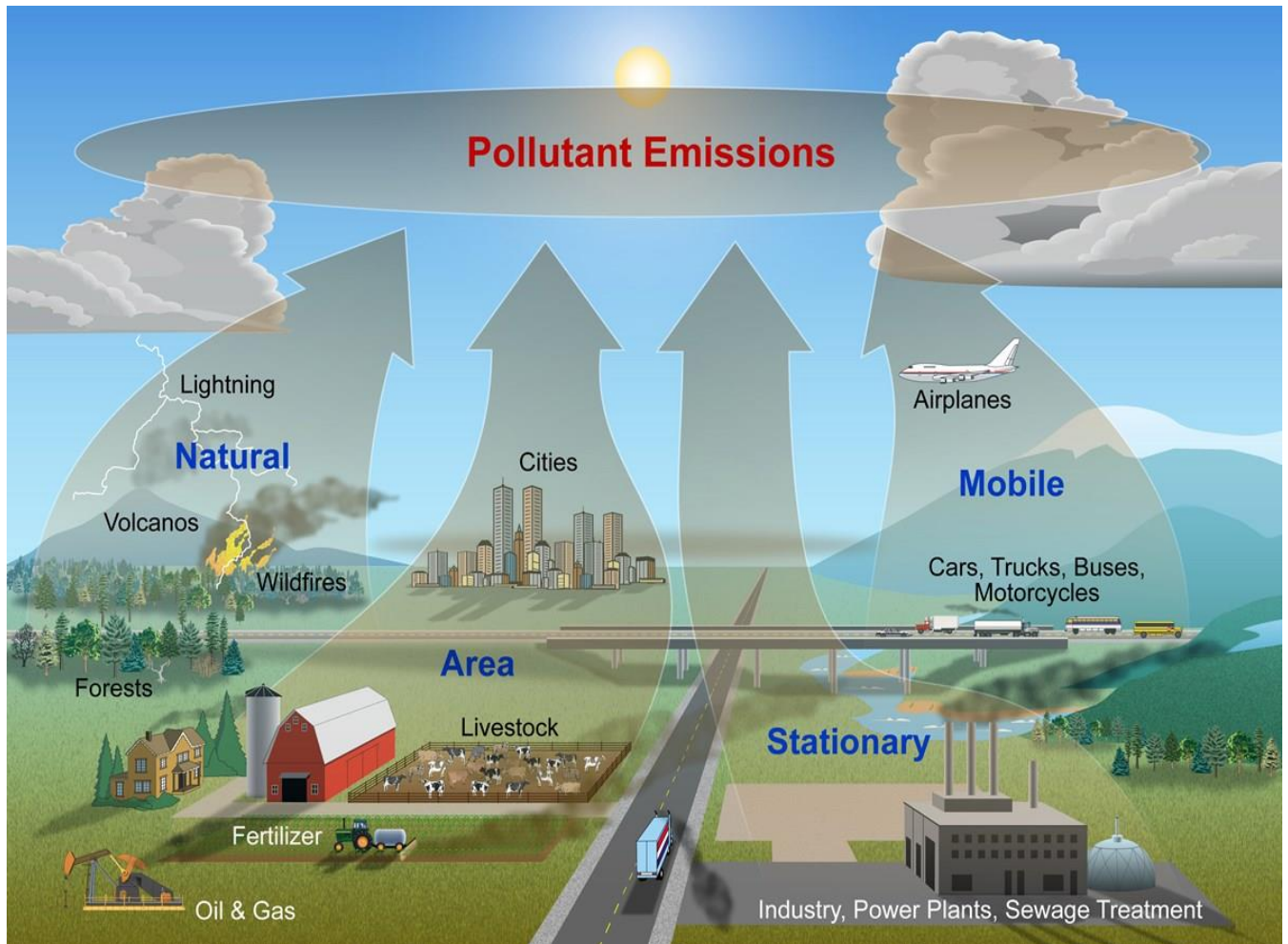


Fig 12: Component of Air Pollution

Air quality management refers to all the activities a regulatory undertakes to protect human health and the environment from the harmful effects of air pollution. There is a continuous review and assessment of goals and strategies based on their effectiveness. All parts of this process are informed by scientific research that provides air quality managers with essential understanding of how pollutants are emitted, transported in air and their effects on human health and the environment.

a. Status related to Air Quality Management

Details of Data Requirement	Present Status
Number of Automatic Air Quality monitoring stations in the district. - Operated by SPCB / State Govt / Central govt./ PSU agency : - Operated by Industry:	Continuous air quality monitoring station – 49 by Board, 04 by CPCB and 1 by IMD
Number of manual monitoring States operated by SPCBs	78
Name of towns / cities which are failing to comply with national ambient air quality stations	27
No of air pollution industries	146

