ACTION PLAN
FOR
RESTORATION OF POLLUTED STRETCH
OF
RIVER AAMI
FROM

RUDHAULI, BASTI

TO

SOHGAURA, GORAKHPUR

UTTAR PRADESH POLLUTION CONTROL BOARD

TC – 12V, VIBHUTI KHAND, GOMTINAGAR,

LUCKNOW (UP)

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1. INTRODUCTION

Gaon ki Gang i.e. River Aami is known as Lifeline of Magahar, which originates from Sikhaira Tal, Siddharthnagar. The river passes through, Siddharthnagar, Basti, Sant Kabir Nagar and Gorakhpur. During its journey, its traverses approximately 102 Kms. and ultimately confluences in the River Rapti near village Sohgaura of tehsil Bansgaon of district Gorakhpur.

The stretch of the river from Rudhauli, Basti to Sohgaura, Gorakhpur has been identified as a polluted stretch. As per records an approx. 12 MLD sewage is contributed in river Aami. During the journey of 102 Kms from Sikhaira district Siddharthnagar it carries rain water during monsoon through connected tributary/natural drain / manmade Nalas of both banks. Maximum flow has been observed in rainy season and minimum flow in summer season.

Fig: 1.1 Confluence point of River Aami in River Rapti at Vill. Sohgaura, Gorakhpur.

As per the last year monitoring of river water quality in the identified polluted stretch of river Aami from Bhatpurwa, Basti to Sohgaura, Gorakhpur water of River Aami is neither fit for Drinking water nor for outdoor bathing and fish culture etc.

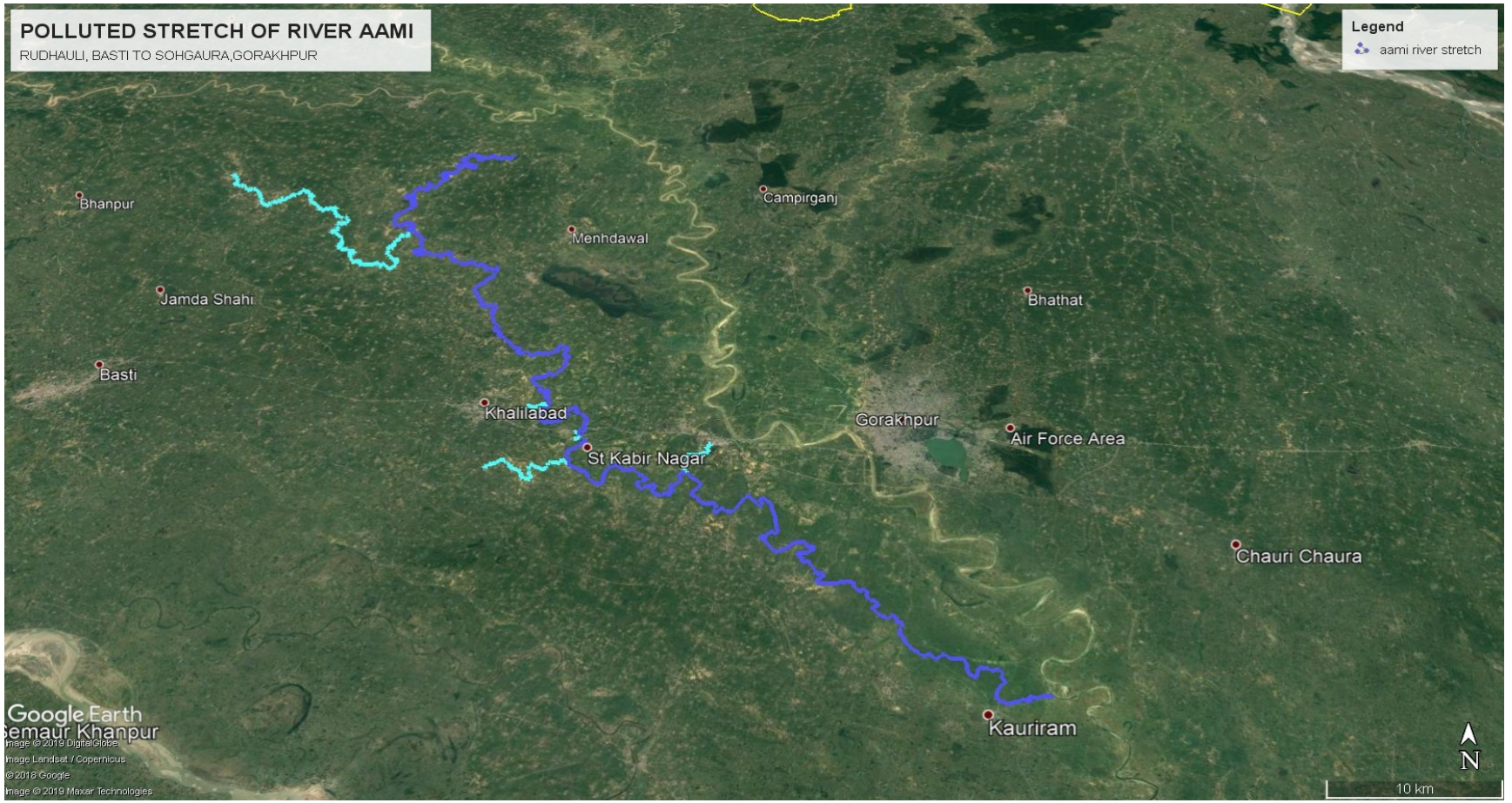


Fig: 1.2: Image showing stretch of River Aami from origin to confluence at river Rapti and the polluted stretch from Basti to Gorakhpur

1.1 POLLUTED STRETCH OF AAMI RIVER FROM RUDHAULI, BASTI TO SOHGAURA, GORAKHPUR

Aami River originates from Sikhara Tal, Siddharthnagar and flows further towards Basti, Sant Kabir Nagar and Gorakhpur. During its journey from origin to destination, it traverses a distance of about 102 Kms out of which the polluted stretch lies in between Rudhauli, Basti to Sohgaura, Gorakhpur of approximate length of 80 Kms.

There are 37 (Left Bank: 17 and Right Bank: 20) villages located on the banks of this polluted stretch of river. The total population of these villages is 42,345 as per the census of 2011. Taking Decadal growth into consideration, the estimated population in 2019 would be around 48,725 and estimated generation of sewage would reach approx. 5.3 MLD.

There are mainly 12 water polluting industries located in the catchment of the concerned stretch of Aami River Appendix-3 These industries have effluent treatment plants. Some industries are of zero liquid discharge as per charter and some industries are discharging its effluent on land as per conditions imposed by UPPCB. Industrial discharge in the River is taking place through 03 drains. Out of 03 drains 01 drains is mixed drains which is carrying treated industrial effluent as well as untreated sewage.

2. OBJECTIVE OF THE ACTION PLAN

The objective of the Action Plans is to restore the quality of River Aami to be made fit for at least bathing purposes within 06 months from the date of implementation of action plan.

3. POLLUTION INVENTORY

3.1 DETAILS OF DRAINS POLLUTING RIVER AAMI

Details of drains contributing the pollution

In the polluted stretch under question of river Aami, total discharge of 27.6 MLD is estimated in the form of sewage and industrial effluent through 06 drains directly or partially discharging into the river.

As per desk inventory, about 12 MLD of sewage and 15.6 MLD of industrial effluent are currently being discharged into the river Aami through 06 drains. Treated Industrial effluent coming from 12 industries which is approx. 15.6 MLD, is being discharged into river Aami in the polluted river stretch. The treatment of sewage is a major area of concern because local bodies situated in the catchment area has not installed STPs. The estimates of industrial effluent are based upon the consented discharge quantified from the units but actual industrial effluent may be more than the estimates owing to over discharge by consented industries.

A detailed drain wise data regarding sewage, industrial effluent and number of industries in the drain, status of tapping and status of fixing of bar meshes etc. is given in **Appendix-1**

Summary of Drains

S	Name of the Drain	District/ City	Type of Drains	Status of Drains			Industries		Sewage Discharge (MLD)			Total Discharge in the River (MLD)
			Domestic/ Industrial/Mixed Industrial Mixed	Tapped	Untapped	Partially Tapped	Number	Treated Effluent (MLD)	Treated	Untreated	Total	
1	Satnarya Nala	Basti	Industrial	–	1	–	2	0	0	0	0	0
2	Sarahi Nala	Sant Kabir Nagar	Domestic	_	1	–	–	–	–	7	7	7
3	Dhurahara Drain	Sant Kabir Nagar	Industiral	–	1	–	2	0.6	–	–	–	0.6
4	Nagar Panchyat Magahar Nala, Near Kabir Chauraha	Sant Kabir Nagar	Domestic	–	1	–	–	–	–	2	2	2
5	Nagar Panchyat Magahar Nala, Near Rail Bridge	Sant Kabir Nagar	Domestic	–	1	–	–	–	–	3	3	3
6	Sarya Drain	Gorakhpur	Mixed	–	1	–	8	3	–	12	12	15
	Total		**–**	**–**	**06**	**–**	**12**	**3.6**	**–**	**24**	**24**	**27.6**

***** Drains originating from Gorakhpur Industrial Development Authority (GIDA) meets natural drains know as sarya drain which meets river Aami. This drains is a mixed drain and it carries treated effluent from major 08 water polluting industries, several micro industries and untreated domestic effluent from industries situated in GIDA.

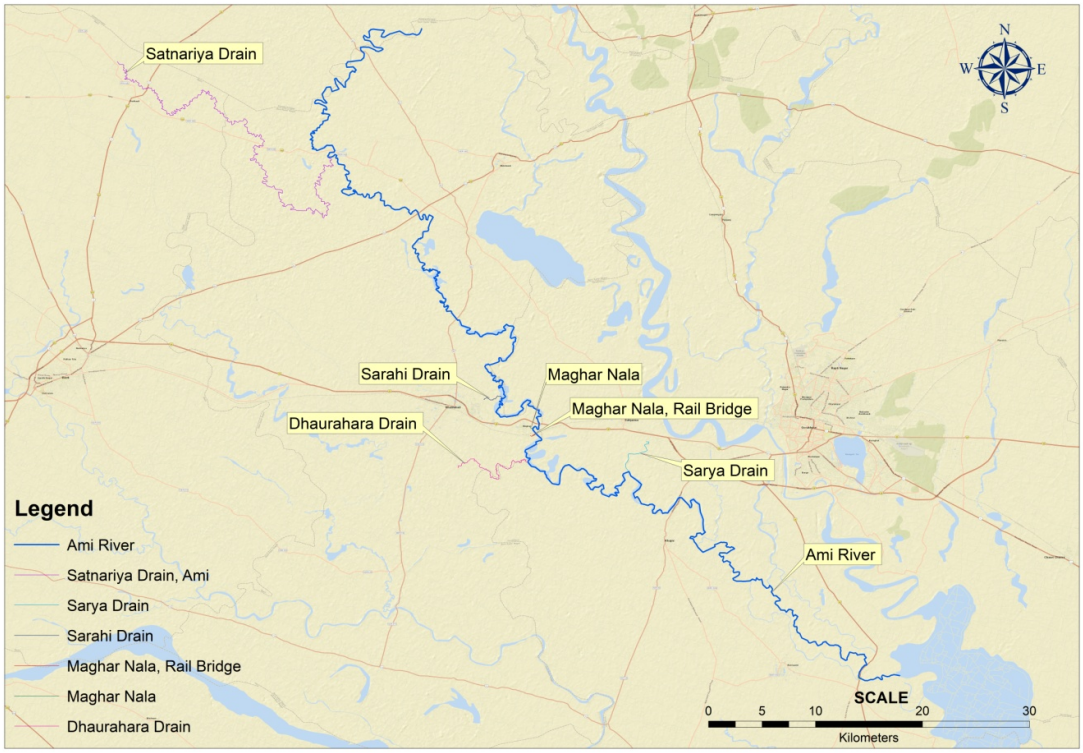


Fig : 3.1, GIS Map of Aami River Polluted Stretch with Drains

A. Satnariya Drain (Rudhauli, Basti)

a. Origin

Satnariya Drain originates from the near by area of Vill- Athdama, Rudhauli, Basti, Uttar Pradesh. It joins Aami River near village- Athdama, Basti. Coordinates of its meeting point in River Aami are Latitude: 27.06275000N & Longitude: 82.78425000E. Previously the Drain was carrying industrial effluent of 02 Industries in the catchment of river Aami. Presently M/s Bajaj Hindusthan Ltd. (Sugar Division) Athdama, Rudhauli, Basti is not discharging treated effluent in surface water in compliance of charter made by CPCB and M/s Bajaj Hindusthan Ltd. (Distillery Division) Athdama, Rudhauli, Basti is a zero liquid discharge industry.

b. Length covered

Total Distance of Satnariya Drain from its origin to meeting point to Aami River is approx.: 61.9 kms.

c. Details of industries & discharge of their effluent into the drain

Presently Satnariya Drain is carrying natural water/Excess water of irrigation canal.

Parameters	Results
pH	7.57
BOD (mg/l)	15
COD (mg/l)	104
TSS (mg/l)	372
Date of Sampling	04.04.19

B. SARAHI DRAIN (KHALILABAD SANT KABIR NAGAR)

a. Origin

Sarahi Drain originates from Khalilabd City and meets River Aami. Coordinates of its origin point are: Latitude: 26.77891667"N & Longitude: 83.09569444E. This drain is a domestic drain carrying sewage generated from Nagar Palika Parishad, Khalilabad, Sant Kabir Nagar. Total Discharge from Sarahi Drain is approx. 4.9 MLD.

