BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH
NEW DELHI

ORIGINAL APPLICATION NO. 840/2022

IN THE MATTER OF:

DR. SANJAY KULSHRESTHRA
Senior Consultant Pediatric Surgeon,
1/171, Delhi Gate,
Gulab Rai Marg,
Agra -2

...Applicant(s)

Versus

1. **GOVERNMENT OF UTTAR PRADESH & OTHERS**
Through Secretary,
Ministry of Urban Development,
Lal Bahadur Shastri Bhawan
(Annexi Building),
Sarojini Naidu Marg,
Lucknow, Uttar Pradesh

2. **GOVERNMENT OF UTTAR PRADESH & OTHERS**
Through Secretary,
Ministry of Geology & Mining, UP,
Khanij Bhawan, 27/8,
Raja Ram Mohan Rai Marg,
Lucknow-226001
Uttar Pradesh

3. **GOVERNMENT OF NCT, DELHI**
Through Secretary,
Ministry of Water Resources & River Development,
627, Shram Shakti Bhawan,
Rafi Marg,
New Delhi-110001

...Respondent(s)

WITH

ORIGINAL APPLICATION NO. 773/2022

IN THE MATTER OF:

RAJESH PAREEK
Flat No. 1004, Madhvi B,
Shri Radha Valley, NH.19,
Mathura-281004

...Applicant(s)

Versus

1. **GOVERNMENT OF UTTAR PRADESH & OTHERS**
Through Secretary,
Ministry of Urban Development,
Lal Bahadur Shastri Bhawan
(Annexi Building),
Sarojini Naidu Marg,
Lucknow, Uttar Pradesh

...Respondent(s)

IN OA NO. 840/2022-

COUNSELS FOR APPLICANT(S):
Dr. Sanjay Kulshrestha, applicant in person (Through VC)

COUNSELS FOR RESPONDENT(S):
Mr. Bhanwar Pal Singh Jadon, Mr. Chetan Jadon and Mr. Hardik Saxena, Advocates for the State of UP
Mr. Atif Suhrawardy, Ms. Yogya Sharma and Mr. Pankaj Kumar, Advocates for CPCB
Ms. Priyanka Swami, Advocate for Nagar Nigam, Agra
Mr. Arvind Kumar and Mr. Ankit Kumar Vats, Advocates for UPPCB (Through VC)

IN OA NO. 773/2022-

COUNSELS FOR RESPONDENT(S):
Mr. Bhanwar Pal Singh Jadon, Mr. Chetan Jadon and Mr. Hardik Saxena, Advocates for the State of UP
Mr. Atif Suhrawardy, Ms. Yogya Sharma and Mr. Pankaj Kumar, Advocates for CPCB
Mr. Daleep Dhyani, Advocate for UPPCB (Through VC)

CORAM:

HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

RESERVED ON: DECEMBER 07, 2023
PRONOUNCED ON: APRIL 24, 2024

SYNOPSIS

JUDGMENT

BY HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER

1. In both the matters, complaint is in respect of pollution of River Yamuna at Agra and Mathura-Vrindavan due to discharge of untreated sewage in the river. Since issues are common, therefore, both matters have been heard together and are being decided by this common judgment.

2. ***Original Application No. 840/2022*** (hereinafter referred to as **'OA –I'**) raises an issue of serious degradation of environment due to pollution of water in River Yamuna at Agra. It has come up before this Tribunal under Sections 14, 15, 16 and 17 read with Section 18(1) of National Green Tribunal Act, 2010 (hereinafter referred to as **'NGT Act 2010'**), at the instance of Dr. Sanjay Kulshreshtha who had appeared in person. Applicant has given his credentials as Senior Consultant Paediatric Surgeon, having concern about various environmental issues.

3. Applicant in OA-I has stated in brief that pollution in River Yamuna is affecting aquatic life and killing fishes in mass due to deposit of huge silt in river bed at Agra. Pollution is also causing green staining of precious monument i.e., Taj Mahal. Every year, large number of fishes are reported dead at various locations in River Yamuna at Agra. Number and severity of mass killing of fishes is increasing year by year. It was reported on 16.11.2021 and 22.07.2021 in Sikandara-Taj Mahal area at Agra that thousands of dead fishes have covered water surface of river Yamuna and death has occurred due to abnormally low Dissolved Oxygen (hereinafter referred to as **'DO'**) in river water. DO level near Agra waterworks is 1.7 milligram per litre (hereinafter referred to as **'mg/l'**) against the prescribed standard of not less than 3 mg/l which is vital for life of aquatic animals

like fish. Two more such major mass killings of fishes occurred on 04.11.2018 and 13.06.2015. In support, copies of the newspapers publishing the said incidents have been filed as annexure A/1, A/2, A/3 and A/4. It is alleged that discharge of untreated liquid waste in river water is causing oxygen depletion, resulting in death of fishes in river water.

