

Government of Manipur
Directorate of Environment and Climate Change
Porompat, Imphal – 05

No. 4/124/2019 (RRC) / DoE&CC

Imphal, the 6th November, 2023

To,
The Executive Director – Technical (NMCG)
National Mission for Clean Ganga
Ministry of Jal Shakti, Govt. of India

Sub. : Submission of Monthly Progress Report(MPR) to the Central Monitoring Committee in the NGT Matter OA No. 673 of 2018;

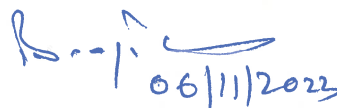
Sir,

I have the honour to submit herewith the Monthly Progress Report (MPRs) in respect of Manipur State for the month of August, September and October 2023 for kind reference and doing the needful.

With regards,

Encl : As above

Yours Sincerely



(Dr. T. Brajakumar Singh)

Director

Copy to :

1. Staff Officer to the Chief Secretary, Government of Manipur
2. Addl. Chief Secretary (Forest, Environment and Climate Change, Govt. of Manipur
3. Scientist 'B', National River Conservation Division, Ministry of Jal Shakti, Govt. of India

National Mission for Clean Ganga
Format for submission of Monthly Progress Report in the NGT Matter OA
No. 673 of 2018
(in compliance to NGT order dated 24.09.2020)
For the State of Manipur submitted on 20th AUGUST 2023

Overall status of the State:

I. Total Population:

	2011 Census	Projected as on 2020
Urban Population	8,34,154	10,47,135
Rural Population	17,36,236	21,79,541
Total	25,70,390	32,26,676

Estimated Sewage Generation (MLD) : 115.054 MLD

II. Details of Sewage Treatment Plant:

- Existing No. of STPs and Treatment Capacity : 1 (one) STP of 27 MLD operational
- Capacity Utilization of existing STPs : 21.59 MLD
- MLD of sewage being treated through alternate technology : NIL
- Gap in Treatment Capacity in MLD : 5.41 MLD
- No. of Operational STPs : 1 (one) Detail of STP is at **Annexure - 1**
- No. of Complying STPs : 1 (one)
- No. of Non-complying STPs : Nil

Details of each existing STP in the State

No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
1	Lamphel, Imphal West	27 MLD	21.59 MLD	Operational (79.98%)	Complying

Details of under construction STPs in the State

No.	Location	Capacity of the plant in MLD	Physical Progress in %	Status of I&D or House sewer connections	Completion Timeline
1	Maibam Leikai, Imphal West	16 MLD	98 %	NIL	31.03. 2023
2	Iroisemba, Imphal West	1 MLD	95%	NIL	31.03. 2023

Details of proposed STPs in the State

No.	Location	Capacity of the STP proposed in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Likely Date of Completion
1	Imphal	49 MLD	Agreement Signed	---

III. Details of Industrial Pollution:

	No. of industries in the State	:	1011 Nos.
			944 outside Industrial Estate
			67 inside Industrial Estate
	No. of water polluting industries in the State located along the 9 (nine) prioritized rivers of Manipur	:	Nil
	Quantity of effluent generated from the industries in MLD	:	0.93 KLD (estimated) in case of the 3 units located within Nilakuthi Food Park, Imphal East
	Quantity of Hazardous Sludge generated from the Industries in TPD	:	Data not available
	Number of industrial units having ETPs	:	Nil
	Number of industrial units connected to CETP	:	3 (three)
	Number and total capacity of ETPs	:	Nil
	Details of existing	:	Nil
	Under construction	:	Nil
	Proposed	:	Nil
	Compliance status of the ETPs	:	Nil
	Number and total capacity of CETPs	:	1 (one) CETP
	Details of existing	:	1 unit of 400 KLD capacity
	Under construction	:	3
	Proposed	:	Nil

Town	Existing ETP Capacity	CETP Proposed, if any	Status (DPR/ tendering/ under construction etc.)
Imphal	400 KLD capacity	Nil	The DPRs for 3(three) ETPs at Takyelpat, Tera Urak & Kuraopokpi Industrial Estates of Manipur has been submitted to the Ministry of Commerce & Industries, Government of India through Planning Department, Manipur under PM Gatishakti "Scheme for Special Assistance to the States for Capital Investment for 2022-23".

- Status of compliance and operation of the CETPs

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (Existing, under construction & proposed)
Imphal	5 (five)	Data not available	Nil	1 (one) CETP of 400 Kilo Liter / Day at Nilakuthi Industrial Estate, Imphal Status : Functional

IV. **Solid Waste Management:**

- Total Urban Local Bodies (ULBs) : 27 ULBs
- Population of ULBs : 6,15,344 (2011 Census)
: 7,92,734 (2021 projected population)
- Current Municipal Solid Waste Generation : 290 MTD
(as per SBM 2.0 guidelines, MSW generation is estimated @450gm per capita generation for Imphal Municipal Corporation (for more than one lakh population) and @300gm per capita generation for other ULBs (for less than one lakh population) based on 2020 projected population)
- Waste Collected : 202 TPD
- Existing Management / treatment facility : 165 TPD
- Utilization of MSW processing : 135 TPD
[Managed by ULBs = 135 TPD
Managed at Source = 76.6 TPD
Total Managed = 211.6 TPD]
- Number, installed capacity and utilization of existing MSW processing facilities in TPD bifurcated by type of processing.

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
1	IMC / Municipal Solid waste Management Plant, Lamdeng, Imphal	100	90	Waste to Energy and Composting	100% by November 2023
2	Lamshang MC	1	1	Composting	- Capacity Building to achieve 100% collection - Segregation of Waste aimed to reach 100% by November, 2023.
3	Samurou MC	3	3.42	Segregation cum transfer station	100% Segregation at source by March 2023 - Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
					Waste Management Plant • Increase in awareness • Increase in Manpower and vehicles • Allotment of Permanent land for management of solid waste has been proposed to DC.
4	Thongkhong Laxmi MC	0.7	3.24	• Segregation cum transfer station and composting pits	• Inert collected waste, which remains after segregation of recycle-able items including plastics and cardboard boxes, composting materials, domestic hazardous waste, etc, is transferred to Lamdeng Solid Waste treatment plant.
5	Sekmai MC	1	0.5	• Home Composting is predominant in all wards • Central Composting at Segregation Shed, Parao • Mixed/ Dry Waste disposed at Lamdeng SWM Plant	• Engagement of local clubs/SHGs to achieve 100% segregation at source • Capacity enhancement for treatment and processing
6	Lilong IW MC	1	1	• Segregation Shed for Material Recovery • Vermi composting	• More composting pits • More vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Lamdeng SWM Plant.
7	Lamlai MC	3	0.8	• Composting (Home + Centralised) • Source segregation and Centralised segregation	• Treatment facilities at Lamdeng Waste to energy Plant (Cluster Approach)
8	Thoubal MC / Thoubal SWM Plant	6	6	• Segregation and composting	• Encouraging source segregation and home composting • Training of newly engaged staffs • Treatment started • Massive awareness of general public and sanitary staff
9	Yairipok MC	1	0.69	• Transfer and segregation Station & Composting	• More Composting by November 2023 • Engaging recyclers for waste
10	Sikhong Sekmai MC	1	0.56	• Wet waste gets processed at source	• Treatment Facility at Thoubal Cluster

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
				feed of poultry and piggery. • Segregated recyclable waste sent to recycler	
11	Lilong Thoubal MC	1	1	• Segregation Shed Composting Unit	• More composting pits, more vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Thoubal SWM Plant
12	Heirol MC	1	0.11	• Transfer and Segregation Station and Composting	• More composting unit by December 2023.
13	Wangjing Lamding MC	1	0.11	• Segregation and transfer station	• More composting unit by December 2023.
14	Andro MC	1	0.74	• Bulk waste is processed or consumed at source a poultry and piggery feeds • Aerobic Composting, Segregation and Recycling	• Treatment facilities at Thoubal Khunou (Cluster B) • Increase in manpower • Awareness drives & Engagement of Recyclers
15	Kakching MC/ Kakching SWM Plant	7	6.52	• Composting, Segregation & Recycling	• Vigorous IEC campaign has been started which will allow and help in mitigating the gaps
16	Kakching Khunou MC	1.2	1.23	• Composting, Segregation & Recycling	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
17	Sugnu MC	1.2	0.59	• Composting, Segregation & Recycling	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
18	Mayang Impha MC	4	3.31	• Segregation Sheds at Ward Level and Processing Unit are operational • Home composting plant is on progress	• Treatment plant / Composting Pits and Segregation Sheds/MRF are operational • Remaining collected waste are kept under control • Awareness and IEC activities are carried out for more effective and making up the gaps
19	Wangoi MC	2.1	1.09	• Composting	• IEC activities and behavioral change
20	Kumbi MC	1	1.29	• Composting	• 100% D2D Collection • Land available 0.27 acre
21	Kwakta MC	1	0.55	• Composting	• Untreated waste is dumped at

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
					uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	4	2.99	• Composting	• Segregation shed has been constructed • Composting plants have also been constructed & commissioned • IEC Campaign has organized for proper 100% source segregation
23	Ningthoukhong MC	5.5	1.4	• Composting & sent back for re-cycling	• 100% D2D collection • Composting • Segregation
24	Bishnupur MC	5	2.75	• Sanitary Landfill	• Vigorous IEC campaign and implementation of stringent rules or bye-laws • By-Laws is published and shall be implemented for closing the gap
25	Oinam MC	1.5	0.9	• Composting	• Encouraging households to source segregate waste and practice home composting of wet waste • Engaging recyclers for dry waste.
26	Nambol MC	2	0.95	• Composting pit • Manual Segregation initiated at the segregation shed	• Increasing recovery of other recyclable materials apart from plastic bottles/waste • Encouraging source segregation and home composting.
27	Jiribam MC	8	2.58	• Composting, send back for recycling, MRF	Nil
	Total	165	135		

• Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%)	• Planning for upgrade the installed capacity as per required by 2029-30
• No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction)	• Existing – Nil • Proposed – 5TPD
• Total No. of wards	• 305 Wards
• No. of wards having door to door collection service	• 305 Wards
• No. of wards practicing segregation at source	• 304 Wards

- Details of MSW treatment facilities **proposed and under construction** :

Sl. No.	Name of ULB or Processing unit	Capacity	Technology	Proposed / under Construction
1	Annexed at Table-3			
	• No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills		• 5 (five) sanitary landfill and 7 controlled dumpsites • Annexure-Table 3	
	• No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers		• Nil	
	• No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers		• 1 at Jiribam MC [floating racks/screens installed]	
	• Status of ULB wise Management of Solid waste		• At Annexure – Table -1 and Table -2	

V. Bio-medical Waste Management:

Total Bio-medical generation	:	0.82 TPD	• Deep burial practiced at remote rural areas • DPR submitted to ministry for up-gradation of the existing CBMWTF • Action Plan submitted to the State Pollution Control Board by the Directorate Health Service for BMW management
No. of Hospitals and Health Care Facilities	:	534 Nos. [i/c 420 PHSCs]	
Status of Treatment Facility CBMWTF	:	CBMWTF = 1 No. (capacity- 25 Kg/hr.) Captive Facility = 2 Nos. (Capacities-100 Kg/hr. & 105 Kg/hr.) Deep Burial = 391 Nos.	
Status of Treatment Facility ETPs	:	52 Nos.	

VI. Hazardous Waste Management:

Total Hazardous Waste generation	:	0.99 TPD
No. of Industries generating Hazardous waste	:	334 (automobile service centres mainly micro-scale units)
Treatment Capacity of all TSDFs	:	Nil
Avg. Quantity of Hazardous waste reaching the TSDFs and Treated	:	Nil
Details of on-going or proposed TSDF	:	Under preparation of DPR, Final DPR by December 2022

VII. Plastic Waste Management:

Total Plastic Waste generation	:	22.7 TPD
Treatment / Measures adopted for reduction or management of plastic waste	:	Plastic waste utilized for waste to energy plant, road construction and for recycling
Details of Alternate Treatment Technology being adopted	:	Nil

by the State/UT		
Identification of including drains contributing to river pollution and action as per NGT order on in-situ treatment	:	Joint survey was conducted and the report was submitted in January, 2020 Completed
Details of Nodal Officer appointed by Chief Secretary in the State / UT	:	• Shri M.H. Khan Additional Chief Secretary Forest, Environment & Climate Change, Govt. of Manipur as Chairman, State level Monitoring Mechanism • Dr. T. Brajakumar Singh Joint Director, Directorate of Environment and Climate Change as Nodal Officer for appearing / VC / submission / compiling of reports before NGT/CPCB/CMC • Dr. W. Roshan Singh Executive Engineer Manipur Pollution Control Board
VIII. Details of meetings carried under the in the State/UT	:	• Last meeting under Chairmanship Chief of Secretary, Govt. of Manipur was held on 16th January, 2023 • Once or twice in every month by Addl. Chief Secretary (Forest, Environment & Climate Change), Government of Manipur
IX Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	:	At Annexure – 4
IX. Ground water regulation	:	Nil
X. Good irrigation practices being adopted by the State	:	1. Irrigation from Barrages and Dams through Canals 2. Loktak Lift Irrigation through open canals 3. River Lift Irrigation schemes by Minor Irrigation Department 4. Ground Water Irrigation schemes through tube wells and dug wells by Minor Irrigation Department 5. Surface Minor Irrigation through Canals
XI. Rain Water Harvesting	:	Nil
XII. Demarcation of Floodplain and removal of illegal encroachments	:	1. Eviction and removal of illegal encroachments is being carried out from time to time 2. Eviction of flood plain encroacher was conducted in different locations of Thoubal district in 2022. 3. Eviction along Imphal River at Lilong area and at Kanglatombi and Kangpokpi areas was conducted in this month.

XIII.	Maintaining minimum e-flow of river	:	I. Water is released from the Dams and reservoirs from time to time to maintain e-flow of various rivers in the state. II. For other rivers without reservoir or dam, no activities are taken up in the upper catchment for maintenance of e-flow as it is beyond the scope of Flood Division, WRD.
XIV.	Plantation activities along the rivers	:	No plantation taken up on the river banks of the 9 (nine) until the time reported upon
XV.	Development of biodiversity park	:	No biodiversity parks have been developed so far. However, there are plans to develop two biodiversity parks proposed under the Imphal Ring Road Project
XVI.	Reuse of Treated Water	:	Nil
XVII.	Model River being adopted by the State & Action Proposed for achieving the bathing quality standards	:	Nambul River (Priority – II) Targeted Action for achieving the bathing quality standards as at Annexure - 5
XVIII.	Status of Preparation of Action Plan by the 13 Coastal States	:	NA
XIX.	Regulation of Mining Activities in the State / UT	:	1. The Mines and Mineral (Regulation and Development) Act, 1957 differentiates minerals into (a) major mineral and (b) minor mineral. The mineral administration of mining activities belonging to major minerals vests with the Central Government and are regulated under the Mines and Mineral (Regulation and Development) Act and Rules frame there under. The mineral administration of minor minerals vests with the respective State Governments and are regulated under their respective minor mineral concession Rules framed under section 15(1) of the Act and Rules framed their under. Similarly, in Manipur, the mining activities belonging to minor minerals are regulated under the Manipur Minor Mineral Concession Rules, 2012 and amendments thereon. In order to check illegal mining, to regulate transportation and storage of minor minerals, The Manipur Minerals (Prevention of Illegal

		Mining, Storage and Transportation) rules, 2018 has also been notified. In addition, The Manipur Mineral Policy, 2021 is being framed.
XX.	Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring	: Nil

A. Total Status of STPs in Imphal (as on 20th AUGUST, 2023)

Particular	Unit	Phase I	Phase II	Ongoing NRCD Project	Total
Capacity of STP	MLD	27	49	17	93
Capacity of STP Utilized	MLD	21.59			21.59
Total Sewer Pipe	RM	69,429	2,77,289		3,46,718
Primary (Main Pipe)	RM	25,291			25,291
Secondary (Sub-main Pipe)	RM	44,138			44,138
Interception & Diversion Pipelines	RM			14,545	14,545
No. of urban drains to be collected	Drain			72	72
Targeted Connection septic tank	Unit	9,564	42,190		
Connected septic tank	Unit	7650			7650
Lift Station	Unit	5	21	14	40
Population (by 2054)	Lakh	1,86,534	3,49,759		5,36,293
Covered Municipal Ward	Wards	11	16	14	
Area covered	Sq. Km.	11	35		
Covered Polluted River				Nambul P-II	
Method of Treatment		ASP	SBR	MBBR	

Note : Targeted household for Phase I has been decreased from 12,000 Nos. to 9,564 because 2436 household shall be covered in Imphal Sewerage project – Phase II.

