NAGALAND POLLUTION CONTROL BOARD

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NPCB/NGT/OA No. 673/2018/ 2736 Date: 30/09/2021

To

The Secretary
Ministry of Jal Shakti
1st Floor, Major Dhyan Chand National Stadium
India Gate, New Delhi 110002

Sub: Monthly Progress Report for the month of August 2021 in compliance to Hon'ble National Green Tribunal Order dated 08.04.2019 in O.A No. 673 of 2018

Sir,

With reference to the subject cited above, I am enclosing herewith the Monthly Progress Report for River Dhansiri (Priority-I) for the month of August 2021 in compliance of Hon'ble National Green Tribunal Order dated 08.04.2019 in O.A. No. 673 of 2018.

Thank you.

Yours Sincerely

Enclosed: As stated

(K. HukatoChishi, IFS)
Member Secretary

NPCB/NGT/OA No. 673/2018/ Date: 30/09/2021

Copy to:

1. Shri. A. Sudhakar, DH, WQM-I Division, Central Pollution Control Board, Delhi for kind information and necessary action.
2. The Chief Engineer, PHED, Kohima for kind information and necessary action.
3. The Principal Secretary, Dept. of Environment, Forests & Climate Change for kind information.

(K. HukatoChishi, IFS)
Member Secretary

National Mission for Clean Ganga
Format for submission of August 2021 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 Nagaland

Overall status of the State:

I. Total Population: **22.8 lakhs**

Urban Population **(6,58,008)** & Rural Population separately **(16,21,992)**

II. Estimated Sewage Generation (MLD): **44.3 MLD**

III. Details of Sewage Treatment Plant:

- Existing no. of STPs and Treatment Capacity (in MLD): **25.43 MLD under construction at Dimapur**
- Capacity Utilization of existing STPs: **Nil**
- MLD of sewage being treated through Alternate technology: **Nil**
- Gap in Treatment Capacity in MLD: **Nil**
- No. of Operational STPs: **Nil**
- No. of Complying STPs: **Nil**
- 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
Nil					

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	**Dimapur**	**25.43 MLD (under Construction)**	**Construction of STP 100% completed**	**Sewer 90 % (under Construction)**	**31st March 2022**

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
Nil				

IV. Details of Industrial Pollution:

- No. of industries in the State: **1023 Nos.**
- No. of water polluting industries in the State: **5 Nos.**

- Quantity of effluent generated from the industries in MLD: **102 KLD**
- Quantity of Hazardous Sludge generated from the Industries in TPD: **10 TPA**
- Number of industrial units having ETPs: **3 Nos.& 2 units under process**
- Number of industrial units connected to CETP: **NIL**
- Number and total capacity of ETPs (details of existing/ under construction / proposed) : **3 Nos. of 102 KLD capacity. 2 Nos. of ETP 30 KLD is under process**
- Compliance status of the ETPs: **All the ETPs are operational and functioning properly.**
- Number and total capacity of CETPs (details of existing/ under construction / proposed): **Nil**
- Status of compliance and operation of the CETPs

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (existing, under construction & proposed)
Nil				

V. Solid Waste Management:

- Total number of Urban Local Bodies and their Population: **39 ULBs with 6,19,972 population**
- Current Municipal Solid Waste Generation: **304.3 TPD**
  Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing eg- Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), biomethanation, MRF etc: **1 Nos, Kohima Municipal Council has set up a scientific landfill at Lerie, Kohima of 50 TPD capacity processing plant and a plastic recycling unit is also installed at the same site. Dimapur town, generating about 115 TPD, bioremediation has initiated since 2019 for the treatment of legacy waste and fresh solid waste.**

- Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%):**NA**
- No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction): **Nil**
- Total no. of wards, no. of wards having door to door collection service, no. of wards practicing segregation at source