4. Applicant on exploration of issue found that as long back as in 2002 also, thousands of fishes had died in Sikandara-Taj Mahal area at Agra covering the water surface and this was noticed in an article written by Mr. Prabhanjan Verma under the title "**Down to earth: report: Fishy deaths, The mystery of large-scale fish fatalities in the Yamuna near Agra and the conflicting official theories**". Such incidents are common and in the subsequent period, occurrence of incidents has become more frequent and prominent, particularly, close to some townships or populated area.

5. Central Pollution Control Board (hereinafter referred to as **'CPCB'**) report said that level of DO throughout the year in river Yamuna was less than 4 mg/l and at some locations, it was 0.0 mg/l due to discharge of untreated and partially treated waste water. CPCB has also found water quality of river Yamuna in category 'E' which means that it is fit for recreation and industrial cooling only. In support thereof, copy of a report of Anil Kumar Mishra, Department of Civil Engineering, institute of Technology and Management, Gurgaon, India under the title "**A River about to Die: Yamuna**", has been filed as annexure A/5. It is said that virtually river has turned into a nallah. Recent and strange kind of complication arising during summer is that large amount of silt and mud collected in Yamuna is causing growth of special types of insects called

"Chironomus Calligraphus" (Geoldichironomus). These insects after getting proliferated, move from river to Taj Mahal where they leave black-green excreta which turns the marble stone of Taj Mahal into green. A report under the title "**Pollution turns India's white marble Taj Mahal yellow and green**" written by Mr. Sunil Kataria published in Environment dated 21.05.2018 has been filed as annexure A/6. It is also said that though stains of bugs on the marble are washable but it requires vigorous scrubbing and frequent scrubbing which will affect sheen of marble.

6. Approximately 52 drains are pouring liquid waste directly into river Yamuna at Agra just close to Taj Mahal, causing stagnation in river water of Yamuna as a result whereof fishes which used to check insect population by eating its larvae are dying and thereby disturbing ecological balance. Various experts and Committees have recommended dredging or desilting of river Yamuna to restore river bed so as to ensure free flow of water and to increase capacity of water reservoir in that area. Reliance has been placed on newspaper reports filed as annexure A/10 and A/11 to OA-I.

7. River Yamuna is one of the most polluted river in India. Its course within Agra and Delhi is most polluted segment. Yamuna at Delhi is getting tremendous attention from all concerned Governmental agencies and non-Government organisations but at Agra, due to omission/ignorance and lack of attention, it is deteriorating like anything. Out of several reasons causing pollution in River Yamuna, one of the serious causes is non availability of adequate water to maintain e-flow of the river. Except rainy season, there is almost zero flow of water in River Yamuna. Water is taken away at different barrages on the upstream of River Yamuna like Okhla

Barrage, Gokul Barrage etc. Sufficient water is not available for maintaining e-flow in the river which is causing pollution in a huge way at Agra. Moreover, various drains at Agra carrying sewage and domestic waste are meeting and discharging untreated or partially treated liquid waste in river water, directly, causing pollution. There are about 320 big and small drains at Agra and majority of them are draining out untreated sewage and waste water in River Yamuna. These drains carry about 286 millions liters per day (hereinafter referred to as **'MLD'**) waste water. There are eight Sewage Treatment Plants (hereinafter referred to as **'STP'**) which are capable of treating only about half of the total liquid waste generated at Agra. This is causing huge pollution in river water of Yamuna, turning it in a big drain/nallah.

8. Among various other reasons causing pollution of river Yamuna, some are, rising river bed or basin of Yamuna due to dumping of untreated sewage and waste water through drains resulting in rapid silt deposition; lack of Silt Management Policy though in a report published in 2017 by Government of India, Ministry of Water Resources on the subject of River Development and Ganga Rejuvenation, emphasis was laid on desilting or dredging of river beds regularly; huge high faecal/coliform contamination found in river Yamuna; high solid waste load on the river and outdated STPs requiring upgradation but the same has not been done for various reasons.

