State Environment Plan

(31st March, 2023)

Directorate of Environment & Climate Change

Department of Science, Technology and Environment

Government of Punjab

CONTENTS

1.0 Executive Summary

The Hon'ble National Green Tribunal (NGT) vide Order dated 26.09.2019 in Original Application (O.A.) No. 360 of 2018 titled as Shree Nath Sharma Vs Union of India directed that Central Pollution Control Board (CPCB) shall facilitate the District Magistrates in preparation of District Environmental Plan (DEP) by placing Model plan on its website. This model plan may be adopted as per local requirements by all Districts under supervision of District Magistrate. The said Order also directs that Department of Environment in respective States / UTs should collect district plans to prepare State Environment Plan covering the specific thematic areas, which shall be monitored by respective Chief Secretaries of States and Administration of UTs by 15.12.2019. As per the Template prepared by CPCB, the scope of DEP is based on 7 thematic areas as follows:

1. Waste Management:
    (i) Solid Waste
    (ii) Biomedical Waste
    (iii) Construction & Demolition Waste
    (iv) Hazardous Waste
    (v) E-Waste
    (vi) Plastic Waste
2. Water Quality Management
3. Ambient Air Quality
4. Domestic Sewage
5. Industrial Waste Water
6. Mining Activity
7. Noise Pollution

In compliance to above directions, the State of Punjab had prepared & submitted District Environment Plans (DEP) for all 23 to CPCB & NGT Monitoring Committee, Punjab in November, 2021.These DEPs were further updated & submitted to NGT Monitoring Committee, Punjab in November,2022.

Based on the data of District Environment Plans, the State Environment Plan has been prepared in consultation with stakeholder Departments by the Department of Environment, Govt. of Punjab, in compliance of Hon 'ble NGT Orders in the matter 360/2018.

The State Environment Plan has been approved by the State Level Committee (River Rejuvenation Committee, Air Quality Monitoring Committee) under the Chairmanship of Administrative Secretary, Department of Environment on 04.01.2023 and State Apex Committee under the Chairmanship of Chief Secretary, Punjab on 01.03.2023.

1.1 State Profile

i) Punjab in its present form came into existence on November 1, 1966. The word Punjab is a compound of two Persian words, *panj* ("five") and *āb* ("water"), thus signifying the land of five waters, or five rivers (the Beas, Chenab, Jhelum, Ravi, and Sutlej). The State covers an area of 50,362 square kilometres (19,445 square miles), 1.53% of India's total geographical area. It is the 20th largest Indian State by area.

ii) Punjab is a State in northwest region of India and extends from the latitudes 29.30° North to 32.32° North and longitudes 73.55° East to 76.50° East. Punjab is bounded on the west by Pakistan, on the north by Jammu and Kashmir, on the northeast by Himachal Pradesh and on the south by Haryana and Rajasthan States.

iii) The total area of the State is 50,362 square kilometers. Its average elevation is 300 meters above sea level. Most of the Punjab lies in a fertile, alluvial plain with many rivers and an extensive irrigation canal system. A belt of undulating hills extends along the northeastern part of the State at the foot of the Himalayas. Its average elevation is 300 metres (980 ft) above sea level, with a range from 180 meters in the southwest to more than 500 metres (1,600 ft) around the northeast border. The southwest of the State is semiarid, eventually merging into the Thar Desert. The Shivalik Hills extend along the northeastern part of the State at the foot of the Himalayas.

iv) The State has a balanced amalgamation of heat in summer, rain in monsoon and cold in winter. Punjab experiences both summer and winter to its extreme. It even receives abundant rainfall, which makes the State a very fertile land. The region lying near the foot hills of Himalayas receive heavy rainfall whereas the region lying at a distant from the hills, the rainfall is scanty and the temperature is high.

v) There are 23 Districts and total of 168 statutory towns and 69 census towns in Punjab. Thus, there are total 237 towns (or say cities) in Punjab. Major cities of Punjab include SAS Nagar, Ludhiana, Amritsar, Patiala and Jalandhar.

a. State Administrative Set-up

In compliance of various NGT orders vide O.A. No. 673/2018, 138 & 139/2016, 681/2018, 606/2018, 1038/2018, 593/2017 and 325/2015, the State Govt. had prepared 24 Action Plans to Clean River Sutlej, Beas, Ghaggar & Holy Bein to achieve desired water quality in polluted rivers stretches, to achieve desired ambient air quality in 9 Non-Attainment Cities, Control of Noise Pollution, Comprehensive plan for Waste Management, Plastic Waste Management, Bio-medical Waste Management, Hazardous Waste Management, Control of pollution in Industrial Clusters, Reuse of Treated Wastewater, Rejuvenation of Water Bodies. All these Action Plans stands submitted to Central Pollution Control Board.

The progress of these Action Plans is being regularly reviewed through 3- tier Governance Mechanism as under:

i) District Environment Committees under Deputy Commissioners constituted vide Order dated 31.10.2019

ii) State Level Committees under Administrative Secretary, Department of Environment

a) River Rejuvenation Committee for Clean Rivers constituted vide Order dated 19.11.2018
b) Air Quality Monitoring Committee for Clean Air constituted vide Order dated 13.12.2018

iii) State Apex Committee under Chief Secretary for vide Order dated 14.11.2018.

The Hon'ble NGT vide Order dated 18.08.2022 in O.A. No. 360/2018, directed that the monitoring work being undertaken by the NGT Monitoring Committee headed by Justice Jasbir Singh, former judge, Punjab & Haryana High Court may be taken over by the Chief Secretary for being continued through appropriate administrative monitoring mechanism under them.