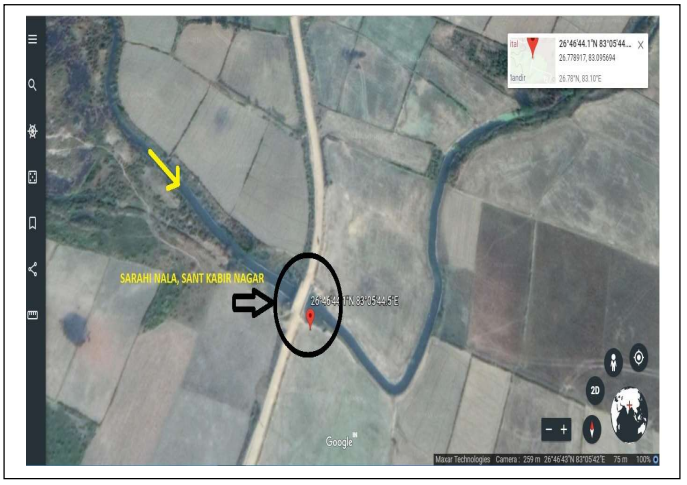
b. Length covered

Covered Distance of Sarahi Drain from Khalilabad City to meeting point to River Aami is approx. 2.2 km.

c. Details of industries & discharge of their effluent into the drain

Sarahi Drain carries domestic waste water from the catchment area of Nagar Palika Parishad, Khalilabad, Sant Kabir Nagar.

Parameters	Results
pH	7.81
BOD (mg/l)	160
COD (mg/l)	1320
TSS (mg/l)	686
Total Coliform (MPN/100 ml)	3500000
Date of Sampling	04.04.19



C. DHAURAHARA DRAIN (DHAURAHARA, SANT KABIR NAGAR)

a. Origin

Dhaurahara Drain originates from the near by area of Vill-Dhaurahara. The coordinates of meeting points of Dhaurahara Drain in to Aami River is Latitude: 26.762031N & Longitude: 83.105590E.

b. Length covered :

Covered Distance of Dhaurahara Drain from its origin point to meeting point to Aami is approx.: 12.3 km.

c. Details of industries & discharge of their effluent into the drain

Dhaurahara Drain carries Treated Industrial Effluent discharged from M/s Rayna Paper Board Industries, (Unit-2), Dhaurahara, Sant Kabir Nagar. Approx. 600 Kilo Liter treated effluent is discharge from the industry which meets river Aami through Dhaurahara Drain.

Parameters	Results
pH	7.1
BOD (mg/l)	15
COD (mg/l)	114
TSS (mg/l)	20
Date of Sampling	01.03.19

D. NAGAR PANCHYAT MAGHAR NALA, NEAR KABIR CHAURAHA

a. Origin

This Nala originates from Noth portion of Nagar Panchyat, Magahar and Carries untreated domestic sewage which meets River Aami near Kabir Chauraha. Coordinates of its meeting point to Aami River are Latitude: 26.754001N & Longitude: 83.136691E.

b. Length covered

Distance covered by Nala is approx. 0.33 km.

c. Details of industries & discharge of their effluent into the drain

This Drain carries domestic waste water from the catchment area of Nagar Panchyat, Magahar. Total Discharge from this Drain is approx. 1.5 MLD.

Parameters	Results
pH	7.51
BOD (mg/l)	200
COD (mg/l)	1920
TSS (mg/l)	730
Total Coliform (MPN/100 ml)	16000000
Date of Sampling	04.04.19

E. NAGAR PANCHYAT MAGHAR NALA, NEAR RAIL BRIDGE

a. Origin

This Drain originates from the Southern part of Nagar Panchyat Magahar. It carries waste water generated from the houses situated in the Southern part of Nagar Panchyat, Magahar. The Coordinate of its meeting point to River Aami are Latitude: 26.750255N & Longitude: 83.139429E.

b. Length covered

The distance covered by this Drain is approx. 0.57 Km.

c. Details of industries & discharge of their effluent into the drain.

This Drain carries domestic waste water generated from Southern Part of Nagar Panchyat, Magahar. Total Discharge from this Drain is approx. 2.5 MLD.

Parameters	Results
pH	7.51
BOD (mg/l)	200
COD (mg/l)	1920
TSS (mg/l)	730
T. Coli (MPN /100ml)	1600000
Date of Sampling	04.04.19

F. SARYA DRAIN

a. Origin

This Drain originates from the near by area of GIDA. It carries the treated effluent of industries situated in GIDA and untreated domestic effluent discharged from industries situated in GIDA. This drain meets River Aami near vill Bhansar. Coordinates of meeting point of Sarya Drain are Latitude: 26.718722N & Longitude: 83. 21747E.

b. Length covered

Distance covered by Sarya drain is approx.: 4.92 km.

c. Details of industries & discharge of their effluent into the drain

It carries about 12 MLD of sewage generated from industries situated in GIDA and 3 MLD treated industrial effluent discharge from industries situated in GIDA.

Parameters	Results
pH	8.5
BOD (mg/l)	80
COD (mg/l)	220
TSS (mg/l)	920
Date of Sampling	14.06.19

3.2 DETAILS OF SEWAGE POLLUTION SOURCES

As mentioned above, total sewage discharged into River Aami through 03 domestic drains is approximately 12 MLD and through 01 mixed drain is about 12 MLD. 02 main towns namely Khalilabad, Sant Kabir Nagar and Magahar, Sant Kabir Nagar are located in the catchment of the river (**Appendix-1**). The sewage and other effluent generated from these cities contribute to the organic load of the river. As mentioned earlier the treatment of sewage is a major issue of concern because STPs have not been installed by local bodies. At present there is no STP in the polluted river stretch. 01 STP of 07 MLD at Sant kabir nagar and 01 STP of 5 MLD at maghar, Sant kabir nagar are propsed, DPR is prepared and submitted to UP, Govt for approval. 15 MLD STP/CETP is also proposed for sewage generated from the small scale industries situated at GIDA, Gorakhpur.

Details of Plan for Treatment of Sewage Gap in River Aami

Sl. No.	District	Name of Drain (City)	Details of STPs proposed		Details of DPR				Expected date of completion
			Name	Capacity (in MLD)	Status (under preparation/ prepared)	Amount of DPR (Rs. In crore)	Status of approval (submitted/ approved)	Funding Agency	
1	Sant Kabir Nagar	Sarahi	–	07	Prepared	–	Submitted to U.P. Govt.	Namami Gange	24 months after the approval of DPR
2	Sant Kabir Nagar	Magahar Nagar Panchyat Nala	–	05	Prepared	–	Submitted to U.P. Govt.	Namami Gange	24 months after the approval of DPR
3	Gorakhpur	GIDA, Gorakhpur	–	15	Under preparation	–	–	–	24 months after the approval of DPR

Source: Data obtained from UP Jal Nigam and Desk Inventory of UPPCB.

Analysis of gap generated in Sewage Treatment based on projection of Population for Year 2030 in the catchment of River Aami, Basti to Sohgaura, Gorakhpur

S. NO	CITY	POPULATION (AS PER CENSUS 2011)	ESTIMATED POPULATION 2030	WATER CONSUMPTION (MLD) (@135)	ESTIMATED SEWAGE GENERATION YEAR 2030 (MLD)	INSTALLED CAPACITY OF EXISTING STP (MLD)	PROPOSED STP CAPACITY (MLD)	GAP IN STP CAPACITY UTILIZATION BASED ON POPULATION YEAR 2030 (MLD)
1	Khalilabad	47,847	55,713	7.521	6.016	NIL	7	NIL
2	Magahar	19,181	20,188	2.73	2.19	NIL	5	NiL
	Total	**67028**	**75901**	**10.251**	**8.206**	**NIL**	**12**	**NIL**

There are 02 local bodies situated in the catchment of Polluted Stretch of River Aami. Estimated Sewer Generation on the basis of Census 2011 is 7.24 MLD. The proposed capacity of STPs is 12MLD. There is no gap in the treatment of Sewage Generated and STPs to be installed at Khalilabad and Magahar.

3.3 DETAILS OF WASTE MANAGEMENT

3.3 (a) Municipal Solid Waste

There are 02 Towns located in the catchment area of River Aami from Basti to Gorakhpur approx. 16.5 TPD Solid Waste is generated in both the towns namely Nagar Palika Parishad, Khalilabad, Sant Kabir Nagar and Nagar Panchyat, Magahar, Sant Kabir Nagar. Both the local bodies has been practicing door to door collection of MSW.The details of city wise municipal solid waste generation are given below:

Sino.	District	Waste generated (TPD)	Waste Collected (TPD)	Door to Door Collection)	Remarks
1	Khalilabad, Sant Kabir Nagar	12	12	Yes	As of now the MSW processing facility is not established /functional in the ULBs. Hence it is required to work on decentralized processing of waste till the WTE plants are established.
2	Magahar, Sant Kabir Nagar	4.5	4.5	Yes	
	Total	**16.5**	**16.5**	Yes	

Source: Nagar Palika Parishad and Nagar Panchyat.

Details of Dumping Site 500 Meters from the edge of the River

There is no legacy waste dumping site within 500 meter of Aami River.

The villages located on the banks of this polluted stretch of river Aami. The total population of these villages generates approx. 12.5 TPD of un-segregated solid waste. This un-segregated solid waste is dumped in open plots or ponds/low lying areas in the villages which contribute air and ground water pollution. Details of villages, their location, population etc. is given in **Appendix-2.** The details of the existing wetlands are available in the **Appendix– 5.**

Gap Analysis of Municipal Solid Waste Treatment based on Year 2030 Population in the catchment of River Aami.

SR. NO.	DISTRICT	CITY / TOWN	POPULATION (AS PER CENSUS	ESTIM-ATED POPULATION 2030	MSW GENERATION ESTIMATED	AVAILABLE PROCESSING FACILITY (TPD)	GAP (TPD)	PROPOSED PROCESSING FACILITY & TIMELINE
1	Sant Kabir Nagar	Khalilabad	47,847	55,713	13.148	NIL	13.148	As per Appendix-8
2	Sant Kabir Nagar	Maghar	19,121	20,188	4.764	NIL	4.764	
	TOTAL				**17.912**	**NIL**	**17.912**	

There are 02 Cities situated at the catchment of Polluted Stretch of River Aami. Estimated MSW Generation on the basis of Census 2030 is 17.912TPD. Any processing facilities are not available in both the Cities. Hence, gap of 17.912 TPD exists in the catchment area of polluted River Stretch. Proposed facilities and timeline as received from Urban Development Department is enclosed as **Appendix- 8**

3.3 (b) Bio-Medical Waste

In 02 local bodies located in the catchment of the stretch of river Aami there are 84 Health Care Facilities which generate 182.7Kg/Day of Bio-Medical Waste. All the Health Care Facilities have valid agreements with 01 Common Bio-Medical Waste Treatment Facilities situated in industrial area Khalilabad, Sant Kabir Nagar for collection, transportation and disposal of Bio-Medical Waste. The segregation of Bio-Medical Waste and disposal in the CBWTFs as per the provisions of Bio-Medical Waste Management Rules, 2016 is a major area of concern. The mixing of Bio-Medical Waste with Municipal Solid Waste is also observed which also needs to be addressed. The details of Bio-Medical Waste generated in the Cities/Towns and details of Common Bio-Medical Waste Treatment Facilities are given below:

Sino.	District	Total No. Of H.C.Fs	Bio Medical Waste generated (Kg/Day)	Bio Medical Waste Treated (Kg/Day)	No. Of H.C.Fs attached with CBWTF	No. Of H.C.Fs having captive treatment facility	Gap between waste generated & treatment capacity available (Kg/Day)	Remarks
1	Sant Kabir Nagar	84	182.7	182.7	84	NIL	NIL	**All the HCFs are Members of CBWTF**
	Total	**84**	**182.7**	**182.7**	**84**	**NIL**	NIL	

Source: Desk Inventory of UPPCB.