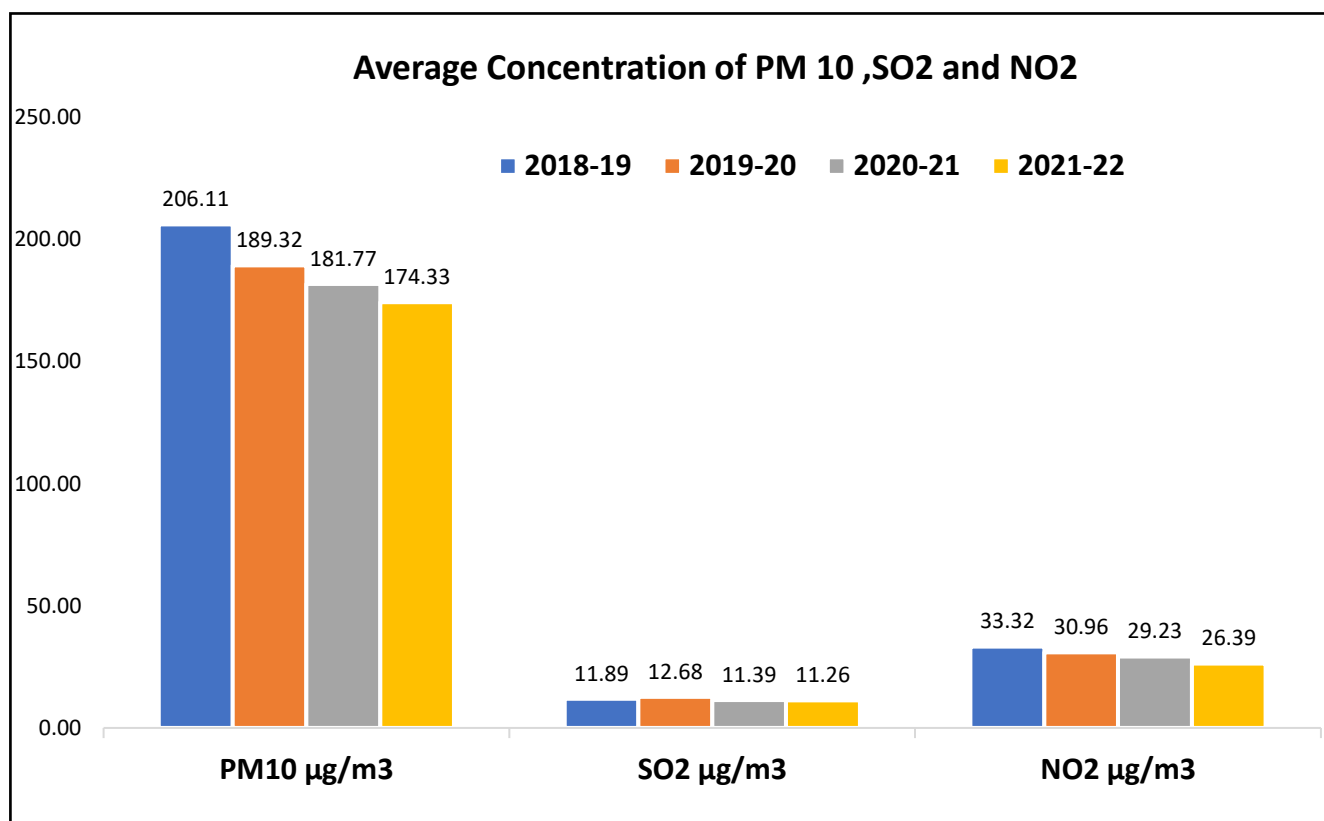


Fig 13: Average Concentration of PM₁₀, SO₂ and NO₂

b. Identification of gaps and action plan:

S. No.	Action points	Indicative Action Plan	Responsible agency	Timeline for completion of action plan
1.	Identification of prominent air polluting sources?	Sources identified in the Non-Attainment Cities and the NCR region.	PCB	Regular Activities
2.	Ambient Air quality data?	Continuous Air Quality monitoring station is installed and connected to the CPCB server.	PCB	Completely
3.	Setting up of Continuous Ambient Air Quality Monitoring Station	In some district Continuous Air Quality monitoring station not yet installed.	PCB	Regular Activities
4.	District Level Action Plan for Air Pollution	17 City is covered in the category of Non-attainment city.	PCB	Regular Activities
5.	Hotspots of air pollution in District	Hotspot identified in the Non-Attainment Cities and the NCR region.	PCB	Regular Activities
6.	Awareness on Air Quality	Presently "Swachh Vayu" App is working in the state.	PCB	Regular Activities

Conclusion & Recommendations

1. State Pollution Control Board should post the information (district wise on its website) indicating industries projects granted with consents ameliorative steps and their compliance status.
2. Industries discharging Air Emission and not having proper APCM are closed down as per Air Act till compliance is achieved
3. Public access for informing that if any industry is discharging unauthorized gaseous emissions, may be provided on the website of SPCB and such complaints be acted expeditiously.

4.0 Water Quality Management

Systematic management of water resources is necessary to ensure the required balance between development pressures and the safeguarding of the natural and built environment for future generations. The purpose of Water Quality management Plan (WQMP) is to reduce discharge of pollutants into urban runoff from development projects by reducing or eliminating sources of pollutants, and managing site runoff volumes and flow rates through best Management Practices.