Sl.no	Town	Number of administrative wards	House- to- house collection	Segregation
1	Kohima	19	Yes, 50%	Yes
2	Dimapur	23	Yes, 100%	Yes
3	Mokokchung	18	Yes, 55%	No
4	Phek	11	Yes, 85%	No
5	Wokha	15	Yes, 4%	Yes
6	Mon	11	Yes, 50%	No
7	Zunheboto	13	Yes, 90%	Yes 50%
8	Tuensang	13	Yes, 100%	No
9	Kiphire	11	Yes, 100%	No
10	Peren	9	Yes, 25%	No
11	Longleng	11	No	Yes 20%

Sl.no	Town	Number of administrative wards	House- to- house collection	Segregation
12	Noklak	9	Yes, 15%	No
13	Medziphema	9	No, however, point to point collection is being done	No
14	Chumukedima	11	Yes, 80%	Yes 60%
15	East Dimapur	11	DNA	DNA
16	Tuli	11	Yes, 28%	Yes 85%
17	Changtongya	11	Yes	Yes 30%
18	Longkhim	9	No	Yes
19	Mangkolemba	9	No	No
20	Bhandari	9	No	No
21	Tening	9	No	No
22	Jalukie	9	No	No
23	Pfutsero	11	Yes, 85%	No
24	Tseminyu	9	Under the process for implementation	Yes
25	Naginimora	9	No	No
26	Tizit	9	No	NIL
27	Shamator	11	No	No
28	Pungro	9	No	No
29	Tobu	9	No	No
30	Aboi	9	No	No
31	Meluri	9	No	No
32	Chozuba	9	No	Yes
33	Chiephobozou	10	No	No
34	Niuland	7	No	No
35	Tamlu	9	No	No
36	Seyochung	7	No	No
37	Atoizu	9	No	No
38	Satakha	6	No	No
39	Aghunato	10	No	No

- Details of MSW treatment facilities proposed and under construction (no., capacity, and technology): **Nil**

- No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills:
  38 Nos. of dumpsites and 1 (one) sanitary landfill at Kohima.

- No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers:
  1 no. at Dimapur (29 bighas) near River Dhansiri. Bioremediation has been done since 2019 for the treatment of legacy waste and fresh solid waste.

- No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers:
  River Dhansiri: 2 major drains namely, Lengri nullah & Hospital nullah connects river Dhansiri at the downstream.
  River Chathe: 1 major drain, Sugar mill nullah joins River Chathe.

Status of ULB wise Management of Solid Waste

ULB	Total MSW generation in TPD	Total MSW being processed in TPD	Existing MSW facilities	Utilization Capacity of the existing MSW facilities	Proposed MSW Facilities & Completion Timeline
39	**304.3 TPD**	**132.05**	**1 at Kohima**	**50 TPD processing facilities with landfill life of 25 years**	**Nil**

VI. Bio-medical Waste Management:

- Total Bio-medical generation: **645 kg/day**
- No. of Hospitals and Health Care Facilities: **726 HCFs including clinics**
- Status of Treatment Facility/ CBMWTF: **There are three captive treatment plants i.e. at Phek, Mokokchung and Dimapur. All district hospitals and bedded hospitals have deep burial, sharp pits, and microwave and autoclave facilities for treatment and disposal of biomedical wastes. However, there is no CBMWTF available.**

VII. Hazardous Waste Management:

- Total Hazardous Waste generation: **29.03 MTA**
- No. of Industries generating Hazardous waste: **3 units (oil sludge and spent oil) inventory under progress. This spent oil is transported to Assam for bioremediation by the Indian Oil Corporation.**
- Treatment Capacity of all TSDFs: **Not available**
- Avg. Quantity of Hazardous waste reaching the TSDFs and Treated: **Not available**
- Details of on-going or proposed TSDF: **Not available**

VIII. Plastic Waste Management:

- Total Plastic Waste generation: **565 TPA**
- Treatment/ Measures adopted for reduction or management of plastic waste:

(i) The Govt. of Nagaland vide gazette notification no. dated 17th June 2019 notified "Total ban on all single-use plastics in Nagaland"

The following Single-use plastic products shall be totally banned in the state:

a) All plastic carry bags, with or without handles, irrespective of thickness and size
b) Plastic cutlery including plates, plastic cups, straws, stirrers, etc.
c) Cutlery and other decorative made of Styrofoam (thermocol).
d) Polythene.
e) Nylon.
f) Poly Vinyl Chloride (PVC).
g) Poly- Propylene and
h) Poly-styrene.