Details of Bio-Medical Waste Treatment Facilities

S.N.	Name of the CBWTF operator connect No. & Address	Total No. Of HCFs Being Covered	Covered District	Treatment facility available			BMW Treatment capacity Kg/day	Number of Vehicles	Status of On Line Continuous Emission Monitoring System & Connectivity	Validity of issued Authorization
				Incinerator	Auto Clave	Shredder				
1	2	3	4	5	6	7	8	9	10	11
1	M/s Medical Pollution Control Committee, Industrial Area Khalilabad, Sant Kabir Nagar	745	Gorkhpur, Sant Kabir Nagar, Basti, Siddharthnagar, Maharajganj	100 kg/hr	25 kg/shift	100 kg/hr	3100	10 With GPS	Installed & Connected	31.05.2024

Source: Desk Inventory of UPPCB

3.3(c) Hazardous Waste

The total hazardous waste generation in the catchment of the polluted stretch from 07 industrial units is 192 Ton/Annum which is collected, treated and disposed by 01 Common Facilities located near Kanpur Dehat. The details of Hazardous Waste generated and the treatment facilities are given below:

Sino.	District	Hazardous Waste Generating Units	Hazardous Waste Generated (TPA)				Facility for Treatment & Disposal of Hazardous Waste	Gap b/w waste generated & treatment capacity (TPA)
			Incinerable	Landfillable	Recyclable	Total		
1	GIDA, Gorakhpur	04	–	192	–	192	The Incinerable & Landfillable Hazardous waste is disposed to authorized TSDFs U.P. Waste Management Project, Kanpur Dehat.	There is no Gap between generation & disposal of Hazardous Waste
	Total	**04**	**–**	**192**	**–**	**192**		

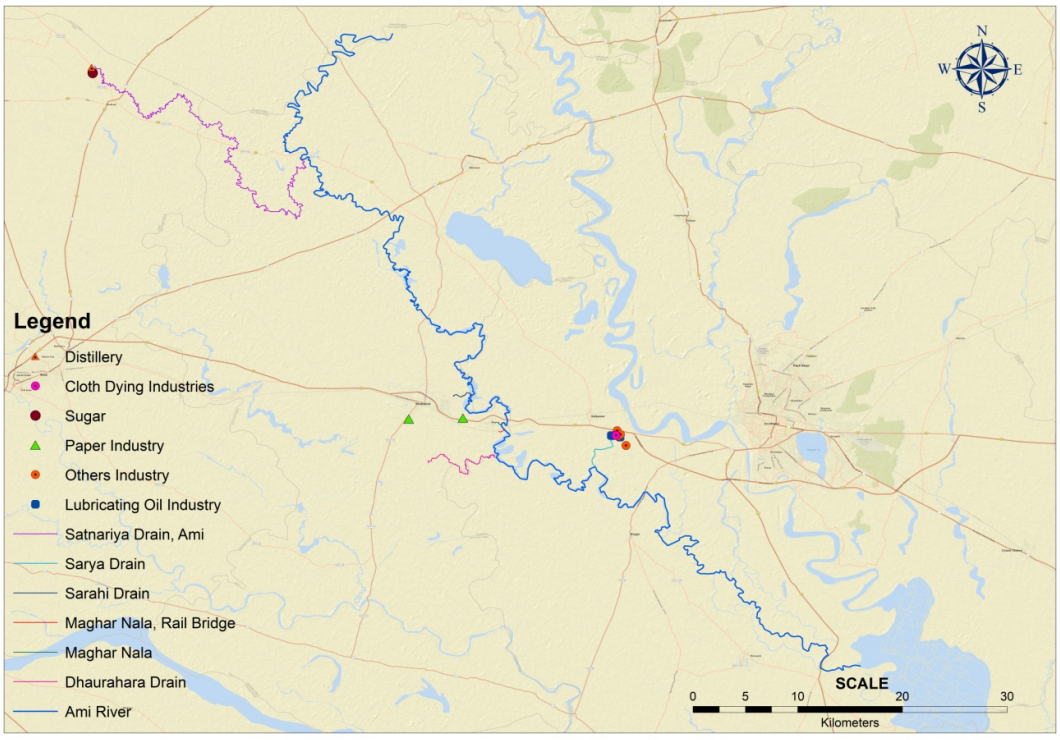
Source: Desk Inventory of UPPCB

3.3(d) E-Waste

In the State, total 43 Common E- Waste Disposal Facilities are operational. Out of these, 10 units are collection center, 16 have the facility of collection & dismantling whereas remaining 17 are collection, dismantling and recycling centers. The cumulative capacity of these plants- 2,48,000/annum. The quantum of E-Waste generated in the state is approximately 86,000 TPA. Hence, there is no gap in the generation and treatment infrastructure for safe E-Waste handling as per the provisions of E-Waste Rules, 2016. The status report of E-Waste disposal facilities in the State is enclosed at **Appendix–6.**

4. DETAILS OF INDUSTRIAL POLLUTION SOURCES

There are mainly 12 water polluting industries located in the catchment of the concerned stretch of Aami River **Appendix-3A.** These industries have effluent treatment plants. Some Industries are of zero liquid discharge as per charter and some industries are discharging its effluent on land as per conditions imposed by UPPCB. Industrial discharge in the River is taking place through 03 drains. Out of 03 drains 01 drain is mixed drain which is carrying treated industrial effluent as well as untreated sewage. The industries are grossly polluting in nature which belong to Sugar, Distillery, Textile and other miscellaneous industries. The drain wise and sector wise distribution of industries and their GIS Mapping details are given below in the Figure



4.1 DETAILS OF INDUSTRIAL UNITS

The drain wise and sector wise distribution of industries and their discharge & the details given in the tables below:

Summary of Industrial Units

SN	District	Drain	Type of Industry							Total Effluent Discharge (MLD)
			* The Type of Industry may be changed as per local conditions							
			Sugar	Pulp & Paper	Distillery	Textile	Slaughter House	Others	Total	
1	Basti	Satnariya Nala	1	0	1	0	0	0	2	0
2	Sant Kabir Nagar	Dhamorahara Drain	0	2	0	0	0	0	2	0.6
3	Gorakhpur	Sarya Nala	0	0	0	2	0	6	8	3
	Total		**1**	**2**	**1**	**2**	**0**	**6**	**12**	**3.6**

Source : Desk Inventory of UPPCB

4.2 GAP ANALYSIS OF INDUSTRIES SITUATED IN THE CATCHMENT OF RIVER AAMI

Presently polluted stretch of River Aami receives approximately 3.6 MLD treated industrial effluent and 12 MLD untreated sewage generated from the small industries situated in GIDA, for which STP/CETP of 15 MLD si propsed by GIDA and DPR is under preparation by UP, Jal Nigam. The industries situated in the catchment of the polluted river stretch utilize ground water needed for their processes. Total estimated water extraction by the industries is approximately 30 MLD against the discharge of 15.6 MLD by the industries. This indicates that about 48 percent of the treated effluent is recycled in the processes and rest accounts for the evaporation losses and consumption in the products.

Sector wise Gap analysis is given below: -

I. **Sugar:-**There are 01 Sugar industries in the catchment of polluted river stretch. The detail gap analysis may be referred to in **Appendix-3A**. These gaps are to be fulfilled within 06 months. This will help in reducing the water consumption, improving the quality of treated effluent and reuse of water in irrigation.

II. **Textile: -** There are 02 textile/yarn dyeing industries in the catchment of polluted river stretch. For reduction of water consumption & strengthening of Pollution control system as per charter prepared by CPCB, the action points with timeline are given in **Appendix–3B.**

III. **Distillery**:- There is 01 distillery unit in the catchment of polluted river stretch. Although the distillery is maintaining zero liquid discharge (ZLD) but improvements are required with respect to establishment of slop boiler for incineration of spent wash /slop per

CPCB guidelines. Action points with time line are given in **Appendix–3C.**

IV. Remaining 8 industries are Paper and misc. nature of industry respectively. All these units are having adequate ETPs. These industries. Effluent after proper treatment & regular monitoring is done by U.P. Pollution Control Board.

5. STATUS OF GROUND WATER

The polluted stretch of Aami River is from Rudhauli, Basti to Sohgaura, Gorakhpur. The river flows through 04 districts i.e. Basti Siddarth Nagar Sant Kabir Nagar. The status of Groundwater in these blocks is given below:

River Aami Stretch from Rudhauli, Basti to Sohgaura, Gorakhpur
Ground Water Status

Sr. No.	Name of District	Name of Block	Pre Monsoon / Post Monsoon water level (Meters)						Status of Exploitation
			May-14	Nov-14	Jan-15	May-15	Nov-15	Jan-16	
1	Siddhartha nagar	Dumariaganj	4.46	1.87	2.03	3.46	2.23	3.58	
2	Siddhartha nagar	Belwa lagunahi	3.75	1.96	2.69	3.6	3.55	4.51	
3	Sant Kabir nagar	Khalilabad	4.84	2.88	3.47	4.15	4.95	5.15	Safe
4	Gorakhpur	Kauriram	6.62	3.29	6.06	6.14	7.23	7.88	Safe
5	Basti	Rudhauli	3.65			3.75		5.7	Safe

Pre Monsoon Data--2014Source:*http://cgwb.gov.in/District_Profile/UP*

CHEMICALS ANALYSIS DATA OF SAMPLES COLLECTED FROM GROUND WATER MONITORING WELLS IN UTTAR PRADESH 2015 -2016
River Aami, Stretch from Rudhauli, Basti to Sohgaura, Gorakhpur

S.No.	District	Block	pH	E.C.µ S/cm at25˚C	CO3	HCO3	Cl	F	NO3	SO4	TH	Ca	Mg	Na	K	SiO2	PO4	TDS	RSC	SAR
1	Siddharthnagar	Dumariaganj	8	630	NIL	354	36	0.4	0.93	6.4	290	80	22	23	0.9	31	ND	307	0.6	0.56
2		Mithawal	8.1	520	NIL	256	49.6	0.49	ND	2.2	190	52	15	44	2.2	22	ND	348	0.4	1.38
3	Sant Kabir nagar	Khalilabad	8.16	925	NIL	293	92	0.21	38	49	270	40	41	82	6.6	38	ND	620	-0.6	2.18
4	Gorakhpur	Kauriram	7.11	1200	NIL	439	121	0.49	17	46	420	68	61	67	3.9	35	ND	804	-1.2	1.42
5		Sahjanwa	8.25	950	NIL	256	107	0.5	0.5	104	300	72	29	71	3.1	36	ND	367	-1.8	1.79
6	Basti	Rudhauli	7.9	804	NIL	342	64	0.24	ND	60	300	52	41	63	4.2	29	ND	539	-0.4	1.58

Source: http://cgwb.gov.in/District_Profile/UP.

6. MONITORING OF POLLUTION SOURCES

6.1 MONITORING OF DRAINS

All the 06 drains will be monitored on monthly basis and the sampling points are selected near the confluence of the drains with the Aami River. Care has been taken that there is no backwater effect of the river at the sampling point and no source of pollution joins the drain after the sampling point. The details of drain sampling points are given below:

Drain Sampling Points

Sino	District	Name of Drain	Monitoring Point	Latitude	Longitude	Monitoring Frequency	Controlling Regional Office
1	Basti	Satnariya Drain	Basti	27.0627500N	82.7842500E	Monthly	Basti
2	Sant Kabir Nagar	Sarahi Drain	Basti	26.7789166N	83.0956944E	Monthly	Basti
3	Sant Kabir Nagar	Dhauraha ra Drain	Basti	26.72031N	83.105590E	Monthly	Basti
4	Sant Kabir Nagar	Maghar Nala	Basti	26.754001N	83.136691E	Monthly	Basti
5	Sant Kabir Nagar	Maghar Nala, Rail Bridge	Basti	26.750255N	83.139429E	Monthly	Basti
6	Gorakhpur	Sarya Drian	Gorakhpur	26.718722N	83.21747E	Monthly	Gorakhpur

6.2 MONITORING OF RIVER

The polluted stretch of river Aami will be monitored at 07 places so as to ascertain adverse effect of pollution by various sources in the river. The details of sampling points are given below:

River Sampling Points

Sino.	District	Monitoring Point			Monitoring Frequency	Controlling Regional Office
		Place	Latitude	Longitude		
1	Basti	Aami River at Bhatpurwa Road Bridge	27.06322222	82.7935833	Monthly	Basti
2	Basti	Aami River Basti-Bansi Road Bridge, Rudhauli	27.04019444	82.81275000	Monthly	Basti
3	Sant Kabir Nagar	Aami River, Khalilabad, Mehdawal Road Bridge, Balusashan	27.84594444	83.07269444	Monthly	Basti
4	Sant Kabir Nagar	Aami River N.H. 28, Road Bridge, Khalilabad	26.75827778	83.14208333	Monthly	Basti
5	Sant Kabir Nagar	Aami River, Railway Bridge, Magahar, Khalilabad	26.75122222	83.13877778	Monthly	Basti
6	Gorakhpur	Aami River, Vill-Bharsarh Road Bridge, Sahjanwa	26.71762	83.21609	Monthly	Gorakh-pur
7	Gorakhpur	Aami River, Road Bridge, Chhatai, Khajani	26.69582	83.26015	Monthly	Gorakh-pur

The monitoring data for the last three years is available at **Appendix-7**

6.3 MONITORING OF WATER POLLUTING INDUSTRIES

All the water polluting industries will be monitored regularly by UPPCB. GPIs will be monitored quarterly and other industries will be monitored randomly. Third Party Institutions shall also be entrusted with the responsibility of comprehensive monitoring by CPCB and NMCG.

6.4 ESTABLISHMENT OF AAMI POLLUTION CONTROL ROOM

A Control Room for monitoring and centralized reporting of various pollution sources shall be established in Gorakhpur with appropriate infrastructure and human resource. This control room will be under overall supervision of UPPCB.