Tribunal's order dated 25.11.2022:

9. OA-I was considered initially on 25.11.2022. Tribunal referred to its earlier order dated 15.03.2021 passed in ***OA 176/2020, Social Action for Forest and Environment (SAFE) vs. Union of India & Others***

wherein status of pollution of River Yamuna at Agra was noticed and directions were issued to Chief Secretary to ensure remedial action in a mission mode. Chief Secretary was directed to pay due attention on utilisation of treated sewage; setting up of solid waste processing plant of adequate capacity to avoid mounting of legacy waste; leachate recirculation and treatment as per Solid Waste Management Rules, 2016 (hereinafter referred to as **'SWM Rules 2016'**) and also for monitoring of ground water to check contamination. Observing that a substantial question relating to environment due to implementation of scheduled enactments under NGT Act 2010 has arisen, Tribunal constituted a Joint Committee comprising Principal Secretaries, Environment and Urban Development, Uttar Pradesh, CPCB, National Mission for Clean Ganga (hereinafter referred to as **'NMCG'**) and Uttar Pradesh Pollution Control Board (hereinafter referred to as **'UPPCB'**), requiring it to submit a factual Report which may *inter-alia* cover quantity of sewage generation at Agra, existing sewage treatment capacity, actually utilized capacity of STPs and quantity of sewage being discharged through drains carrying sewage, untreated and treated, from STPs. Joint Committee was also required to highlight water quality of River Yamuna at different locations and steps taken in terms of preventing discharge into Yamuna.

Joint Committee Report dated 23.02.2023 filed on 24.02.2023:

10. Pursuant to order dated 25.11.2022, Joint Committee visited the concerned site on 23.02.2023 and submitted report to the Tribunal on 24.02.2023. Report says that **sewer network in Agra city is 1496 kms. and gap in sewer network is 1475 kms**. It means that the gap is almost 50%. Relevant extract of the Report dated 24.04.2023 reads as under:

"Back ground:

Agra city is situated on the bank of the river Yamuna in the northern state of Uttar Pradesh, India. The city lies between 27°11'N 78°01'E / 27.18°N 78.02°E having altitude at 171 meters above sea level. Projected population in the year 2020 is approx.23,78,285. It is one of the most populated city of Uttar Pradesh.

Agra features in a semiarid climate that borders on a humid subtropical climate. The city features are moderate winters, hot and dry summers and a monsoon season. However, the monsoon though substantial in Agra, are not quite as heavy as the monsoon in other parts of India.

Executive Engineer, Nirman Khand (II), U.P Jal Nigam (Urban), Agra informed that ***90 major and minor drains are identified in Agra (Annexure-1), which carry storm water, sewage and mixed effluent****. 0.038MLD treated effluent is being discharged from 18 water polluting industries located in the industrial area which are complying discharge effluent norms. Among them,* ***21 drains are tapped having flow of 58.25 MLD, 08 drains are partially tapped having flow of 210.82 MLD connected to the Sewage Treatment Plants. 61 drains are yet to be tapped having flow of 16.93MLD****.*

As per the information provided by Municipal Corporation, Agra, ***Bio-remediation work is being carried out on 61 untapped drains & 06 Nos. partially tapped drains by Municipal Corporation, Agra****. The details of drains for bioremediation is attached as (Annexure-2).*

As per the data furnished by U.P Jal Nigam (Urban), Agra, the ***existing sewer network is 1496 km in the city and gap in sewer network is 1475 km****. The work for 62 km is in process under AMRUT Scheme. Proposal for estimated cost of Rs. 2699 Crore for sewerage infrastructure has already been sent under AMRUT-2.0 (Annexure-3).*

Status of Sewage Generation, Collection and Treatment:

Considering the water demand of 441 MLD including wastage of water, ***sewage generation as per the population is estimated about 306 MLD.*** *As per information provided by UP Jal Nigam (Urban), the details are as follows:*

Table-1

Total Sewage Generation	*306MLD*
Installed Treatment Capacity	*220.75 MLD*

Utilization Treatment Capacity	*175 MLD*
Sewage being discharged to River Yamuna	***131 MLD (43.00%)***

From the above data, it is clear that ***sewerage system and sewage treatment facilities are not sufficient in the city****. At* ***presently 131 MLD sewage is being discharged into river Yamuna****. However,* ***out of 131 MLD sewage, 28.62 MLD sewage is being treated through bio-remediation and discharged into river Yamuna****.*