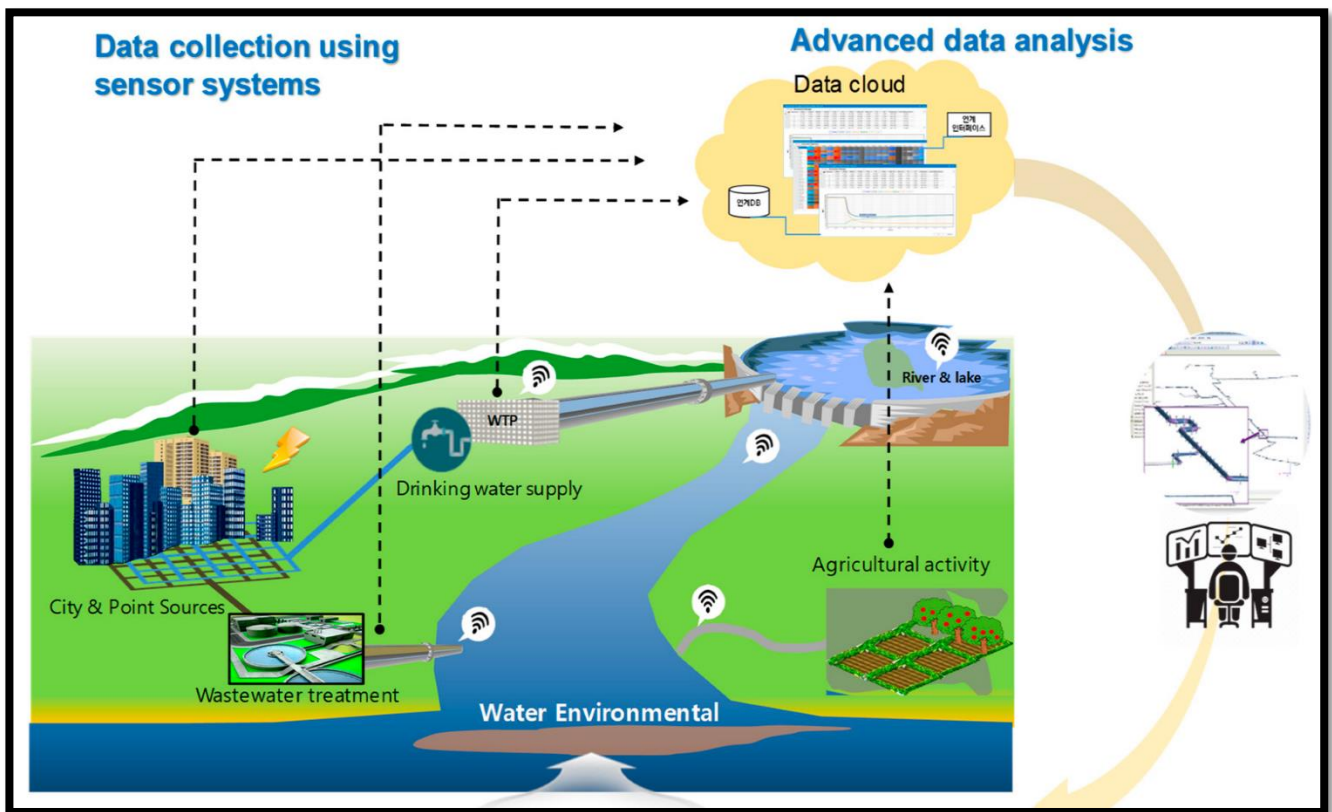


Fig 14: Water Quality Management

Domestic Sewage Management Plan

Domestic sewage is generated by domestic activities including toilet, bathroom, clothes washing and kitchen cleaning activities. This sewage water contains high levels of micro-organisms, chemicals (nutrients) and other contaminants capable of causing human illness and adversely impacting on the local environment.