(ii) Polymer bitumen road is constructed in limited ways using plastic wastes.

IX. Details of Alternate Treatment Technology being adopted by the State/UT

At present, 2 (two) units of Faecal Sludge Treatment Plant (20 KLD and 90 KLD) in place and serviced by 13 cesspool vehicles in the city of Dimapur and Kohima respectively. However, phytoremediation and Faecal Sludge and Septage Management Plants are proposed for all the other ULBs.

X. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment:

In progress as mentioned in IX.

XI. Details of Nodal Officer appointed by Chief Secretary in the State/UT:

1. **OSD, Environment & Forests**
2. **Deputy Director, Industries & Commerce**
3. **Member Secretary, NPCB**

XII. Details of meetings carried under the Chairmanship of Chief Secretary in the State/UT:
Regular meeting is being taken under the Chairmanship of Chief Secretary to review action taken in relation to various NGT matters such as Sewage Treatment, Municipal Solid Waste Management, Biomedical Waste Management, Plastic Waste, Non-attainment cities, River Rejuvenation, etc.

XIII. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river;

Enclosed

XIV. Ground water regulation:
Water Resources Department under the State Plan carry out activity wherein wells are dug for ground water extraction. Sensitization programme for ground water is also under implementation.

XV. Good irrigation practices being adopted by the State:
Water Resources Department has been carrying out activities under the Minor Irrigation Schemes wherein diversion, protection wall and line & unlined canals are constructed under the Ministry of Water Resources.

XVI. Rain Water Harvesting:
Rain water harvesting is very popular in the State and is available in almost every house. Rain water harvesting is also maintained by Government department buildings, schools and at colleges.

XVII. Demarcation of Floodplain and removal of illegal encroachments:
Information will be sought from Department of Water Resources, Nagaland State Disaster Management Authority and District Administration/ Revenue Department.

XVIII. Maintaining minimum e-flow of river:
Environment flow is being assessed regularly by the Water Resources Department.

XIX. Plantation activities along the rivers:

Tree plantation work done by Department of Environment, Forests and Climate Change and Agri allied departments.

XX. Development of biodiversity park:

10 Community Reserve Forests has been notified in Dimapur district which falls in the upstream catchment area of the River Dhansiri and Chathe with a total area of 23.025 Sq.km. Botanical Garden and Puliebadze wildlife sanctuary are located in Kohima. There are no areas in flood plain of Dimapur suitable for Biodiversity Parks.

XXI. Reuse of Treated Water:

As per the directive of the Hon'ble National Green Tribunal, the treated water shall be reuse for the following:

(a) Treated Water from STP is proposed to be utilized for irrigating the agricultural farms lying within the vicinity of the STP.

(b) Sprinkling the road construction sites to control dust pollution

(c) Flushing/cleaning of the sewage drains

(d) Fire hydrants

XXII. Model River being adopted by the State & Action Proposed for achieving the bathing quality standards:

Chathe River is proposed. Action plan of Chathe River has been submitted to CPCB.

XXIII. Status of Preparation of Action Plan by the 13 Coastal States:

Not applicable

XXIV. Regulation of Mining Activities in the State/UT:

Regulated by District Administration; Geology & Mining Department as per Nagaland Minor Mineral Concession Rules 2004 (NMMCR).

XXV. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring

Polluters and law violators are issued show cause notices/ Closure Notices.