7. POLLUTED RIVER STRETCH REJUVENATION ACTION PLAN

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
A. SEWAGE MANAGEMENT					
	(a) Short Term Action Point				
1	Estimation of total sewage generation from City/Towns where sewage treatment facility does not exist and preparation of DPR for treatment of sewage.	02 Months	U.P. Jal Nigam & Concerned ULBs		
2	Measurement of flow & load of all the drains contributing pollution load in River Aami.	02 Months	U.P. Jal Nigam & Concerned ULBs		
3	Installation of Bar-meshes in the drains & regular cleaning &disposal of Solid Waste from them.	03 Months	Concerned ULBs		The ULBs will ensure compliance in the prescribed time line as informed by Urban Development Department.
4	Untapped drains to be provided with modular treatment facilities/ In-	06 Months	U.P. Jal Nigam & Concerned ULBs	National River Conservation Plan (NRCP) Scheme of	The ULBs/Urban Development Department will ensure compliance in

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	Situ bio-remediation or Phytroid-SWAB (CSIR-NEERI) based treatment.			MoEF&CC	the prescribed time line as informed by Urban Development Department.
5	Proposed STP	24 months after approval of DPR	U.P. Jal Nigam/ Govt. working Agencies		Timeline as informed by Urban Development Department, Govt. of U.P.
6	Formulation of Action Plan for long term use of treated water discharged from STPs.	03 Months	U.P. Jal Nigam, Irrigation & Concerned ULBs in consultation with UPPCB/CPCB		
7	Installation of Web Cams & OCEEMS in STPs	03 Month	U.P. Jal Nigam/ Operating Govt. Agencies		
8	Formulation of Action Plan for income generation of STPs including installation of Solar Power Plants, Energy Plantation & sale of sludge and treated water, bio-composting etc.	03 Months	U.P. Jal Nigam & ULBs		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
9	Obtaining Consent to Operate/Establish and Hazardous Authorization from UPPCB	02 Months	U.P. Jal Nigam/ Operating Govt. Agencies		
10	Preparation of DPR for channelization including diversion of sewage generated from household / township / villages to sewer lines and interception of all drains (excluding drains carrying industrial wastewater) for ensuring proper treatment through upcoming STPs.	Within 3 Months	Jal Nigam / Nagar Nigam, Concerned Districts		
11	Septage Management in the areas where sewerage network does not exist	Within 6 Months	ULBs/Jal Nigam		The ULBs will ensure compliance in the prescribed time line as informed by Urban Development Department.
(b)	**Long Term Action Point**				
1	Laying of Sewerage	24Months	U.P. Jal Nigam &	National River	

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	Network & Connection of households to the sewer line in order to utilize the installed capacity of existing STPs	from sanction of DPR	Concerned ULBs	Conservation Plan (NRCP) Scheme of MoEF&CC	
2	Establishment of Sewage Treatment Plants of adequate capacity	24 to 30 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	National River Conservation Plan (NRCP) Scheme of MoEF&CC	Detailed plan along with details of status of DPR, source of funding etc. Is given in para-3.2 as informed by Urban Development Department, U.P.
3	Tapping & diversion of the drains having high sewage load to STPs to be constructed on I&D model	24 to 30 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	National River Conservation Plan (NRCP) Scheme of MoEF&CC	Detailed plan along with details of status of DPR, source of funding etc. Is given in para-3.2 as informed by Urban Development Department, U.P.
4	Infrastructure Development in Irrigation/Horticulture/ Sprinkling/Industrial use etc. And ensuring use of treated water	24 to 30 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs	National River Conservation Plan (NRCP) Scheme of MoEF&CC	Detailed plan along with details of status of DPR, source of funding etc. Is given in para-3.2 as informed by Urban Development

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
					Department, U.P.
5	Installation of Solar Power Plant & Energy Plantations in the vacant land of STPs	12 Months from sanction of DPR	U.P. Jal Nigam/ Operating Govt. Agencies		
6	Installation of supplementary/tertiary treatment system in existing STPs which are not able to achieve discharge norms in the present system	12 Months from sanction of DPR	U.P. Jal Nigam & Concerned ULBs		
7	Treatment of waste water in Rural areas flowing into the river by Bio-remediation/Phyto-remediation/Oxidation Pond etc.	12 Months	Gram Panchayat, Panchayati Raj, Rural Development Departments, Rashtriya Swachta Mission-Garmin		The financial resources may be arranged from MNREGA/Swatch Bharat Mission – Garmin
8	Ensuring ODF in all the villages situated along the river	12 Months	Gram Panchayat, Panchayati Raj, Rural Development Departments, Rashtriya Swachta Mission-Garmin		
B. INDUSTRIAL WASTE MANAGEMENT					

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
(a) Short Term Action Point					
1	Re-inventorization of Water Polluting Industries in the catchment area of the drains and their status with respect to consent, installation of ETP, adequacy of ETP and final discharge point	03 Months	UPPCB, Department of Industries		
2	Monitoring of water polluting industries and ensuring closure of industries which are operating without consent or non-compliant	Quarterly	UPPCB & CPCB		
3	Installation of OCEEMS, Flow Meter & Web Cams in large and medium category of GPIs with connectivity to the server of CPCB and UPPCB	03 Months	UPPCB		
4	Closure and legal action against the illegal water polluting industries	Regular activity	District Level Inter-Departmental Enforcement Committee having		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	operating in non-confirming /residential areas		representatives of Administration, Police, UPPCB, ULBs, Development Authority, Power Corporation, Department of Industries etc.		
5	In Sugar industries for reducing the water consumption, improving the quality of treated effluent and reuse of water in irrigation	06 months	UPPCB/CPCB/ Industry department		
(b) Long Term Action Point					
1	Adoption of cleaner technologies by water polluting industrial sectors having major impact on water quality of the river. For e.g. – Electroplating, Dyeing, Pulp & Paper industries etc.	24 Months	UPPCB, CPCB & Department of Industries		
2	Imposing stringent norms	24 Months	Departments of		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	in Distillery, Pulp & Paper.		Environment, Industries, Excise &UPPCB		
3	Reducing abstraction of ground water by reuse/recycle of treated effluent by installation of additional treatment facilities & process improvement	12 Months	CGWA, CPCB, Department of Industries & UPPCB		
4	Use of treated effluent from CETPs for industrial and irrigation purposes	12 Months	Department of Industries, SPVs, Operating Agencies, UPPCB & CPCB		
5	Actions related to improvement of ETPs and reduction of use of ground water by the industries as per the prescriptions given in Appendices 3A, 3B & 3C.	6 to 24 Months	Department of Industries, UPPCB & CPCB		
C. SOLID WASTE & FLOOD PRONE ZONE MANAGEMENT					
(a) Short Term Action Point					
1	Strictly ensuring	Immediate	ULBs, Gram		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	prohibition of dumping of solid & other waste within 500 Meters of the banks of the river		Panchayat Development Authorities & Urban Development Department		
2	Collection & Segregation of Solid Waste as per the provision of SWM Rules, 2016	Immediate	ULBs, Gram Panchayat Development Authorities & Urban Development Department	National River Conservation Plan (NRCP) Scheme of MoEF&CC	The ULBs will ensure compliance as per timeline given according to the Action Plan **(Appendix-8)** as informed by Urban Development Department, UP. Panchayati Raj Department, UP will ensure compliance in Rural Areas.
3	Disposal of Recyclable waste through registered recyclers	Immediate	ULBs, Gram Panchayat, Development Authorities & Urban Development Department		The ULBs will ensure compliance as per timeline given according to the Action Plan **(Appendix-8)** as informed by Urban Development Department, UP. Panchayati Raj

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
					Department, UP will ensure compliance in Rural Areas.
4	Compliance of SWM Rules, 2016 by bulk generators (onsite bio-composting, disposal of recyclable waste through registered recyclers)	02 Months	ULBs, Development Authorities, Railways, Transport Corporation, Mandi Parishad, Cantonment Board, Educational Institution, RWAs & Urban Development Department etc.		The ULBs will ensure compliance as per timeline given according to the Action Plan **(Appendix-8)** as informed by Urban Development Department, UP. Panchayati Raj Department, UP will ensure compliance in Rural Areas.
5	Upgradation & operation of existing non-operational & non-complying Solid Waste Treatment Facilities as per prescribed norms	06 Months	ULBs, Development Authorities & Urban Development Department		The ULBs will ensure compliance as per timeline given according to the Action Plan **(Appendix-8)** as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
6	Compliance of C&D Waste Management Rules, 2016 & prohibition of illegal dumping of C&D waste	Immediate	ULBs, Development Authorities & Urban Development Department		
7	Installation of Web Cams in Solid Waste & C&D Waste Treatment & Disposal Facilities with open access to UPPCB & CPCB server connectivity	03 Month of functioning of the processing plants	ULBs, Development Authorities & Urban Development Department		
8	Formulation of Action Plan for income generation of Solid Waste & C&D Waste Treatment & Disposal Facilities including installation of Solar Power Plants, Energy Plantation & sale of RDF, compost etc.	02 Months	ULBs, Development Authorities & Urban Development Department		The ULBs will ensure compliance as per timeline given according to the Action Plan **(Appendix-8)** as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
9	Obtaining Consent to Operate/Establish and Authorization from UPPCB	02 Months	ULBs, Development Authorities, Urban Development Department & UPPCB		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
			& CPCB		
10	Banning of use of POP & metal based paints in manufacturing of idols	Immediate	ULB, Transport, District Administration, Department of Industries		
11	Sensitisation of Murtikars not to use metal based paints	Immediate	ULB, Department of Industries, District Magistrate & UPPCB		
12	Ensuring idol immersion in environmental friendly manner by creation of artificial ponds with proper lining & proper disposal of sludge & effluent	Immediate	ULBs, Development Authorities &District Administration		
13	Ensure strict prohibition of encroachments & illegal constructions in FPZ	06 Months	Development Authorities, District Administration &Police and Irrigation Department		
14	Removal of solid waste &	06 Months	ULBs, Gram		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	algal growth disposed in the river by use of low cost innovative techniques with involvement of local community.		Panchayat, Development Authorities &Irrigation Department		
(b)	**Long Term Action Point**				
1	Establishment of new solid waste & C&D treatment & disposal facilities against the gap with respect to generation of solid waste	24 Months after sanction of DPR	ULBs, Development Authorities & Urban Development Department		The ULBs will ensure compliance as per timeline given according to the Action Plan **(Appendix-8)** as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
2	Treatment & disposal of legacy waste dumped within 500 meters of the bank of the River	24 Months after sanction of DPR	ULBs, Development Authorities & Urban Development Department		The ULBs will ensure compliance as per timeline given according to the Action Plan **(Appendix-8)** as informed by Urban

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
					Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
3	Construction of electric/fuel efficient crematorium to stop disposal of unburnt/ semi burnt corpses in the river	24 Months	ULBs, Development Authorities & Urban Development Department		The ULBs will ensure compliance as per timeline given as informed by Urban Development Department, UP. Development Authorities will also ensure compliance in concerned areas.
4	Demarcation & notification of FPZ by introducing Pillars at suitable locations in river flood plain and preventing encroachment in river bed.	24 Months	Irrigation Department		Only after sanctioning of DPR & its other formalities including sanctioning of budget under NMCG.
5	Removal of illegal encroachments & constructions from FPZ	24 Months	District Level Committee headed by D.M, with		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
			representative from concerned Departments.		
D. ECOLOGICAL FLOW & GROUND WATER MANAGEMENT					
(a) Short Term Action Point					
1	Identification, inventorization & geo referencing of wetlands/water bodies including their zone of influence & catchment areas within 2 Km of the river	03 Months	State Wetland Authority, Forest & Wildlife, Panchayati Raj, Revenue Department, ULBs & Gram Panchayats		
2	Identification & geo referencing of vacant lands in the vicinity of the river for development of bio-diversity parks & forest areas	03 Months	Forest & Wildlife, Panchayati Raj, Revenue Department, ULBs & Gram Panchayats		
3	Identification of external water sources like canal escapes etc. for addition of water in the river for dilution purposes	03 Months	Irrigation Department		Only surplus water after fulfilling irrigation demands will be provided to nearby rivers through canal escapes.

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
4	Prohibition of illegal mining & diversion of river stream	Regular Activity	District Administration, Mining Department & Irrigation Department		Only diversion of river stream would be reported to District authorities in non monsoon period by concerned district irrigation officers.
5	Ensuring rain water harvesting/recharging structures/Rainer wells on river banks & construction of water harvesting structures	Regular Activity	Mining, Rural Development & Minor Irrigation Department		Possible funding may be arranged through MNREGA and Central assistance by NMCG.
(b)	**Long Term Action Point**				
1	Notification of E-flow of the River	12 Months	Irrigation Department, MoWR (CWC)		Notification of E-flow of the River will be done by MOWR (CWC).
2	Ecological restoration of the wetlands including plantation in the catchment area & development of community based eco-tourism in the wetland	24 Months from sanction of DPR	State Wetland Authority, Forest & Wildlife Department Tourism Department & National Mission for Clean Ganga		Possible source of funding may be from Centrally Sponsored Scheme for Development of Wetlands and from NMCG.

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
3	Development of Bio-diversity Parks and Riverine Forests by plantation & re-generation of native species of trees, grasses & herbs and establishment of new nurseries	24 Months from sanction of DPR	State Wetland Authority, Forest & Wildlife Department & National Mission for Clean Gang		Funds may be arranged from NMCG.
4	Adoption of good irrigation/Agriculture practices, suitable crop selection, use of sprinkler/drip irrigation to minimize the water consumption through awareness & support to the farmers	12 Months	Agriculture Department, Rural Development, Minor Irrigation Department		
5	Removal of encroachment from wetlands, ponds & their restoration	24 Months	Revenue, Administration, Panchayati Raj Department, ULBs & Gram Panchayats		
6	Allowing flow of fresh surplus water source like canal for restoration of E-	18 Months	Irrigation Department		Only surplus water after fulfilling irrigation demands will be provided

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	flow				to nearby rivers through canal escapes.
7	Recharge of dry Wells and Ponds	24 Months	Panchayati Raj Department, ULBs & Gram Panchayats		
E. MONITORING & EVALUATION					
(a)	**Short Term Action Point**				
1	Daily Monitoring of river water quality at the upstream & downstream of cities & meeting points of the major drains	Regular Activity	UPPCB, District Gang Committee/ District Environment Committee		
2	Weekly monitoring of drains, STPs	Regular Activity	UPPCB, District Gang Committee/ District Environment Committee		
3	Monitoring of water polluting industries	Quarterly	UPPCB, District Gang Committee/ District Environment Committee		
4	Monitoring of ground water quality within 500 meters of the rivers & drains	Quarterly	UPPCB, CGWA, CPCB & District Gang Committee/ District Environment Committee		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
5	Pre-monsoon & post-monsoon monitoring of ground water level	Regular Activity	CGWA & Directorate of Ground Water		
6	Measurement of River flow as per the protocol	Regular	Irrigation Department & District Gang Committee/ District Environment Committee		Annual flow discharge data of river.
7	Project formulation & funding including recurring expenses for employment of JRFs/Monitoring Assistants/Field Assistants, purchase of kits & equipments, vehicle on rental basis, development of Web Portal & establishment of Control Room, purchase of desktop computers, printers/ LED Monitor	02 Months	UPPCB, District Gang Committee/ District Environment Committee, SMCG &NMCG		