Status of utilization of the existing STP :

- 1 (one) unit of 27 MLD STP (ASP technology) is operational under PHED
- 69,429 rm sewer pipeline [25,291 rm primary lines, 44.14 rm secondary lines]
- Total target connection is 9,564 households

INCREMENTAL STATUS OF UTILIZATION FOR 27 MLD AT LAMPHELPAT, IMPHAL WEST

	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Cumulative as on 20 th Aug. 2023	Gap
Household Connected	4000	250	250	60	10	30	0	0	0	0	7650	1914
Utilization in MLD	9 MLD	9.5 MLD	10 MLD	10.26 MLD	10.28 MLD	10.35 MLD	10.35 MLD	10.35 MLD	10.35 MLD	10.35 MLD	21.59 MLD	5.41 MLD
Utilization in %	33%	35%	38%	38%	38%	38%	38%	38%	38%	38%	79.98 %	20.02 %
	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	June 2022	July 2022		
Household Connected	0	50	0	0	0	150	50	280	320	314		
Utilization in MLD	13.13 MLD	13.27 MLD	13.27 MLD	13.27 MLD	13.27 MLD	13.69 MLD	13.83 MLD	14.62 MLD	14.87 MLD	16.41 MLD		
Utilization in %	49%	49.14 %	49.14%	49.14 %	49.14 %	50.71 %	51.22 %	54.15 %	57.51 %	60.78 %		

	Aug. 2022	Sep. 2022	Oct. 2022	Nov. 2022	Dec. 2022	Jan. 2023	Feb. 2023	Mar. 2023	April 2023	May 2023		
Household Connected	50	280	356	800	50	14	150	20	80	50		
Utilization in MLD	16.5 MLD	17.34 MLD	18.35 MLD	20.60 MLD	20.74 MLD	20.78 MLD	21.17 MLD	21.22 MLD	21.45 MLD	21.59 MLD		
Utilization in %	61.31 %	64.24 %	67.96 %	76.32 %	76.85 %	76.99 %	78.41 %	78.62 %	79.46 %	79.98 %		
	June 2023	July 2023	August 2023									
Household Connected	0	0	0									
Utilization in MLD	21.59 MLD	21.59 MLD	21.59 MLD									
Utilization in %	79.98 %	79.98 %	79.98 %									

B. In-situ Bio-remediation and others :

	Name of the Polluted River (P-V)	Total Length of the River	Length of Polluted stretches	BOD Range (mg/l)	Population at polluted zone	Status / Proposed for Treatment
1	Imphal	89.24 km	19.98 km	2.9 - 3.1	84,857	- Revised DPR for Imphal River along with Fecal Sludge and Septage Management (FSSM) for 315 KLD at 27 ULBs and in situ treatment through Bioremediation of 16.75 MLD submitted to NRCD on 18th September 2021. - Revised DPR with full justification on the comments made by the Ministry will be submitted soon.
2	Iril	156.50 km	18.12 km	2.8 - 3.0	1,714	
3	Khuga	79.25 km	10.92 km	2.0 – 3.0	857	
4	Khujairok	10.06 km	4.21 km	3.2	4,286	
5	Lokchao/ Thongjarok	17.04 km	5.31 km	3.0	1,143	
6	Manipur	261.00 km	35.00 km	3.1	7,143	
7	Thoubal	142.80 km	24.61 km	2.8	30,286	
8	Wangjing	35.08 km	3.70 km	3.1 - 3.2	7,143	

Note :

ASP (Activated Sludge Process), EAP (Extended Aeration Process),
SBR (Sequencing Batch Reactor), MBBR (Moving Bed Biofilm Reactor)

FORMAT FOR SEWAGE TREATMENT PLANTS AND UTILIZATION OF SEWAGE (20th AUGUST 2023)

Sl. No.	City / Town	No. of STP	Location of STP	Coordinates of STP	STP Commissioned year	Status (operational/ Non-Operational/ Under Construction)	STP Installed Capacity (In MLD)	Actual Utilization of installed capacity (In MLD)	Technology UASB / ASP / OP / SBR / MBBR / FAB etc.	onsent status	Compliance Status Source: Manipur Pollution Control Board					
											Oil & Grease	pH	TSS mg/l	COD mg/l	BOD mg/l	Kaecal Coliform(#/100ml)
1	Imphal	1	Lamphel	24°49'45"N 93°54'58'E	2020	Operational	27	21.59 MLD	ASP		2.7	7.3	36	44	12.5	120

LIST OF WATER POLLUTING FACTORIES LOCATED WITHIN INDUSTRIAL ESTATE/FOOD PARK**Takyel Industrial Estate, Imphal West Districts, Manipur.**

Sl. No.	Name of unit	Nearest River	Proprietor	Name of Products
1	M/S Modern Foods	Nambul	T. Sanajaoba Singh	Noodles
2	M/S Hangle Industries	Nambul	H. Nabadeep Singh	Spices & Food Products
3	M/S Pera Fruit Products	Nambul	Kh. Sanayaima Singh	Fruit Processing
4	M/S Khudol	Nambul	K. Siddhanta Sharma	Food Processing
5	M/S Ratana Fruit	Nambul	L. Sarat Singh	Food items
6	M/S Universal Iodises Salt Industries	Nambul	P. Joychandra Singh	Food Items

Nilakuthi Food Park, Imphal East

Sl. No.	Name of unit	Nearest River	Proprietor	Name of Products
1	Shree Balaji Flour Mill	Imphal	Mrs. Rangnamei Martha	Flour
2	KMU	Imphal	Wangkheirakpam Gobin Singh	Bakery
3	Thangjam Agro Industries Pvt. Ltd.	Imphal	Thangjam Joykumar Singh	Bakery

TABLE 1 : SOLID WASTES GENERATION, COLLECTION AND MANAGEMENT - ULB WISE IN MANIPUR, AUGUST 2023

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
1	Imphal MC	2,65,573	3,50,050	157.5	130.0	3.5	100	90	24	114	28%	• 100% by Nov 2023
2	Lamshang MC	8,130	9739	2.92	0.5	0.92	1	1	1.5	2.5	14.38%	• Capacity Building to achieve 100% collection • Segregation of Waste aimed to reach 100% by Nov 2023.
3	Samurou MC	14818	18602	5.58	3.42	0.93	3	3.42	1.23	4.65	17%	• 100% Segregation at source by March 2023 • Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid Waste Management Plant • Increase in awareness • Increase in Manpower and vehicles • Allotment of Permanent land for management of solid waste has been proposed to DC
4	Thongkhong Laxmi MC	14,878	18,677	5.6	3.24	0.84	0.7	3.24	1.52	4.76	15%	• Inert collected waste, which remains after segregation of recycle-able items including plastics and cardboard boxes, composting materials, domestic hazardous waste, etc, is transferred to Lamdeng Solid Waste treatment plant

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
5	Sekmai MC	5,065	6,358	1.9	0.50	0.9	1	0.5	0.50	1	47%	- Engagement of local clubs/SHGs to enhance D2D and emphasize segregation at source - Capacity enhancement for treatment and processing
6	Lilong IW MC	12,427	15,600	4.6	1	0.6	1	1	3	4	13%	- More composting pits, more vehicles and manpower and encouraging source segregation and home composting - Cluster basis facilities at Lamdeng SWM Plant
7	Lamlai MC	4,601	5,776	1.73	0.8	0.2	3	0.8	0.73	1.5	13%	Treatment facilities at Lamdeng Waste to energy Plant (Cluster Approach)
8	Thoubal MC	45,947	57,678	17.3	13	0.3	6	6	4	10	42.2%	- Encouraging source segregation and home composting - Training of newly engaged staffs - Treatment started - Massive awareness of general public and sanitary staff
9	Yairipok MC	9,569	12,012	3.6	1.4	0.4	1	0.69	1.8	2.49	31%	- More composting by Nov 2023 - Engaging recyclers for waste
10	Sikhong Sekmai MC	7,390	9,277	2.78	0.56	0	1	0.56	2.22	2.78	0%	Treatment facilities at Thoubal cluster
11	Lilong TBL MC	24,900	31,258	9.3	2.00	0.8	1	1	6.5	7.5	19%	More composting pits, more vehicles and manpower and

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
												encouraging source segregation and home composting • Cluster basis facilities at Thoubal SWM Plant
12	Heirok MC	2,974	3,733	1.12	0.42	0.1	1	0.11	0.6	0.71	36.6%	• More composting unit by Dec 2023
13	Wangjing Lamding MC	8,055	10,112	3.03	0.7	0.43	1	0.11	1.9	2.01	33.7%	• More composting unit by Dec 2023
14	Andro MC	8,744	10,977	3.29	0.9	0	1	0.74	2.39	3.13	4.86%	• Treatment facilities at Thoubal Khunou (Cluster B) • Increase in manpower, Awareness drives & Engagement of recyclers.
15	Kakching MC	32,138	40,344	12.1	8.54	0.19	7	6.52	3.37	9.89	18%	• Vigorous IEC campaign has been started and help in mitigating the gaps
16	Kakching Khunou MC	11,379	14,284	4.28	2.5	0.17	1.2	1.23	1.61	2.84	34%	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
17	Sugnu MC	5,132	6,442	1.93	1.11	0.32	1.2	0.59	0.50	1.09	44%	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
18	Mayang Imphal MC	24,239	34,428	10.33	7.02	0.62	4	3.31	2.69	6	42%	• Treatment Plant/Composting Pits and segregation Sheds/MRF are operational • Remaining collected waste are kept under control • Awareness & IEC activities are

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
												carried out for more effective and making up the gaps
19	Wangoi MC	9,106	11,431	3.43	1.25	0.20	2.1	1.09	1.98	3.07	10.496%	• IEC activities and Behavioural change
20	Kumbi MC	9,546	11,983	3.59	2	0.08	1	1.29	1.51	2.8	22%	• Now 100% D2D collection • Land available 0.27 acre
21	Kwakta MC	8,579	10,769	3.23	1.13	0	1	0.55	2.1	2.65	17.96%	• Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	19,893	24,972	7.49	5.4	0.09	4	2.99	2	4.99	33%	• Segregation shed has constructed • Composting plans also been constructed. It has commissioned • IEC Campaign has organised for proper 100% source segregation
23	Ningthoukhong MC	13,078	16,417	5.00	2.2	0.3	5.5	1.4	2.5	3.9	22%	• 100% D2D collection- Composting Segregation
24	Bishnupur MC	12,167	15,274	4.58	3.62	0	5	2.75	0.96	3.71	19%	• Vigorous IEC campaign and implementation of stringent rules or bye-laws • By-Laws is published and shall be implemented for closing the gap

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
25	Oinam MC	7,161	8,989	2.7	1.6	0.0	1.5	0.9	1.1	2	26%	- Encouraging households to source segregate waste and practice home composting of wet waste - Engaging recyclers for dry waste
26	Nambol MC	22,512	28,260	8.5	4.3	0	2	0.95	4.2	5.15	39%	- Increasing recovery of other recyclable materials apart from plastic bottles/waste - Encouraging source segregation and home composting
27	Jiribam MC	7,343	9,218	2.76	2.58	0	8	2.58	0.18	2.76	0%	NIL
Total		6,15,344	7,92,660	290	202	11.89	165.2	135	76.6	211.91		
PC to the generated wastes					70%	4%	57%	47%	26%	73%	27%	

Note : *1. Taking r=2.3 as annual Population growth rate [Ref.: MoUD, GoI] *2. Waste generated is estimated including floating population @10%
*3. As per SBM 2.0 guidelines, Waste generated is estimated in @450gm per capita generation (for more than 1 lakh population) for Imphal MC and @ 300gm per capita generation (for less than 1 lakh population)

TABLE 2 : SOLID WASTES GENERATION, COLLECTION AND MANAGEMENT – WARDWISE OF ULBs IN MANIPUR, AUGUST 2023

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
1	Imphal MC	27	27	100%	27	45%		Waste to Energy and Composting	100% by Nov 2023
2	Lamshang MC	9	9	50%	9	51%	0	Composting	IEC activities emphasize segregation at source
3	Samurou MC	11	11	100%	11	59%	0	Segregation cum transfer station	100% Segregation at source by Nov 2023 - Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid Waste Management Plant - Increase in awareness - Increase in Manpower and vehicles - Allotment of Permanent land for management of solid waste has been proposed to DC
4	Thongkhong Laxmi MC	11	11	100%	11	60%	0	Segregation cum transfer station and composting pits.	- In terms of Ward-wise, Region-wise, Area-wise, Leikai-wise, Leirak-wise coverage of D2D collection, there is 100% coverage of D2D - More awareness and behavioural change campaign required Capacity building of manpower - By acquiring a permanent sanitary landfill/solid waste management site. (ULB has requested to concerned DC and MAHUD Dept. vide letter of even nos. dated 18.05.2019, 02.08.2021, 29.11.2021& 04.11.2022 to allocate a suitable SWM site for the ULB but yet to be allotted till now.)

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
5	Sekmai MC	9	9	50%	9	50%	0	• Home Composting is predominant in all wards • Central Composting at Segregation Shed, Parao • Mixed/ Dry Waste disposed at Lamdeng SWM Plant	• IEC activities to emphasize segregation at Source
6	Lilong IW MC	9	9	100%	9	80%	0	• Segregation Shed for Material Recovery • Vermi composting	• More composting pits, more vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Lamdeng SWM Plant
7	Lamlai MC	9	9	100%	9	100%	0.88	• Composting (Home +Centralised) • Source segregation and centralised segregation	• Treatment facilities at Lamdeng Waste to Energy Plant (Cluster Approach)
8	Thoubal MC	18	18	100%	18	80%	6.7	• Segregation and composting	• Collection to be done through NGOs and SHGs
9	Yairipok MC	9	9	100%	8	90%	2.2	• Transfer and Segregation Station and Composting	• More composting unit by Nov 2023
10	Sikhong Sekmai MC	9	9	100%	9	100%	0.62	• Wet waste gets processed at source as feed of poultry and piggery, segregated recyclable waste is sent to recycler	• Treatment facility at Thoubal Cluster
11	Lilong TBL MC	9	9	100%	9	70%	0	• Segregation Shed • Composting Unit	• More composting pits, more vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Thoubal SWM Plant

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
									• Extensive awareness drive, incorporating more SHGs in SWM
12	Heirol MC	9	9	100%	9	70%	0	• Transfer and Segregation Station and Composting	• More composting unit by Nov 2023
13	Wangjing Lamding MC	9	9	100%	9	70%	0	• Segregation and transfer station	• More composting unit by Nov 2023
14	Andro MC	12	12	100%	12	96.5%	0.96	• Bulk of wet waste is processed or consumed at source a poultry & piggery feeds • Aerobic Composting, Segregation & Recycling	• Transport of remaining segregated Inert waste to the transfer station for Cluster-B located at Thoubal • Increase in manpower, Awareness drives & Engagement of Recyclers
15	Kakching MC	12	12	100%	12	93%	2	• Composting, segregation & recycling	• Separate vehicles for collection of dry and wet waste have been allotted which will help in the poor collection and management of waste
16	Kakching Khunou MC	9	9	96%	9	82%	2	• Composting, segregation & Recycling	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
17	Sugnu MC	9	9	97%	9	80%	1	• Composting, Segregation & Recycling	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
18	Mayang Imphal MC	13	13	100%	13	85%	1.25	• Segregation Sheds at Ward Level and Processing Unit are operational. Home composting plant is on progress.	• Treatment Plant/Composting Pits and segregation Sheds/MRF are operational • Remaining collected waste are kept under control • Awareness & IEC activities are carried out for more effective and making up the gaps
19	Wangoi MC	9	9	100%	9	70%	0.17	• Composting	

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
20	Kumbi MC	9	9	100%	9	65%	0.27	• Composting	
21	Kwakta MC	9	9	100%	9	65%	0.625	• Composting	• Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	12	12	100%	12	59%	5.1	• Composting	• Requested DC to allot land. Rigorous IEC Campaign to be held for source segregation
23	Ningthoukhong MC	14	14	100%	14	70%	1.31	• Composting & sent back for re-cycling	• Composting Segregation
24	Bishnupur MC	12	12	100%	12	75%	5	• Sanitary Landfill	• Composting plant at 2.5 Acre
25	Oinam MC	9	9	100%	9	70%	0	• Composting	• Encouraging households to source segregate waste and practice home composting of wet waste • Engaging recyclers for dry waste.
26	Nambol MC	18	18	100%	18	80%	3.21	• Composting pit • Manual Segregation initiated at the segregation shed	• Capacity building of sanitary Workers • Increasing manpower, vehicles and machinery • Awareness drive • Co-opting SHGs and CSOs in SWM
27	Jiribam MC	10	10	100%	10	100%	6.02	• Composting, Send back for recycling, MRF	• Nil
Total		305	305		304		38.695		
In Percentage-Ward coverage				100%		100%			
Average Household coverage				96%		75%			

