

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 March 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 : 21.22 MLD
- MLD of sewage being treated through alternate technology : NIL
- Gap in Treatment Capacity in MLD : 5.78 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	21.22 MLD	Operational (78.62%)	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	Work Order Issued	---

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	:	Nil
	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 : 205 TPD
- Existing Management / treatment facility : 162.7 TPD
- Utilization of MSW processing : 130 TPD
[Managed by ULBs = 135 TPD
Managed at Source = 76.1 TPD
Total Managed = 211TPD]
- 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 June 2023
2	Lamshang MC	1	1	Composting	- Capacity Building to achieve 100% collection - Segregation of Waste aimed to reach 100% by March 2023.
3	Samurou MC	3	3..32	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

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	3.13	• 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	0.9	• 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	0.5	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	4.0	• 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	0.51	• Transfer and segregation Station & Composting	• More Composting by June 2023 • Engaging recyclers for waste
10	Sikhong Sekmai MC	1	0.56	• Wet waste gets processed at source feed of poultry and piggery. • Segregated recyclable	• 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
				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	0.11	Transfer and Segregation Station and Composting	More composting unit by June 2023.
13	Wangjing Lamding MC	1	0.11	Segregation and transfer station	More composting unit by June 2023.
14	Andro MC	1.0	0.74	- Bulk waste is processed or consumed at source a poultry and piggery feeds - 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	6.5	Composting, Segregation & Recycling	- Purchase of 4(four) TATA 407(ready for deployment) - IEC activities and Behavioural Changed by January 2023 - Engagement of recyclers
16	Kakching Khunou MC	1.23	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 I MC	4	2.98	- 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

SN	Name of MSW processing unit	Installed capacity	Utilization (in TPD)	Type of processing	Action plan to bridge Gap between utilization and installed facility
					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	1.3	• 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	2.51	• Composting sends back for recycling, MRF	Nil
	Total	165	133		

• 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	• 303 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	:	0.70 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	:	42 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 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. 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

Annexure - 1

A. Total Status of STPs in Imphal (as on 15th March, 2023)

Particular	Unit	Phase I	Phase II	Ongoing NRCD Project	Total
Capacity of STP	MLD	27	49	17	93
Capacity of STP Utilized	MLD	21.22			21.22
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	7520			7520
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 LAMPHEL PAT, 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 10th Mar. 2023	Gap
Household Connected	4000	250	250	60	10	30	0	0	0	0	7520	2044
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	21.22 MLD	5.78 MLD
Utilization in %	33%	35%	38%	38%	38%	38%	38%	38%	38%	38%	78.62 %	21.38 %
	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				
Household Connected	50	280	356	800	50	14	150	20				
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				
Utilization in %	61.31 %	64.24 %	67.96 %	76.32 %	76.85 %	76.99 %	78.41 %	78.62 %				

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 March 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			
											pH	TSS mg/l	COD mg/l	BOD mg/l
1	Imphal	1	Lamphel	24°49''45'N 93°54''58'E	2020	Operational	27	21.22 MLD	ASP		7.2	28	35	11.2

LIST OF WATER POLLUTING INDUSTRIES REGISTERED UNDER THE FACTORIES ACT, 1948 LOCATED OUTSIDE OF INDUSTRIAL ESTATE/FOOD PARK

Sl. No.	Name of unit	Status	Factory License	Consent status	Re-categorisation as per CPCB direction	Factory Type	Nearest River	Occupier/ Proprietor	Section	No. of workers
1.	Elija's Resting Center, Singjamei Mayengbam Leikai, IW	Action initiated/ taken	322	No	Green, water polluting	Soap/ Detergent	Imphal	Smt Irom (O) Manju Devi	85	8
2.	Manihar Oil Mill, Wangoi Thounaojam Leikai, IW	Action initiated/ taken	264	No	Green, water polluting	Oil Mill	Manipur	L. Manihar Singh	85	3
3.	Dish & Detergent Making Industry, Thoubal Achouba (Mela Ground), Thoubal	Instructed to apply for consent	268	No	Green, water polluting	Soap/ Detergent	Manipur	Thounaojam Premila Devi	85	9
4.	Ahanthem Oil Mill, Pishumthong, Oinam Leikai, IW	Action initiated/ taken	48	No	Green, water polluting	Oil Mill	Nambul	Ahanthem Arunkumar Singh	85	3
5.	Tet (Tyre, Engine, Gas Body), Uripok Khoisnam Leikai, IW	Action initiated/ taken	59	No	HW generating unit	Automobile Workshop	Nambul	A Satyaranjan Sharma	85	5
6.	Mohon Motor Works Naoremthong Khullem Leikai, IW	Action initiated/ taken	103	No	HW generating unit	Automobile Workshop	Nambul	Maibam Dian Mohan	2m(i)	18
7.	Surjit Motor Works, Uripok Yambem Leikai, IW	Action initiated/ taken	303	No	HW generating units	Automobile Workshop	Nambul	Soubam Surjit Singh	85	6
8.	Athokpam Oil Mill, Wangbal Lamboithong, Thoubal	Action initiated/ taken	321	No	Green, water polluting	Oil Mill	Thoubal	Athokpam Bolai Singh	85	3
9.	Bimolchand Oil Mill Yairipok Poiroukhongjin, IE	Action initiated/ taken	242	No	Green, water polluting	Oil Mill	Wangjing	Konthoujam Bimolchand Singh	85	3
10.	Miranda Oil Mill, Wangjing Sorokhaibam Leikai, Thoubal	Action initiated/ taken	126	No	Green, water polluting	Oil Mill	Wangjing	Khundrakpam Miranda Devi	85	3