S.No.	Action Point	Timeline	Implementing Department/Agency	Source of Funding	Remark
	etc.				
8	Development of Web Portal for reporting & centralized monitoring of water quality of the river & drains and action points with access to all concern stakeholders departments/agencies responsible for implementation of the action plan	Regular	UPPCB, NMCG & CPCB		
9	Establishment of Regional Control Rooms at District/ Division Level for monitoring & uploading of data related to monitoring of water quality & compliance of action points with its integration to the State Level Control Room	04 Months	UPPCB, District Gang Committee/ District Environment Committee		

APPENDICES

APPENDIX-1

Pollution Source Mapping of River Aami from Rudhauli, Basti to Sohgaura, Gorakhpur

.NO	District	Name of Drain	Meeting Point of Drain		Domestic/ Industrial/ Mixed	Tapped/Untapped/Partially Tapped	Industries		Sewage Discharge (MLD)		Total	Status of Bar mesh
			Latitude	Longitude			Number	Treated Effluent (MLD)	Treated	Untreated		
1	Basti	Satnariya Drain *	27.06275000N	82.78425000E	Industrial	Untapped	02	0	0	0	0	No
2	Sant Kabir Nagar	Sarahi Drain	26.77891667N	83.09569444E	Domestic	Untapped	0	0	0	07	07	No
3	Sant Kabir Nagar	Dhaurahara Drain	26.72031N	83.105590E	Industrial	Untapped	02	0.6	0	0	0	No
4	Sant Kabir Nagar	Maghar Nala	26.754001N	83.136691E	Domestic	Untapped	0	0	0	02	02	No
5	Sant Kabir Nagar	Maghar Nala, Rail Bridge	26.750255N	83.139429E	Domestic	Untapped	0	0	0	03	03	No
6	Gorakhpur	Sarya Drian **	26.718722N	83.21747E	Mixed	Untapped	08	03	0	12	15	No
	Total						**12**	**3.6**	**0**	**24**	**24**	–

* This drain is a industrial drain which is situated in the catchment area of river Aami but no effluent is allowed to be discharged in this drain. This drain has a possibility of the discharge of 01 Sugar industry and 01 Distillery. Although the treated effluent of Sugar industry is utilized for ferti-irrigation and the distillery is operating on ZLD basis but in case of any default effluent from these industries may be discharged in this drain.

** Drain **originating** from Gorakhpur Industrial Development Authority (GIDA) meets natural drains know as sarya drain which meets river Aami. This drain is a mixed drain and it carries treated effluent from major 08 water polluting industries, several micro industries and untreated domestic effluent from industries situated in GIDA.

Appendix-2

Details of Cities & Towns

Sino.	District	Name of City/ Town	Type of ULB	Population (Lakh) Census - 2011	Estimated Population (Lakh) Year - 2019
1	Sant Kabir Nagar	Khalilabad	Nagar Palika Parishad, Khalilabad	47,847	50,747
2	Sant Kabir Nagar	Khalilabad	Nagar Panchyat, Magahar	19,181	19,552
	Total			**67028**	**70299**

Source: Census book -2011.

Appendix-3

Details of Industries

S. N.	District	Name and Address	Location		Type	Treatment Mechanism (ETP/CETP)	Effluent Discharge (KLD)	Effluent Discharge River	Compliance Status (yes/No)
			Latitude (N)	Longitude (E)					
1	Gorakhpur	Tripurari Lubricant Pvt. Ltd., A-2/22, Sector-15, GIDA, Gorakhpur	26.744883	83.231455	Refined Lubricating Oil	ETP	1	River Aami	Yes
2	Gorakhpur	Ambey Processer, FL-2, Sector-13, GIDA, Gorakhpur	26.745452	83.235603	Cloth Dying	ETP	300	River Aami	Yes
3	Gorakhpur	Bathwal Udyog Pvt. Ltd., FL-3, Sector-13, GIDA, Gorakhpur	26.745001	83.235471	Oral Syrup	ETP	200	River Aami	Gorakhpur
	Gorakhpur	Burnet Pharmaceutical Pvt. Ltd., AL-1,	26.749048	83.236466	Cloth Dying	ETP	2.5	River Aami	Yes

		Sector-13 GIDA, Gorakhpur							
5	Gorakhpur	Azam Rubber Products Ltd., AL-9, Sector-13, GIDA, Gorakhpur	26.736403	83.244031	Hawai Chappal, Shoes & Slippers	ETP	140	River Aami	Yes
6	Gorakhpur	Crazy Snack Pvt. Ltd., BL-2, Sector- 13, GIDA, Gorakhpur	26.745862	83.239312	Bread	ETP	3	River Aami	Yes
7	Gorakhpur	Faithful Commercial Ltd., FL-4, Sector- 13, GIDA, Gorakhpur	26.744561	83.237506	Solvent Extracted Oil	ETP	25	River Aami	Yes
8	Gorakhpur	S.P. Chemical Works, D-1/4A, Sector-13, GIDA, Gorakhpur	26.743567	83.238941	Lubricating Oil	ETP	1	River Aami	Yes
9	Sant Kabir Nagar	Raina Paper Board Industry Unit-I, Po-Deegha, Khalilabad,	26.759972	83.104016	Media Craft Paper	ETP	ZLD	and Rest being use in ferti irrigation	

		Sant Kabir Nagar							
10	Sant Kabir Nagar	Raina Paper Board Industry Unit-II, Po-Deegha, Khalilabad, Sant Kabir Nagar	26.759257	83.05747	Writing Printing Paper	ETP	600		
11	Basti	Bajaj Hindusthan Ltd. (Sugar Unit) Athdama, Rudhauli	27.056735	82.786004	Sugar	ETP	420Treted Effluent being used in process & Rest is being ferti- irrigation	River Aami	Yes
12	Basti	Bajaj Hindusthan Ltd. (Distillery Unit) Athdama, Rudhauli	27.061362	82.784811	R.S./ E.N.A.	ETP	ZLD	–	Unit line Closed

Appendix 3 A

GAP Analysis of Industries Situated in the Polluted Stretch of River Aami

Sl. No.	District	Name of Industry	Sector	Effluent Discharge (KLD)	Details of ETP	Gap Analysis	Remark
1	2	3	4	5	6	7	8
1	Gorakhpur	Tripurari Lubricant Pvt. Ltd., A-2/22, Sector-15, GIDA, Gorakhpur	Refined Lubricating Oil	900	Oil & Grease Tank, Primary Settling Tank, Aeration Tank, Secondary Settling Tank, SDB, Sand & Carbon Filter	No Gap	
2	Gorakhpur	Ambey Processer, FL-2, Sector-13, GIDA, Gorakhpur	Cloth Dying	1000	Oil & Grease Tank, Separator Tank, Equalisation Tank, Chemical Mixing Tank, Settling Tank, Primary Clarifier, Aeration Tank, Secondary Clarifier, Sand Filter, Activated Carbon Filter SDB.	Water Consumption to be reduced and charter of CPCB to be followed as per appendix 3B	
3	Gorakhpur	Bathwal Udyog Pvt. Ltd., FL-3, Sector-13, GIDA, Gorakhpur	Cloth Dying	60	Bar Screen, Oil Grease Trap ,Chemical Dosing Tank, Equalization Tank, Sedimentation Tank, aeration Tank, Settling Tank, Sludge Drying Bed	Water Consumption to be reduce and charter of CPCB to be follow as per appendix 3B	
4	Gorakhpur	Burnet Pharmaceutical Pvt. Ltd., AL-1, Sector-13 GIDA, Gorakhpur	Oral Syrup	500	Bar Screen, Chemical Dozing Tank, Aeration Tank and Sludge Drying Bed.	No Gap	

5	Gorakhpur	Azam Rubber Products Ltd., AL-9, Sector-13, GIDA, Gorakhpur	Hawai Chappal, Shoes & Slippers	ZLD	Collection Tank, Equalisation Tank, Settling Tank,	No Gap	
6	Gorakhpur	Crazy Snack Pvt. Ltd., BL-2, Sector- 13, GIDA, Gorakhpur	Bread	ZLD	Br Screening Oil & Grease Skimmer, Equalisation Tank, Primary Tube Settler, Aeration Tank, Multi Grade Filter, Activated Carbon Filter	No Gap	
7	Gorakhpur	Faithful Commercial Ltd., FL-4, Sector- 13, GIDA, Gorakhpur	Solvent Extracted Oil	ZLD	Bar Screen, Oil Grease Trap ,Primary Settling Tank, Aeration Tank, Sludge Drying Bed	No Gap	
8	Gorakhpur	S.P. Chemical Works, D-1/4A, Sector- 13, GIDA, Gorakhpur	Lubricating Oil	65	Bar Screening, Oil & Grease trapped, Equalisation Tank, Primary Tube Settler, Aeration Tank, Activated Carbon Filter	No Gap	
9	Sant Kabir Nagar	Raina Paper Board Industry Unit-I, Po-Deegha, Khalilabad, Sant Kabir Nagar	Media Craft Paper	ZLD	Bar Screen , Oil Skimmer, Chemical Dogging, Equalisation Tank, Primary Clarifier, Aeration Tank, Secondary Clarifier, Multi Grate Sand & Carbon Filter Sludge, SDB.	Water Consumption to be reduced & charter of CPCB to be followed.	

10	Sant Kabir Nagar	Raina Paper Board Industry Unit-II, Po-Deegha, Khalilabad, Sant Kabir Nagar	Writing Printing Paper	600	Bar Screen , Oil Skimmer, Chemical Dogging, Equalisation Tank, Primary Clarifier, Aeration Tank, Secondary Clarifier, Multi Grate Sand & Carbon Filter Sludge, SDB.	No gap Water Consumption to be reduced & charter of CPCB to be followed	
11	Basti	Bajaj Hindusthan Ltd. (Sugar Unit) Athdama, Rudhauli	Sugar	420	Bar Screen , Oil Skimmer, Chemical Dogging, Equalisation Tank, Primary Clarifier, Aeration Tank, Secondary Clarifier, Multi Grade Sand & Carbon Filter Sludge, SDB.	Water Consumption to be reduced & charter of CPCB to be followed	
12	Basti	Bajaj Hindusthan Ltd. (Distillery Unit) Athdama, Rudhauli	R.S./ E.N.A.	ZLD	Bio Methanation, MEE, Bio Composting	Phase Wise Reduction of fresh water consumption and to achieve ZLD as per appendix- 3C	

Appendix 3B

Action Points for Textile Industries

Central Pollution Control Board has released a document titled "Charter for Water Recycling & Pollution Prevention for Textile Industry". The Textile unit shall take time bound steps as detailed below for fulfilling the existing gaps with reference to water consumption & discharge of effluent, effluent treatment infrastructure etc. as below with timeline for upgrading the Effluent Treatment Plant –

Sino.	Objective	Action Point	Timeline
1.	Water Consumption	Reduce Water consumption by 20% per kg of product by Completing Upgradation of ETP.	31-12-2019
2.	Water Consumption	Reduce Water consumption by 15 % in addition to last year's 20 % per kg of product by Completing Upgradation of ETP by adding tertiary treatment units.	31-12-2020
3.	Water Consumption	Confirmation of 30 % Water Recycle against total input (in other words water consumption per kg should be reduced by 30 % minimum)	Beyond 31-12-2020
4.	Monitoring of Water Consumption	Installation of sealed flow meter and running hours meter on bore wells and inlet pipeline of different process section.	01 Month
5.	Colour coding of pipe lines	Colour coding of pipe lines carrying recycled process water and fresh process water.	06 Months
6.	Self-Assessment of ETP adequacy	Preparation of ETP adequacy assessment report.	01 Month
7.	Installation of sealed flow metering system	Installation of sealed flow metering system along with running hours at the inlet water source (Bore well or other sources) and outlet and at inlet pipeline of different process operation and outlet of ETP	30-06-2019

8.	Setting up of Online Effluent Monitoring System	Setting up of Online Effluent Monitoring System to Monitor final outlet discharge, units connected to CETPs can have Common System Installed at CETP discharge	06 Months

Appendix 3C

Action Plan for Distillery & Fermentation Sector for Mitigation of Pollution to ensure ZLD

S.no	GAP	Action Point	Time Line
1.	MEE condensate management	MEE condensate management through CPU	12 Months
2.	Mass flow meter at inlet & outlet	Installation of online mass flow meter at inlet & outlet of MEE & its connectivity to CPCB/UPPCB server	03 Months
3.	Restriction on spent wash storage capacity	Restriction on Spent wash storage capacity I. 01 Month in case of Bio-compost II. 01 Week in case of incineration	03 Months
4.	Installation of web cam	Installation of PTZ cameras and connectivity	01 Month
5.	Ground water monitoring	Setting up of adequate no. of bore well and peizometers around the bio compost area for Ground water monitoring.	03 Months
6.	OCEMS on boilers.	Installation of OCEMS on boilers.	06 Months
7.	Implementation of notification regarding compost	Registration from Agriculture Department as per notification of compost & sale of bio-compost in bag packing	Immediate
8.	Safe storage of Molasses	Safe storage of Molasses as per CPCB guidelines.	Immediate