In compliance of above said NGT Order, the Govt. of Punjab has issued directions to all the Divisional Commissioners on 17.01.2023 to monitor the District Environment Plans in their respective Districts on behalf of Chief Secretary, Punjab from 1.01.2023 onwards. The Standard Operating Procedure (SOP) being followed for monitoring the District Environment Plans has also been prepared.

b. Local institutions

There are total 93 tehsils & 81 sub-tehsils in State of Punjab. The districts with highest number of tehsils are Ludhiana and Sangrur, both having 7 tehsils each. District Barnala and Pathankot have lowest number of tehsils, with each having 2 tehsils.

c. Natural Resources

(i) Water bodies

Water is considered to be an inexhaustible natural resource in the world, but the quantum varies from place to place. Punjab, as the name suggests, is the land of rivers. It is endowed with a good surface water resource through rivers and streams and also has abundant underground water reservoirs. It is a conservative estimate that nearly 80 per cent of the water resources is consumed in the production of food and fiber. Agricultural water-management, therefore, assumes great significance. While surface water management has been under governmental jurisdiction, underground water is mostly exploited on a private basis. The use of water has been through an integrated approach on the basis of comprehensive research and investigations. In spite of this, there has been problems of fluctuating sub-soil water level losses and wastage of undeveloped and developed water courses and a general phenomenon of improper drainage. For Punjab, the rivers Sutlej, Ravi and Beas of the Indus basin and the rivers Yamuna and the Ganga basin originating in the Himalayas are the main sources of water for canal irrigation. Storage basins have been constructed over the river Sutlej-Bhakra Dam, on the river Beas–Beas Dam at Pong and on the

river Ravi–Thein Dam, whereas for the river Yamuna, the storage dam (Kishau Dam) is yet to be completed. The rivers Sutlej, Beas and Ravi have been interlinked with the transfer of water from the Ravi to the Beas and from the Beas to the Sutlej – the Bhakra canal system and the Yamuna canal system are also interlinked to regulate the water flow. In other words, all the four rivers have been so interlinked that these can operate as a common grid, and this remarkable water management system is greatly responsible for progressive agriculture in the State, as it provides abundant surface water for irrigation.

(ii) Availability of water resources

For any particular region, available water sources comprise: (i) rainfall (ii) surface water from canal networks and (iii) the groundwater. Being integral parts of the hydrologic cycle, these three water sources are associated to each other.

- **Rainfall:** Rainfall in Punjab, the annual average rainfall is 580 mm, which is highly erratic in distribution in time and space. Around eighty percent of the total rainfall is received during 3 to 4 months of the monsoon period.

- **Surface Water Resources of Punjab:** The major rivers (perennial) including Sutlej, Beas, Ghaggar (seasonal) with a water potential of about 14.54 Million Acre Feet (MAF). 14,500 kms long canal network with six major canals and about 1,00,000 km water courses with total Cultivable Command Area of 30.88 Lacs hectares.

- **Groundwater:** Punjab State has sweet groundwater with Electrical Conductivity (EC) values less than 2000 micro-mhos per centimeter (µmhos/cm) at 25°C and Residual Sodium Carbonate (RSC) less than 2.5 milli-equivalent per litre (me/lt.) in nearly 80 percent of its gross geographical area. The replenishable groundwater in the State is mainly generated from the following sources: a. Infiltration due to rainfall b. Seepage from canals system c. Return flow from surface irrigation

(iii) Forest coverage

With a total geographical area of 50,362 square kilometers, Punjab has forest cover of 3,084 square kilometers. Out of this, 44 square km is reserved forest, 137 sq km protected forest and 1,903 sq km unclassed forest. Geography & Demography

(iv) Geography and Demography

Total Area of the State	50362 Sq.Km
Total Population	Rs 277.43 lacs
% of Rural to Total Population	62.51%

% of Urban to Total Population	37.49%
Density	550 per sq.km
Literate & Educated Persons	1,89,88,611
Female per 1000 male	893
Literacy	75.84%

(v) Land-use pattern

Punjab with a geographical area of 50362 sq. km. is accommodating 27704236 persons. Presently, 82.61 percent land of Punjab is under agriculture (net sown area). The other categories i.e., land not available for cultivation and forests occupy 10.53and 5.86 percent area respectively. Besides these, the other categories are insignificant in Punjab and cover only 1 percent area of the State. In land use categories big imbalances exist in Punjab. For example, the share of forests is very low (5.86 percent) as stipulated (33 percent). Presently natural resources especially water, soil and air of Punjab are degrading day by day, which is perhaps due to imbalances in land use categories.

S.No.	Land Use type	Area (in Hectares)	Percentage (%)
1.	Geographical area	5036	
2.	Area reporting for land utilization	5033	100
3.	Forests	258	5.13
4.	Barren and un cultivable land	550	10.93
5.	Cultivable waste	6	0.12
6.	Permanent pastures & other grazing land	5	0.10
7.	Land under misc.& groves not included in net area sown	8	0.16
8.	Fallow land other than current fallows	6	0.12
9.	Current Fallows	55	1.09
10.	Net sown area	4145	82.35

(vi) Climate

The geography & subtropical latitudinal location of Punjab lead to large variations in temperature from month to month. Even though only limited regions experience temperatures below 0°C (32 °F), ground frost is commonly found in the majority of Punjab during the winter season. The temperature rises gradually with high humidity and overcast skies. However, the rise in temperature is steep when the sky is clear and humidity is low. The maximum temperatures usually occur in mid-May and June.

Punjab experiences three main seasons mentioned as under:

- Summer (mid-April to the end of June)
- Monsoon (early July to the end of September)
- Winter (early December to the end of February

Punjab starts experiencing mildly hot temperatures in February. The actual summer season commences in mid-April and the heat continues till the end of August. High temperatures between May and August hover between 40-47 °C. The area experiences atmospheric pressure variations during the summer months. Punjab's rainy season begins in the first week of July as monsoon currents generated in the Bay of Bengal bring rain to the region. The monsoon lasts up to mid-September. Temperature variation is minimal in January. The mean night and day temperatures fall to 5 °C (41 °F) and 12 °C (54 °F), respectively.