Table-3 : SOLID WASTES PROCESSING AND MANAGEMENT – WARDWISE OF ULBS IN MANIPUR, AUGUST 2023

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
1	Imphal MC and Lamdeng SWM Plant	nil	Composting and Waste to Energy Plant operational	Nil		Nil	Nil	1	Nil	Nil	Nil
2	Lamshang MC	NA	Composting and manual segregation of waste, waste to power and waste to manure at Lamdeng SW plant	Nil		Nil	Nil	Nil	Nil	Nil	Nil
3	Samrou MC	NA	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
4	Thongkhong Laxmi MC	NA	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
5	Sekmai MC	0	NA	Nil		0	0	Nil	Nil	Nil	Nil
6	Lilong IW MC	0	Manual segregation of waste for material recovery Vermicomposting pits	Nil		Nil	Nil	Nil	Nil	Nil	Nil
7	Lamlai MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
8	Thoubal MC	0	NA	Nil		Nil	Nil	1	2	Nil	Nil
9	Yairipok MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
10	Sikhong Sekmai MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
11	Lilong TBL MC	0	Manual segregation of waste for material recovery Vermicomposting pits	Nil		Nil	Nil	Nil	Nil	Nil	Nil
12	Heirok MC	0	Composting pit	Nil		Nil	Nil	Nil	Nil	Nil	Nil
13	Wangjing Lamding MC	0.3	Composting pit [proposed]	Nil		Nil	Nil	Nil	Nil	Nil	Nil
14	Andro MC	0	Manual segregation & aerobic composting	Nil		Nil	Nil	Nil	Nil	Nil	Nil
15	Kakching MC	0	Manual segregation & aerobic composting	Nil		1	2	1	2.5	Nil	Nil
16	Kakching Khunou MC	0	NA	Nil		0	0	Nil	Nil	Nil	Nil
17	Sugnu MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
18	Mayang Imphal MC	0	Manual segregation of waste & Composting construction completed	Nil		Nil	Nil	Nil	Nil	Nil	Nil
19	Wangoi MC	0	Nil	Nil		Nil	Nil	Nil	Nil	Nil	Nil
20	Kumbi MC	0	Composting pit	Nil		1	0.27	Nil	Nil	Nil	Nil
21	Kwakta MC	0	NA	Nil		1	0.016	Nil	Nil	Nil	Nil

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
22	Moirang MC	0	NA	Nil		1	2.5	Nil	Nil	Nil	Nil
23	Ningthoukhong MC	0	Anaerobic, Segregation, Composting and recovery of reusable wastes	Nil		1	1.31	Nil	Nil	Nil	Nil
24	Bishnupur MC, Multi-Segregation shed at Chothe Village, Ward No. 12	0	Anaerobic (completed)	Nil		Nil	Nil	1	2.5	Nil	Nil
25	Oinam MC	0	Composting (operational)	Nil		1	0.4	Nil	Nil	Nil	Nil
26	Nambol MC	0	Aerobic and vermi-composting	Nil		1	3.21	Nil	Nil	Nil	Nil
27	Jiribam MC	0	NA	Nil		Nil	Nil	1	1.72	Nil	1
	Total	0.3				7	9.706	5	8.72		1

STATUS OF WATER QUALITY OF POLLUTED RIVERS**Remark :**

Manipur Pollution Control Board has been conducting monthly water quality analysis of the polluted rivers. The monthly water quality data of the polluted rivers will be reported during 1st week of the next month i. e. Report for July will get on 1-10th August. Therefore, Water Quality Report for February will be reproduced in the MPR of August.

Water Quality of the Imphal, Iril, Manipur, Thoubal, Wangjing, Khuga, Khujairok, Lokchao, Nambul, Waisel Maril & Moirang Rivers and Effluent of Sewage Treatment Plant, Langol
for the month of JULY, 2023

1. Imphal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Koirengei	7.3	7.4	3.2	8.1	50
Minuthong	7.2	7.3	3.3	10.6	85
Mahabali	7.3	7.3	3.3	9.3	75

2. Iril River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kangla Siphai	7.3	7.4	3.2	13.2	55
Porompat	7.4	7.5	3.2	9.2	50
Lilong	7.2	7.3	3.3	12.0	65

3. Manipur River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Yairipok	7.4	7.3	3.3	12.6	50
Sekmaiying	7.4	7.5	3.4	11.8	70
Ithai	7.5	7.4	3.3	14.6	85

4. Thoubal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Litan	NA	NA	NA	NA	NA

5. Wangjing River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Heirolk	7.4	7.4	3.4	12.2	55
Wangjing	7.3	7.3	3.3	10.3	60

6. Khuga River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Churachandpur Bazar	NA	NA	NA	NA	NA
Khuga Dam	NA	NA	NA	NA	NA

7. Khujairek River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Khujairek	NA	NA	NA	NA	NA

8. Lokchao River, Bishnupur

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Lokchao Bridge near Bishnupur Bazar	7.5	7.3	3.5	10.2	45

9. Nambul River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Samushang	7.3	7.3	4.0	15.6	100
Naoremthong	7.0	7.2	4.1	15.7	90
Hump Bridge	6.9	7.1	4.4	16.8	180
Heirangoithong	7.0	7.1	4.5	16.2	190
Singda Dam	7.7	7.5	3.3	9.2	30

10. Kongba River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kongba Eranpham	7.0	7.3	3.9	16.6	110
Kongba Erong	6.9	7.2	4.0	11.3	115

11. Waisel Maril

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Meijrao Bridge, Hiyangthang	6.8	7.2	4.4	13.8	140
Kha Sanjenbam Mayai Leikai	7.3	7.3	3.9	12.1	75

12. Moirang River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Laikhurembi, Moirang Bazar	7.4	7.3	3.5	10.6	50

13. Sewage Treatment Plant Effluent

Location	Oil & Grease (mg/L)	pH	TSS mg/L	BOD mg/L	COD mg/L
Langol	2.5	7.3	36	12.5	44

Action Plan of the model river in Manipur

Action	Target Action	Priority – II : Nambul River		
		Target Quantity	Time Line	Status
Action 1	Solid Waste Management			
1.1	Identification of garbage vulnerable point	12 Municipal Wards	Oct 2019	Completed Action: MAHUD / IMC
1.2	Door to Door Collection, identify & register of missed out house hold, punitive action against litterer along the river	12 Municipal Wards	Oct 2019	Completed Action: MAHUD / IMC
1.3	Formation of Tasks Force for proper implementation of waste management		Oct 2019	Constituted
1.4	Providing of household waste bins	19,863 bins	Oct 2020	80% completed Action: Environment & CC
1.5	High rise fencing of grilling and netting at vulnerable zones of both the river banks to protect throwing of solid wastes into the river	5 km	Apr 2021	Completed Action: Environment & CC
1.6	Renovation of existing crematoria along the river stretch	56 Nos.	Apr 2021	Completed Action: Environment & CC
1.7	Installation of secondary waste collection bins / community bins / dumper placer containers / transfer bins / littering bins at suitable places	37 Nos.	Oct 2020	Completed Action: Environment & CC
1.8	Construction of Public toilets at vulnerable points	35 Nos. by IMC 20 Nos. under NRCD	Apr 2021	Completed Action: Environment & CC
1.9	IEC / Public Awareness Activities	14 No. (one each in every ward)	Every month	Conducted regularly Action: Environment & CC
Action 2	Channelization, treatment, utilization and disposal of treated domestic sewage			
2.1	Identification of location and estimation of liquid waste generation at Imphal town		Oct 2019	Completed Action: PHED
2.2	Interception and diversion of the urban drains / outfalls to the Nambul River by laying pipes of 14,545 meters at both the banks of River at 12 Municipal Wards viz. 6, 7, 8, 9, 11, 12, 13, 14,15, 16, 24 and 27		Apr 2022	30% Completed Action: Environment & CC
2.3	Treatment option and capacity : Installation of 2 (two) Sewage Treatment Plants (STPs) of 16 MLD and 1 MLD		Apr 2022	85% Completed Action: Environment & CC
2.4	Commissioning of the Imphal Sewerage Project Phase-I of 27 MLD		Dec 2019	Commissioned Action: PHED
2.5	Commissioning of the Imphal Sewerage Project Phase-II of 41 MLD		Apr 2022	DPR Submitted, waiting for approval of NIT from NDB Action: PHED

Action	Target Action	Priority – II : Nambul River		
		Target Quantity	Time Line	Status
Action 3	Protection of catchment area			
3.1	<i>In-situ</i> augmentation of medicinal plants and economic plantation at catchment			Completed Action: Forest
Action 4	Protection and prevention of Flood Plain Zone			
4.1	Protection and Improvement of River Bunds. 1,500 m for Nambul River 16,860 m in Imphal River 2,670 m in Kongba River 2,403 m in Thoubal River 317 m in Wangjing River 11,711 m in Manipur River		Before 2021	Status will be updated soon Action: WRD
4.2	Re-Sectioning of Rivers and Streams. 82,091 m in Imphal River. 15,480 m in Kongba River 89,100 m in Nambul and its tributaries. 1,900 m in Chakpi River		Before 2021	Status will be updated soon Action: WRD
4.3	CC/RCC Retaining Walls with and without piles to be provided at the most eroded and vulnerable river banks.		Before 2021	Status will be updated soon Action: WRD

B. 8 (eight) polluted stretches of Rivers viz. Imphal, Iril, Khuga, Khujairok, Lokchao, Manipur, Thoubal, Wangjing under Priority V in Manipur

Action	Target Action	Target Quantity	Timeline	Status & Actor
Action 1	Solid Waste Management			
1.1	Identification of garbage vulnerable point along the 8 (eight) identified polluted river stretches	59 Municipal Wards	6 months (December 2019)	Status will be updated soon Action : MAHUD / ULBs
1.2	Door to Door Collection and transportation of Municipal solid wastes with source segregation through Cluster Approach	59 Municipal Wards 33.45 MT	1 year (June 2020)	
1.3	Installation of littering bins at suitable places	500 Nos. of Bins	1 year (June 2020)	
1.4	Setting up of waste processing site at Cluster Approach	5 Cluster Units	2 Year (June 2021)	
1.5	Construction of Public toilets at vulnerable points	59 Nos. (one each for every ward for 59 wards)	2 Year (June 2021)	
1.6	IEC / Public Awareness Activities	177 Nos. (3 times for every 59 Wards)	Ongoing	
1.7	Encouraging of home composting	10% of total household	Ongoing	
Action 2	Channelization, treatment, utilization and disposal of treated domestic sewage			
2.1	Identification of location and estimation of liquid waste generation	Under survey	Ongoing	Completed Action : PHED
2.2	Treatment option through phytoremediation technique in consultation with NEERI (National Environmental Engineering Research Institute), Nagpur	27.024 + 38.73 = 65.754 MLD	2 Years (June 2021)	DPR submitted to NRCD, Ministry of Jal Shakti, Govt. of India Action : Environment & CC
2.3	Commissioning of the Imphal Sewerage Project Phase-II: Installation of STPs of 3 (three) units SBR (Sequencing Batch Reactors) technology covering all the remaining wards of Imphal Municipal Corporation (Finalized DPR)	41 MLD	Funding awaited	DPR submitted, waiting for approval of NIT from NDB Action : PHED
Action 3	Protection of catchment Area of 1539 sq. km.			
3.1	<i>In situ</i> augmentation with economic plants	1539 sq. km.	2 Years (June 2021)	Status will be updated soon Action : Forest
3.2	Inventorisation and mapping of springs for protection and rejuvenation at catchment	8 rivers	1 Year (June 2020)	Status will be updated soon Action : Environment & CC
Action 4	Protection and prevention of Flood Plain Zone			
4.1	Protection and Improvement	1. 1500 m for Nambul	Before 2021	Status will be updated

	of River Bunds	River 2. 16860 m in Imphal River and its tributaries 3. 2670 m in Kongba River 4. 2403 m in Thoubal River 5. 317 m in Wangjing River 6. 11711 m in Manipur River		soon Action : WRD
4.2	Re-Sectioning of Rivers and Streams	1. 82091 m in Imphal River 2. 15480 m in Kongba River 3. 89100 m in Nambul and its tributaries 4. 1900 m in Chakpi River	Before 2021	
4.3	CC / RCC Retaining Walls with and without piles to be provided at the most eroded and vulnerable river banks	Along Nambul, Imphal, Thoubal, Kongba, Iril and other major rivers	Before 2021	

National Mission for Clean Ganga
Format for submission of Monthly Progress Report in the NGT Matter OA
No. 673 of 2018
(in compliance to NGT order dated 24.09.2020)
For the State of Manipur submitted on 20th SEPTEMBER 2023

Overall status of the State:

I. Total Population:

	2011 Census	Projected as on 2020
Urban Population	8,34,154	10,47,135
Rural Population	17,36,236	21,79,541
Total	25,70,390	32,26,676

Estimated Sewage Generation (MLD) : 115.054 MLD

II. Details of Sewage Treatment Plant:

- Existing No. of STPs and Treatment Capacity : 1 (one) STP of 27 MLD operational
- Capacity Utilization of existing STPs : 21.59 MLD
- MLD of sewage being treated through alternate technology : NIL
- Gap in Treatment Capacity in MLD : 5.41 MLD
- No. of Operational STPs : 1 (one) Detail of STP is at **Annexure - 1**
- No. of Complying STPs : 1 (one)
- No. of Non-complying STPs : Nil

Details of each existing STP in the State

No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
1	Lamphel, Imphal West	27 MLD	21.59 MLD	Operational (79.98%)	Complying

Details of under construction STPs in the State

No.	Location	Capacity of the plant in MLD	Physical Progress in %	Status of I&D or House sewer connections	Completion Timeline
1	Maibam Leikai, Imphal West	16 MLD	98 %	NIL	31.03. 2023
2	Iroisemba, Imphal West	1 MLD	95%	NIL	31.03. 2023

Details of proposed STPs in the State

No.	Location	Capacity of the STP proposed in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Likely Date of Completion
1	Imphal	49 MLD	Agreement Signed	---

III. Details of Industrial Pollution:

	No. of industries in the State	:	1011 Nos.
			944 outside Industrial Estate
			67 inside Industrial Estate
	No. of water polluting industries in the State located along the 9 (nine) prioritized rivers of Manipur	:	Nil
	Quantity of effluent generated from the industries in MLD	:	0.93 KLD (estimated) in case of the 3 units located within Nilakuthi Food Park, Imphal East
	Quantity of Hazardous Sludge generated from the Industries in TPD	:	Data not available
	Number of industrial units having ETPs	:	Nil
	Number of industrial units connected to CETP	:	3 (three)
	Number and total capacity of ETPs	:	Nil
	Details of existing	:	Nil
	Under construction	:	Nil
	Proposed	:	Nil
	Compliance status of the ETPs	:	Nil
	Number and total capacity of CETPs	:	1 (one) CETP
	Details of existing	:	1 unit of 400 KLD capacity
	Under construction	:	3
	Proposed	:	Nil
Town	Existing ETP Capacity	CETP Proposed, if any	Status (DPR/ tendering/ under construction etc.)
Imphal	400 KLD capacity	Nil	The DPRs for 3(three) ETPs at Takyelpat, Tera Urak & Kuraopokpi Industrial Estates of Manipur has been submitted to the Ministry of Commerce & Industries, Government of India through Planning Department, Manipur under PM Gatishakti "Scheme for Special Assistance to the States for Capital Investment for 2022-23".

- Status of compliance and operation of the CETPs

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (Existing, under construction & proposed)
Imphal	5 (five)	Data not available	Nil	1 (one) CETP of 400 Kilo Liter / Day at Nilakuthi Industrial Estate, Imphal Status : Functional

IV. **Solid Waste Management:**

- Total Urban Local Bodies (ULBs) : 27 ULBs
- Population of ULBs : 6,15,344 (2011 Census)
: 7,92,734 (2021 projected population)
- Current Municipal Solid Waste Generation : 290 MTD
(as per SBM 2.0 guidelines, MSW generation is estimated @450gm per capita generation for Imphal Municipal Corporation (for more than one lakh population) and @300gm per capita generation for other ULBs (for less than one lakh population) based on 2020 projected population)
- Waste Collected : 201 TPD
- Existing Management / treatment facility : 167 TPD
- Utilization of MSW processing : 138 TPD
[Managed by ULBs = 138 TPD
Managed at Source = 78.6 TPD
Total Managed = 216.6 TPD]
- Number, installed capacity and utilization of existing MSW processing facilities in TPD bifurcated by type of processing.