Appendix-4

Details of Gram Panchayats & Revenue Villages on the banks of River

VILLAGE SITUATED ALONG THE RIVER AAMI RIVER LEFT BANK

VILLAGE SITUATED ALONG THE RIVER AAMI LEFT BANK										
S.NO.	**District**	**NAME OF VILLAGE**	**LAT**	**LONG**	**DISTANCE**	**DECANDAL POPULATION (2011)**	**Growth rate**	**Estimated population (2019)**	**Sewage Generation (MLD)**	**Estimated Solid Waste(KG /DAY)**
1	Sant Kabir Nagar	jogibir	27° 2'19.75"N	82°58'38.03"E	300	273	20.77	318	0.034	79.59
2	Sant Kabir Nagar	Rajabuha	27° 0'12.47"N	82°57'25.92"E	280	367	20.77	428	0.046	107.00
3	Sant Kabir Nagar	Agiauna	26°59'27.13"N	82°58'19.50"E	250	801	20.77	934	0.101	233.52
4	Sant Kabir Nagar	Bhainsath	26°55'11.86"N	83° 3'3.57"E	220	1,416	20.77	1651	0.178	412.82
5	Sant Kabir Nagar	Malen	26°53'59.43"N	83° 2'30.75"E	160	553	20.77	645	0.070	161.22
6	Gorakhpur	Lonia	26°48'38.83"N	83° 6'55.24"E	154	1,325	17.81	1514	0.163	378.45
7	Gorakhpur	Mohammadpur	26°46'25.15"N	83° 6'43.62"E	100	4,373	17.81	4996	0.540	1249.02
8	Gorakhpur	Bharpahi	26°46'46.73"N	83° 7'50.86"E	200	2,931	17.81	3349	0.362	837.15

9	Gorakhpur	Chhajania	26°43'19.89"N	83° 8'24.54"E	100	190	17.81	217	0.023	54.27
10	Gorakhpur	Jigina	26°42'43.93"N	83° 9'10.54"E	238	1,214	17.81	1387	0.150	346.74
11	Gorakhpur	Kuwal khurd	26°43'27.04"N	83° 9'47.35"E	135	543	17.81	620	0.067	155.09
12	Gorakhpur	Bharsar	26°43'9.38"N	83°12'34.65"E	175	5,094	17.81	5820	0.629	1454.95
13	Gorakhpur	Koluhe	26°42'54.44"N	83°13'20.09"E	250	1,177	17.81	1345	0.145	336.17
14	Gorakhpur	Kaili	26°42'20.31"N	83°13'45.16"E	180	1,865	17.81	2131	0.230	532.68
15	Gorakhpur	Belwa Dari	26°41'30.21"N	83°13'48.20"E	154	321	17.81	367	0.040	91.68
16	Gorakhpur	Katka	26°41'3.43"N	83°14'50.06"E	300	553	17.81	632	0.068	157.95
17	Gorakhpur	Dadauna	26°39'17.48"N	83°17'13.37"E	250	1,563	17.81	1786	0.193	446.42

VILLAGE SITUATED ALONG THE RIVER AAMI RIGHT BANK

S.NO.	DISTRICT	NAME OF VILLAGE	LAT	LONG	DISTANCE	DECANDAL POPULATION (2011)	Growth rate	Population (2019)	Sewage Generation (MLD)	Estimated Solid Waste(kg/day)
1	SIDDHARTH NAGAR	Sahukhria	27° 4'20.08"N	82°59'29.17"E	175	272	25.45	327	0.04	81.84
2	SIDDHARTH NAGAR	Piprahwa	27° 3'6.09"N	82°58'55.79"E	100	231	25.45	278	0.03	69.51
3	SIDDHARTH NAGAR	Dauvrihar	27° 2'45.79"N	82°58'9.80"E	145	329	25.45	396	0.04	99.00
4	SIDDHARTH NAGAR	Gopal Pur	26°59'21.31"N	82°57'52.82"E	300	227	25.45	273	0.03	68.30

5	SANTKABIR NAGAR	Peethia	26°56'47.54"N	83° 0'23.75"E	300	223	20.77	260	0.03	65.01
6	SANTKABIR NAGAR	Kithoori	26°56'10.20"N	83° 1'47.23"E	171	1065	20.77	1242	0.13	310.49
7	SANTKABIR NAGAR	Pipari	26°55'44.87"N	83° 2'47.08"E	171	54	20.77	63	0.01	15.74
8	SANTKABIR NAGAR	Sagath	26°53'58.24"N	83° 2'16.96"E	150	1961	20.77	2287	0.25	571.71
9	SANTKABIR NAGAR	Kulhua Lalkara	26°49'45.84"N	83° 5'31.90"E	100	2914	20.77	3398	0.37	849.55
10	SANTKABIR NAGAR	Dhaurahra	26°45'59.00"N	83° 6'17.97"E	205	770	20.77	898	0.10	224.49
11	SANTKABIR NAGAR	Rasoolabad	26°46'9.95"N	83° 7'55.31"E	280	1490	20.77	1738	0.19	434.39
12	Gorakhpur	Anantpur	26°42'31.82"N	83° 8'53.41"E	250	1712	17.81	1956	0.21	488.98
13	Gorakhpur	Ahirauli	26°42'18.64"N	83°12'46.57"E	260	1261	17.81	1441	0.16	360.17
14	Gorakhpur	Sahidabad	26°41'31.52"N	83°13'17.64"E	200	1428	17.81	1631	0.18	407.87
15	Gorakhpur	Raut Dadee	26°41'16.95"N	83°13'43.83"E	300	1341	17.81	1532	0.17	383.02
16	Gorakhpur	Tarsan	26°40'54.57"N	83°14'12.51"E	250	373	17.81	426	0.05	106.54
17	Gorakhpur	Sakharua	26°40'50.74"N	83°15'6.83"E	300	612	17.81	699	0.08	174.80
18	Gorakhpur	Gowrapar	26°39'41.64"N	83°16'3.92"E	220	475	17.81	543	0.06	135.67
19	Gorakhpur	Makhani	26°39'14.85"N	83°17'29.30"E	182	424	17.81	484	0.05	121.10
20	Gorakhpur	Gorsaira	26°37'28.66"N	83°18'47.77"E	100	624	17.81	713	0.08	178.23

Appendix-5

WET LANDS / WATER BODIES ALONG THE RIVER AAMI

WET LANDS / WATER BODIES ALONG THE RIVER AAMI LEFT BANK

SR. NO	NAME OF DISTRICT	NAME OF NEARBY VILLAGE	LATITUDE	LONGITUDE	DISTANCE FROM RIVER (KM)	LOCATION OF WETLAND	
						LEFT BANK	RIGHT BANK
1	Siddharth Nagar	Arji	27° 4'56.27"N	83° 1'28.16"E	0.46	Y	
2		Dewri	27° 4'53.87"N	83° 0'36.98"E	0.18	Y	
3		Deauri	27° 5'15.34"N	83° 0'19.61"E	0.2	Y	
4		Karja	27° 3'57.18"N	83° 0'19.63"E	0.61	Y	
5		Kunauna	27° 2'44.47"N	82°59'14.28"E	0.58	Y	
6		Mira pur	27° 2'19.52"N	82°59'0.14"E	0.47	Y	
7		Mira pur 2	27° 2'11.61"N	82°58'57.00"E	0.6	Y	
8		Sursacha Manjot	26°59'54.35"N	82°57'33.68"E	0.8	Y	
9		Kusahara	26°57'35.42"N	83° 0'39.27"E	0.85	Y	
10		Padria	26°56'18.88"N	83° 2'36.26"E	0.34	Y	
11		Khajurkol	26°54'49.91"N	83° 2'39.34"E	0.1	Y	
12		Bhagthi	26°54'37.89"N	83° 2'30.47"E	0.3	Y	
13		Malen	26°54'7.46"N	83° 2'28.77"E	0.08	Y	
14	Basti	Ramwapur	26°52'22.83"N	83° 3'49.57"E	0.66	Y	
15	Sant Kabir Nagar	Bhawanigara	26°51'11.01"N	83° 5'10.34"E	1.4	Y	
16	Gorakhpur	Ranukhor	26°48'26.99"N	83° 6'33.58"E	0.29	Y	
17	Siddharth Nagar	Urwalia	26°47'41.99"N	83° 7'7.08"E	0.74	Y	
18	Gorakhpur	Manjharia Mafi	26°46'56.74"N	83° 7'16.47"E	0.7	Y	
19		Mohammadpur	26°46'20.56"N	83° 6'44.64"E	0.28	Y	

20		Kusmaul	26°46'0.19"N	83° 6'37.68"E	0.22	Y	
21		Bharpahi	26°47'2.08"N	83° 7'40.66"E	0.73	Y	
22		Maila	26°46'27.25"N	83° 9'10.77"E	1.19	Y	
23		Domandand	26°43'33.49"N	83° 8'40.03"E	0.71	Y	
24		Kuwal khurd	26°43'25.64"N	83° 9'39.40"E	0.23	Y	
25		Tanwamafi	26°43'17.80"N	83°11'7.82"E	0.43	Y	
26		Telia Dih	26°42'23.44"N	83°12'5.64"E	0.5	Y	
27		Koluhe	26°42'57.15"N	83°13'35.15"E	0.61	Y	
28		Belwa Dari	26°41'46.90"N	83°14'23.03"E	0.67	Y	
29		Sahajupar	26°41'34.18"N	83°17'2.56"E	0.77	Y	
30	Basti	Abgeer	26°35'0.24"N	83°22'54.69"E	0.57	Y	
31	Siddharth Nagar	Kashera	27° 6'6.77"N	83° 0'1.54"E	1.35		Y
32	Siddharth Nagar	Pachmohni	27° 5'27.09"N	82°58'45.23"E	1.5		Y
33	Siddharth Nagar	Bisri	27° 4'14.18"N	82°58'34.41"E	1.65		Y
34	Siddharth Nagar	Piprahwa	27° 3'7.50"N	82°58'36.57"E	0.61		Y
35	Siddharth Nagar	Keswar	27° 3'7.13"N	82°57'37.73"E	1.08		Y
36	Sant Kabeer Nagar	Gana pokhar	27° 0'26.05"N	82°55'39.85"E	2.45		Y
37	Sant Kabeer Nagar	Dighawa	26°56'14.55"N	82°58'36.04"E	1.61		Y
38	Sant Kabeer Nagar	Kusuru Khurd	26°55'19.51"N	83° 0'44.27"E	2.05		Y
39	Sant Kabeer Nagar	Kusuru Kalan	26°54'26.39"N	83° 1'7.72"E	1.67		Y
40	Siddharth Nagar	Pedari	26°50'27.23"N	83° 3'56.32"E	0.9		Y
41	Sant Kabeer Nagar	Utrawal	26°49'36.70"N	83° 4'19.41"E	1.28		Y
42	Basti	Marwatia	26°49'40.69"N	83° 5'34.35"E	0.4		Y
43	Basti	Dhauraha Purwa	26°46'1.14"N	83° 6'7.89"E	0.39		Y
44	Gorakhpur	Kazipur	26°45'20.83"N	83° 7'23.30"E	1.86		Y

45	Gorakhpur	Suraulia	26°43'10.20"N	83° 7'20.27"E	1.32		Y
46	Gorakhpur	Chhapiya	26°41'25.56"N	83°12'44.95"E	1.19		Y
47	Gorakhpur	Tarsan	26°40'40.24"N	83°13'35.88"E	1.25		Y
48	Gorakhpur	Bhusawal	26°35'12.37"N	83°20'36.53"E	1.3		Y

Appendix-6

Status of E-Waste Management

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

S. No.	Name & Address of Unit	Regional Office	Status of Authorisation	Status of Registration & Validity	Type	Capacity (T/Annum)
1	M/s Auctus -E Recycling Solutions Pvt. Ltd., F-637, M.G. Road, Industrial Area, Ghaziabad.	Ghaziabad	Grant	Registered 30.08.2019	Collection, Dismantle	1800
2	M/s Mahaluxmi Metal Alloys (India) Pvt. Ltd., Modinagar, Ghaziabad.	Ghaziabad	Grant	Registered 22.05.2023	Collection, Dismantle, Recyclers	30000
3	M/s N.K. Products, 58-59, M.G. Road, Ghaziabad.	Ghaziabad	Refused	Registered 22.06.2016	Collection, Dismantle	9000
4	M/s Bharat Oil Co., E-18, Site-IV, Sahibabad, Industrial Area, Ghaziabad.	Ghaziabad	Grant	Registered 16-05-18	Collection, Dismantle	4000
5	M/s Planet Green Recycling Pvt. Ltd., G-129, Phase -1, M.G. Road, Ghaziabad.	Ghaziabad	Grant	Registered 23.08.2018	Collection, Dismantle, Recyclers	1500
6	M/s Rocket Sales, Plot No. 1-12, I/A, M.G. Road, Hamper.	Ghaziabad	Grant	Registered 27.08.2019	Collection,, Dismantle	300
7	M/s Arsh Recycling Pvt. Ltd., Plot No. 203, UPSDIC, I/A, M.G. Road, Ghaziabad.	Ghaziabad	Grant	Registered 20.06.2023	Collection, Dismantle, Recycling,	15000
8	M/s Auctus Recycling Solutions Pvt. Ltd. Habibpur, Greater Noida.	Greater Noida	Grant	Registered 06.12.2021	Dismantle, Collection	19500
9	M/s Khan Traders, B-5, site4, Panki Industrial Area, Kanpur.	Kanpur	Grant	Registered 15-11-2020	Collection, Dismantle	7190
10	M/s Green Tech Recycling, Khasra No.-645, Acchraunds, Bahadurpur Road, Partapur, Meerut.	Meerut	Grant	Registered 12.01.2022	Collection, Dismantle	1800
11	M/s Narora Atomic Power Station, Narora, Bulandsahar.	Bulandshahar	Not Applied	_	Collection' Dismantling & Recycling	10