5.0 Water Quality Monitoring

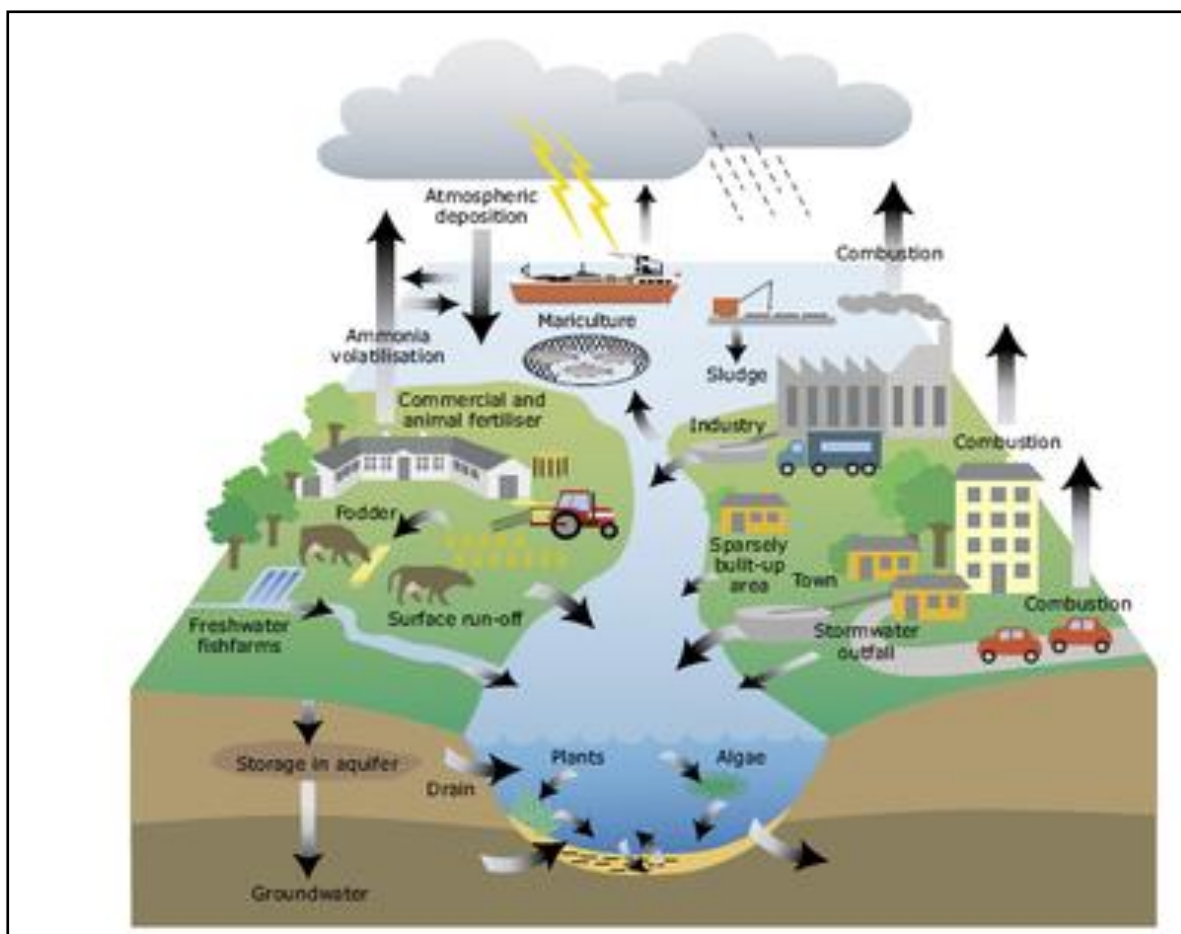


Fig 15: Descriptive figure of Waste Water and its Components

a. Status related to Water Quality Management

Summary of drains

S.No.	District	Number of Drains	Total length of drains (K.M.)
1	Ganga Organisation	547	5166.49
2	Son Organisation	250	1867.48
3	Ramganga Organisation	666	4340.16
4	Sharda Sahayak Organisation	2196	13107.86
5	Eastern Ganga Organisation	39	537.98
6	Sharda Organisation	1452	8042.55

7	Gandak Organisation	1277	9302.25
8	Betwa Organisation	8	41.2
9	Saryu-First Organisation	18	219.94
		6453	42625.91

Source: <https://idup.gov.in/en/page/drainages>

b. Identification of gaps and action plan for water quality monitoring:

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeli ne for compl etion of action plan
1.	Inventory of water bodies	An environmental monitoring cell shall maintain data of all water bodies (rivers / canals / natural drains / creeks / estuaries / groundwater / ponds / lakes / etc.) in district including its water quality.	UPPCB/J alkal/ Jal Nigam/Irr igation Dep.	-
2.	Quality of water bodies in the district	District level monitoring cell for periodic monitoring of water bodies for specific parameters in association with SPCBs is being done.	UPPCB/ Jal Nigam	-
3.	Hotspots of water contamination	District level monitoring cell for periodic monitoring of water bodies for Hotspots of water contamination in association with SPCBs is being done.	UPPCB/J alkal/ Jal Nigam/Irr igation Dep.	-
4.	Protection of river / lake water front	Protection of river/lake water front is done by the authorities.	Nagar Nigam/N agar Palaika/ /Jal Nigam	Complying

5.	Inventory of sources of water pollution	Action plan to completed inventory sources of water pollution.	Jalkal	
6.	Oil spill disaster management (for coastal districts)	Not Applicable.	Not Applicable	Not Applicable
7.	Protection of flood plains	Prepared for protection flood plain and prevention of encroachment.	Nagar Nigam/Nagar Palaika/ /Jal Nigam	Complying
8.	Rejuvenation of groundwater	prepared action plan to rejuvenate ground water in selected areas.	Nagar Nigam/Nagar Palaika/ /Jal Nigam	Complying
9.	Complaints redressal system	Compliant redressal system is functional.	Nagar Nigam/Nagar Palaika/ /Jal Nigam	Complying