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
1	IMC / Municipal Solid waste Management Plant, Lamdeng, Imphal	100	90	Waste to Energy and Composting	Linkage up with NULM SHG's in monitoring and supervision of door to door collection so as to achieved 100%
2	Lamshang MC	1	1	Composting	Capacity Building to achieve 100% collection
3	Samurou MC	3	3.42	Segregation cum transfer station	100% Segregation at source by Dec 2023 - Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid Waste Management Plant - Increase in awareness

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
					• Increase in Manpower and vehicles • Allotment of Permanent land for management of solid waste has been proposed to DC.
4	Thongkhong Laxmi MC	0.7	3.24	• Segregation cum transfer station and composting pits	• Inert collected waste, which remains after segregation of recycle-able items including plastics and cardboard boxes, composting materials, domestic hazardous waste, etc, is transferred to Lamdeng Solid Waste treatment plant.
5	Sekmai MC	1	0.5	• Home Composting is predominant in all wards • Central Composting at Segregation Shed, Parao • Mixed/ Dry Waste disposed at Lamdeng SWM Plant	• Engagement of local clubs/SHGs to achieve 100% segregation at source • Capacity enhancement for treatment and processing
6	Lilong IW MC	1	1	• Segregation Shed for Material Recovery • Vermi composting	• More composting pits • More vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Lamdeng SWM Plant.
7	Lamlai MC	3	0.8	• Composting (Home + Centralised) • Source segregation and Centralised segregation	• Treatment facilities at Lamdeng Waste to energy Plant (Cluster Approach)
8	Thoubal MC / Thoubal SWM Plant	8	8	• Segregation and composting	• Encouraging source segregation and home composting • Training of newly engaged staffs • Treatment started • Massive awareness of general public and sanitary staff
9	Yairipok MC	1	0.69	• Transfer and segregation Station & Composting	• Segregation shed & composting unit by December 2023 • Awareness drives and engagement of recyclers for dry waste • Engaging recyclers for waste
10	Sikhong	1	0.56	• Wet waste gets	• Treatment Facility at Thoubal

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
	Sekmai MC			processed at source feed of poultry and piggery. • Segregated recyclable waste sent to recycler	Cluster
11	Lilong Thoubal MC	1	1	• Segregation Shed Composting Unit	• More composting pits, more vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Thoubal SWM Plant
12	Heirol MC	1	0.25	• Transfer and Segregation Station and Composting	• More composting unit by Dec 2023.
13	Wangjing Lamding MC	1	0.27	• Segregation and transfer station	• More composting unit by Dec 2023.
14	Andro MC	1	0.75	• Bulk waste is processed or consumed at source a poultry and piggery feeds • Aerobic Composting, Segregation and Recycling	• Treatment facilities at Thoubal Khunou (Cluster B) • Increase in manpower • Awareness drives & Engagement of Recyclers
15	Kakching MC/ Kakching SWM Plant	7	6.52	• Composting, Segregation & Recycling	• Intensified IEC on D2D waste collection and source segregation. Mandatory submission of payment receipts of D2D waste collection at time of availing any form of service from the council. With these activities Generation-Management Gap will be 0% by 20.11.2023
16	Kakching Khunou MC	1.2	1.23	• Composting, Segregation & Recycling	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
17	Sugnu MC	1.2	0.59	• Composting, Segregation & Recycling	• Intensified IEC on D2D waste collection and source segregation. Mandatory submission of payment receipts of D2D waste collection at time of availing any form of service from the council. With these activities Generation-Management Gap will be 0% by 20.11.2023

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
18	Mayang Imphal MC	4	3.31	- Segregation Sheds at Ward Level and Processing Unit are operational - Home composting plant is on progress	- Treatment plant / Composting Pits and Segregation Sheds/MRF are operational - Remaining collected waste are kept under control - Awareness and IEC activities are carried out for more effective and making up the gaps
19	Wangoi MC	2.1	1.09	Composting	IEC activities and behavioral change
20	Kumbi MC	1	1.29	Composting	100% D2D Collection - Land available 0.27 acre
21	Kwakta MC	1	0.55	Composting	Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	4	2.99	Composting	- Segregation shed has been constructed - Composting plants have also been constructed & commissioned - IEC Campaign has organized for proper 100% source segregation
23	Ningthoukhong MC	5.5	1.4	Composting & sent back for re-cycling	100% D2D collection - To operationalise Composting unit
24	Bishnupur MC	5	2.75	Sanitary Landfill	- Vigorous IEC campaign and implementation of stringent rules or bye-laws - By-Laws is published and shall be implemented for closing the gap
25	Oinam MC	1.5	0.9	Composting	- Encouraging households to source segregate waste and practice home composting of wet waste - Engaging recyclers for dry waste.
26	Nambol MC	2	0.95	- Composting pit - Manual Segregation initiated at the segregation shed	- Increasing recovery of other recyclable materials apart from plastic bottles/waste - Encouraging source segregation and home composting.
27	Jiribam MC	8	2.53	Composting, send back for recycling, MRF	Nil
	Total	167	138		

Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%)	Planning for upgrade the installed capacity as per required by 2029-30
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• No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction)	• Existing – Nil • Proposed – 5TPD
• Total No. of wards	• 305 Wards
• No. of wards having door to door collection service	• 305 Wards
• No. of wards practicing segregation at source	• 304 Wards

• Details of MSW treatment facilities **proposed and under construction** :

Sl. No.	Name of ULB or Processing unit	Capacity	Technology	Proposed / under Construction
1	Annexed at Table-3			
	• No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills		• 5 (five) sanitary landfill and 7 controlled dumpsites • Annexure-Table 3	
	• No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers		• Nil	
	• No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers		• 1 at Jiribam MC [floating racks/screens installed]	
	• Status of ULB wise Management of Solid waste		• At Annexure – Table -1 and Table -2	

V. Bio-medical Waste Management:

Total Bio-medical generation	:	0.83 TPD	• Deep burial practiced at remote rural areas • DPR submitted to ministry for up-gradation of the existing CBMWTF • Action Plan submitted to the State Pollution Control Board by the Directorate Health Service for BMW management
No. of Hospitals and Health Care Facilities	:	534 Nos. [i/c 420 PHSCs]	
Status of Treatment Facility CBMWTF	:	CBMWTF = 1 No. (capacity- 100 Kg/hr.) Captive Facility = 2 Nos. (Capacities-100 Kg/hr. & 105 Kg/hr.) Deep Burial = 391 Nos.	
Status of Treatment Facility ETPs	:	52 Nos.	

VI. Hazardous Waste Management:

Total Hazardous Waste generation	:	0.99 TPD
No. of Industries generating Hazardous waste	:	334 (automobile service centres mainly micro-scale units)
Treatment Capacity of all TSDFs	:	Nil
Avg. Quantity of Hazardous waste reaching the TSDFs and Treated	:	Nil
Details of on-going or proposed TSDF	:	Under preparation of DPR, Final DPR by December 2022

VII. Plastic Waste Management:

Total Plastic Waste generation	:	22.7 TPD
Treatment / Measures adopted for reduction or management of plastic waste	:	Plastic waste utilized for waste to energy plant, road construction and for recycling
Details of Alternate Treatment Technology being adopted by the State/UT	:	Nil
Identification of including drains contributing to river pollution and action as per NGT order on in-situ treatment	:	Joint survey was conducted and the report was submitted in January, 2020 Completed
Details of Nodal Officer appointed by Chief Secretary in the State / UT	:	• Shri M.H. Khan Additional Chief Secretary Forest, Environment & Climate Change, Govt. of Manipur as Chairman, State level Monitoring Mechanism • Dr. T. Brajakumar Singh Director, Directorate of Environment and Climate Change as Nodal Officer for appearing / VC / submission / compiling of reports before NGT/CPCB/CMC • Dr. W. Roshan Singh Executive Engineer Manipur Pollution Control Board
VIII. Details of meetings carried under the in the State/UT	:	• Last meeting under Chairmanship Chief of Secretary, Govt. of Manipur was held on 16th January, 2023 • Once or twice in every month by Addl. Chief Secretary (Forest, Environment & Climate Change), Government of Manipur
IX Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	:	At Annexure – 4
IX. Ground water regulation	:	Nil
X. Good irrigation practices being adopted by the State	:	1. Irrigation from Barrages and Dams through Canals 2. Loktak Lift Irrigation through open canals 3. River Lift Irrigation schemes by Minor Irrigation Department 4. Ground Water Irrigation schemes through tube wells and dug wells by Minor Irrigation Department 5. Surface Minor Irrigation through Canals
XI. Rain Water Harvesting	:	Nil
XII. Demarcation of Floodplain and removal of illegal encroachments	:	1. Eviction and removal of illegal encroachments is being carried out from time to time 2. Eviction of flood plain encroacher

		was conducted in different locations of Thoubal district in 2022. 3. Eviction along Imphal River at Lilong area and at Kanglatombi and Kangpokpi areas was conducted in this month.
XIII. Maintaining minimum e-flow of river	:	I. Water is released from the Dams and reservoirs from time to time to maintain e-flow of various rivers in the state. II. For other rivers without reservoir or dam, no activities are taken up in the upper catchment for maintenance of e-flow as it is beyond the scope of Flood Division, WRD.
XIV. Plantation activities along the rivers	:	No plantation taken up on the river banks of the 9 (nine) until the time reported upon
XV. Development of biodiversity park	:	No biodiversity parks have been developed so far. However, there are plans to develop two biodiversity parks proposed under the Imphal Ring Road Project
XVI. Reuse of Treated Water	:	Nil
XVII. Model River being adopted by the State & Action Proposed for achieving the bathing quality standards	:	Nambul River (Priority – II) Targeted Action for achieving the bathing quality standards as at Annexure - 5
XVIII. Status of Preparation of Action Plan by the 13 Coastal States	:	NA
XIX. Regulation of Mining Activities in the State / UT	:	1. The Mines and Mineral (Regulation and Development) Act, 1957 differentiates minerals into (a) major mineral and (b) minor mineral. The mineral administration of mining activities belonging to major minerals vests with the Central Government and are regulated under the Mines and Mineral (Regulation and Development) Act and Rules frame there under. The mineral administration of minor minerals vests with the respective State Governments and are regulated under their respective minor mineral concession Rules framed under section 15(1) of the Act and Rules framed their under. Similarly, in Manipur, the mining activities belonging to minor minerals are regulated under the Manipur Minor Mineral Concession Rules, 2012 and

		amendments thereon. In order to check illegal mining, to regulate transportation and storage of minor minerals, The Manipur Minerals (Prevention of Illegal Mining, Storage and Transportation) rules, 2018 has also been notified. In addition, The Manipur Mineral Policy, 2021 is being framed. 2. District Survey Report for all 16 Districts has been approved and finalized.
XX.	Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring	: Nil

A. Total Status of STPs in Imphal (as on 20th SEPTEMBER, 2023)

Particular	Unit	Phase I	Phase II	Ongoing NRCD Project	Total
Capacity of STP	MLD	27	49	17	93
Capacity of STP Utilized	MLD	21.59			21.59
Total Sewer Pipe	RM	69,429	2,77,289		3,46,718
Primary (Main Pipe)	RM	25,291			25,291
Secondary (Sub-main Pipe)	RM	44,138			44,138
Interception & Diversion Pipelines	RM			14,545	14,545
No. of urban drains to be collected	Drain			72	72
Targeted Connection septic tank	Unit	9,564	42,190		
Connected septic tank	Unit	7650			7650
Lift Station	Unit	5	21	14	40
Population (by 2054)	Lakh	1,86,534	3,49,759		5,36,293
Covered Municipal Ward	Wards	11	16	14	
Area covered	Sq. Km.	11	35		
Covered Polluted River				Nambul P-II	
Method of Treatment		ASP	SBR	MBBR	

Note : Targeted household for Phase I has been decreased from 12,000 Nos. to 9,564 because 2436 household shall be covered in Imphal Sewerage project – Phase II.

Status of utilization of the existing STP :

- 1 (one) unit of 27 MLD STP (ASP technology) is operational under PHED
- 69,429 rm sewer pipeline [25,291 rm primary lines, 44.14 rm secondary lines]
- Total target connection is 9,564 households

INCREMENTAL STATUS OF UTILIZATION FOR 27 MLD AT LAMPHELPAT, IMPHAL WEST

	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Cumulative as on 20 th Aug. 2023	Gap
Household Connected	4000	250	250	60	10	30	0	50	280	356	7650	1914
Utilization in MLD	9 MLD	9.5 MLD	10 MLD	10.26 MLD	10.28 MLD	10.35 MLD	10.35 MLD	16.5 MLD	17.34 MLD	18.35 MLD	21.59 MLD	5.41 MLD
Utilization in %	33%	35%	38%	38%	38%	38%	38%	61.31 %	64.24 %	67.96 %	79.98 %	20.02 %
	Nov. 2022	Dec. 2022	Jan. 2023	Feb. 2023	Mar. 2023	May 2023	June 2023	July 2023	August 2023	Sept 2023		
Household Connected	800	50	14	150	20	50	0	0	0	0		
Utilization in MLD	20.60 MLD	20.74 MLD	20.78 MLD	21.17 MLD	21.22 MLD	21.59 MLD	21.59 MLD	21.59 MLD	21.59 MLD	21.59 MLD		
Utilization in %	76.32 %	76.85 %	76.99%	78.41 %	78.62 %	79.98 %	79.98 %	79.98 %	79.98 %	79.98 %		

B. In-situ Bio-remediation and others :

	Name of the Polluted River (P-V)	Total Length of the River	Length of Polluted stretches	BOD Range (mg/l)	Population at polluted zone	Status / Proposed for Treatment
1	Imphal	89.24 km	19.98 km	2.9 - 3.1	84,857	- Revised DPR for Imphal River along with Fecal Sludge and Septage Management (FSSM) for 315 KLD at 27 ULBs and in situ treatment through Bio-remediation of 16.75 MLD submitted to NRCD on 18th September 2021. - Revised DPR with full justification on the comments made by the Ministry will be submitted soon.
2	Iril	156.50 km	18.12 km	2.8 - 3.0	1,714	
3	Khuga	79.25 km	10.92 km	2.0 – 3.0	857	
4	Khujairok	10.06 km	4.21 km	3.2	4,286	
5	Lokchao/ Thongjarok	17.04 km	5.31 km	3.0	1,143	
6	Manipur	261.00 km	35.00 km	3.1	7,143	
7	Thoubal	142.80 km	24.61 km	2.8	30,286	
8	Wangjing	35.08 km	3.70 km	3.1 - 3.2	7,143	

Note :

ASP (Activated Sludge Process), EAP (Extended Aeration Process),
SBR (Sequencing Batch Reactor), MBBR (Moving Bed Biofilm Reactor)

FORMAT FOR SEWAGE TREATMENT PLANTS AND UTILIZATION OF SEWAGE (20 th SEPTEMBER 2023)																
Sl. No.	City / Town	No. of STP	Location of STP	Coordinates of STP	STP Commissioned year	Status (operational/ Non-Operational/ Under Construction)	STP Installed Capacity (In MLD)	Actual Utilization of installed capacity (In MLD)	Technology UASB / ASP / OP / SBR / MBBR / FAB etc.	Consent status	Compliance Status Source: Manipur Pollution Control Board					
											Oil & Grease	pH	TSS mg/l	COD mg/l	BOD mg/l	Faecal Coliform
1	Imphal	1	Lamphel	24°49'45"N 93°54'58'E	2020	Operational	27	21.59 MLD	ASP		2.6	7.4	34	43	12.6	12

LIST OF WATER POLLUTING FACTORIES LOCATED WITHIN INDUSTRIAL ESTATE/FOOD PARK**Takyel Industrial Estate, Imphal West Districts, Manipur.**

Sl. No.	Name of unit	Nearest River	Proprietor	Name of Products
1	M/S Modern Foods	Nambul	T. Sanajaoba Singh	Noodles
2	M/S Hangle Industries	Nambul	H. Nabadeep Singh	Spices & Food Products
3	M/S Pera Fruit Products	Nambul	Kh. Sanayaima Singh	Fruit Processing
4	M/S Khudol	Nambul	K. Siddhanta Sharma	Food Processing
5	M/S Ratana Fruit	Nambul	L. Sarat Singh	Food items
6	M/S Universal Iodises Salt Industries	Nambul	P. Joychandra Singh	Food Items

Nilakuthi Food Park, Imphal East

Sl. No.	Name of unit	Nearest River	Proprietor	Name of Products
1	Shree Balaji Flour Mill	Imphal	Mrs. Rangnamei Martha	Flour
2	KMU	Imphal	Wangkheirakpam Gobin Singh	Bakery
3	Thangjam Agro Industries Pvt. Ltd.	Imphal	Thangjam Joykumar Singh	Bakery

TABLE 1 : SOLID WASTES GENERATION, COLLECTION AND MANAGEMENT - ULB WISE IN MANIPUR, SEP 2023

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)						Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
1	Imphal MC	2,65,573	3,50,050	157.5	129.0	3	100	90	25.5	115.5	42.0	27%	• Linkage up with NULM SHG's in monitoring and supervision of door-to-door collection so as to achieved 100%
2	Lamshang MC	8,130	9739	2.92	1	0.42	1	1	1.5	2.5	0.4	14%	• Capacity Building to achieve 100% collection
3	Samurou MC	14818	18602	5.58	3.42	0.92	3	3.42	1.24	4.66	0.9	16%	• 100% Segregation at source by Dec 2023 • Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid Waste Management Plant • Increase in awareness • Increase in Manpower and vehicles • Allotment of Permanent land for management of solid waste has been proposed to DC
4	Thongkhong Laxmi MC	14,878	18,677	5.6	3.24	0.83	0.7	3.24	1.53	4.77	0.8	15%	• Inert collected waste, which remains after segregation of recycle-able items including plastics and cardboard boxes, composting materials, domestic hazardous waste, etc, is transferred to Lamdeng Solid Waste treatment