12	M/s Metal Alloys, E-46, Industrial Area, Ramnagar, Varanasi	Varanasi	Grant	Registered 31-05-2019	Collection	1825
13	M/s Comwen Information Technologies Pvt. Ltd., 127/35B, Chak Ragunath, Naini, Allahabad.	Allahabad	Grant	Registered 11-08-2017	Collection	300
14	M/s Dasia Eco E-Waste Recyclers E-160 Industrial areas, Khalilabad, Santkabir Nagar.	Basti	Grant	Registered 31-12-2017	Collection, Dismantling	720
15	M/s Sims Recycling Solutions Plot no.1 Udyog Kendra II Ecotech-III Greater Noida.	Greater Noida	Grant	Registered 31.12.2019	Collection, Dismantle, Recycling	1250
16	M/s J.A.O. E-Waste Recycling Co, Vill- Jaitpur, Distt -Moradabad.	Moradabad	Grant	Registered 23.11.2020	Collection	3001
17	M/s HIN Green E-waste Recycling (P) Ltd, B-19/1, Summer Garden Colony, Meerut.	Meerut	Grant	Registered 12.04.2018	Collection, Dismantle,	750
18	M/s S.R. Metcast India (P) Ltd 11.8 Km, Agra Mathura Road, Agra.	Agra	Grant	Registered 02.08.2022	Collection	600
19	M/s K.M. Metals Suppliers 9/270, 271, Mathura Agra.	Agra	Not Applied	_	Collection	5000
20	M/s Parkas Metal House 39/223, Karan Lohamandi, Agra.	Agra	Grant	Registered 02.05.2023	Collection	1500
21	M/s Shree MahaveerJi Trading Company, 30/127, Chippitala, Agra.	Agra	Not Applied	Reject	Collection	4500
22	M/s E-Waste Recyclers India E-50, UPSIDC Industrial area, NH-2 Kosikalan, Mahura.	Mathura	Grant	Registered 01.03.2022	Collection, Dismantle	6000
23	M/s Supar Trading Company, Plot No.-3 Govt. Industrial Estate, Talkatora Road, Lucknow.	Lucknow	Not Applied	Registered 03.04.2016	Collection	365
24	M/s V.R. Techno Enviro Services pvt. Ltd. khasra No. 440, indira Priyedarshni ward, jarhra Indira Nagar, Lucknow.	Lucknow	Not Applied	Registered 09.04.2016	Collection, Dismantle	365
25	M/s Sachin enterprises,84/1,Plot no.34-35 Fazalganj, Kanpur.	Kanpur	Grant	Registered One Time	Collection	5000 Pieces Per **Annum**

26	M/s Gandhi Traders, 91/103, Dalelpurwa, Kanpur.	Kanpur	Grant	Registered 04.06.2018	Collection	5000 Pieces Per **Annum**
27	M/s Greezon Recycling Pvt. Ltd., R 30, UPSIDC, Industrial Area, Sikandrabad, Bulandshahar.	Bulandshahar	Grant	Registered 27.08.2022	Collection Dismantle, Recycling	16.5
28	M/s Sachin Enterprises, 123/751, block-T 74 pratapganj Agrarian Purwa, Fazalganj, Kanpur.	Kanpur	Grant	Registered 16.11.2022	Collection, Dismantling, Refurbishing	2500
29	M/s Greeniva Recycler Pvt. Ltd., Plot No. G-284, M.G. Road, Industrial Area, Hapur.	Hapur	Grant	Registered 18.06.2019	Collection, Dismantling, Recycling.	1500
30	M/s S. Malik Traders, Plot No.-93, 94 Vill-Budhera Jahidpur, Meerut.	Meerut	Grant	Registered 12.01.2022	Collection, Dismantling	365
31	M/s Royal Faiz Recycling (p) Ltd. , I-22, I.A. M.G. Road, Hapur.	Ghaziabad	Grant	Registered 29.01.2023	Collection, Dismantle, Recycling	12000
32	M/s 3 C Recycler, F-326, I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 31.12.2022	Collection, Dismantle, Recycling	9000
33	M/s Life E- Recycling (P) Ltd., F- 435, UPSIDC I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 05.06.2023	Collection, Dismantle,	9000
34	M/s Hind Recycling (P) Ltd., Plot No. F-203, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 01.03.2022	Collection, Dismantle,	9000
35	M/s Hayat Recycler, F-53, 54, I/A, M.G. Road, Hapur.	Ghaziabad	Grant	Registered 21.06.2023	Collection, Dismantle, Recycling	15000
36	M/s B.R.P. Infotech Private Limited, F-394, Phase-I, M.G.Road, Industrial Area, Hapur	Hapur	Grant	Registered 28.06.2023	Recycling, Dismantling, Segregation, Collection	9000 MT/Year
37	M/s Sky Green Waste Recycling Management , Khasra No.- 174, Alipur Jijmana, Meerut, U.P.	Meerut	Grant	Registered 20.12.2023	Dismantling, Recycling	5475 MT/Y 4500 MT/A

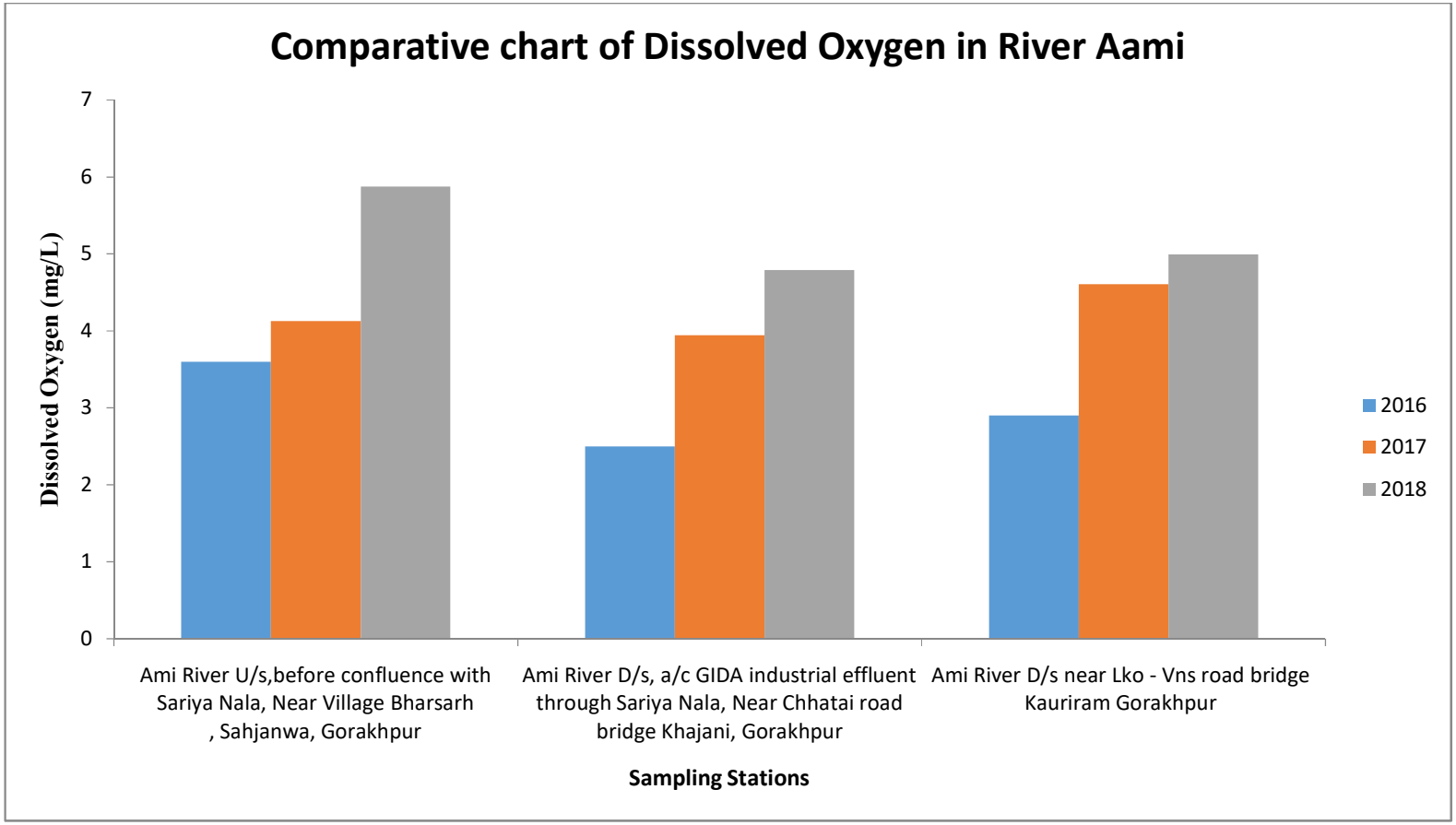
38	M/s Swatch Bharat Recycling Company, Gali-N0-4, 2083, Saipuram Industrial Area, Delhi Road, Meerut, U.P.	Meerut	Grant	Registered 08.05.2023	Recycling	4800 MT/A
39	M/s Rudra Enterprises, Plot No. A- 96, Sector-A-4, Tronica City, Loni, Ghaziabad	Ghaziabad	Grant	Registered 03.05.2023	Disposal & Dismantling	500 MT/Month
40	M/s Avgree Recycling Pvt. Ltd. KH No. 549, Vill.-Tiyala, Meerut- Bulandshahar Road, Hapur Bypass, Hapur	Ghaziabad	Grant	Registered 10.09.2023	Dismantling & Segregation	11000 MT/A
41	M/s Faiz Recycling, G-235, MG Road, Industrial Area, Hapur	Ghaziabad	Grant	Registered 13.02.2024	Dismantling & Segregation	36.67 MT/Day
42	M/s Horizon Recycling Pvt. Ltd., Khasra no.-35, Kumarhera, 7th km Dehradun Road, Saharanpur, U.P.	Saharanpur	Grant	Registered 02.08.2022	Recycling, Dismantling, Segregation, Collection	12000 MT/A
43	M/s Golden Ewaste Recyclers Pvt. Ltd., Plot No.- 12A, Gagol Road, Behind Sophia School Udyog Puram, Partapur, Meerut	Meerut	Grant	Registered 01.04.2024	Transportation, Refurbishing, Dismantling, Segregation, Storage, Disposal	9600 MT/A

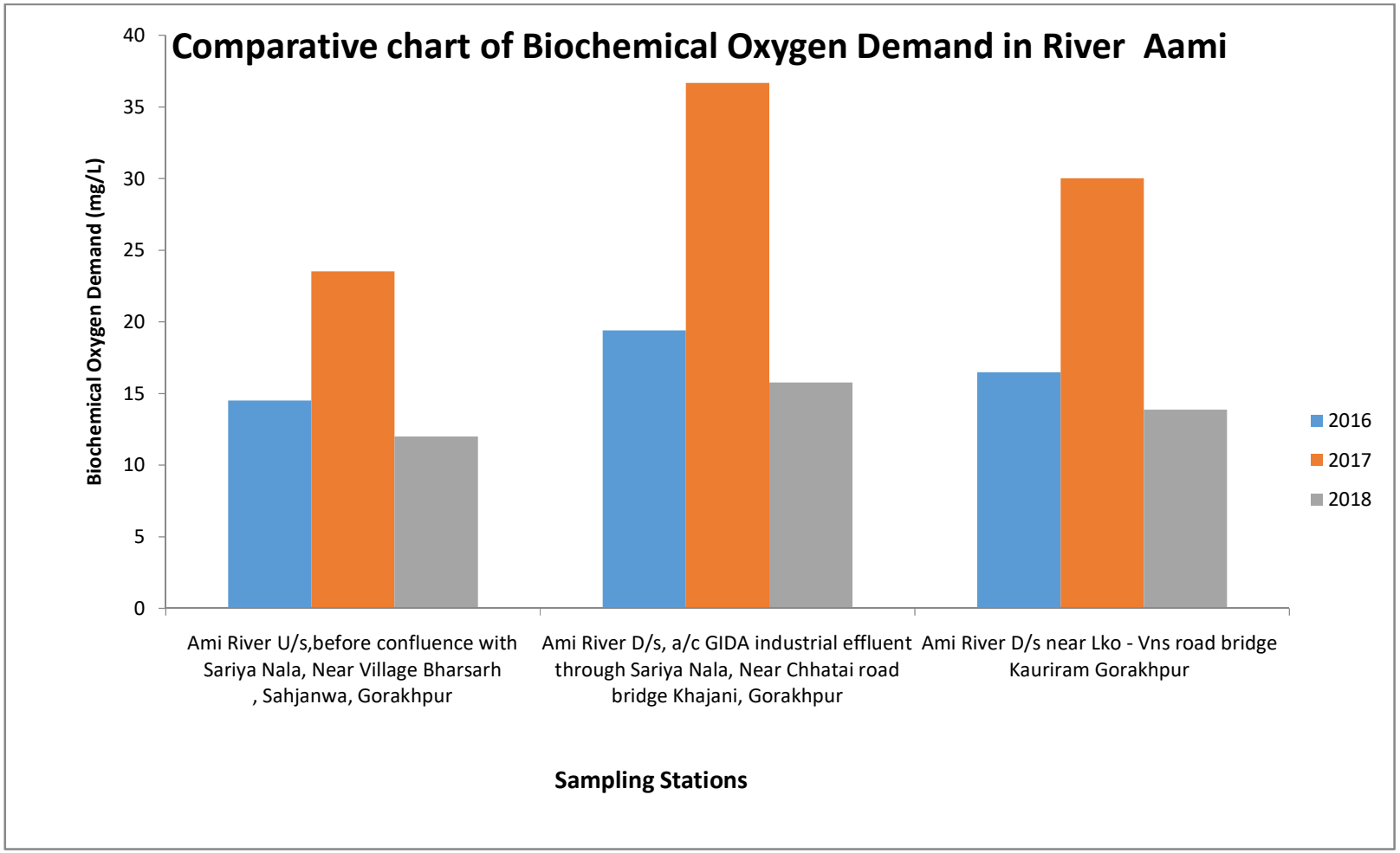
Appendix-7

River Water Quality Data
Water Quality of River Aami in UP
Year 2016-2018

Comparision of Water Quality of Ami River in U.P. Year, (2016- 2018)