(K. Hukato Chishi, IFS)
Member Secretary
Nagaland Pollution Control Board

ANALYSIS REPORT OF NATIONAL WATER QUALITY MONITORING PROGRAMME FOR AUGUST 2021

FIELD OBSERVATION/ PARAMETER	STATION CODE								
	1796	1797	1798	1799	1800	1928	1929	1930	2886
Date of collection	05-08-2021	05-08-2021	05-08-2021	05-08-2021	05-08-2021	05-08-2021	05-08-2021	06-08-2021	05-08-2021
Time	08:40AM	12:03PM	01:43PM	11:05AM	01:34PM	01:52PM	07:40AM	09:40AM	09:38AM
Visible Effluent Discharge	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Use of Water in Down Stream	Fishing Bathing	Fishing Bathing	Fishing Bathing	Fishing	Nil	Fishing Bathing	Fishing Bathing	Fishing Bathing	Fishing
Weather	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Depth of water body (in cm)	50-100 cm	Less than 50 cm	Less than 50cm	50-100 cm	50-100 cm	Less than 50 cm	50-100 cm	50-100 cm	Greater than 100 cm
Human Activities	Bathing Fishing	Bathing Washing Fishing	Fishing Bathing Washing Cultivation	Fishing	Nil	Fishing Bathing Washing Boating	Bathing Washing Fishing Stone quarry	Bathing Washing Fishing	Cultivation Boating
Colour	Turbid Brown	Turbid Brown	Turbid Brown	Turbid Brown	Light Brown	Light Brown	Light Brown	Light Grey	Clear
Odour	Odour free	Odour free	Odour free	Odour free	Unpleasant	Unpleasant	Odour free	Odour free	Odour free
Velocity of flow (m/sec)	0.20	0.20	0.2	0.20	0.30	0.30	0.4	0.30	Still Water
Water Temperature (°C)	31.7	33	33.7	33.8	34.6	34	28.1	25.9	41
Air Temperature	32	32.2	32.9	32.8	34.6	33	31.0	31.8	33
Dissolved Oxygen (mg/l)	6	3.8	4.6	4.4	1.8	2.2	5	5.8	3.8
pH	7.8	7.6	7.6	7.5	7.2	7.4	7.8	8.3	6.8
Conductivity (µS/cm)	98.2	98.4	107.1	107.7	241	196.8	155	269	119.7
Biochemical Oxygen Demand (mg/l)	1.6	2	2.4	2	3.2	2.8	1.6	2.4	2.4
Nitrate - Nitrogen (mg/l)	4.4	4.5	2.5	2.5	2.1	2.4	2.1	1.7	1.6
Turbidity (NTU)	244	178	243	268	39.1	83.3	38.2	25.3	10.32
Chloride	33	25	34	33	42	12	17	15	10
Phenolpthalien Alkalinity (mg/l)	0	0	0	0	12	8	0	12	0
Total Alkalinity (mg/l)	48	44	52	48	96	100	78	84	64
Chemical Oxygen Demand (mg/l)	41	53	18	40	41	72	25	56	22
Ammonia- Nitrogen (mg/l)	0.09	0.15	0.1	0.21	0.99	0.34	0.25	0.07	0.16
Total Hardness (mg/l)	20	24	24	36	52	48	72	64	44
Calcium Hardness (mg/l)	16	20	16	20	40	40	42	44	24
Magnesium Hardness (mg/l)	0.97	0.97	1.95	3.9	2.92	1.95	7.32	4.88	4.88
Sulphate (mg/l)	47.8	47.5	43.9	46.7	24.5	25.1	21	34	11.2
Total Dissolved Solids (mg/l)	49.1	49.2	53.6	53.8	120	98.4	74	134	59.7
Total Suspended Solids (mg/l)	0.25	0.24	0.36	0.3	0.17	0.12	0.1	0.06	0.05
Phosphate (mg/l)	0.19	0.18	0.19	0.19	0.34	0.14	0.14	0.1	0.07
Boron (mg/l)	0.03	0.05	0.05	0.04	0.05	0.03	0.03	0.03	0.04
Potassium (mg/l)	20.1	4.9	5.4	5.3	9.8	6.9	2.5	2.7	3.1
Fluoride (mg/l)	0.24	0.35	0.36	0.34	0.25	0.27	0.12	0.19	0.37