5.1 Domestic Sewage

Table a: Status of Sewage Treatment Plants (STPs) in Uttar Pradesh
Jun-22

S.No	Sewage Treatment Plant in UP	Number
1	Total STP (Operational + Not Operational)	111
2	Operational STP	99
	STP Achieving Norms	53
	STP Not Achieving Norms	46

3	STP Not In Operation	12
4	STP in Under Construction + Under Tendering	58+32=90
<p>Note:- The standards are as per MOEF&CC Notification dated 13.10.2017, titled "Applicable Effluent Discharge Standards for STPs" are as follows: pH-6.5-9.0; BOD - <30 mg/l; TSS- <100 mg/l & FC- <1000 MPN/100 ml</p>		

A. Status of existing STPs in the State

- Existing No. of STPs and Treatment Capacity (in MLD):

Total No. – **111**

- Treatment Capacity - **3486 MLD**
- Capacity Utilization of existing STPs: **2905 MLD (83%)**
- MLD of sewage being treated through Alternate technology: -
- Gap in Treatment Capacity in MLD: **645.35**
- No. of Operational STPs: **97**
 - No. of Complying STPs: **67*** (*Due to revised CPCB directions dated 26.06.20, Number of complying STPs decreased*)
 - No. of Non-complying STPs: **30**
 - No. of STPs having BOD up to 10 mg/L: **17**
 - No. of STPs having BOD between 10-30 mg/L: **66**
 - No. of STPs having BOD more 30 than mg/L: **14**
- No. of Non-operational STPs - **13**

b. Identification of gaps and action plan for treatment of domestic sewage:

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1.	Sewage Treatment Plants (STPs)	A Sewage treatment plants is functional in most of the district.	Jal Nigam	-

2.	Underground sewerage network	The underground sewage network is operational in the major city and yet be to operational in all districts.	-	-
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Conclusion & Recommendations

- SPCB/PCCs may undertake snapshot monitoring of ambient air quality in a phased manner covering all cities and towns for wider coverage. GRAP action should be initiated in case of deviations.
- Surveillance squads/ task forces may be set up at Ward and Circle level to prohibit burning of garbage and other waste.
- Open parks, dilapidated roads and other sources of dust pollution should be identified and actions be taken to prevent the suspension of dust from such sources.
- Every city, town and village should have time-bound plan to set up sewage/Septage management facility.
- Intermediate remedial methods may be employed till sewage drains are intercepted and diverted to STP.
- Treated sewage may be utilized for sprinkling on dust emitting sources for gardening and other non-potable purposes.

5.2 Industrial waste-water management

Industrial waste water is one of the important and major pollution sources of Water. A huge amount of industrial waste water was discharged into rivers, lake & sand coastal areas. This resulted in serious pollution problems in the water environment and causes negative effects to the eco-system and human's life. There are many types of industrial waste water based on different industries and contaminants. Each sector produces its own particular combination of pollutants.