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)						Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
													plant
5	Sekmai MC	5,065	6,358	1.9	0.50	0.9	1	0.5	0.50	1	0.9	47%	- Engagement of local clubs/SHGs to achieve 100% segregation at source - Capacity enhancement for treatment and processing
6	Lilong IW MC	12,427	15,600	4.6	1	0.6	1	1	3	4	0.6	13%	- More composting pits, more vehicles and manpower and encouraging source segregation and home composting - Cluster basis facilities at Lamdeng SWM Plant
7	Lamlai MC	4,601	5,776	1.73	0.8	0.2	3	0.8	0.73	1.5	0.2	13%	Treatment facilities at Lamdeng Waste to energy Plant (Cluster Approach)
8	Thoubal MC	45,947	57,678	17.3	13	0.3	8	8	4	12	5.3	31%	- Encouraging source segregation and home composting - Training of newly engaged staffs - Treatment started - Massive awareness of general public and sanitary staff
9	Yairipok MC	9,569	12,012	3.6	1.4	0.2	1	0.69	2	2.69	0.9	25%	- More composting by Dec 2023 - Engaging recyclers for waste
10	Sikhong Sekmai MC	7,390	9,277	2.78	0.56	0	1	0.56	2.22	2.78	0.0	0%	Treatment facilities at Thoubal cluster
11	Lilong TBL MC	24,900	31,258	9.3	2.00	0.8	1	1	6.5	7.5	1.8	19%	More composting pits, more vehicles and manpower and

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)						Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
													encouraging source segregation and home composting • Cluster basis facilities at Thoubal SWM Plant
12	Heirol MC	2,974	3,733	1.12	0.42	0.05	1	0.25	0.65	0.9	0.2	20%	• More composting unit by Dec 2023
13	Wangjing Lamding MC	8,055	10,112	3.03	0.7	0.3	1	0.27	2.03	2.3	0.7	24%	• More composting unit by Dec 2023
14	Andro MC	8,744	10,977	3.29	0.9	0	1	0.75	2.39	3.14	0.2	5%	• Treatment facilities at Thoubal Khunou (Cluster B) • Increase in manpower, Awareness drives & Engagement of recyclers.
15	Kakching MC	32,138	40,344	12.1	8.55	0.17	7	6.52	3.38	9.9	2.2	18%	• Intensified IEC on D2D waste collection and source segregation. Mandatory submission of payment receipts of D2D waste collection at time of availing any form of service from the council. With these activities Generation-Management Gap will be 0% by 20.11.2023
16	Kakching Khunou MC	11,379	14,284	4.28	2.5	0.17	1.2	1.23	1.61	2.84	1.4	34%	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
17	Sugnu MC	5,132	6,442	1.93	1.11	0.32	1.2	0.59	0.50	1.09	0.8	44%	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
18	Mayang Imphal MC	24,239	34,428	10.33	7.02	0.62	4	3.31	2.69	6	4.3	42%	• Treatment Plant/Composting Pits and segregation Sheds/MRF are

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)						Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
													operational • Remaining collected waste are kept under control • Awareness & IEC activities are carried out for more effective and making up the gaps
19	Wangoi MC	9,106	11,431	3.43	1.25	0.20	2.1	1.09	1.98	3.07	0.4	10%	• IEC activities and Behavioural change
20	Kumbi MC	9,546	11,983	3.59	2	0.08	1	1.29	1.51	2.8	0.8	22%	• Now 100% D2D collection • Land available 0.27 acre
21	Kwakta MC	8,579	10,769	3.23	1.13	0	1	0.55	2.1	2.65	0.6	18%	• Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	19,893	24,972	7.49	5.4	0.09	4	2.99	2	4.99	2.5	33%	• Segregation shed has constructed • Composting plans also been constructed. It has commissioned • IEC Campaign has organised for proper 100% source segregation
23	Ningthoukhong MC	13,078	16,417	5.00	2.2	0.3	5.5	1.4	2.5	3.9	1.1	22%	• 100% D2D collection· Composting Segregation
24	Bishnupur MC	12,167	15,274	4.58	3.62	0	5	2.75	0.96	3.71	0.9	19%	• Vigorous IEC campaign and implementation of stringent rules or bye-laws • By-Laws is published and shall be

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)						Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Total	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
													implemented for closing the gap
25	Oinam MC	7,161	8,989	2.7	1.6	0.0	1.5	0.9	1.1	2	0.7	26%	- Encouraging households to source segregate waste and practice home composting of wet waste - Engaging recyclers for dry waste
26	Nambol MC	22,512	28,260	8.5	4.3	0	2	0.95	4.2	5.15	3.4	39%	- Increasing recovery of other recyclable materials apart from plastic bottles/waste - Encouraging source segregation and home composting
27	Jiribam MC	7,343	9,218	2.76	2.53	0	8	2.53	0.23	2.76	0.0	0%	NIL
Total		6,15,344	7,92,660	290	201	10.47	167.2	138	78.6	216.1	74.1		
PC to the generated wastes					69%	4%	58%	47%	27%	74%	26%	26%	

Note : *1. Taking r=2.3 as annual Population growth rate [Ref.: MoUD, GoI] *2. Waste generated is estimated including floating population @10%
*3. As per SBM 2.0 guidelines, Waste generated is estimated in @450gm per capita generation (for more than 1 lakh population) for Imphal MC and @ 300gm per capita generation (for less than 1 lakh population)

TABLE 2 : SOLID WASTES GENERATION, COLLECTION AND MANAGEMENT – WARDWISE OF ULBs IN MANIPUR, SEP 2023

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
1	Imphal MC	27	27	100%	27	47%		Waste to Energy and Composting	100% by Nov 2023
2	Lamshang MC	9	9	80%	9	51%	0	Composting	IEC activities emphasize segregation at source
3	Samurou MC	11	11	100%	11	59%	0	Segregation cum transfer station	100% Segregation at source by Nov 2023 - Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid Waste Management Plant - Increase in awareness - Increase in Manpower and vehicles - Allotment of Permanent land for management of solid waste has been proposed to DC
4	Thongkhong Laxmi MC	11	11	100%	11	60%	0	Segregation cum transfer station and composting pits.	- In terms of Ward-wise, Region-wise, Area-wise, Leikai-wise, Leirak-wise coverage of D2D collection, there is 100% coverage of D2D - More awareness and behavioural change campaign required Capacity building of manpower - By acquiring a permanent sanitary landfill/solid waste management site. (ULB has requested to concerned DC and MAHUD Dept. vide letter of even nos. dated 18.05.2019, 02.08.2021, 29.11.2021& 04.11.2022 to allocate a suitable SWM site for the ULB but yet to

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
									be allotted till now.)
5	Sekmai MC	9	4	50%	9	50%	0	• Home Composting is predominant in all wards • Central Composting at Segregation Shed, Parao • Mixed/ Dry Waste disposed at Lamdeng SWM Plant	• IEC activities to emphasize segregation at Source
6	Lilong IW MC	9	9	100%	9	80%	0	• Segregation Shed for Material Recovery • Vermi composting	• More composting pits, more vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Lamdeng SWM Plant
7	Lamlai MC	9	9	100%	9	100%	0.88	• Composting (Home +Centralised) • Source segregation and centralised segregation	• Treatment facilities at Lamdeng Waste to Energy Plant (Cluster Approach)
8	Thoubal MC	18	18	100%	18	80%	6.7	• Segregation and composting	• Engaging more workers in the composting plant • Introduction of compactor machines • Introduction of segregation machines
9	Yairipok MC	9	9	100%	8	93%	2.2	• Transfer and Segregation Station and Composting	• Segregation shed and composting unit by Dec 2023
10	Sikhong Sekmai MC	9	9	100%	9	100%	0.62	• Wet waste gets processed at source as feed of poultry and piggery, segregated recyclable waste is sent to recycler	• Treatment facility at Thoubal Cluster

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
11	Lilong TBL MC	9	9	100%	9	70%	0	• Segregation Shed Composting Unit	• More composting pits, more vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Thoubal SWM Plant • Extensive awareness drive, incorporating more SHGs in SWM
12	Heirok MC	9	9	100%	9	80%	0	• Transfer and Segregation Station and Composting	• More composting unit by Dec 2023
13	Wangjing Lamding MC	9	9	100%	9	80%	0	• Segregation and transfer station	• More composting unit by Dec 2023
14	Andro MC	12	12	100%	12	97%	0.96	• Bulk of wet waste is processed or consumed at source a poultry & piggery feeds • Aerobic Composting, Segregation & Recycling	• Transport of remaining segregated Inert waste to the transfer station for Cluster-B located at Thoubal • Increase in manpower, Awareness drives & Engagement of Recyclers
15	Kakching MC	12	12	100%	12	93%	2	• Composting, segregation & recycling	• Intensified IEC on D2D waste collection and source segregation. Mandatory submission of payment receipts of D2D waste collection at time of availing any form of service from the council. With these activities Generation-Management Gap will be 0% by 20.11.2023
16	Kakching Khunou MC	9	9	96%	9	82%	2	• Composting, segregation & Recycling	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers
17	Sugnu MC	9	9	97%	9	80%	1	• Composting, Segregation & Recycling	• Transport of remaining segregated waste to Kakching cluster • Engagement of recyclers • Intensified IEC on D2D waste collection

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
									and source segregation. Mandatory submission of payment receipts of D2D waste collection at time of availing any form of service from the council. With these activities Generation-Management Gap will be 0% by 20.11.2023
18	Mayang Imphal MC	13	13	100%	13	85%	1.25	Segregation Sheds at Ward Level and Processing Unit are operational. Home composting plant is on progress.	- Treatment Plant/Composting Pits and segregation Sheds/MRF are operational - Remaining collected waste are kept under control - Awareness & IEC activities are carried out for more effective and making up the gaps
19	Wangoi MC	9	9	100%	9	70%	0.17	Composting	
20	Kumbi MC	9	9	100%	9	65%	0.27	Composting	
21	Kwakta MC	9	9	100%	9	65%	0.625	Composting	Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	12	12	100%	12	59%	5.1	Composting	Requested DC to allot land. Rigorous IEC Campaign to be held for source segregation
23	Ningthoukhong MC	14	14	100%	14	75%	1.31	Composting & sent back for re-cycling	To operationalize Composting & Segregation
24	Bishnupur MC	12	12	100%	12	75%	5	Sanitary Landfill	Composting plant at 2.5 Acre

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
25	Oinam MC	9	9	100%	9	70%	0	• Composting	• Encouraging households to source segregate waste and practice home composting of wet waste • Engaging recyclers for dry waste.
26	Nambol MC	18	18	100%	18	80%	3.21	• Composting pit • Manual Segregation initiated at the segregation shed	• Capacity building of sanitary Workers • Increasing manpower, vehicles and machinery • Awareness drive • Co-opting SHGs and CSOs in SWM
27	Jiribam MC	10	10	100%	10	100%	6.02	• Composting, Send back for recycling, MRF	• Nil
Total		305	300		304		38.695		
In Percentage-Ward coverage				98%		100%			
Average Household coverage				97%		76%			

Table-3 : SOLID WASTES PROCESSING AND MANAGEMENT – WARDWISE OF ULBS IN MANIPUR, SEPTEMBER 2023

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
1	Imphal MC and Lamdeng SWM Plant	Nil	Composting and Waste to Energy Plant operational	Nil		Nil	Nil	1	Nil	Nil	Nil
2	Lamshang MC	NA	Composting and manual segregation of waste, waste to power and waste to manure at Lamdeng SW plant	Nil		Nil	Nil	Nil	Nil	Nil	Nil
3	Samrou MC	NA	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
4	Thongkhong Laxmi MC	NA	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
5	Sekmai MC	0	NA	Nil		0	0	Nil	Nil	Nil	Nil
6	Lilong IW MC	0	Manual segregation of waste for material recovery Vermicomposting pits	Nil		Nil	Nil	Nil	Nil	Nil	Nil
7	Lamlai MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
8	Thoubal MC	0	NA	Nil		Nil	Nil	1	2	Nil	Nil
9	Yairipok MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
10	Sikhong Sekmai MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
11	Lilong TBL MC	0	Manual segregation of waste for material recovery Vermicomposting pits	Nil		Nil	Nil	Nil	Nil	Nil	Nil
12	Heirok MC	0	Composting pit	Nil		Nil	Nil	Nil	Nil	Nil	Nil
13	Wangjing Lamding MC	0.3	Composting pit [proposed]	Nil		Nil	Nil	Nil	Nil	Nil	Nil
14	Andro MC	0	Manual segregation & aerobic composting	Nil		Nil	Nil	Nil	Nil	Nil	Nil
15	Kakching MC	0	Manual segregation & aerobic composting	Nil		1	2	1	2.5	Nil	Nil
16	Kakching Khunou MC	0	NA	Nil		0	0	Nil	Nil	Nil	Nil
17	Sugnu MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
18	Mayang Imphal MC	0	Manual segregation of waste & Composting construction completed	Nil		Nil	Nil	Nil	Nil	Nil	Nil
19	Wangoi MC	0	Nil	Nil		Nil	Nil	Nil	Nil	Nil	Nil
20	Kumbi MC	0	Composting pit	Nil		1	0.27	Nil	Nil	Nil	Nil
21	Kwakta MC	0	NA	Nil		1	0.016	Nil	Nil	Nil	Nil

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
22	Moirang MC	0	NA	Nil		1	2.5	Nil	Nil	Nil	Nil
23	Ningthoukhong MC	0	Anaerobic, Segregation, Composting and recovery of reusable wastes	Nil		1	1.31	Nil	Nil	Nil	Nil
24	Bishnupur MC, Multi-Segregation shed at Chothe Village, Ward No. 12	0	Anaerobic (completed)	Nil		Nil	Nil	1	2.5	Nil	Nil
25	Oinam MC	0	Composting (operational)	Nil		1	0.4	Nil	Nil	Nil	Nil
26	Nambol MC	0	Aerobic and vermi-composting	Nil		1	3.21	Nil	Nil	Nil	Nil
27	Jiribam MC	0	NA	Nil		Nil	Nil	1	1.72	Nil	1
	Total	0.3				7	9.706	5	8.72		1

STATUS OF WATER QUALITY OF POLLUTED RIVERS**Remark :**

Manipur Pollution Control Board has been conducting monthly water quality analysis of the polluted rivers. The monthly water quality data of the polluted rivers will be reported during 1st week of the next month i. e. Report for February will get on 1-10th March. Therefore, Water Quality Report for February will be reproduced in the MPR of March.

Water Quality of the Imphal, Iril, Manipur, Thoubal, Wangjing, Khuga, Khujairok, Lokchao, Nambul, Waisel Maril & Moirang Rivers and Effluent of Sewage Treatment Plant, Langol
for the month of AUGUST, 2023

1. Imphal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Koirengei	7.3	7.3	3.3	8.3	45
Minuthong	7.1	7.3	3.2	10.5	75
Mahabali	7.2	7.3	3.3	9.2	70

2. Iril River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kangla Siphai	7.3	7.3	3.3	13.4	50
Porompat	7.4	7.4	3.2	9.4	55
Lilong	7.1	7.2	3.3	2.2	60

3. Manipur River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Yairipok	7.3	7.3	3.3	12.4	55
Sekmaiying	7.4	7.4	3.3	11.6	75
Ithai	7.4	7.3	3.2	14.2	80

4. Thoubal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Litan	7.3	7.4	3.3	12.6	40

5. Wangjing River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Heirolk	7.3	7.3	3.3	11.4	50
Wangjing	7.2	7.3	3.3	10.2	55

6. Khuga River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Churachandpur Bazar	7.3	7.4	3.3	10.4	65
Khuga Dam	7.4	7.5	3.3	9.2	35

7. Khujairek River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Khujairek	7.3	7.3	3.4	14.6	165

8. Lokchao River, Bishnupur

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Lokchao Bridge near Bishnupur Bazar	7.4	7.4	3.4	10.0	40

9. Nambul River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Samushang	7.2	7.3	4.2	15.8	110
Naoremthong	7.1	7.1	4.1	15.4	85
Hump Bridge	7.0	7.0	4.5	17.2	170
Heirangoithong	7.0	7.0	4.5	17.4	180
Singda Dam	7.8	7.5	3.2	7.7	35

10. Kongba River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kongba Eranpham	6.9	7.2	3.8	16.8	100
Kongba Erong	6.8	7.1	3.9	11.2	110

11. Waisel Maril

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Meijrao Bridge, Hiyangthang	6.6	7.2	4.1	13.6	130
Kha Sanjenbam Mayai Leikai	7.2	7.3	3.7	12.3	70

12. Moirang River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Laikhurembi, Moirang Bazar	7.3	7.3	3.4	10.7	55

13. Sewage Treatment Plant Effluent

Location	Oil & Grease (mg/L)	pH	TSS mg/L	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Langol	2.6	7.4	34	12.6	43	120