Table-2: Detail of STPs Established/Operational in Agra

S. No	***STP Location***	***Commission (Year)***	***Co-ordinates***	***Install Capacity***	***Technology***	***Status***
1	*Boodhi Ka Nagla*	*2001*	*27.2258 77.9948*	*2.25 MLD*	*WSP*	*Operational*
2	*Peelakhar*	*2001*	*27.1998 78.0609*	*10.0 MLD*	*WSP*	*Operational*
3	*Dhandhupura-I*	*2001*	*27.1623 78.0719*	*78.0 MLD*	*UASB*	*Operational*
4	*Jaganpur, Sikandarpur*	*2011*	*27.2449 77.9973*	*14.0 MLD*	*UASB*	*Operational*
5	*BhimNagri, Devri Road*	*2011*	*27.0933 78.0299*	*12.0 MLD*	*UASB*	*Operational*
6	*Sadarwan (Bichpuri)*	*2013*	*27.1789 77.9041*	*40.0 MLD*	*UASB*	*Operational*
7	*Dhandhupura-II*	*2014*	*27.1659 78.0757*	*24.0 MLD*	*UASB*	*Operational*
8	*Sadarwan (Bichpuri) New*	*2014*	*27.1792 77.9007*	*36.0 MLD*	*SBR*	*Operational*
9	*4.5 MLD STP at KalindiVihar Agra*	*2010*	*27.2210 78.0667*	*4.5 MLD*	*UASB*	*Operational*

1- ***Buri Ka Nagla (2.25 MLD):*** *The STP is located in north side of Agra city. The capacity of STP (****Oxidation Pond/Waste stabilization pond****) is 2.25 MLD. The* ***treated effluent is being discharged into river Yamuna.***

2- ***Pilakhar, shahadara, Nunhai (10 MLD):*** *The STP is situated in south side of NH-2 near Atul Generator factory Agra. The plant is working on UASB (****Up-flow Anaerobic Sludge Blanket****) based technology. At present, the utilization capacity of STP is approx. 10 MLD. The* ***treated effluent is being discharged into river Yamuna****.*

3- ***Dhandhupura (78 MLD):*** *The STP is situated in the east side of Taj Mahal. The plant is working on UASB (**Up-flow Anaerobic Sludge Blanket**) based technology. At present, the utilization capacity of STP is approx. 77.5 MLD. The **treated effluent is being used for irrigation purpose and partially being discharged in river Yamuna**.*

4- ***Jaganpura, Dayalbagh, Agra (14 MLD):*** *The STP is situated in north side of NH-2. The plant is operated by M/s V A Tech Wabag Ltd under one city one operator scheme. The plant is working on UASB (**Up-flow Anaerobic Sludge Blanket**) based technology. At present, the utilization capacity of STP is approx. 14 MLD raw sewage and the **treated effluent is being used for irrigation purpose**.*

5- ***Devri, Agra (12 MLD):*** *The STP is located in East side of NH-3. The plant is operated by M/s VA Tech Wabag Ltd under one city one operator scheme. The plant is working on UASB (**Up-flow Anaerobic Sludge Blanket**) technology. At present, the utilization capacity of STP is approx. 08 MLD and the **treated effluent is being discharged into canal for irrigation purpose and partially being discharged in River Yamuna**.*

6- ***Sadarvan, Bichpuri (40 MLD):*** *The STP is located in west side of Agra city near Jaipur highway NH-11. The plant is operated by M/s VA Tech Wabag Ltd under one city one operator scheme. The plant is working on UASB (**Up flow Anerobic Sludge Blanket Digestion**) technology. At present, the **utilization capacity of STP is approx. 28 MLD** and the **treated effluent is being discharged into canal for irrigation purpose**.*

7- ***Dhandhupura (24 MLD STP-11):*** *The STP is situated toward north-east side of 78 MLD STP Dhandhupura plant. The plant is operated by M/s VA Tech Wabag Ltd under one city one operator scheme. The plant is working on UASB (**Up-flow Anaerobic Sludge Blanket**) technology. At present, the **utilization capacity of STP is approx.18 MLD** and the **treated effluent is being used for irrigation purpose**.*

8- ***Sadarvan, Bichpuri (36 MLD):*** *The STP is located in west side of Agra city near Jaipur highway NH-I1. The plant is operated by M/s VA Tech Wabag Ltd under one city one operator scheme. The plant is working on SBR (**Sequence Batch Reactor**) technology. The STP is consists of several units such as a sump, screen, grit chamber and settling tank. At present, the **utilization capacity of STP is approx. 18MLD** and the*

treated effluent is being discharged into canal for irrigation purpose.