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

(i) Solid Waste Management

Urban Local Bodies

a. Current status related to Solid Waste Management

No of ULBs	Total No of Wards	No of Households	Total Population	Solid Waste Generated per day
166	3152	20,65,609	1,23,81,058	4100 TPD

b. Identification of Gaps and Action plan

S. No.	Action points	Present Status	Gaps	Action Plan / Target	Timeline for completion of Action Plan
1	**Segregation**				
(i)	Segregation of Waste at Source (Household Coverage)	85.5%	14.5%	Dedicated teams of Community Facilitators and Motivators is deployed at ULBs for bringing 100% compliance.	30.09.23
2	**Sweeping**				
(i)	Manual Sweeping (No. of wards covered)	96%	4%	100 % sweeping to be achieved by increasing the frequency of sweeping & deploying requisite workforce	30.06.23
(ii)	Mechanical Road Sweeping (No. of machines)	11 No.	21	Funds tied up under SBM-U 2.O & machines will be purchased by utilizing SBMU funds.	31.12.23
3	**Waste Collection**				
(i)	Door to Door collection (Household Coverage)	99.50%	0.50%	100%	30.06.23
(ii)	Waste Collection through Manual Tricycles with separate Compartments (Nos)	9320	Nil	Achieved	NA
(iii)	Mini Collection Trucks with separate compartments (Nos)	1434	Nil	Achieved	NA
(iv)	MRFs (Nos)	265	25	Remaining 25 MRFs are being set up	30.09.23

				by utilizing SBM-U funds.	
4.	**Waste Transportation**				
(i)	Review existing infrastructure for waste Transport				
a	Manual Tricycles (Nos)	9320	Nil	Achieved	NA
b	Mini Collection vehicles with separate compartments (Nos)	1390	Nil	Achieved	NA
(c)	Bulk Waste Trucks (Nos)	44	Nil	Achieved	NA
(ii)	Waste Transfer points/ Garbage Vulnerable Points (Nos)	945	76	Under progress	30.09.23
5.	**Waste Treatment and Disposal**				
(i)	Wet-waste Management by Bulk Waste Generators (Nos)	237	158	100% compliance by BWGs	31.12.23
(ii)	Wet-waste Management by ULBs (Nos)	8318	6	ULBs are being pursued for 100% compliance	30.09.23
(iii)	Dry-Waste Management by setting up Material Recovery Facilities (Nos)	265	25	ULBs are being pursued for 100% compliance	30.09.23
(iv)	Processing of Non-recyclable waste to Energy (Nos)	1	2	Will be set up under SBMU 2.O	31.03.25
(v)	Disposal of inert and non-recyclable wastes by setting up Sanitary Landfill (Nos)	35	100	ULBs are being pursued for 100% compliance	31.03.24
(vi)	Remediation of historic / legacy dumpsite (No. of ULBs)	59	89	Remediation of legacy waste is under process in 89 ULBs and shall be expected to be completed by the prescribed timelines.	31.03.24
(vii)	Involvement of NGOs (Nos)	365	Nil	Regular activity	NA
(viii)	Authorization of Waste Pickers (Nos)	6736	Nil	Regular activity	NA
(ix)	Preparation of own by-laws to comply with SWM Rules 2016	Prepared and Notified	Nil	Achieved	NA

Village Panchayats

a. Current status related to Solid Waste Management

No of Village/Gram Panchayats	No of Households	Total Population	Solid Waste Generated per day
13,313	38,87,052	18,871,899	4,929.22 TPD

b. Identification of gaps and Action plan:

S. No.	Action points	Present Status	Gaps	Action Plan / Target	Timeline for completion of Action Plan
1	**Segregation at Source**				
(i)	Segregation of Waste at Source (Village Household Level)	10%	90%	100%	30.09.26
2	**Sweeping**				
(i)	Manual Sweeping	Data Not available	Data Not available	100%	30.09.26
(ii)	Mechanical Road Sweeping& Collection	The Gram Panchayats at their own level are managing the sweeping and collection of waste at present.			
3	**Waste Collection**				
(i)	100% collectionof solid waste	10%	90%	100%	30.09.26
(ii)	Door to Door collection	10%	90%	100%	30.09.26
(iii)	Waste Collection trolleys with separate compartments	Tricycles/Carts are being used by GPs having dry and wet waste segregation facility for collecting waste.			
(iv)	Mini Collection Trucks with separate compartments	Not viable in small villages as GPs are maintaining Solid Waste Management through GP fund.			
(v)	Waste Deposition centers (for domestic hazardous wastes)	Domestic hazardous waste is generated in very small quantity in villages which at present is handled by GP themselves by setting up village level SWM facility. Further community is also been guided through various campaigns to handle hazardous waste carefully.			
4.	**Waste Transport**				
(i)	Review existing infrastructure for waste Transport				

(a)	Mini Collection Trucks with separate compartments	Mini collection trucks are not viable in villages due to narrow streets. However, tricycles/push carts are being used by GPs for collection of waste.			
(b)	Bulk WasteTrucks	Being transported through bulk waste truck at the interval of 2-3 months			
4.	**Waste Treatment and Disposal**				
(i)	Wet-waste Management by Gram Panchayat by setting up of Compost facilities.	Segregated dry & wet waste is collected from households and is brought to village level SWM facility. The wet waste is then sent to compost pits where it is converted to compost. The compost is thereafter sold/ used for horticulture purposes.			
(ii)	Dry-Waste Management: Material Recovery for dry-waste fraction	The SWM plant at village level has a dedicated area earmarked for collection of dry waste. The dry waste shall be sorted out in different fractions. The recyclable saleable fraction of solid waste shall be given to rag pickers. The non-recyclable fraction of the solid waste shall be disposed of in coordination with Department of Water Supply and Sanitation.			
(iii)	Disposal of inert and non- recyclable wastes: Sanitary Landfill	The quantity of inert and non-recyclable wastes is very less in villages.	100%	DRDP through respective GPs shall dispose of the same in co-ordination with the Department of Water Supply and Sanitation.	Timelines yet to be finalized
(iv)	Preparation of own by-laws to comply with SWM Rules 2016	by-laws yet to be prepared and notified	100%	By-laws to be notified	Timelines yet to be finalized