Sl. No.	Name of unit	Status	Factory License	Consent status	Re-categorisation as per CPCB direction	Factory Type	Nearest River	Occupier/ Proprietor	Section	No. of workers
11.	Oinam Motors Maruti Suzuki Workshop Yairipok Bishnunaha Pukhri Mapal, Thoubal	Action initiated/ taken	210	No	Green, water polluting	Automobile Workshop	Wangjing	Oinam Ananta Singh	85	6
12.	Ingocha Tractor Repairing Centre, Yairipok Bishnunaha, Thoubal	Action initiated/ taken	294	No	HW generating unit	Automobile Workshop	Wangjing	Takhelambam Ingocha Singh	85	6

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, MARCH 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 June 2023
2	Lamshang MC	8,130	9739	2.92	1	0.42	1	1	1.5	2.5	14.38%	• Capacity Building to achieve 100% collection • Segregation of Waste aimed to reach 100% by March 2023.
3	Samurou MC	14818	18602	5.58	3.32	1.04	3	3.32	1.22	4.54	19%	• 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	3.17	0.91	0.7	3.13	1.52	4.65	16.96%	• 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	1.40	0	1	0.9	0.50	1.4	26%	- 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	0.5	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	4	4	8	53.8%	- 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	0.51	1.8	2.31	36%	- More composting by June 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 encouraging 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	Total	Gen-Man Gap= [(Gen-Man)/ Gen] x 100	
												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 June 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 June 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	8.5	0.24	7	6.5	3.36	9.86	18.51%	• Purchase of 4(four) TATA 407(ready for deployment) • IEC activities and Behavioural Changed by January 2023 • Engagement of recyclers
16	Kakching Khunou MC	11,379	14,284	4.28	1.38	1.29	1.23	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	1.3	0.03	1.2	0.59	0.60	1.19	38.34%	• 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	2.98	2.69	5.67	45%	• Treatment Plant/Composting Pits and segregation Sheds/MRF are operational • Remaining collected waste are kept under control

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	
												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
23	Ningthoukhong MC	13,078	16,417	5.00	2.2	0.3	5.5	1.3	2.5	3.8	24%	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	2.51	0	8	2.51	0.25	2.76	0%	NIL
Total		6,15,344	7,92,660	290	202	11.55	158.3	133	76.7	209.55		
PC to the generated wastes					70%	4%	55%	46%	26%	72%	28%	

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, MARCH 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	39%		Waste to Energy and Composting	100% by December 2022
2	Lamshang MC	9	9	100%	9	69%	0	Composting	Composting
3	Samurou MC	11	11	100%	11	56%	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	57%	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	88%	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%	0.9	• 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	60%	6.7	• Segregation and composting	• Collection to be done through NGOs and SHGs
9	Yairipok MC	9	9	100%	7	85%	2.2	• Transfer and Segregation Station and Composting	• More composting unit by June 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 June 2023
13	Wangjing Lamding MC	9	9	100%	9	70%	0	• Segregation and transfer station	• More composting unit by June 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	100%	5	• Composting, segregation & recycling	• Segregation and aerobic composting is just started
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		303		36.615		
In Percentage-Ward coverage				100%		99%			
Average Household coverage				99.7%		76%			

Table-3 : SOLID WASTES PROCESSING AND MANAGEMENT – WARDWISE OF ULBS IN MANIPUR, MARCH 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	Samurou 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	Composting and manual segregation of waste Vermicomposting	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	NA	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
22	Moirang MC	0	NA	Nil		1	2.5	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)		
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 February, 2023

1. Imphal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Koirengei	7.2	7.2	2.9	7.2	40
Minuthong	7.1	7.3	3.2	9.4	60
Mahabali	7.1	7.4	3.2	8.6	65

2. Iril River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kangla Siphai	7.4	7.2	3.2	11.8	45
Porompat	7.4	7.5	3.1	8.8	55
Lilong	7.1	7.4	3.2	9.6	60

3. Manipur River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Yairipok	7.1	7.2	3.4	11.6	55
Sekmaiying	7.3	7.3	3.3	11.8	60
Ithai	7.4	7.2	3.2	10.6	65

4. Thoubal River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Litan	7.4	7.4	3.1	12.4	25

5. Wangjing River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Heirok	7.2	7.2	3.4	12.6	50
Wangjing	7.3	7.2	3.5	10.8	60

6. Khuga River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Churachandpur Bazar	7.3	7.1	3.3	8.9	60
Khuga Dam	7.4	7.3	3.1	10.4	20

7. Khujairek River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Khujairek	7.2	7.2	3.4	14.3	130

8. Lokchao River, Bishnupur

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Lokchao Bridge near Bishnupur Bazar	7.0	7.3	3.3	10.2	30

9. Nambul River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Samushang	6.9	7.1	4.5	13.8	90
Naoremthong	6.6	7.3	4.1	14.2	90
Hump Bridge	5.4	7.0	4.3	16.4	240
Heirangoithong	5.0	6.9	4.2	15.7	220
Singda Dam	7.5	7.3	3.1	7.8	30

10. Kongba River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Kongba Eranpham	5.7	7.1	4.3	14.2	130
Kongba Erong	5.4	7.2	4.2	9.5	145

11. Waisel Maril

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Meijrao Bridge, Hiyangthang	5.7	7.1	4.5	14.4	150
Kha Sanjenbam Mayai Leikai	6.9	7.2	4.2	10.8	90

12. Moirang River

Location	DO	pH	BOD mg/L	COD mg/L	Fecal Coliform (MPN/100ml)
Laikhurembi, Moirang Bazar	7.0	7.2	3.4	10.2	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	2.5	7.2	28	11.2	35	120

Action Plan of the model river in Manipur

Action	Target Action	Priority – II : Nambal 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 Nambal 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	