Action Plan of the model river in Manipur

Action	Target Action	Priority – II : Nambul River		
		Target Quantity	Time Line	Status
Action 1	Solid Waste Management			
1.1	Identification of garbage vulnerable point	12 Municipal Wards	Oct 2019	Completed Action: MAHUD / IMC
1.2	Door to Door Collection, identify & register of missed out household, punitive action against litterer along the river	12 Municipal Wards	Oct 2019	Completed Action: MAHUD / IMC
1.3	Formation of Tasks Force for proper implementation of waste management		Oct 2019	Constituted
1.4	Providing of household waste bins	19,863 bins	Oct 2020	80% completed Action: Environment & CC
1.5	High rise fencing of grilling and netting at vulnerable zones of both the river banks to protect throwing of solid wastes into the river	5 km	Apr 2021	Completed Action: Environment & CC
1.6	Renovation of existing crematoria along the river stretch	56 Nos.	Apr 2021	Completed Action: Environment & CC
1.7	Installation of secondary waste collection bins / community bins / dumper placer containers / transfer bins / littering bins at suitable places	37 Nos.	Oct 2020	Completed Action: Environment & CC
1.8	Construction of Public toilets at vulnerable points	35 Nos. by IMC 20 Nos. under NRCD	Apr 2021	Completed Action: Environment & CC
1.9	IEC / Public Awareness Activities	14 No. (one each in every ward)	Every month	Conducted regularly Action: Environment & CC
Action 2	Channelization, treatment, utilization and disposal of treated domestic sewage			
2.1	Identification of location and estimation of liquid waste generation at Imphal town		Oct 2019	Completed Action: PHED
2.2	Interception and diversion of the urban drains / outfalls to the Nambul River by laying pipes of 14,545 meters at both the banks of River at 12 Municipal Wards viz. 6, 7, 8, 9, 11, 12, 13, 14,15, 16, 24 and 27		Apr 2022	30% Completed Action: Environment & CC
2.3	Treatment option and capacity : Installation of 2 (two) Sewage Treatment Plants (STPs) of 16 MLD and 1 MLD		Apr 2022	85% Completed Action: Environment & CC
2.4	Commissioning of the Imphal Sewerage Project Phase-I of 27 MLD		Dec 2019	Commissioned Action: PHED
2.5	Commissioning of the Imphal Sewerage Project Phase-II of 41 MLD		Apr 2022	DPR Submitted, waiting for approval of NIT from NDB Action: PHED

Action	Target Action	Priority – II : Nambul River		
		Target Quantity	Time Line	Status
Action 3	Protection of catchment area			
3.1	<i>In-situ</i> augmentation of medicinal plants and economic plantation at catchment			Completed Action: Forest
Action 4	Protection and prevention of Flood Plain Zone			
4.1	Protection and Improvement of River Bunds. 1,500 m for Nambul River 16,860 m in Imphal River 2,670 m in Kongba River 2,403 m in Thoubal River 317 m in Wangjing River 11,711 m in Manipur River		Before 2021	Status will be updated soon Action: WRD
4.2	Re-Sectioning of Rivers and Streams. 82,091 m in Imphal River. 15,480 m in Kongba River 89,100 m in Nambul and its tributaries. 1,900 m in Chakpi River		Before 2021	Status will be updated soon Action: WRD
4.3	CC/RCC Retaining Walls with and without piles to be provided at the most eroded and vulnerable river banks.		Before 2021	Status will be updated soon Action: WRD

B. 8 (eight) polluted stretches of Rivers viz. Imphal, Iril, Khuga, Khujairok, Lokchao, Manipur, Thoubal, Wangjing under Priority V in Manipur

Action	Target Action	Target Quantity	Timeline	Status & Actor
Action 1	Solid Waste Management			
1.1	Identification of garbage vulnerable point along the 8 (eight) identified polluted river stretches	59 Municipal Wards	6 months (December 2019)	Status will be updated soon Action : MAHUD / ULBs
1.2	Door to Door Collection and transportation of Municipal solid wastes with source segregation through Cluster Approach	59 Municipal Wards 33.45 MT	1 year (June 2020)	
1.3	Installation of littering bins at suitable places	500 Nos. of Bins	1 year (June 2020)	
1.4	Setting up of waste processing site at Cluster Approach	5 Cluster Units	2 Year (June 2021)	
1.5	Construction of Public toilets at vulnerable points	59 Nos. (one each for every ward for 59 wards)	2 Year (June 2021)	
1.6	IEC / Public Awareness Activities	177 Nos. (3 times for every 59 Wards)	Ongoing	
1.7	Encouraging of home composting	10% of total household	Ongoing	
Action 2	Channelization, treatment, utilization and disposal of treated domestic sewage			
2.1	Identification of location and estimation of liquid waste generation	Under survey	Ongoing	Completed Action : PHED
2.2	Treatment option through phytoremediation technique in consultation with NEERI (National Environmental Engineering Research Institute), Nagpur	27.024 + 38.73 = 65.754 MLD	2 Years (June 2021)	DPR submitted to NRCDD, Ministry of Jal Shakti, Govt. of India Action : Environment & CC
2.3	Commissioning of the Imphal Sewerage Project Phase-II: Installation of STPs of 3 (three) units SBR (Sequencing Batch Reactors) technology covering all the remaining wards of Imphal Municipal Corporation (Finalized DPR)	41 MLD	Funding awaited	DPR submitted, waiting for approval of NIT from NDB Action : PHED
Action 3	Protection of catchment Area of 1539 sq. km.			
3.1	In situ augmentation with economic plants	1539 sq. km.	2 Years (June 2021)	Status will be updated soon Action : Forest
3.2	Inventorisation and mapping of springs for protection and rejuvenation at catchment	8 rivers	1 Year (June 2020)	Status will be updated soon Action : Environment & CC
Action 4	Protection and prevention of Flood Plain Zone			
4.1	Protection and Improvement	1. 1500 m for Nambul	Before 2021	Status will be updated

	of River Bunds	River 2. 16860 m in Imphal River and its tributaries 3. 2670 m in Kongba River 4. 2403 m in Thoubal River 5. 317 m in Wangjing River 6. 11711 m in Manipur River		soon Action : WRD
4.2	Re-Sectioning of Rivers and Streams	1. 82091 m in Imphal River 2. 15480 m in Kongba River 3. 89100 m in Nambul and its tributaries 4. 1900 m in Chakpi River	Before 2021	
4.3	CC / RCC Retaining Walls with and without piles to be provided at the most eroded and vulnerable river banks	Along Nambul, Imphal, Thoubal, Kongba, Iril and other major rivers	Before 2021	

National Mission for Clean Ganga
Format for submission of Monthly Progress Report in the NGT Matter OA
No. 673 of 2018
(in compliance to NGT order dated 24.09.2020)
For the State of Manipur submitted on 20th OCTOBER 2023

Overall status of the State:

I. Total Population:

	2011 Census	Projected as on 2020
Urban Population	8,34,154	10,47,135
Rural Population	17,36,236	21,79,541
Total	25,70,390	32,26,676

Estimated Sewage Generation (MLD) : 115.054 MLD

II. Details of Sewage Treatment Plant:

- Existing No. of STPs and Treatment Capacity : 1 (one) STP of 27 MLD operational
- Capacity Utilization of existing STPs : 21.59 MLD
- MLD of sewage being treated through alternate technology : NIL
- Gap in Treatment Capacity in MLD : 5.41 MLD
- No. of Operational STPs : 1 (one) Detail of STP is at **Annexure - 1**
- No. of Complying STPs : 1 (one)
- No. of Non-complying STPs : Nil

Details of each existing STP in the State

No.	Location	Existing STP Capacity	Capacity Being Utilized	Operational Status of STP	Compliance Status of STP
1	Lamphel, Imphal West	27 MLD	21.59 MLD	Operational (79.98%)	Complying

Details of under construction STPs in the State

No.	Location	Capacity of the plant in MLD	Physical Progress in %	Status of I&D or House sewer connections	Completion Timeline
1	Maibam Leikai, Imphal West	16 MLD	98 %	NIL	31.03. 2023
2	Iroisemba, Imphal West	1 MLD	95%	NIL	31.03. 2023

Details of proposed STPs in the State

No.	Location	Capacity of the STP proposed in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Likely Date of Completion
1	Imphal	49 MLD	Agreement Signed	---

III. Details of Industrial Pollution:

	No. of industries in the State	:	1011 Nos.
			944 outside Industrial Estate
			67 inside Industrial Estate
	No. of water polluting industries in the State located along the 9 (nine) prioritized rivers of Manipur	:	Nil
	Quantity of effluent generated from the industries in MLD	:	0.93 KLD (estimated) in case of the 3 units located within Nilakuthi Food Park, Imphal East
	Quantity of Hazardous Sludge generated from the Industries in TPD	:	Data not available
	Number of industrial units having ETPs	:	Nil
	Number of industrial units connected to CETP	:	3 (three)
	Number and total capacity of ETPs	:	Nil
	Details of existing	:	Nil
	Under construction	:	Nil
	Proposed	:	Nil
	Compliance status of the ETPs	:	Nil
	Number and total capacity of CETPs	:	1 (one) CETP
	Details of existing	:	1 unit of 400 KLD capacity
	Under construction	:	3
	Proposed	:	Nil

Town	Existing ETP Capacity	CETP Proposed, if any	Status (DPR/ tendering/ under construction etc.)
Imphal	400 KLD capacity	Nil	The DPRs for 3(three) ETPs at Takyelpat, Tera Urak & Kuraopokpi Industrial Estates of Manipur has been submitted to the Ministry of Commerce & Industries, Government of India through Planning Department, Manipur under PM Gatishakti "Scheme for Special Assistance to the States for Capital Investment for 2022-23".

- Status of compliance and operation of the CETPs

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (Existing, under construction & proposed)
Imphal	5 (five)	Data not available	Nil	1 (one) CETP of 400 Kilo Liter / Day at Nilakuthi Industrial Estate, Imphal Status : Functional

IV. **Solid Waste Management:**

- Total Urban Local Bodies (ULBs) : 27 ULBs
- Population of ULBs : 6,15,344 (2011 Census)
: 7,92,734 (2021 projected population)
- Current Municipal Solid Waste Generation : 290 MTD
(as per SBM 2.0 guidelines, MSW generation is estimated @450gm per capita generation for Imphal Municipal Corporation (for more than one lakh population) and @300gm per capita generation for other ULBs (for less than one lakh population) based on 2020 projected population)
- Waste Collected : 203 TPD
- Existing Management / treatment facility : 169 TPD
- Utilization of MSW processing : 142 TPD
[Managed by ULBs = 142 TPD
Managed at Source = 78.9 TPD
Total Managed = 221 TPD]
- Number, installed capacity and utilization of existing MSW processing facilities in TPD bifurcated by type of processing.

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
1	IMC / Municipal Solid waste Management Plant, Lamdeng, Imphal	100	90	Waste to Energy and Composting	100% by December 2023
2	Lamshang MC	1	1.2	Composting	Waste collection vehicle procured. Bye Law published and Segregation of Waste aimed to reach 100% by November 2023.
3	Samurou MC	3	3.44	Segregation cum transfer station	100% Segregation at source by Dec 2023 - Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
					Waste Management Plant. • Increase in awareness. • Increase in Manpower and vehicles. Allotment of Permanent land for management of solid waste has been proposed to DC.
4	Thongkhong Laxmi MC	0.7	3.26	• Segregation cum transfer station and composting pits	• Inert collected waste, which remains after segregation of recycle-able items including plastics and cardboard boxes, composting materials, domestic hazardous waste, etc, is transferred to Lamdeng Solid Waste treatment plant.
5	Sekmai MC	1	1.2	• Home Composting is predominant in all wards • Central Composting at Segregation Shed, Parao • Mixed/ Dry Waste disposed at Lamdeng SWM Plant	• Engagement of local clubs/SHGs to achieve 100% segregation at source • Capacity enhancement for treatment and processing
6	Lilong IW MC	1	1	• Segregation Shed for Material Recovery • Vermi composting	• More composting pits • More vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Lamdeng SWM Plant.
7	Lamlai MC	3	0.9	• Composting (Home + Centralised) • Source segregation and Centralised segregation	• Treatment facilities at Lamdeng Waste to energy Plant (Cluster Approach)
8	Thoubal MC / Thoubal SWM Plant	10	9	• Segregation and composting	• Encouraging source segregation and home composting • Training of newly engaged staffs • Treatment started • Massive awareness of general public and sanitary staff
9	Yairipok MC	1	0.89	• Transfer and segregation Station & Composting	• More Composting by Dec 2023 • Engaging recyclers for waste
10	Sikhong Sekmai MC	1	0.56	• Wet waste gets processed at source feed of poultry and piggery.	• Treatment Facility at Thoubal Cluster

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
				Segregated recyclable waste sent to recycler	
11	Lilong Thoubal MC	1	1	Segregation Shed Composting Unit	- More composting pits, more vehicles and manpower and encouraging source segregation and home composting - Cluster basis facilities at Thoubal SWM Plant
12	Heirok MC	1	0.3	Transfer and Segregation Station and Composting	More composting unit by Dec 2023.
13	Wangjing Lamding MC	1	0.37	Segregation and transfer station	More composting unit by Dec 2023.
14	Andro MC	1	0.78	- Bulk waste is processed or consumed at source a poultry and piggery feeds - Aerobic Composting, Segregation and Recycling	- Treatment facilities at Thoubal Khunou (Cluster B) - Increase in manpower - Awareness drives & Engagement of Recyclers
15	Kakching MC/ Kakching SWM Plant	7	6.53	Composting, Segregation & Recycling	Intensified IEC on D2D waste collection and source segregation. Mandatory submission of payment receipts of D2D waste collection at time of availing any form of service from the council. With these activities Generation-Management Gap will be 0% by 20.11.2023
16	Kakching Khunou MC	1.2	2.1	Composting, Segregation & Recycling	- Transport of remaining segregated waste to Kakching cluster - Engagement of recyclers
17	Sugnu MC	1.2	0.61	Composting, Segregation & Recycling	- Transport of remaining segregated waste to Kakching cluster - Engagement of recyclers
18	Mayang Imphal MC	4	3.46	- Segregation Sheds at Ward Level and Processing Unit are operational - Home composting plant is on progress	- Treatment plant / Composting Pits and Segregation Sheds/MRF are operational - Remaining collected waste are kept under control - Awareness and IEC activities are carried out for more effective and making up the gaps
19	Wangoi MC	2.1	1.09	Composting	IEC activities and behavioral change

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
20	Kumbi MC	1	1.29	• Composting	• 100% D2D Collection • Land available 0.27 acre
21	Kwakta MC	1	0.55	• Composting	• Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	4	2.99	• Composting	• Segregation shed has been constructed • Composting plants have also been constructed & commissioned • IEC Campaign has organized for proper 100% source segregation
23	Ningthoukhong MC	5.5	1.7	• Composting & sent back for re-cycling	• 100% D2D collection • Composting • Segregation
24	Bishnupur MC	5	2.8	• Sanitary Landfill	• Vigorous IEC campaign and implementation of stringent rules or bye-laws • By-Laws is published and shall be implemented for closing the gap
25	Oinam MC	1.5	0.9	• Composting	• Encouraging households to source segregate waste and practice home composting of wet waste • Engaging recyclers for dry waste.
26	Nambol MC	2	1.8	• Composting pit • Manual Segregation initiated at the segregation shed	• Increasing recovery of other recyclable materials apart from plastic bottles/waste • Encouraging source segregation and home composting.
27	Jiribam MC	8	2.51	• Composting, send back for recycling, MRF	Nil
	Total	169	142		

• Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%)	• Planning for upgrade the installed capacity as per required by 2029-30
• No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction)	• Existing – Nil • Proposed – 5TPD
• Total No. of wards	• 305 Wards
• No. of wards having door to door collection service	• 305 Wards
• No. of wards practicing segregation at source	• 304 Wards

- Details of MSW treatment facilities **proposed and under construction** :

Sl. No.	Name of ULB or Processing unit	Capacity	Technology	Proposed / under Construction
1	Annexed at Table-3			
	• No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills		• 5 (five) sanitary landfill and 7 controlled dumpsites • Annexure-Table 3	
	• No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers		• Nil	
	• No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers		• 1 at Jiribam MC [floating racks/screens installed]	
	• Status of ULB wise Management of Solid waste		• At Annexure – Table -1 and Table -2	

V. Bio-medical Waste Management:

Total Bio-medical generation	:	0.83 TPD	• Deep burial practiced at remote rural areas • DPR submitted to ministry for up-gradation of the existing CBMWTF • Action Plan submitted to the State Pollution Control Board by the Directorate Health Service for BMW management
No. of Hospitals and Health Care Facilities	:	534 Nos. [i/c 420 PHSCs]	
Status of Treatment Facility CBMWTF	:	CBMWTF = 1 No. (capacity-100 Kg/hr.) Captive Facility = 2 Nos. (Capacities-100 Kg/hr. & 105 Kg/hr.) Deep Burial = 391 Nos.	
Status of Treatment Facility ETPs	:	54 Nos.	