(ii) Plastic waste Management

Urban Local Bodies

a. Current status related to Plastic waste management

No of ULBs	Total No of Wards	No of Households	Total Population	Plastic Waste Generated per day
166	3152	20,65,609	1,23,81,058	340 TPD

b. Identification of Gaps and Action plan:

S. No.	Action points	Present Status	Gaps	Action Plan /Target	Timeline for completion of Action Plan
1	Door to Door collection of dry waste including PW in ULBs (% HH Coverage)	99.50%	0.50%	ULBs are being pursued for compliance	30.06.23
2	Facilitate organized collection of Plastic waste at Waste transfer point or Material Recovery Facility in ULBs	Yet to be carried out	Linkage with Plastic waste recyclers & involvement of PIBOs is yet to be done.	PPCB shall in coordination with DLG to enforce PIBOs to make compliance.	Regular activity
3	Setting up MRFs for collecting Plastic Waste (Nos)	265	25	ULBs are being pursued for compliance	30.09.23
4	Awareness and education programs implementation	Regular Activity	Regular Activity	Regular Activity	-
5	Plastic Industry Registration	Total no. of units: 470	145	100% registration	31.12.23
6.	Ban on Single Use Plastic	Notification no. 5/18/2016/4LG4/745 dated 15.07.2022	Nil	Regular Activity	Regular Activity
7.	Implementation of Extended Producer Responsibility	Number of Producers associated with ULBs: NIL Infrastructural support by Producers/ Brand Owners to ULBs: NIL	100%	Punjab Pollution Control Board in coordination with local body shall ensure the compliance by Producers.	Regular Activity

Village Panchayats

a. Current status related to Plastic Waste Management

No of Village/Gram Panchayats	No of Households	Total Population	Plastic Waste Generated per day
13,313	3,887,052	18,871,899	339.59 TPD

b. Identification of gaps and Action plan:

S. No.	Action points	Present Status	Gaps	Action Plan/ Target	Timeline for completion of Action Plan
1	Door to Door collection of dry waste including PW	Door to Door Collection of dry waste has been completed in 337 Villages in the state.			
2	Facilitate organized collection of PW at Waste transfer point or Material Recovery Facility	GPs are in the process of segregation of Solid Waste, the plastic is removed and is sold to local Kabadiwalas.			
3	PW collection Centers				
4	Awareness and education programs implementation	Awareness in rural areas will be generated through loudspeakers from Mandirs, Gurudwara and Masjids, Seminars will be conducted to aware people about the hazards of using plastic.			
5	Access to Plastic Waste Disposal Facilities	GPs are in the process of collection of Solid Waste, the plastic is being segregated and is sold to local Kabadiwalas.			
6.	Ban on Single Use Plastic	Notification for ban on identified Single Use Plastic has been issued vide No. SO4164/PA9/1994/S30/2022 dated 11.10.2022 and the same shall be implemented.			
7.	Implementation of Extended Producer Responsibility	The quantity of EPR is very less in villages and hence it is not possible to implement the provisions of the same in Rural areas.			

(iii) C & D Waste Management

Urban Local Bodies

a. Current status related to C & D Waste

Sr. No.	Details of Data Requirement	Present Status
1	Total C & D waste generation in MT per day (As per data from Municipal Corporations / Municipalities)	300 TPD
2.	No of C&D waste recycling facilities	140 including 100 TPD Facility at MC Jalandhar. 60 TPD Plant under construction at MC Amritsar and 100 TPD at MC Ludhiana
3.	Capacity of C&D waste Recycling Facility	240 TPD
4.	No of the Districts having access to C&D waste recycling facility	All 23 Districts

b. Identification of gaps and Action plan:

S. No.	Action points for blocks / town municipalities / City corporations	Present Status	Gaps	Action Plan/ Target	Timeline for completion of Action Plan
1	Arrangement for separate collection of C&D waste to C&D waste deposition point	201 C&D deposition/ collection sites identified	N.A.	N.A.	N.A.
2	Whether Local authority have fixed user fee on C&D waste and introduced permission system for bulk waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month?	DLG already fixed user fee on C&D waste and introduced permission system for bulk waste generators	N.A.	Not Applicable	N.A.
3	C&D recycling Facility (Nos)	140	2	99 % completion	March 2023
4	Usage of recycled C&D waste in non- structural concrete, paving blocks, lower layers of road pavements, colony and roads	As per State C&D Waste Management Policy, 2020, SOP dated 01-07-2020 and Notification dated 02-11-2021, usage of C&D waste	Nil	Regular activity	NA

		is being promoted in non-structural construction activities.			
5	ICE on C & D waste management	A team of 130 Community Facilitators and around 350 Motivators has been deployed at ULBs' level for day-to-day awareness creation.	Nil	Regular activity	NA

Village Panchayats

a. Current status related to C & D Waste

Sr. No.	Details of Data Requirement	Status
1	Total C & D waste generation in MT per day in Village Panchayats	Being Identified
2	No of C&D waste recycling facilities in Village Panchayats	Being Identified
3	Capacity of C&D waste Recycling Facility	Being Identified
4	No of Village Panchayats having access to C&D waste recycling facility	Being Identified

b. Identification of gaps and Action plan:

S. No.	Action points for blocks / town municipalities / City corporations	Present Status	Gaps	Action Plan	Timeline for completion of action plan
1	Arrangement forseparate collectionof C&D waste to C&D waste deposition point	Being Identified	Being Identified	Being Identified	Being Identified
2	Whether Rural Development and Panchayat have fixed user fee on C&D waste and introduced permission system for bulk waste generators who generate more than 20 tons or more in one day or 300 tonsper project in a month?	Being Identified	Being Identified	Being Identified	Being Identified

3	C&D recycling Facility	Being identified	Being Identified	100 % completion	Being Identified
4	Usage of recycled C&D waste in non- structural concrete, paving blocks, lower layers of road pavements and roads	Being Identified	No policy in place	Authority may make give appropriate incentives on usage of C & D waste. A % of usage in public works may be specified / any other scheme.	Being Identified
5	ICE on C & D waste management	Being Identified	No sustained system of creating awareness created among local communities in place.	Action plan for awareness and education shall be prepared.	Being Identified

(iv) Biomedical Waste Management

a. Current Status related to Biomedical Waste

Inventory of BMW in the District	**Quantity**
Total no. of Bedded Healthcare Facilities	4096
Total no. of Non-bedded HCF	7245
No. of HCFs authorized by SPCBs/PCCs	9404
No of Common Biomedical Waste Treatment and Disposal Facilities (CBWTFs)	5
Capacity of CBWTFs	Capacities of CBWTFs is as under: Incinerator – 18496 Kg/day Autoclave – 23125 Kg/day
No. of Deep burials for BMW, if any	Nil
Quantity of biomedical waste generated per day	16 TPD
Quantity of biomedical waste treated per day	16 TPD

b. Identification of gaps and Action plan:

S. No.	Action points	Status	Gaps	Action Plan	Timeline for completion of action plan
1.	Inventory and Identification of Healthcare Facilities	Inventory made and identification completed.	Nil	NA	NA
2.	Adequacy of facilities to treat biomedical waste	5 CBWTFs setup in the State are adequate to treat the Bio-medical waste	Nil	NA	NA
3.	Tracking of BMW	Bar code system already implemented by all HCFs and CBWTFs. BMW carrying vehicles are equipped with GPS system.	Nil	NA	NA
4.	Awareness and education of healthcare staff	23 no. of training programs have been conducted by the ROs for the assistance of Health care Facilities during the period Jan-2022 to September-2022. Besides above, PPCB has organized a webinar on Bio-medical Waste Management on 21-10-2022 in which around 710 no. of officers/officials of Health Care Facilities participated.	NIl	Regular Activity	Regular Activity
5.	Compliance to Rules by HCFs and CBWTFs	The HCF are being visited by PPCB to check the compliance of BMW Rules.	Nil	Surprise checking of HCFs on quarterly basis.	Regular Activity
6.	Installation of ETP in Health care facilities	Number of ETPs installed by HCFs: 285 out of 4065 a) ETPs installed by Private HCFs:226 b) ETPs installed by Govt. HCFs: 59 & 4 under installation	Pvt. HCFs: 3618 Govt.HCFs:162	ETPs to be installed by Pvt HCFs= 3844 Govt. HCFs:221	31.12.23

(v) Hazardous Waste Management

a. Current Status related to Hazardous Waste Management

Details of Data Requirement	**Present Status**
No of Industries generating HW	3321
Quantity of HW in the district	118645.12 MT/Annum
(i) Quantity of Incinerable HW	3056.95 MT/Annum
(ii) Quantity of land-fillable HW	38155.40 MT/Annum
(iii) Quantity of Recyclable / utilizable HW	80882.56 MT/Annum
No of common TSDF	One at Village Nimbua, Derabassi, District SAS Nagar
Contaminated Sites	1. Basti Sheikh, Jalandhar (CS) 2. Hambran Road, MSW Dump Site, Ludhiana (CS) 3. Buddha Nullah, Ludihana (CS) 4. Mahaluxmi Orgo Chemical Industries, Nabha Road, Bhawanigarh, Sangrur (CS) 5. Tajpur Road, MSW dump site, Ludhiana (CS) 6. PSIEC Leather Complex, Jalandhar (CS) 7. Kala Sanghia Drain, Jalandhar (PCS) 8. Nasrali Village, Mandi Gobindgarh (PCS) 9. Anjali Village, Mandi Gobindgarh (PCS) 10. Bhawanigarh, District Sangrur

b. Identification of gaps and action plan:

S. No.	**Action points**	**Status**	**Gaps**	**Action Plan/Target**	**Timeline for completion of action plan**
1.	Inventorization and authorization of Hazardous waste generating units	Identified and inventory completed. • No. of HW generating units: 3411 •No. of authorized	200 nos.	Camps will be organized to pursue the industries to obtain the authorization. Also, new hazardous waste generating	Regular activity

		Industries: 3211		industries will be identified.	
2.	Establishment of collection centers	CTSDF already exist.	Nil	NA	NA
3.	Number of Contaminated Sites and its Remediation	The report for the preliminary assessment of 9 contaminated sites was sent to CPCB. Action as per CPCB suggestion is under process. **1 At Bhawanigarh, District Sangrur-** Remediation Plan submitted in Hon'ble NGT. The Tribunal vide order dated 31.03.2022 directed the State to execute the plan	Nil	100% remediation of all contaminated sites.	NA

(vi) E-Waste Management

a. Current Status related to E-Waste Management

Details of Data Requirement	**Present Status**
Inventory of E-Waste in MT/year	1578.552 TPA
Collection centers established by ULBs in theDistrict	266 Material Recovery Facilities
Collection centers established by Producersor their PROs	30
No of authorized E-Waste recyclers /Dismantler	4

b. Identification of gaps and action plan:

S. No.	Action points	Status	Gaps in implementation	Action Plan/ Target	Timeline for completion of Action Plan
1	Inventory / Generation of E-Waste / Bulk-waste generators	Complied	Nil	Being updated regularly	NA
2	Regulation of Illegal E-Waste recycling / dismantling	Initiated	Being identified	Surprise visits will be made to identify illegal e-waste recyclers / dismantlers (To be provided)	Regular activity