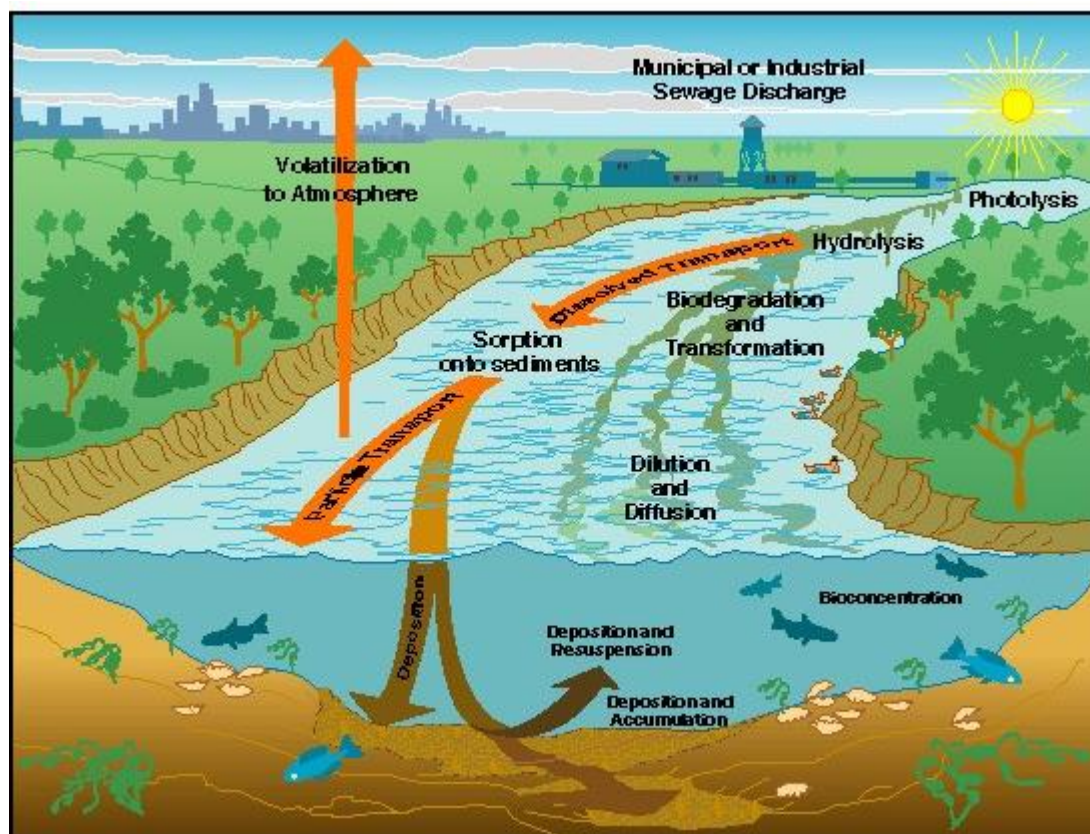


Fig 16: Component of Industrial Waste Water

Most industries produce some wastewater. Recent trends have been to minimize such production or to recycle treated wastewater within the production process. Some industries have been successful at redesigning their manufacturing processes to reduce or eliminate pollutants, through a process called pollution prevention. Sources of industrial wastewater include battery manufacturing, electric power plants, food industry, iron and steel industry, mines and quarries, nuclear industry, oil and gas extraction, organic chemicals manufacturing, petroleum refining and petrochemicals, pulp and paper industry, smelters, textile mills, industrial oil contamination, water treatment, wood preserving. Treatment processes include brine treatment, solids removal (e.g. chemical precipitation, filtration), oils and grease removal, removal of biodegradable organics, removal of other organics, removal of acids and alkalis, removal of toxic materials.

a. Current Status related to Industrial Waste-water Management

No. of industries in the State	11,332
Number of Red, Orange, Green and White industries in the State	Nos of Red industries- 2058 Nos of Orange industries - 5068 Nos of Green industries -4206
No. of water polluting industries in the State	1648 (Grossly Polluting Industries)
Quantity of effluent generated from the industries in MLD	850.5 MLD
Quantity of Hazardous Sludge generated from the Industries	524343.50 MTA
Number of industrial units having ETPs	1404
Number of industrial units connected to CETP	514 (Most of Tannery Unit at Kanpur are presently closed)
Number of existing CETP	07
Capacity of CETP	58.55 MLD
No. of Upgradation/ under construction CETP	04
Capacity of under construction CETP	26.65 MLD

• Status of compliance and operation of the CETPs

S.No.	Name	Existing Capacity	District	Compliance Status
1.	Apparel Park Tronica City CETP, Phase-I (for textile units), Ghaziabad	6 MLD	Ghaziabad	Yes
2.	CETP, HPDA, Pilkhaun, Hapur	2.1 MLD	Hapur, Ghaziabad	Yes
3.	Banther Industrial Pollution Control Co. CETP, Banther, Unnao	4.5 MLD	Unnao	Yes
4.	Unnao Tanneries Pollution Control Company (CETP) Site-II, Unnao	2.15 MLD	Unnao	Yes
5.	CETP, Industrial Area, Site-A, Mathura	6.25 MLD	Mathura	No
6.	CETP, UPSIDC Textile Complex, Rooma, Kanpur (for textile units)	1.5 MLD	Kanpur	Yes
7.	CETP Jajmau, Kanpur	36 MLD	Kanpur	No

b. Identification of gaps and action plan for industrial wastewater:

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1.	Compliance to discharge norms by Industries	Necessary action be initiated through SPCBs against the industries not Meeting the standards.	UPPCB	Regular Activity
2.	Complaint redressal system	A compliant redressal system is functional.	UPPCB	Completed

6.0 Mining Activity Management plan

Mining sector has observed considerable rise in past few years. Extraction of minerals consists of several steps few of which needs considerable attention otherwise these result in irreparable loss. Sand mining of sand is the major mining activity. It is important that mining is done from identified areas, river bed mining must be strictly prohibited and strict action should be against those involved in illegal mining activities. Role of district administration, police department and mining department is very important. Mining activities inside Forest Areas should be discouraged and Eco Sensitive Zone guidelines should be strictly implemented around Protected Areas.



Fig 17: Mining Activity

The Boulder, Gravel and Sand are one of the most important construction materials. These minerals are found deposited in river bed as well as adjoining areas. These aggregates of raw materials are used in the highest volume on earth after water. Therefore, it is the need of hour that mining of these aggregates should be carried out in a scientific and environment friendly manner.

Mineral Concession in respect of minor minerals are granted as per the provisions of the State Rules, framed by the State Government in exercise of powers conferred under section 15 of the Mines and Minerals (D&R) Act, 1957.

a. Status related to Mining Activity Management

Details of Data Requirement	Existing Mining operations
Type of Mining Activity	Coal, Pyrophyllite, Diaspore, Andalusite, Rock Phosphate, High grade Silica sand , China Clay, Dimensional Stone (Granite & Sandstone), Cement grade Limestone, Dolomite, Potash, Sillimanite, Iron ore, Brick Clay, stone Ballast, Sand etc.