VI. Hazardous Waste Management:

Total Hazardous Waste generation	:	0.99 TPD
No. of Industries generating Hazardous waste	:	334 (automobile service centres mainly micro-scale units)
Treatment Capacity of all TSDFs	:	Nil
Avg. Quantity of Hazardous waste reaching the TSDFs and Treated	:	Nil
Details of on-going or proposed TSDF	:	Under preparation of DPR, Final DPR by December 2023

VII. Plastic Waste Management:

Total Plastic Waste generation	:	
Treatment / Measures adopted for reduction or management of plastic waste	:	
Details of Alternate Treatment Technology being adopted by the State/UT	:	

Identification of including drains contributing to river pollution and action as per NGT order on in-situ treatment	:	• Joint survey was conducted and the report was submitted in January, 2020 • Completed
Details of Nodal Officer appointed by Chief Secretary in the State / UT	:	
VIII. Details of meetings carried under the in the State/UT	:	•
IX Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river	:	
IX. Ground water regulation	:	
X. Good irrigation practices being adopted by the State	:	1. Irrigation from Barrages and Dams through Canals. 2. Loktak Lift Irrigation through open canals 3. River Lift Irrigation schemes by Minor Irrigation Department 4. Ground water irrigation schemes through tube wells and dug wells by Minor Irrigation Department 5. Surface Minor Irrigation through canals.
XI. Rainwater Harvesting	:	
XII. Demarcation of Floodplain and removal of illegal encroachments	:	1. Eviction and removal of illegal encroachments is being carried out from time to time. 2. Eviction of flood plain encroacher was conducted in different locations of Thoubal District in 2022 3. Eviction along Imphal River at Lilong area and at Kanglatombi and Kangpokpi areas was conducted in this month
XIII. Maintaining minimum e-flow of river	:	Water is released from the Dams and reservoirs from time to time to maintain e-flow of various rivers in the state. For other rivers without reservoir or dam, no activities are taken up in the upper catchment for maintenance of e-flow as it is beyond the scope of Flood Division, WRD.
XIV. Plantation activities along the rivers	:	•
XV. Development of biodiversity park	:	•
XVI. Reuse of Treated Water	:	• Nil
XVII. Model River being adopted by the State & Action Proposed for achieving the bathing quality standards	:	

XVIII.	Status of Preparation of Action Plan by the 13 Coastal States	:	
XIX.	Regulation of Mining Activities in the State / UT	:	The Mines and Mineral (Regulation and Development) Act, 1957 differentiates minerals into (a) major mineral and (b) minor mineral. The mineral administration of mining activities belonging to major minerals vests with the Central Government and are regulated under the Mines and Mineral (Regulation and Development) Act and Rules frame there under. The mineral administration of minor minerals vests with the respective State Governments and are regulated under their respective minor mineral concession Rules framed under section 15(1) of the Act and Rules framed their under. Similarly, in Manipur, the mining activities belonging to minor minerals are regulated under the Manipur Minor Mineral Concession Rules, 2012 and amendments thereon. In order to check illegal mining, to regulate transportation and storage of minor minerals, The Manipur Minerals (Prevention of Illegal Mining, Storage and Transportation) rules, 2018 has also been notified. In addition, The Manipur Mineral Policy, 2021 is being framed. DSR for all 16 Districts has been approved and finalized
XX.	Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring	:	

A. Total Status of STPs in Imphal (as on 20th October, 2023)

Particular	Unit	Phase I	Phase II	Ongoing NRCD Project	Total
Capacity of STP	MLD	27	49	17	93
Capacity of STP Utilized	MLD	21.59			21.59
Total Sewer Pipe	RM	69,429	2,77,289		3,46,718
Primary (Main Pipe)	RM	25,291			25,291
Secondary (Sub-main Pipe)	RM	44,138			44,138
Interception & Diversion Pipelines	RM			14,545	14,545
No. of urban drains to be collected	Drain			72	72
Targeted Connection septic tank	Unit	9,564	42,190		
Connected septic tank	Unit	7650			7650
Lift Station	Unit	5	21	14	40
Population (by 2054)	Lakh	1,86,534	3,49,759		5,36,293
Covered Municipal Ward	Wards	11	16	14	
Area covered	Sq. Km.	11	35		
Covered Polluted River				Nambul P-II	
Method of Treatment		ASP	SBR	MBBR	

Note : Targeted household for Phase I has been decreased from 12,000 Nos. to 9,564 because 2436 household shall be covered in Imphal Sewerage project – Phase II.

Status of utilization of the existing STP :

- 1 (one) unit of 27 MLD STP (ASP technology) is operational under PHED
- 69,429 rm sewer pipeline [25,291 rm primary lines, 44.14 rm secondary lines]
- Total target connection is 9,564 households

INCREMENTAL STATUS OF UTILIZATION FOR 27 MLD AT LAMPHELPAT, IMPHAL WEST

	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Cumulative as on 20 th Oct. 2023	Gap
Household Connected	4000	250	250	60	10	30	0	50	280	356	7650	1914
Utilization in MLD	9 MLD	9.5 MLD	10 MLD	10.26 MLD	10.28 MLD	10.35 MLD	10.35 MLD	16.5 MLD	17.34 MLD	18.35 MLD	21.59 MLD	5.41 MLD
Utilization in %	33%	35%	38%	38%	38%	38%	38%	61.31 %	64.24 %	67.96 %	79.98 %	20.02 %
	Nov. 2022	Dec. 2022	Jan. 2023	Feb. 2023	Mar. 2023	May 2023	June 2023	July 2023	Aug 2023	Sept 2023		
Household Connected	800	50	14	150	20	50	0	0	0	0		
Utilization in MLD	20.60 MLD	20.74 MLD	20.78 MLD	21.17 MLD	21.22 MLD	21.59 MLD	21.59 MLD	21.59 MLD	21.59 MLD	21.59 MLD		
Utilization in %	76.32 %	76.85 %	76.99%	78.41 %	78.62 %	79.98 %	79.98 %	79.98 %	79.98 %	79.98 %		

	Oct. 2023											
Household Connected	0											
Utilization in MLD	21.59 MLD											
Utilization in %	79.98 %											

B. In-situ Bio-remediation and others :

	Name of the Polluted River (P-V)	Total Length of the River	Length of Polluted stretches	BOD Range (mg/l)	Population at polluted zone	Status / Proposed for Treatment
1	Imphal	89.24 km	19.98 km	2.9 - 3.1	84,857	- Revised DPR for Imphal River along with Fecal Sludge and Septage Management (FSSM) for 315 KLD at 27 ULBs and in situ treatment through Bio-remediation of 16.75 MLD submitted to NRCD on 18th September 2021. - Revised DPR with full justification on the comments made by the Ministry will be submitted soon.
2	Iril	156.50 km	18.12 km	2.8 - 3.0	1,714	
3	Khuga	79.25 km	10.92 km	2.0 – 3.0	857	
4	Khujairok	10.06 km	4.21 km	3.2	4,286	
5	Lokchao/ Thongjarok	17.04 km	5.31 km	3.0	1,143	
6	Manipur	261.00 km	35.00 km	3.1	7,143	
7	Thoubal	142.80 km	24.61 km	2.8	30,286	
8	Wangjing	35.08 km	3.70 km	3.1 - 3.2	7,143	

Note :

ASP (Activated Sludge Process), EAP (Extended Aeration Process),
SBR (Sequencing Batch Reactor), MBBR (Moving Bed Biofilm Reactor)

	FORMAT FOR SEWAGE TREATMENT PLANTS AND UTILIZATION OF SEWAGE (20 th October 2023)															
Sl. No.	City / Town	No. of STP	Location of STP	Coordinates of STP	STP Commissioned year	Status (operational/ Non-Operational/ Under Construction)	STP Installed Capacity (In MLD)	Actual Utilization of installed capacity (In MLD)	Technology UASB / ASP / OP / SBR / MBBR / FAB etc.	Consent status	Compliance Status Source: Manipur Pollution Control Board					
											Oil & Grease	pH	TSS mg/l	COD mg/l	BOD mg/l	Faecal
1	Imphal	1	Lamphel	24°49''45'N 93°54''58'E	2020	Operational	27	21.59 MLD	ASP		2.5	7.3	3.2	44	12.4	12

LIST OF WATER POLLUTING FACTORIES LOCATED WITHIN INDUSTRIAL ESTATE/FOOD PARK**Takyel Industrial Estate, Imphal West Districts, Manipur.**

Sl. No.	Name of unit	Nearest River	Proprietor	Name of Products
1	M/S Modern Foods	Nambul	T. Sanajaoba Singh	Noodles
2	M/S Hangle Industries	Nambul	H. Nabadeep Singh	Spices & Food Products
3	M/S Pera Fruit Products	Nambul	Kh. Sanayaima Singh	Fruit Processing
4	M/S Khudol	Nambul	K. Siddhanta Sharma	Food Processing
5	M/S Ratana Fruit	Nambul	L. Sarat Singh	Food items
6	M/S Universal Iodises Salt Industries	Nambul	P. Joychandra Singh	Food Items

Nilakuthi Food Park, Imphal East

Sl. No.	Name of unit	Nearest River	Proprietor	Name of Products
1	Shree Balaji Flour Mill	Imphal	Mrs. Rangnamei Martha	Flour
2	KMU	Imphal	Wangkheirakpam Gobin Singh	Bakery
3	Thangjam Agro Industries Pvt. Ltd.	Imphal	Thangjam Joykumar Singh	Bakery

TABLE 1 : SOLID WASTES GENERATION, COLLECTION AND MANAGEMENT - ULB WISE IN MANIPUR, October 2023

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
1	Imphal MC	2,65,573	3,50,050	157.5	129.0	3	100	90	25.5	115.5	27%	100% By Dec 2023
2	Lamshang MC	8,130	9739	2.92	1.2	0.22	1	1.2	1.5	2.7	7.53%	Waste collection vehicle procured. Bye Law published and Segregation of Waste aimed to reach 100% by November 2022.
3	Samurou MC	14818	18602	5.58	3.44	0.9	3	3.44	1.24	4.68	16%	100% Segregation at source by Dec 2023, presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid Waste Management Plant. Increase in awareness. Increase in Manpower and vehicles. Allotment of Permanent land for management of solid waste has been proposed to DC.
4	Thongkhong Laxmi MC	14,878	18,677	5.6	3.26	0.81	0.7	3.26	1.53	4.79	14%	Inert collected waste, which remains after segregation of recycle-able items including plastics and cardboard boxes, composting materials, domestic hazardous waste, etc, is transferred to Lamdeng Solid Waste treatment plant.

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
5	Sekmai MC	5,065	6,358	1.9	1.20	0.2	1	1.2	0.50	1.7	11%	- Engagement of local clubs/SHGs to enhance D2D and emphasize segregation at source - Capacity enhancement for treatment and processing
6	Lilong IW MC	12,427	15,600	4.6	1	0.6	1	1	3	4	13%	More composting pits , more vehicles and manpower and encouraging source segregation and home composting. Cluster basis facilities at Lamdeng SWM Plant.
7	Lamlai MC	4,601	5,776	1.73	0.9	0.1	3	0.9	0.73	1.63	6%	Treatment facilities at Lamdeng Waste to energy Plant (Cluster Approach)
8	Thoubal MC	45,947	57,678	17.3	13	0.3	10	9	4	13	24.9%	- Encouraging source segregation and home composting - Training of newly engaged staffs - Treatment started - Massive awareness of general public and sanitary staff
9	Yairipok MC	9,569	12,012	3.6	1.4	0.2	1	0.89	2	2.89	20%	- More composting by Dec 2023 - Engaging recyclers for waste
10	Sikhong Sekmai MC	7,390	9,277	2.78	0.56	0	1	0.56	2.22	2.78	0%	Treatment facilities at Thoubal cluster
11	Lilong TBL MC	24,900	31,258	9.3	2.00	0.8	1	1	6.5	7.5	19%	More composting pits, more

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
												vehicles and manpower and encouraging source segregation and home composting. Cluster basis facilities at Thoubal SWM Plant.
12	Heirol MC	2,974	3,733	1.12	0.42	0.05	1	0.3	0.65	0.95	15.2%	• More composting unit by Dec 2023
13	Wangjing Lamding MC	8,055	10,112	3.03	0.7	0.3	1	0.37	2.03	2.4	20.8%	• More composting unit by Dec 2023
14	Andro MC	8,744	10,977	3.29	0.9	0	1	0.78	2.39	3.17	3.65%	• Treatment facilities at Thoubal Khunou (Cluster B) • Increase in manpower. • Awareness drives & Engagement of recyclers
15	Kakching MC	32,138	40,344	12.1	8.57	0.15	7	6.53	3.38	9.91	18%	• Intensified IEC on door-to-door waste collection and source segregation • Mandatory submission of payment receipts of D2D waste collection at the time of availing any form of service from the council • With these activities Generation - Management gap will 0% by 20.11.2023
16	Kakching Khunou MC	11,379	14,284	4.28	2.6	0.07	1.2	2.1	1.61	3.71	13%	• Transport of remaining segregated waste to Kakching cluster.

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
												Engagement of recyclers.
17	Sugnu MC	5,132	6,442	1.93	1.13	0.3	1.2	0.61	0.50	1.11	42%	- Transport of remaining segregated waste to Kakching cluster. - Engagement of recyclers
18	Mayang Imphal MC	24,239	34,428	10.33	7.02	0.42	4	3.46	2.89	6.35	39%	Treatment Plant/Composting Pits and segregation Sheds/MRF are operational. Remaining collected waste are kept under control. Awareness & IEC activities are carried out for more effective and making up the gaps.
19	Wangoi MC	9,106	11,431	3.43	1.25	0.20	2.1	1.09	1.98	3.07	10.496%	IEC activities and Behavioural change
20	Kumbi MC	9,546	11,983	3.59	2	0.08	1	1.29	1.51	2.8	22%	- Now 100% D2D collection. - Land available 0.27 acre
21	Kwakta MC	8,579	10,769	3.23	1.13	0	1	0.55	2.1	2.65	17.96%	Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	19,893	24,972	7.49	5.4	0.09	4	2.99	2	4.99	33%	Segregation shed has constructed . Composting plans also been constructed. It has commissioned. IEC Campaign has organised for proper 100% source segregation.

No.	Name of ULB	Population		Solid Waste Generated (MTD)	Waste Collected (TPD)	Gap between Generated and (Collected + Managed at source)	Managed/Treated (in TPD)					Plan to mitigate the gap between generation of wastes vs collection, managed / treated and Remarks
		2011 Census	2021 Projected				Facilities (TPD)	Managed / Treated	Processed at source	Map Gap in TPD	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
23	Ningthoukhong MC	13,078	16,417	5.00	2.2	0.3	5.5	1.7	2.5	4.2	16%	100% D2D collection- Composting Segregation
24	Bishnupur MC	12,167	15,274	4.58	3.48	0	5	2.8	1.1	3.9	14.8%	Vigorous IEC campaign and implementation of stringent rules or bye-laws, By-Laws is published and shall be implemented for closing the gap
25	Oinam MC	7,161	8,989	2.7	1.6	0.0	1.5	0.9	1.1	2	26%	- Encouraging households to source segregate waste and practice home composting of wet waste. - Engaging recyclers for dry waste.
26	Nambol MC	22,512	28,260	8.5	4.3	0	2	1.8	4.2	6	29%	- Increasing recovery of other recyclable materials apart from plastic bottles/waste. - Encouraging source segregation and home composting.
27	Jiribam MC	7,343	9,218	2.76	2.51	0	8	2.51	0.25	2.76	0%	NIL
Total		6,15,344	7,92,660	290	202	9.09	169.2	142	78.9	221.14		
PC to the generated wastes					70%	3%	58%	49%	27%	76%	24%	

Note : *1. Taking r=2.3 as annual Population growth rate [Ref.: MoUD, Gol] *2. Waste generated is estimated including floating population @10%
*3. As per SBM 2.0 guidelines, Waste generated is estimated in @450gm per capita generation (for more than 1 lakh population) for Imphal MC and @ 300gm per capita generation (for less than 1 lakh population)

TABLE 2 : SOLID WASTES GENERATION, COLLECTION AND MANAGEMENT – WARDWISE OF ULBs IN MANIPUR, OCTOBER 2023

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
1	Imphal MC	27	27	100%	27	55.0%		Waste to Energy and Composting	100% by December 2023
2	Lamshang MC	9	9	100%	9	65%	0	Composting	IEC activities to emphasize Segregation at Source
3	Samrouh MC	11	11	100%	11	60%	0	Segregation cum transfer station	100% Segregation at source by March 2023 - Presently collected waste after segregation of recyclable plastic waste and cardboard is being transferred to Lamdeng Solid Waste Management Plant - Increase in awareness. Increase in Manpower and vehicles - Allotment of Permanent land for management of solid waste has been proposed to DC.
4	Thongkhong Laxmi MC	11	11	100%	11	60%	0	Segregation cum transfer station and composting pits.	- In terms of Ward-wise, Region-wise, Area-wise, Leikai-wise, Leirak-wise coverage of D2D collection, there is 100% coverage of D2D - More awareness and behavioural change campaign required Capacity building of manpower - By acquiring a permanent sanitary landfill/solid waste management site. (ULB has requested to concerned DC and MAHUD Dept. vide letter of even nos. dated 18.05.2019, 02.08.2021, 29.11.2021& 04.11.2022 to allocate a suitable SWM site for the ULB but yet to be allotted till now.)