Note: *The data for whole of the State has been considered in Biomedical Waste Management, Hazardous Waste Management & E-Waste Management.*

3.0 Air Quality Management

a. Current Status related to Air Quality Management

<table>
<tr><th>Details of Data Requirement</th><th>Present Status</th></tr>
<tr><td>Number of Automatic Air Quality Monitoring Stations in the State

- Operated by SPCB / State Govt / Central govt./ PSU agency

- Operated by Industry:</td><td>Total - 6 No. (Operated by Punjab Pollution Control Board)
i. Ludhiana – 2 No.
ii. Patiala – 1 No.
iii. Jalandhar – 1 No.
iv. Amritsar – 1 No.
v. Fatehgarh Sahib – 1 No.

Total 10 No. (Operated by Industry)
i. 1 No. – Operated by Industry (M/s Ambuja Cement, Ropar)
ii. 1 No. – Operated by Industry (M/s Ambuja Cement, Bathinda)
iii. 4 No. – Operated by Industry (M/s Talwandi Sabo Power Ltd, Mansa)
iv. 4 No. – Operated by Industry (M/s HMEL (Refinery), Bathinda)</td></tr>
<tr><td>Number of Manual Monitoring Stations operated by SPCBs</td><td>Total 69 No. (including 24 rural station)
<table><tr><td>i. Amritsar-05</td><td>ii. Patiala-05</td></tr><tr><td>iii. Bathinda-02</td><td>iv. Pathankot-01</td></tr><tr><td>v. Barnala-02</td><td>vi. Roopnagar-03</td></tr><tr><td>vii. Fatehgarh Sahib-05</td><td>viii. SAS Nagar-03</td></tr><tr><td>ix. Faridkot-02</td><td>x. Sangrur-03</td></tr><tr><td>xi. Fazilka-02</td><td>xii. SBS Nagar- 02</td></tr><tr><td>xiii. Ferozpur-02</td><td>xiv. Kapurthala- 02</td></tr><tr><td>xv. Gurdaspur-05</td><td>xvi. Mansa- 01</td></tr><tr><td>xvii. Hoshiarpur-02</td><td>xviii. Moga – 01</td></tr><tr><td>xix. Jalandhar-05</td><td>xx. Muktsar Sahib- 02</td></tr><tr><td>xxi. Ludhiana-11</td><td>xxii. Tarn Tarn - 01</td></tr><tr><td>xxiii. Malerkotla-02</td><td></td></tr></table></td></tr>
</table>

Name of Towns / Cities which are failing to comply with National Ambient Air Quality Standards	Ludhiana, Patiala, Jalandhar, Amritsar, Khanna, DeraBassi, Mandi Gobindgarh, Dera Baba Nanak, Naya-Nangal, Bathinda and Batala *(includes 9 Non-Attainment Cities besides Bathinda & Batala)* Action plan for all 9 Non-Attainment Cities was prepared and submitted to CPCB in compliance of NGT Order dated 08.10.18 in O.A. No. 681/2018 titled as "NCAP with multiple timelines to Clean Air in 102 Cities to be released around August 15"
No. of Air Polluting Industries	11943 No.
Prominent Air Polluting Sources [Large Industry] / [Small Industry] / [Unpaved Roads] / [Burning of Waste Stubble] / [Brick Kiln] / [Industrial EState] / [Others] (Multiple selection)	- Industry (Large / Small) - Vehicles - Road Dust (Unpaved roads) - Construction & Demolition Waste - Open Burning of Biomass/Waste

b. Identification of Gaps and Action Plan:

S. No.	Action Points	Gaps	Indicative Action Plan	Responsible Agency	Timeline
1.	Identification of prominent air polluting sources	Carrying out of Source Apportionment Studies of Naya Nangal, Khanna, Mandi Gobindgarh, Dera Bassi, Patiala, Amritsar & Dera Baba Nanak.	Source Apportionment Studies by IIT, Delhi is near completion	Punjab Pollution Control Board (PPCB)	30.09.23
2.	Setting up of Continuous Ambient Air Quality Monitoring Station (CAAQMS)	Setting up of 3 No. CAAQMS at Dera Bassi, Naya Nangal & Dera Baba Nanak	Tender under process	PPCB	31.12.23
3.	Ambient Air quality data	Nil	Regularly updated on PPCB website, https://ppcb.punjab.gov.in	PPCB	Regular Activity
4.	State Level Action Plan for control of Air Pollution	Nil	The State Action plan (SAP) has been Prepared and Uploaded on NCAP Portal.	PPCB	Completed

5.	Hotspots of air pollution in State	Hotspots of air pollution to be identified after completion of activity at S.No. (1) above	Work under progress	PPCB	30.09.23
6.	Awareness on Air Quality	Nil	Awareness activities to improve air quality are being carried out on regular basis by various stakeholder departments.	PPCB/Deptt. of Transport / Traffic Police	Regular Activity

4.0 Water Quality Management

(i) Water Quality Monitoring

a. Current Status related to Water Quality Management

<table>
<tr><th>Details of Data Requirement</th><th>Present Status</th></tr>
<tr><td>Rivers</td><td>
<table>
<tr><th rowspan="2">S.No.</th><th rowspan="2">River</th><th rowspan="2">Total Length (in Km)</th><th colspan="3">No. of Drains/sub drains/villages discharging waste directly or indirectly</th></tr>
<tr><th>Drains</th><th>Sub Drains</th><th>Villages</th></tr>
<tr><td>1.</td><td>Sutlej</td><td>440</td><td>30</td><td>84</td><td>336</td></tr>
<tr><td>2.</td><td>Beas</td><td>460</td><td>13</td><td>22</td><td>180</td></tr>
<tr><td>3.</td><td>Ghaggar</td><td>165</td><td>13</td><td>29</td><td>289</td></tr>
</table>
</td></tr>
<tr><td>Lakes / Ponds</td><td>No. of Rural Ponds - 15,446