Year	2016		2017		2018	
Parameters	**DO (mg/l)**	**BOD (mg/l)**	**DO (mg/l)**	**BOD (mg/l)**	**DO (mg/l)**	**BOD (mg/l)**
Ami River U/s,before confluence with Sariya Nala, Near Village Bharsarh , Sahjanwa, Gorakhpur	3.6	14.5	4.1	23.5	5.9	12
Ami River D/s, a/c GIDA industrial effluent through Sariya Nala, Near Chhatai road bridge Khajani, Gorakhpur	2.5	19.4	3.9	36.7	4.8	15.8
Ami River D/s near Lko - Vns road bridge Kauriram Gorakhpur	2.9	16.5	4.6	30	5	13.9


Comparative chart of Dissolved Oxygen in River Aami
Dissolved Oxygen (mg/L)
7
6
5
4
3
2
1
0
2016
2017
2018
Ami River U/s,before confluence with Sariya Nala, Near Village Bharsarh , Sahjanwa, Gorakhpur
Ami River D/s, a/c GIDA industrial effluent through Sariya Nala, Near Chhatai road bridge Khajani, Gorakhpur
Ami River D/s near Lko - Vns road bridge Kauriram Gorakhpur
Sampling Stations


Comparative chart of Biochemical Oxygen Demand in River Aami
Biochemical Oxygen Demand (mg/L)
40
35
30
25
20
15
10
5
0
2016
2017
2018
Ami River U/s,before confluence with Sariya Nala, Near Village Bharsarh , Sahjanwa, Gorakhpur
Ami River D/s, a/c GIDA industrial effluent through Sariya Nala, Near Chhatai road bridge Khajani, Gorakhpur
Ami River D/s near Lko - Vns road bridge Kauriram Gorakhpur
Sampling Stations

Classification	TYPE OF USE
Class A	Drinking water source without conventional treatment but after disinfection
Class B	Outdoor bathing
Class C	Drinking water source with conventional treatment followed by disinfection.
Class D	Fish culture and wild life propagation
Class E	Irrigation, industrial cooling or controlled waste disposal

TOLERANCE LIMITS

TABLE-1: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – A

S. No.	Characteristic	Tolerance
(1)	(2)	(3)
(I)	pH	6.5 to 8.5
(II)	Dissolved Oxygen, mg/l,	6.0
(iii)	Bio-chemical Oxygen Demand	2.0
(iv)	Total Coliform Organisms, MPN/100 ml, Max	50
(v)	Colour, Hazen units, Max	10
(vi)	Odour	unobjectionable
(vii)	Taste	Agreeable taste
(viii)	Total Dissolved Solids, mg/l, Max	500
(ix)	Total Hardness (as $CaCO_3$), mg/l ,Max	300
(x)	Calcium Hardness (as $CaCO_3$), mg/l, Max	200
(xi)	Magnesium (as $CaCO_3$), mg/1,Max	100
(xii)	Copper (as Cu), mg/l, Max	1.5
(xiii)	Iron (as Fe), mg/l,Max	0.3
(xiv)	Manganese (as Mn), mg/1,Max	0.5
(xv)	Chlorides (as Cl), mg/l,Max	250
(xvi)	Sulphate (as SO_4), mg/l ,Max	400
(xvii)	Nitrates (as NO_2), mg/1,Max	20
(xviii)	Fluorides (as F_2) mg/l,Max	1.5
(xix)	Phenolic compounds(as C_6H_5OH), mg/l,Max	0.002
(xx)	Mercury (as Hg), mg/l ,Max	0.001
(xxi)	Cadmium (as Cd), mg/1,Max	0.01
(xxii)	Selenium (as Se), mg/l ,Max	0.01
(xxiii)	Arsenic (as As), mg/1,Max	0.05
(xxiv)	Cyanides (as CN), mg/l, Max	0.05
(xxv)	Lead (as Pb), mg/l, Max	0.1
(xxvi)	Zinc (as Zn), mg/l, Max	15
(xxvii)	Chromium (as Cr^{6+}), mg/l,Max	0.05
(xxviii)	Anionic detergents, (as MBAS), mg/l ,Max .	0.2
(xxix)	Poly-nuclear aromatic hydrocarbons (PAH),	0.2
(xxx)	Mineral oil, mg/l ,Max	0.01
(xxxi)	Barium (as Ba), mg/l ,Max	1.0
(xxxii)	Silver (as Ag), mg/l Max	0.05
(xxxiii)	Pesticides	Absent
(xxxiv)	Alpha emitters, µc/ml, Max	10^{-9}
(xxxv)	Beta emitters, µc/ml, Max	10^{-8}

TABLE- 2: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – B

S. No. (1)	Characteristic (2)	Tolerance Limit (3)
(i)	pH Value	6.5 to 8.5
(ii)	Dissolved Oxygen, mg/1,Max	5.0
(iii)	Biochemical Oxygen Demand (5 days at 20 °C), Max	3.0
(iv)	Total Coliform Organisms, MPN/100 ml, Max	500
(v)	Fluorides (as F)<mg/l, Max	1.5
(vi)	Colour, Hazen units, Max	300
(vii)	Cyanides (as CN), mg/l, Max	0.05
(viii)	Arsenic (as As), mg/l, Max	0.2
(ix)	Phenolic Compounds (as C_6H_5OH) mg/l, Max	0.005
(x)	Chromium (as Cr^{6+}), mg/l, Max	1.0
(xi)	Anionic detergents (as MBAS), mg/l, Max	1.0
(xii)	Alpha emitters, µc/ml, Max	10^{-8}

TABLE - 3: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – C

S.No.	Characteristic	Tolerance Limit
(1)	(2)	(3)
(i)	pH Value	6.5 to 8.5
(ii)	Dissolved Oxygen, mg/l Minimum	4.0
(iii)	Biochemical Oxygen Demand	3.0
(iv)	Total coliform organisms, MPN/100 ml, Max	5000
(v)	Colour, Hazen units, Max	300
(vi)	Fluorides (as F), mg/l ,Max	1.5
(vii)	Cadmium (as Cd), mg/l, Max	0.01
(viii)	Chlorides (as Cl), mg/l, Max	600
(ix)	Chromium (as Cr^{6+}), mg/l, Max	0.05
(x)	Cyanides (as CN), mg/l, Max	0.05
(xi)	Total Dissolved Solids, mg/l, Max	1500
(xii)	Selenium (as Se), mg/l, Max	0.05
(xiii)	Sulphates (as SO_4), mg/l, Max	400
(xiv)	Lead (as Pb), mg/l, Max	0.1
(xv)	Copper (as Cu),mg/l,Max	1.5
(xvi)	Arsenic (as As), mg/l, Max	0.2
(xvii)	Iron (as Fe), mg/l, Max	50
(xviii)	Phenolic compounds (as C_6H_5OH), mg/l, Max	0.005
(xix)	Zinc (as Zn), mg/l, Max	15
(xx)	Insecticides, mg/l, Max	Absent
(xxi)	Anionic detergents (as MBAS), mg/l, Max	1.0
(xxii)	Oils and grease, mg/l, Max	0.1
(xxiii)	Nitrates (as NO_3), mg/1,Max	50
(xxiv)	Alpha emititers, µc/mg, Max	10^{-9}
(xxv)	Beta emitters, µc/ml, Max	10^{-8}

TABLE- 4: TEOLERANCE LIMITS FOR INLAND SURFACE WATERS, CALSS – D

S.No.	Characteristic	Tolerance Limit
(1)	(2)	(3)
(i)	pH value	6.5 to 8.5
(ii)	Dissolved Oxygen, mg/l, Min.	4.0
(iii)	Free Ammonia (as N), mg/l, Max.	1.2
(iv)	Electrical Conductance at 25 °C, µS, Max	1000
(v)	Free Carbon Dioxide (as $C0_2$),mg/1, Max	6.0
(vi)	Oils and Grease, mg/l, Max	0.1
(vii)	Alpha emitters, µc/ml, Max	10^{-9}
(viii)	Beta emitters, µc/ml, Max	10^{-8}

TABLE- 5: TOLERANCE LIMITS FOR INLAND SURFACE WATERS, CLASS – E

S.No.	Characteristic	Tolerance Limit
(1)	(2)	(3)
(I)	pH value	6.0 to 8.5
(ii)	Electrical Conductance at 25°C, µS, Max	2250
(iii)	Sodium Adsorption Ratio, Max	26
(iv)	Boron (as B), mg/l, Max	2.0
(v)	Total Dissolved Solids, (inorganic), mg/l, Max	2100
(vi)	Sulphates (as SO_4), mg/l, Max	1000
(vii)	Chlorides (as Cl), Mg/l, Max	600
(viii)	Sodium Percentage, Max	60
(ix)	Alpha emitters, µc/ml, Max	10^{-9}
(x)	Beta emitters, µc/ml, Max	10^{-8}

Appendix-8

MSW improvement action plan time-line for the ULBs of Department of Urban Development, UP

S.N.	Key Activities	Timeline (In Months)								
		1	2	3	4	5	6	7	8	9
1	Policy Framework adoption (During the period the ULBs are required to adopt various rules /regulation in terms of bylaws for effective implementation of SWM rules)									
2	With adoption action plan the ULBs along the river will formulate IEC campaign (Specifically designing of promotional materials related to not only just for better waste management in the area but also making common people/institutions aware and sensitise about river pollution and its control measure for making an effective behaviour change. The first 2 months will be needed for preparing the material and widely spreading the message and then it's going to be a continuous effort for a sustained drive to									

	make perceptible change among stakeholders.)									
3	Detail Gap Analysis of existing resources in terms of human resource/equipment/vehicles that are presently deployed and further required for full compliance of SWM rules. During the period each ULB shall prepare a detail micro plan (ward –wise) in sync with the action plan for effective implementation.									
4	Procurement of Required Material / Services after Gap Analysis									
5	Capacity Building. All the key stakeholders from senior officials to the level of safaikarmi is required to be sensitize and trained for the effective compliance of SWM rules and during the period intensive capacity building programmes shall be conducted.									
6	Identification of Land/ Building for waste processing shall be completed for all ULBs within 2 months (decentralised composting/MRF).									

7	Construction /Setting up of decentralised processing facility (composting for wet waste and MRF for dry waste) in all ULBs.									
8	Bulk waste Generators Identification and consultation/capacity building for onsiteWaste Management.									
9	Identification and integration of Informal Rag Pickers									
10	Segregation/ collection / transport / processing (10 percent) (by 4th month of Action Plan adoption)									
11	Segregation/ collection / transport / processing (20 percent)									
12	Segregation/ collection / transport / processing (35 percent)									
15	Segregation/ collection / transport / processing (50 percent)									
16	Segregation/ collection / transport / processing (65 percent)									

17	Segregation/ collection / transport / processing (80) percent)									
18	Segregation/ collection / transport / processing (100) percent) Within 12 months.									

Appendix-9

Other Relevant Information

1. **Address of Enviroment Monitoring Portal-** http://upecp.in/
2. **Link for Resource Persons, Weblink for Central Ground Water Board (CGWB) & Miyawaki Forestry.**

S.No.	Institution	Address	Website Link
1	Akhil Bhartiya Sewa Sasthan, Chitrakoot- Gopal Bhai	Akhil Bhartiya Samaj Sewa Sansthan Bharat Janani Parisar Village: Ranipur Bhatt Post: Sitapur District: Chitrakoot Uttar Pradesh India PIN: 210 204	http://absss.in/
2	Muskan jyoti samiti – Mewa Lalji	Chaudhary Purwa, Old Kechwa Farm,Madiyawa Village, Kursi Road, Lucknow-226021Madiyawa Village, Kursi Road, Lucknow-226021	http://www.muskanjyoti.org/
3	Nirmal Kuteya Seechewal- Sant Balveer Singh Ji Seechewal	Post Office Chak Chella, Tehsil Shahkot, Distt Jalandhar, Punjab 144701, INDIA	http://www.nirmalkuteya.com/portal/
4	Central Ground Water Authority	Central Ground Water Board, Northern Region, Bhujal Bhavan, Sector-B. Sitapur Road Yojna, Ram Ram Bank Chauraha, Lucknow - 226021.	http://cgwb.gov.in/aboutcgwb.html
5	Miyawaki, saytrees		https://saytrees.org/miyawaki.html

3. Re-constitution of District Environment Committee by Chief Secretary, Govt. of Uttar Pradesh vide Office Order No- 13/2019/NGT-257/55-Parya-2-2019-44(Writ)/2016 dated 14 June, 2019 is as follows.

Sl. No.	Member	Designation
1	District Magistrate	Chairman
2	C.D.O.	Member
3	S.S.P.	Member
4	Nominee of CEO, Industrial Development Authority	Member
5	ADM/Incharge, Local Bodies	Member
6	V.C., Development Authority	Member
7	Municipal Commissioner	Member
8	All Executive Officer, Nagar Palika/Panchayat	Member
9	District Supply Officer	Member
10	C.M.O.	Member
11	Ex. En., Irrigation Department,	Member
12	Ex. En., PWD	Member
13	Ex. En., UPPCL	Member
14	R.T.O.	Member
15	G.M., DIC	Member

16	R.M., UPSIDC	Member
17	D.P.R.O.	Member
18	District Agriculture Officer	Member
19	District Horticulture Officer	Member
20	D.E.S.T.O	Member
21	District Information Science Officer	Member
22	Representatives of all Oil & Gas Companies	Member
23	All City Gas Network Companies	Member
24	Regional Officer, U.P. Pollution Control Board.	Member
25	02 NGOs (Environment), nominated by District Magistrate	Member
26	Other Officers/Representatives of Cantonment Board, Jila Panchayat, Jal Nigam, Railways, Ground Water, Industrial Association, Common Bio-Medical Waste Facility, Educational institutions, Specialist etc. nominated by District Magistrate	Member
27	District Forest Officer	Member Convenor