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
5	Sekmai MC	9	9	100%	9	75%	0	• Home Composting is predominant in all wards • Central Composting at Segregation Shed , Parao • Mixed/ Dry Waste disposed at Lamdeng SWM Plant	• IEC activities to emphasize segregation at Source
6	Lilong IW MC	9	9	100%	9	80%	0	• Segregation Shed for Material Recovery • Vermi composting	• More composting pits , more vehicles and manpower and encouraging source segregation and home composting. Cluster basis facilities at Lamdeng SWM Plant...
7	Lamlai MC	9	9	100%	9	100%	0.88	• Composting (Home +Centralised) • Source segregation and centralised segregation	• Treatment facilities at Lamdeng Waste to energy Plant (Cluster Approach)
8	Thoubal MC	18	18	100%	18	80%	6.7	• Segregation and composting	• Collection to be done through NGOs AND SHGs
9	Yairipok MC	9	9	100%	8	93%	2.2	• Transfer and Segregation Station and Composting	• More composting unit by Dec 2023
10	Sikhong Sekmai MC	9	9	100%	9	100%	0.62	• Wet waste get processed at source as feed of poultry and piggery, segregated recyclable waste is sent to recycler	• Treatment facility at Thoubal Cluster
11	Lilong TBL MC	9	9	100%	9	70%	0	• Segregation Shed • Composting Unit	• More composting pits , more vehicles and manpower and encouraging source segregation and home composting • Cluster basis facilities at Thoubal SWM Plant

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
									• Extensive awareness drive, incorporating more SHGs in SWM
12	Heirol MC	9	9	100%	9	70%	0	• Transfer and Segregation Station and Composting	• More composting unit by Dec 2023
13	Wangjing Lamding MC	9	9	100%	9	85%	0	• Segregation and transfer station	• More composting unit by Dec 2023
14	Andro MC	12	12	100%	12	97.5%	0.96	• Bulk of wet waste is processed or consumed at source a poultry & piggery feeds - Aerobic Composting, Segregation & Recycling	• Transport of remaining segregated Inert waste to the transfer station for Cluster-B located Thoubal • Increase in manpower, Awareness drives & Engagement of Recyclers.
15	Kakching MC	12	12	100%	12	94%	2	• Composting, segregation & recycling	• Intensified awareness on source segregation. Manual segregation, mechanical segregation(to be started shortly) and aerobic composting to mitigate the gap of generation and management. With these activities generation -management gap will be 0% by 20.11.2023
16	Kakching Khunou MC	9	9	98%	9	92%	2	• Composting, segregation & Recycling	• Transport of remaining segregated wasted to Kakching cluster. Engagement of recyclers
17	Sugnu MC	9	9	97%	9	81%	1	• Composting, Segregation & Recycling	• Transport of remaining segregated wasted to Kakching cluster Engagement of recyclers

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
18	Mayang Imphal MC	13	13	100%	13	85%	1.25	Segregation Sheds at Ward Level and Processing Unit are operational. Home composting plant is on progress.	Treatment Plant/Composting Pits and segregation Sheds/MRF are operational. Remaining collected waste are kept under control. Awareness & IEC activities are carried out for more effective and making up the gaps.
19	Wangoi MC	9	9	100%	9	70%	0.17	Composting	
20	Kumbi MC	9	9	100%	9	65%	0.27	Composting	
21	Kwakta MC	9	9	100%	9	65%	0.625	Composting	Untreated waste is dumped at uncontrolled dumpsite as a short time measure. Once the cluster basis is completed, the untreated wastes shall be transferred at the cluster head for further processing
22	Moirang MC	12	12	100%	12	59%	5.1	Composting	Requested DC to allot land. Rigorous IEC Campaign to be held for source segregation
23	Ningthoukhong MC	14	14	100%	14	80%	1.31	Composting & sent back for re-cycling	Composting Segregation
24	Bishnupur MC	12	12	100%	12	75%	5	Sanitary Landfill	Composting plant at 2.5 Acre
25	Oinam MC	9	9	100%	9	70%	0	Composting	- Encouraging households to source segregate waste and practice home composting of wet waste. - Engaging recyclers for dry waste.
26	Nambol MC	18	18	100%	18	85%	3.21	- Composting pit - Manual Segregation initiated at the segregation shed	- Capacity building of sanitary Workers - Increasing manpower, vehicles and machinery - Extensive awareness drive - Co-opting SHGs and CSOs in SWM

Sl. No.	Name of ULB	Total Wards	Door to Door (D2D) Collection		Segregated at source		Land Available in Acre	Type of processing unit	Plan to mitigate the gap generation and Management
			No. of Wards	in %	No. of Wards	in %			
27	Jiribam MC	10	10	100%	10	100%	6.02	• Composting, Send back for recycling, MRF	• Nil
Total		305	305		304		38.695		
In Percentage-Ward coverage				100%		100%			
Average Household coverage				100%		78%			

Table-3 : SOLID WASTES PROCESSING AND MANAGEMENT – WARDWISE OF ULBS IN MANIPUR, OCT 2023

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
1	Imphal MC and Lamdeng SWM Plant	Nil	Composting and Waste to Energy Plant operational	Nil		Nil	Nil	1	Nil	Nil	Nil
2	Lamshang MC	NA	Composting and manual segregation of waste, waste to power and waste to manure at Lamdeng SW plant	Nil		Nil	Nil	Nil	Nil	Nil	Nil
3	Samrou MC	NA	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
4	Thongkhong Laxmi MC	NA	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
5	Sekmai MC	0	NA	Nil		0	0	Nil	Nil	Nil	Nil
6	Lilong IW MC	0	Manual Segregation of waste for material recovery Vermicomposting pits	Nil		Nil	Nil	Nil	Nil	Nil	Nil
7	Lamlai MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
8	Thoubal MC	0	NA	Nil		Nil	Nil	1	2	Nil	Nil
9	Yairipok MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
10	Sikhong Sekmai MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
11	Lilong TBL MC	0	Manual Segregation of waste for material recovery Vermicomposting pits	Nil		Nil	Nil	Nil	Nil	Nil	Nil
12	Heirok MC	0	Composting pit	Nil		Nil	Nil	Nil	Nil	Nil	Nil
13	Wangjing Lamding MC	0.3	Composting pit [proposed]	Nil		Nil	Nil	Nil	Nil	Nil	Nil
14	Andro MC	0	Manual segregation & aerobic composting	Nil		Nil	Nil	Nil	Nil	Nil	Nil
15	Kakching MC	0	Manual segregation & aerobic composting	Nil		1	2	1	2.5	Nil	Nil
16	Kakching Khunou MC	0	NA	Nil		0	0	Nil	Nil	Nil	Nil
17	Sugnu MC	0	NA	Nil		Nil	Nil	Nil	Nil	Nil	Nil
18	Mayang Imphal MC	0	Manual segregation of waste & composting construction completed.	Nil		Nil	Nil	Nil	Nil	Nil	Nil
19	Wangoi MC	0	Nil	Nil		Nil	Nil	Nil	Nil	Nil	Nil
20	Kumbi MC	0	Composting pit	Nil		1	0.27	Nil	Nil	Nil	Nil
21	Kwakta MC	0	NA	Nil		1	0.016	Nil	Nil	Nil	Nil

Sl No.	Name of ULB or Name of Processing Unit	Processing unit Under Construction		Uncontrolled Dumpsite		Controlled Dumpsite		Sanitary Landfill		Area of Legacy waste within 1 km buffer of the river	Drains falling into river having floating racks/screen
		Capacity TPD	Technology	No.	Area (Acre)	No.	Area (Acre)	No.	Area (Acre)		
22	Moirang MC	0	NA	Nil		1	2.5	Nil	Nil	Nil	Nil
23	Ningthoukhong MC	0	Anaerobic ,Segregation, Composting and recovery of reusable wastes.	Nil		1	1.31	Nil	Nil	Nil	Nil
24	Bishnupur MC, Multi-Segregation shed at Chothe Village, Ward No. 12	0	Anaerobic (completed)	Nil		Nil	Nil	1	2.5	Nil	Nil
25	Oinam MC	0	Composting (operational)	Nil		1	0.4	Nil	Nil	Nil	Nil
26	Nambol MC	0	Aerobic and vermi-composting	Nil		1	3.21	Nil	Nil	Nil	Nil
27	Jiribam MC	0	NA	Nil		Nil	Nil	1	1.72	Nil	1
	Total	0.3				7	9.706	5	8.72		1

STATUS OF WATER QUALITY OF POLLUTED RIVERS**Remark :**

Manipur Pollution Control Board has been conducting monthly water quality analysis of the polluted rivers. The monthly water quality data of the polluted rivers will be reported during 1st week of the next month i. e. Report for September will get on 1-10th October. Therefore, Water Quality Report for September will be reproduced in the MPR of October.

Water Quality of the Imphal, Iril, Manipur, Thoubal, Wangjing, Khuga, Khujairok, Lokchao, Nambul, Waisel Maril & Moirang Rivers and Effluent of Sewage Treatment Plant, Langol
for the month of SEPT, 2023

1. Imphal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Koirengei	7.4	7.3	3.2	7.4	50
Minuthong	7.3	7.3	3.3	9.2	70
Mahabali	7.3	7.4	3.2	8.4	75

2. Iril River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kangla Siphai	7.3	7.4	3.2	12.3	50
Porompat	7.4	7.5	3.3	8.6	50
Lilong	7.2	7.3	3.3	11.6	65

3. Manipur River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Yairipok	7.3	7.3	3.2	11.2	55
Sekmaijing	7.4	7.4	3.3	10.6	70
Ithai	7.4	7.4	3.3	9.4	75

4. Thoubal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Litan	NA	NA	NA	NA	NA

5. Wangjing River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Heirok	7.3	7.4	3.3	10.4	55
Wangjing	7.3	7.3	3.2	10.0	60

6. Khuga River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Churachandpur Bazar	NA	NA	NA	NA	NA
Khuga Dam	NA	NA	NA	NA	NA

7. Khujairek River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Khujairek	NA	NA	NA	NA	NA

8. Lokchao River, Bishnupur

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Lokchao Bridge near Bishnupur Bazar	7.4	7.3	3.3	9.2	45

9. Nambul River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Samushang	7.0	7.2	4.4	15.4	140
Naoremthong	7.1	7.2	4.2	15.2	90
Hump Bridge	6.5	7.0	4.4	16.4	180
Heirangoithong	6.8	7.1	4.6	15.6	210

10. Kongba River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kongba Eranpham	6.8	7.3	4.2	13.2	150
Kongba Erong	6.4	7.2	3.9	12.4	130

11. Waisel Maril

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Meijrao Bridge, Hiyangthang	6.5	7.3	4.0	13.2	170
Kha Sanjenbam Mayai Leikai	7.1	7.3	3.9	12.4	80

12. Moirang River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Laikhurembi, Moirang Bazar	7.3	7.3	3.3	10.2	50

13. Sewage Treatment Plant Effluent

Location	Oil & Grease (mg/L)	pH	TSS mg/L	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Langol	2.5	7.3	3.2	12.4	44	125

Action Plan of the model river in Manipur

Action	Target Action	Priority – II : Nambul River		
		Target Quantity	Time Line	Status
Action 1	Solid Waste Management			
1.1	Identification of garbage vulnerable point	12 Municipal Wards	Oct 2019	Completed Action: MAHUD / IMC
1.2	Door to Door Collection, identify & register of missed out house hold, punitive action against litterer along the river	12 Municipal Wards	Oct 2019	Completed Action: MAHUD / IMC
1.3	Formation of Tasks Force for proper implementation of waste management		Oct 2019	Constituted
1.4	Providing of household waste bins	19,863 bins	Oct 2020	80% completed Action: Environment & CC
1.5	High rise fencing of grilling and netting at vulnerable zones of both the river banks to protect throwing of solid wastes into the river	5 km	Apr 2021	Completed Action: Environment & CC
1.6	Renovation of existing crematoria along the river stretch	56 Nos.	Apr 2021	Completed Action: Environment & CC
1.7	Installation of secondary waste collection bins / community bins / dumper placer containers / transfer bins / littering bins at suitable places	37 Nos.	Oct 2020	Completed Action: Environment & CC
1.8	Construction of Public toilets at vulnerable points	35 Nos. by IMC 20 Nos. under NRCD	Apr 2021	Completed Action: Environment & CC
1.9	IEC / Public Awareness Activities	14 No. (one each in every ward)	Every month	Conducted regularly Action: Environment & CC
Action 2	Channelization, treatment, utilization and disposal of treated domestic sewage			
2.1	Identification of location and estimation of liquid waste generation at Imphal town		Oct 2019	Completed Action: PHED
2.2	Interception and diversion of the urban drains / outfalls to the Nambul River by laying pipes of 14,545 meters at both the banks of River at 12 Municipal Wards viz. 6, 7, 8, 9, 11, 12, 13, 14,15, 16, 24 and 27		Apr 2022	30% Completed Action: Environment & CC
2.3	Treatment option and capacity : Installation of 2 (two) Sewage Treatment Plants (STPs) of 16 MLD and 1 MLD		Apr 2022	85% Completed Action: Environment & CC
2.4	Commissioning of the Imphal Sewerage Project Phase-I of 27 MLD		Dec 2019	Commissioned Action: PHED
2.5	Commissioning of the Imphal Sewerage Project Phase-II of 41 MLD		Apr 2022	DPR Submitted, waiting for approval of NIT from NDB Action: PHED

Action	Target Action	Priority – II : Nambul River		
		Target Quantity	Time Line	Status
Action 3	Protection of catchment area			
3.1	<i>In-situ</i> augmentation of medicinal plants and economic plantation at catchment			Completed Action: Forest
Action 4	Protection and prevention of Flood Plain Zone			
4.1	Protection and Improvement of River Bunds. 1,500 m for Nambul River 16,860 m in Imphal River 2,670 m in Kongba River 2,403 m in Thoubal River 317 m in Wangjing River 11,711 m in Manipur River		Before 2021	Status will be updated soon Action: WRD
4.2	Re-Sectioning of Rivers and Streams. 82,091 m in Imphal River. 15,480 m in Kongba River 89,100 m in Nambul and its tributaries. 1,900 m in Chakpi River		Before 2021	Status will be updated soon Action: WRD
4.3	CC/RCC Retaining Walls with and without piles to be provided at the most eroded and vulnerable river banks.		Before 2021	Status will be updated soon Action: WRD

B. 8 (eight) polluted stretches of Rivers viz. Imphal, Iril, Khuga, Khujairok, Lokchao, Manipur, Thoubal, Wangjing under Priority V in Manipur

Action	Target Action	Target Quantity	Timeline	Status & Actor
Action 1	Solid Waste Management			
1.1	Identification of garbage vulnerable point along the 8 (eight) identified polluted river stretches	59 Municipal Wards	6 months (December 2019)	Status will be updated soon Action : MAHUD / ULBs
1.2	Door to Door Collection and transportation of Municipal solid wastes with source segregation through Cluster Approach	59 Municipal Wards 33.45 MT	1 year (June 2020)	
1.3	Installation of littering bins at suitable places	500 Nos. of Bins	1 year (June 2020)	
1.4	Setting up of waste processing site at Cluster Approach	5 Cluster Units	2 Year (June 2021)	
1.5	Construction of Public toilets at vulnerable points	59 Nos. (one each for every ward for 59 wards)	2 Year (June 2021)	
1.6	IEC / Public Awareness Activities	177 Nos. (3 times for every 59 Wards)	Ongoing	
1.7	Encouraging of home composting	10% of total household	Ongoing	
Action 2	Channelization, treatment, utilization and disposal of treated domestic sewage			
2.1	Identification of location and estimation of liquid waste generation	Under survey	Ongoing	Completed Action : PHED
2.2	Treatment option through phytoremediation technique in consultation with NEERI (National Environmental Engineering Research Institute), Nagpur	27.024 + 38.73 = 65.754 MLD	2 Years (June 2021)	DPR submitted to NRCD, Ministry of Jal Shakti, Govt. of India Action : Environment & CC
2.3	Commissioning of the Imphal Sewerage Project Phase-II: Installation of STPs of 3 (three) units SBR (Sequencing Batch Reactors) technology covering all the remaining wards of Imphal Municipal Corporation (Finalized DPR)	41 MLD	Funding awaited	DPR submitted, waiting for approval of NIT from NDB Action : PHED
Action 3	Protection of catchment Area of 1539 sq. km.			
3.1	In situ augmentation with economic plants	1539 sq. km.	2 Years (June 2021)	Status will be updated soon Action : Forest
3.2	Inventorisation and mapping of springs for protection and rejuvenation at catchment	8 rivers	1 Year (June 2020)	Status will be updated soon Action : Environment & CC
Action 4	Protection and prevention of Flood Plain Zone			
4.1	Protection and Improvement	1. 1500 m for Nambul	Before 2021	Status will be updated

	of River Bunds	River 2. 16860 m in Imphal River and its tributaries 3. 2670 m in Kongba River 4. 2403 m in Thoubal River 5. 317 m in Wangjing River 6. 11711 m in Manipur River		soon Action : WRD
4.2	Re-Sectioning of Rivers and Streams	1. 82091 m in Imphal River 2. 15480 m in Kongba River 3. 89100 m in Nambul and its tributaries 4. 1900 m in Chakpi River	Before 2021	
4.3	CC / RCC Retaining Walls with and without piles to be provided at the most eroded and vulnerable river banks	Along Nambul, Imphal, Thoubal, Kongba, Iril and other major rivers	Before 2021	