No. of Urban Ponds- 231

Action plan to rejuvenate all the Rural & Urban ponds was prepared and submitted to CPCB in compliance to NGT Order dated 10.05.2019 in O.A. No. 325/2015 titled as "Lt. Col. Sarvadaman Singh Oberoi Vs UOI & Ors".</td></tr>
<tr><td>Total Quantity of Sewage from Towns and Cities in District</td><td>2210 MLD</td></tr>
<tr><td>Quantity of Industrial Wastewater</td><td>421 MLD</td></tr>
<tr><td>Percentage of untreated sewage</td><td>408 MLD (18.40%)</td></tr>
<tr><td>Details of bore wells and number of permissions given for extraction of groundwater</td><td>280516 No.</td></tr>
<tr><td>Groundwater polluted areas if any</td><td>Dump sites of MC’s</td></tr>
<tr><td>Polluted river stretches as identified by CPCB in its report (Nov,22)</td><td>Sutlej (Ludhiana To Harike)
Ghaggar (Mubarakpur To Sardulgarh)
Kali Bein (At Mand Fatehpur)
Sirsa (Along Baddi)
Swan (Along Santoshgarh)</td></tr>
</table>

	Action plan to restore the polluted river stretches of Sutlej, Beas, Ghaggar was prepared and submitted to CPCB in compliance of NGT Order dated 20.09.18 in O.A. No. 673/2018 news item published in "The Hindu" authored by Shri. Jacob Kosuhy titled "More river stretches are now critically polluted.
Maintenance of E Flow of the rivers. (Directions of Hon'ble NGT in OA no. 325/2015 dated 18.11.2020)	Minimum 15% of average lean season flow is being maintained in river Sutlej (640 cusecs) & Beas (370 cusec) by Department of Water Resources. Department of Water Resources reported that there is no regulation point for Ghaggar being a non-perennial river.
Policy for the management of Feacal Sludge & Septage In Rural & Urban Areas	Policy for the Management of Faecal Sludge & Septage in Urban & Rural Areas has been prepared & is being implemented by the Department of Local Govt. and Department of Rural Development and Panchayats respectively.

b. Identification of Gaps and Action Plan for Water Quality Monitoring:

S.No.	Action points	Status	Responsible agency	Timeline for completion of action plan
1.	Inventory of Water Bodies	The inventory of all the water bodies in the State has already been prepared weblink: irrigation.punjab.gov.in	Department of Water Resources	Updated from time to time
2.	Quality of Water Bodies inthe District	The water quality of following rivers & major water bodies is being monitored and data is being uploaded on websites of CPCB & PPCB with details as under: • Sutlej ▪ Beas ▪ Ghaggar ▪ Buddha Nallah ▪ East Bein ▪ Holy Bein ▪ Tung Dhab Drain ▪ Kasoor Drain ▪ Kala Singhian Drain	Punjab Pollution Control Board (PPCB)	Regularly Activity

3.	Hotspots of Water Contamination	Hotspots Identified in the Action Plans for Rivers Sutlej, Beas, Ghaggar &Holy bein. The same can be viewed at the following web link: https://ppcb.punjab.gov.in/en/action-plans	PPCB	Updated from time to time
4.	Complaint Redressal System	The web link is https://nmcg.nic.in/login.aspx	Department of Environment	Completed

(ii) Domestic Sewage

a. Current Status related to Domestic Sewage Management

Details of Data Requirement	**Present Status**
Total No. of ULBs	166 No.
No of ULBs STPs installed No. of Peri Urban Areas	85 No. (Total No. of STPs- 116, Capacity-1992.75 MLD) 5 (Total No. of STPs- 21, Capacity-75.1 MLD)
No of ULBs needing STPs	98 No. (Total No. of STPs proposed-109, Capacity- 555.05 MLD) 5No. (Total No. of STPs proposed-4, Capacity- 7.35 MLD)
No of ULBs having partial underground sewerage network	129 No.
No of ULBs not having sewerage network	37 No.
Total Quantity of Sewage generated in the State	2210 MLD
Total available Treatment Capacity	2068 MLD (137 STPs)
Quantity of treated sewage flowing into Rivers(directly or indirectly)	1803 MLD (137 STPs, cap- 2068 MLD)
Quantity of untreated or partially treated sewage (directly or indirectly)	Untreated – 408 MLD
Reuse of treated effluent through existing STPs (OA no. 496/2016 dated 22.01.2021)	305 MLD of 57 STPs is being reused for irrigation purposes Action plan for reuse of treated wastewater was prepared and submitted to CPCB in compliance of NGT Order No. 148/2016 (M.A. No. 686/2017 dated 27.11.2018) titled as Mahesh Chandra Saxena Vs South Delhi Municipal Corporation & Ors.

b. Identification of Gaps and Action Plan for Treatment of Domestic Sewage:

S. No.	Action points	Gap	Action Plan	Resp.agency	Timeline for completion of action plan
1.	Sewage Treatment Plants (STPs)	408 MLD	113 STPs (562.40 MLD)	Dept. of Local Govt. (DLG)	31.12.24
2.	Underground seweragenetwork	37 towns	37 Towns	DLG	31.12.25
3.	In-situ remediation	5 ULBs	Under Progress	DLG	31.12.23