S.No.	Region	Total fields	Field on leases
1	Agra	16	16
2	Aligarh	3	3
3	Ayodhya	12	9
4	Azamgarh	4	3
5	Bareilly	11	10
6	Basti	10	7
7	Chitrakoot	84	80
8	Devipatan	15	11
9	Gorakhpur	20	18
10	Jhansi	39	39
11	Kanpur	19	19
12	Lucknow	16	14
13	Meerut	12	10
14	Mirzapur	33	25
15	Moradabad	7	6
16	Prayagr	58	46
17	Sharanpur	3	3
18	Varanasi	4	4
Total		366	323

Source: <https://dgmup.gov.in/>

b. Identification of gaps and action plan:

S. No	Action points	Gaps and Action Plan	Responsible agency	Time-line for completion of action plan
1.	Monitoring of Mining activity	A task force/committee constituted by UP Government through letter no. 616/86-2018-371/2005 dated 20-03-2018, in which District Magistrate will be chairman and District Mines Officer will be Secretary/Member.	District Mining Department	Ongoing Process
2.	Inventory of illegal mining if any mining	A task force/committee constituted by UP Government through letter no. 616/86-2018-371/2005 dated 20-03-2018, in which District Magistrate will be chairman and District Mines Officer will be Secretary/Member.	District Mining Department	Ongoing Process
3.	Environment compliance by Mining industry	Letter issued to all Mining lease holders to compliance the terms and conditions which are mentioned in EC issued by SEIAA.	District Mining Department	Ongoing Process

7.0 Noise Pollution Management plan

Noise pollution is generally defined as regular exposure to elevated sound levels that may lead to adverse effects in humans or other living organisms. According to the World Health Organization, sound levels less than 75 dB are not damaging to living organisms, regardless of how long or consistent the exposure is.

Main Sources of Noise Pollution are:

- i. Traffic noise.
- ii. Industrial noise.
- iii. Construction sites.



Fig 18: Limits of Noise Pollution

a. Status related to Noise Pollution Management

Details of Data Requirement	Measurable Outcome
No. of noise measuring devices available with various agencies in district	Noise Meter available in the Regional Office U.P.P.C.B

- ✓ **Total 56 number of districts which have noise monitoring and Data comparison is shown in graph below:**

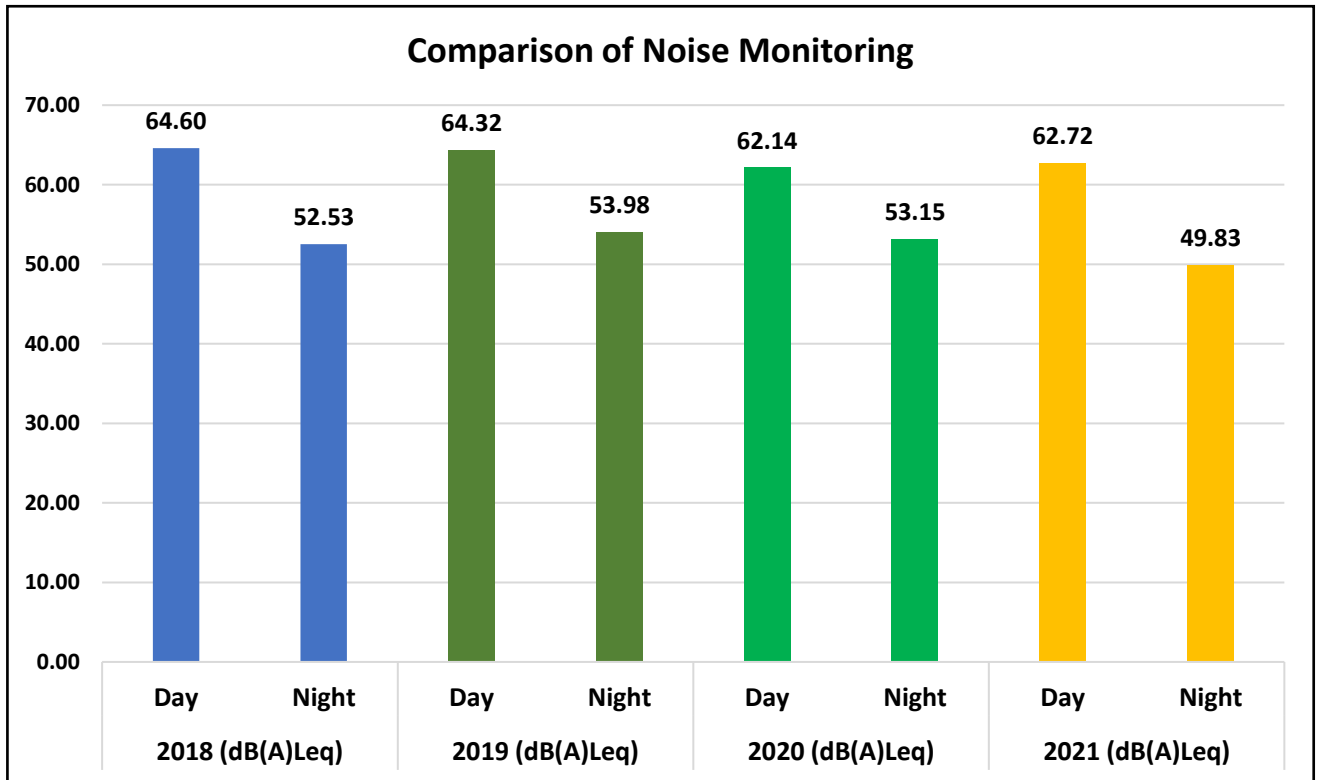


Fig 19: Comparison of Noise Monitoring Data



Fig 20: Mitigation techniques of Noise Pollution

b. Identification of gaps and action plan.