Scientist B

ANALYSIS REPORT OF NATIONAL WATER QUALITY MONITORING PROGRAMME FOR AUGUST 2021

FIELD OBSERVATION/ PARAMETER	STATION CODE								
	2887	2888	2889	2890	2891	2892	2893	2894	2895
Date of collection	05-08-2021	05-08-2021	05-08-2021	06-08-2021	06-08-2021	06-08-2021	06-08-2021	07-08-2021	07-08-2021
Time	10:09AM	09:09AM	11:20AM	07:55AM	12:10PM	12:42PM	01:50PM	08:29AM	09:02AM
Visible Effluent Discharge	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Use of Water in Down Stream	Fishing	Fishing Bathing	Cultivation Fishing	Bathing Fishing	Cultivation Fishing	Cultivation Fishing	Cultivation Fishing	Fishing Bathing Drinking	Fishing Bathing Drinking
Weather	Clear	Clear	Clear	Clear	Cloudy	Cloudy	Cloudy	Rainy	Cloudy
Depth of water body (in cm)	Less than 50 cm	Less than 50 cm	50-100 cm	Less than 50 cm	Less than 50 cm	Less than 50 cm	50-100 cm	50-100 cm	50-100 cm
Human Activities	Bathing Washing Fishing Boating	Bathing Washing Fishing	Washing Cultivation Fishing	Bathing Washing Fishing	Cultivation Fishing Bathing Washing	Washing Cultivation Fishing	Washing Cultivation Fishing	Bathing Washing Fishing	Bathing Washing Fishing Gardening
Colour	Clear	Light Brown	Light Brown	Clear	Light Brown	Light Brown	Light Brown	Brown	Brown
Odour	Odour free	Odour free	Odour free	Soapy	Odour free	Odour free	Odour free	Odour free	Odour free
Velocity of flow (m/sec)	Still water	0.10	0.50	0.20	0.4	0.42	0.48	0.3	0.3
Water Temperature (°C)	34.3	36.4	25.9	24.8	24	23.8	24	28.2	28.7
Air Temperature	33.1	32	27.5	29.6	28.1	29	28.2	28.3	29.9
Dissolved Oxygen (mg/l)	3.2	4.6	6.2	3.4	4.6	4.4	4.2	4.6	4.4
pH	6.8	7.9	8.1	8.3	7.7	7.5	7.5	7.9	7.6
Conductivity (µS/cm)	190.1	74.3	80.8	402	109	148	160	70	115.9
Biochemical Oxygen Demand (mg/l)	2	1.6	1.6	2	1.6	2	2	1.2	1.6
Nitrate - Nitrogen (mg/l)	1.3	2.4	2	7	1.1	2.5	1.9	2.3	2.4
Turbidity (NTU)	5.1	39.6	44.7	4.7	13.1	14	12.5	107.9	24.4
Chloride	58	9	2.9	3.7	6.1	4.4	5.8	2.5	2.6
Phenolpthalien Alkalinity (mg/l)	28	0	0	8	0	0	0	0	0
Total Alkalinity (mg/l)	68	36	36	92	54	58	49	20	24
Chemical Oxygen Demand (mg/l)	53	52	46	27	21	24	22	40	56
Ammonia- Nitrogen (mg/l)	0.04	0.05	0.05	0.05	0.28	0.35	0.34	0.03	0.05
Total Hardness (mg/l)	40	20	24	84	60	65	62	28	16
Calcium Hardness (mg/l)	28	12	16	68	38	32	32	16	12
Magnesium Hardness (mg/l)	2.92	1.95	1.95	3.9.	4.75	8.1	7.48	2.92	0.97
Sulphate (mg/l)	9.3	23.3	25.1	27	28.3	29.1	31.7	21	19.8
Total Dissolved Solids (mg/l)	95	37.4	40.4	201	56.1	77	80	35	58
Total Suspended Solids (mg/l)	0.1	0.16	0.38	0.15	0.2	0.18	0.14	0.11	0.1
Phosphate (mg/l)	0.04	0.09	0.1	0.95	0.09	0.1	0.16	0.09	0.13
Boron (mg/l)	0.04	0.05	0.05	0.06	0.01	0.03	0.03	0.02	0.03
Potassium (mg/l)	8.3	2.6	3.1	10.3	3.4	3.8	4	3.4	3.6
Fluoride (mg/l)	0.43	0.27	0.21	0.18	0.1	0.08	0.14	0.18	0.24

Scientist B