5.0 Industrial wastewater management

a. Current Status related to Industrial Wastewater Management

S. No.	Details of Data Requirement	Present Status
1.	Total Industries in Punjab	22049
2.	Number of Red, Orange, Green and White industries in the State	Red industries- 4417 Orange industries- 13748 Green industries-3884
3.	No of Industries discharging wastewater	4059
4.	Total Quantity of industrial wastewater generated	420.742 MLD
5.	Quantity of treated industrial wastewater discharged into Nalas / Rivers	420.682 MLD
6.	Existing Common Effluent Treatment Facilities (CETPs)	I. Existing CETPs- 6 Nos. (110.535 MLD) i. 1 CETP for Textile Dyeing Units, Ludhiana =15MLD ii. 1CETP for Textile Dyeing Units, Ludhiana=50 MLD iii. 1CETP for Textile Dyeing Units, Ludhiana=40 MLD iv. 1 CETP for electroplating industries, Ludhiana= 0.5 MLD. v. 1CETP for Leather Complex, Jalandhar=5 MLD. vi. 1CETP for vegetable Tanning units, Phillaur, (Jalandhar)=0.035 MLD Existing Reprocessing Units (Prickling Spent Acid)- 6 Nos (276.69 KLD) The remaining quantity of industrial waste water is being treated through captive ETPs installed by the industries.
7.	Proposed Common Effluent Treatment Facilities (CETPs)	I. 0.15 MLD CETP for electroplating units at Jalandhar – Matter pending before Hon'ble Punjab & Haryana High Court II. Upgradation of 5 MLD CETP for Leather Complex, Jalandhar

8.	No of Industries meeting Standards	No. of industries monitored= 284 (Jan,22-Jan,23) • Industries meeting standards - 224
9.	No of Industries not meeting discharge Standards	Industries not meeting standards – 60 (Action initiated against 41 industries)
10.	No. of OCEMs/CCTVs installed on ETPs having discharge >50 KLD	109

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

S. No.	Action points	Gaps	ActionPlan	Responsible agency	Timeline for completion of Action Plan
1.	Compliance to discharge norms by Industries	19 industries	Industries/SPVs are being pursued for maintaining the norms	PPCB	30.06.23

6.0 Dairy waste management

a. Current Status related to Dairy waste Management (in major cities of the State)

Details of Data Requirement	Present Status
Total No. of Biogas Plants	1 Compressed Biogas Plant (CBG) of 1 MW to handle 200 TPD of cow dung installed at Haibowal Dairy Complex, Ludhiana

b. Identification of Gaps and Action Plan for Dairy Waste Management

S.No.	Description	Responsible Dept.	Timelines
1. Tajpur Dairy Complex, Ludhiana			
(i)	Setting up of Compressed Biogas Plant (CBG) (6.4 TPD) to handle 400 TPD of cow dung	Punjab Energy Development Agency (PEDA)	30.09.24
(ii)	Setting up of ETP (2.25 MLD)	Department of Local Govt. (DLG)	30.06.23
2.Haibowal Dairy Complex, Ludhiana			
(i)	Setting up of CBG (4.8 TPD) plant to handle 300 TPD of cow dung	PEDA	31.03.26
(ii)	Setting up of ETP (3.75 MLD)	DLG	30.06.23
3. Jamsher Dairy Complex, Jalandhar			
(i)	Setting up of CBG plant (4.8 TPD) to handle 250 TPD of cow dung	PEDA	31.03.25
(ii)	Setting up of ETP (2.25 MLD)	DLG	30.06.23

7.0 Mining Activity Management plan

a. Current Status related to Mining Activity Management

Details of Data Requirement	Existing Mining operations
Type of Mining Activity	Sand/Gravel Mining
No of licensed Mining operations in the District	33 licensed and ,38 for desilting sites
% Area covered under mining in the District	6.12%
Area of Sand Mining	1346.35 Hectares

b. Identification of gaps and action plan:

S.No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of actionplan
1.	Monitoring of Mining activity	Regular/surprise checking of mining Activity done by Departmental Officials. Weighbridges at pit-head of mines have been integrated with the department centralized portal. The proposal to install CCTVs on all the mining sites for live video streaming is also under active consideration of the department.	Department of Mines and Geology	Regular Activity
2.	Inventory of illegal mining if any mining	If any illegal mining comes into notice of Department, immediate action is taken by the officials as per the rules laid down in Punjab Minor Mineral Rules,2013, Mines and Minerals 9Development and Regulation) Act, lodging of FIR as per IPC and NGT Orders. Department has launched toll free number for complaints related to illegal mining.	Department of Mines and Geology	Regular Activity

3.	Environment complianceby Mining industry	Mining Operations done as per Environmental Clearance conditions and Six-monthly compliance report is being sent by the contractors directly to PPCB, SEIAA &MoEF&CC.	Department of Mines and Geology	Regular Activity

8.0 Noise Pollution Management Plan

a. Current Status related to Noise Pollution Management

Details of Data Requirement	Measurable Outcome
No. of Noise measuring devices available with various agencies inthe State	16 No. (Punjab Pollution Control Board)

b. Identification of Gaps and Action Plan:

S. No.	Action points	Gaps	Indicative Action Plan	Responsible agency	Timeline
1.	Availability of Sound/Noise Level Meters	Procurement of 10 No. Noise Level Meters (NLMs)	Action under process	Traffic Police	31.12.23
2.	Ambient Noise Level monitoring	Portable analyzers and fixed ambient noise level monitoring stations to be installed in major cities & towns	Action under process	Punjab Pollution Control Board	31.03.24
3.	Signboards in Noise zones	373 No. signboards have already been installed at sensitive zones in 8 districts (Fatehgarh Sahib – 55 No., Jalandhar – 50 No., Amritsar – 25 No, Tarantaran – 8 No., Hoshiarpur – 150 No., Moga – 43 No., Kapurthala – 30 No., Fazilka – 12 No.) & to be installed in remaining districts	Action under progress	Department of Local Govt.	31.03.24
4.	Complaint redressing system	Nil	Public complaint redressal system already established and can be viewed at web link: https://connect.punjab.gov.in/grievance/save	Respective District Administration	Regular Activity