S.No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1.	Availability of Sound/Noise Level Meters.	SPCB/PCC have noise level meters and Noise action plan has been prepared.	UPPCB/ District Administration/ULBs/SHOs/Traffic Police	Immediate
2.	Ambient Noise Level monitoring.	UPPCB ensures that ambient sound levels comply with notified standards for residential, sensitive zones.	UPPCB/ ULBs	Immediate
3.	Signboards in Noise zones	District administration ensure that adequate number of sign boards installed at sensitive zones in towns / cities in towns and cities.	District Administration/ULBs/Police	Immediate
4.	Complaint redressing system	A compliant redressal system is functional.	District Administration/Police Administration/ULBs/UPPCB	Immediate

Conclusion & Recommendations

- UPPCB may undertake snapshot monitoring of Noise Level in a phased manner covering all cities and towns for wider coverage.
- Surveillance squads/ task forces may be set up at Ward and Circle level to prohibit DG & other Noise activities during functions and parties.

8.0 Budget requirement of the District-wise

S.No.	District	Budget	
		Required	Available
1.	Agra	3763.45	842.25
2.	Aligarh	687.18	15.64

3.	Amethi	102.42	0.67
4.	Amroha	54.27	8.00
5.	Ambedkar Nagar	Not Required	Not Available
6.	Auraiya	118.03	3.09
7.	Ayodhya	406.55	52.14
8.	Azamgarh	293.83	74.38
9.	Balia	204.46	42.35
10.	Banda	188.32	5.99
11.	Bahraich	Not Available	Not Available
12.	Balrampur	18.64	0.00
13.	Barabanki	Not Available	Not Available
14.	Bareilly	105.97	0.00
15.	Basti	426.74	2.52
16.	Bhadohi	10.83	5.41
17.	Bijnore	53.98	3.27
18.	Baghpat	11.69	1.56
19.	Budaun	31.89	0.36
20.	Bulandshahr	202.32	95.77
21.	Chandauli	366.87	77.73
22.	Chitrakoot	80.21	0.00
23.	Deoria	55.35	0.00
24.	Etah	741.58	216.22
25.	Etwah	4.24	0.18
26.	Farrukhabad	28.90	74.27
27.	Fatehpur	49.35	49.35
28.	Firozabad	238.45	17.28
29.	Gautam Buddha Nagar	361.56	361.55
30.	Gonda	516.78	9.27
31.	Gorakhpur	Not Available	Not Available
32.	Ghaziabad	53.42	0.17
33.	Ghazipur	308.52	61.37
34.	Hapur	32.35	0.27
35.	Hardoi	946.51	18.81
36.	Hathras	534.37	0.49

37.	Hamirpur	17.72	1.41
38.	Jhansi	52.59	40.60
39.	Jaunpur	Not Available	Not Available
40.	Jalaun	8065.53	85.08
41.	Kasganj	259.34	39.00
42.	Kaushambi	1592.71	6.07
43.	Kushinagar	64.22	0.00
44.	Kanpur Dehat	123.86	1.12
45.	Kanpur Nagar	1165.22	171.09
46.	Kannauj	116.61	0.49
47.	Lalitpur	16.55	14.81
48.	Lucknow	53.27	0.00
49.	Lakhimpur Kheri	75.64	32.56
50.	Mahoba	4.94	0.10
51.	Mainpuri	16.44	1.13
52.	Mathura	650.88	0.44
53.	Mau	Not Required	Not Available
54.	Mirzapur	475.59	200
55.	Moradabad	921.20	9.11
56.	Meerut	23.20	2741.35
57.	Muzaffarnagar	9.61	0.67
58.	Maharajganj	22.36	0.00
59.	Pilibhit	22.36	4.51
60.	Pratapgarh	154.55	36.51
61.	Prayagarj	137.48	1.45
62.	Sambhal	46.14	10.24
63.	Saharanpur	3819.47	10.05
64.	Sant Kabir Nagar	69.52	7.26
65.	Shahjahanpur	8.38	0.40
66.	Shravasti	30.62	2.70
67.	Shamli	25.91	7.64
68.	Siddharth Nagar	52.12	4.09
69.	Sitapur	13.11	25.72
70.	Sonbhadra	8.89	0.54

71.	Sultanpur	1.60	1.33
72.	Rampur	294.45	0.00
73.	Raebareli	18.95	0.00
74.	Unnao	1.05	0.94
75.	Varanasi	275.11	0.00
Grand Total (in Crore)		28927.66	5365.60

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