9- ***Kalindi Vihar Agra (4.5 MLD):*** *The STP is located in North side of NH-19. The plant is operated by M/s V A Tech Wabag Ltd under one city one operator scheme. The plant is working on UASB (**Up-flow Anaerobic Sludge Blanket**) technology. At present, the **utilization capacity of STP is approx. 3 .0 MLD** and the **treated effluent is being used for irrigation purpose and partially discharged into River Yamuna**.*

Table 3: Analysis results of the STP samples are as below: (As per sampling dt.10.02.2023)

Parameters		pH	BOD (mg/I)	SS, (mg/I)	COD (mg/I)	Faecal Coliform (MPN/l00ml)
STP	STP 2.25 MLD	7.81	28	42	152	**79000**
	STP 10 MLD	7.86	27	46	144	**84000**
	STP 78 MLD	7.96	26	38	128	**63000**
	STP 14 MLD	7.60	25	40	128	930
	STP 12 MLD	7.80	26	42	136	920
	STP40MLD	7.85	24	40	136	780
	STP 24 MLD	7.85	28	47	160	920
	STP 36 MLD	7.90	25	38	144	930
	STP4.5 MLD	7.68	25	48	152	910

Monthly monitoring of Sewage Treatment Plants is being done by U.P Pollution Control Board, Agra. ***Online Continuous Effluent Monitoring System (OCEMS) has been installed on 07 STPs except 4.5MLD STP Kalindi Vihar and 36 MLD Sadarvan, Bichpuri***.

Monthly monitoring of river Yamuna at different locations is being carried out by U.P Pollution Control Board, Agra. The analysis report for the month of Jan-Feb, 2023 is as below:

Table 4: Analysis results of the Surface Water (River Yamuna)

S. No	Location of sampling points	Date of sample collection	Field Determination				Organic Matter		Coliforms
			Colour	Odour	pH	D.O	B.O.D	C.O.D	Total Coliforms MPN/100 ml
1	U/S Kailash Ghat River Yamuna Agra	21.01.2023	Slight Yellowish	Odourless	7.4	7.2	8.4	16.0	9300
2	UIS Water	21.01.2023	Yellowish	Odourless	7.2	7.0	8.8	20.0	11000

	Works, Jeoni Mandi, River Yamuna Agra								
3	*D/S Agra, Near Taj, River Yamuna Agra*	*21.01.2023*	*Yellowish*	*Odourless*	*7.1*	*6.8*	*9.6*	*20.0*	*25000*
4	*U/S Kailash Ghat, River Yamuna Agra*	*03.02.2023*	*Yellowish*	*Odourless*	*7.6*	*7.2*	*8.4*	*16.0*	*9300*
5	*U/S Water Works, Jeoni Mandi, River Yamuna Agra*	*03.02.2023*	*Yellowish*	*Odourless*	*7.5*	*6.8*	*8.8*	*20.0*	*11000*
6	*D/S Agra, Near Taj, River Yamuna Agra*	*03.02.2023*	*Yellowish*	*Odourless*	*7.3*	*6.7*	*9.2*	*24.0*	*25000*
Note- All the parameters are expressed in mg/lit. Except pH and stated otherwise.									

Photographs omitted

Proposed Future Plan:

As informed by UP Jal Nigam (Urban), Agra 03 nos. of STPs having 166.0 MLD capacity and 10 Nos. Decentralized Sewage Treatment Plant (DSTPs) having capacity of 11.6 MLD has been awarded under the Namami Gange Programme. Details are as follows:

- *31 MLD at Jaganpur,*
- *35 MLD at Pilakhar*
- *100 MLD at Dhandhupura*
- *11.6 MLD at 10 different locations (DSTP)*
- *Total Proposed Capacity of STPs- 177.6 MLD*

It is pertinent to mention, that in the ***Writ Petition (C) 13381/84 (M.C Mehta V/s Union of India and Ors.) order dt. 11.12.2019*** *(Annexure-4) Hon'ble Supreme Court directed as below: -*

"We are informed that ***there are several open drains and sewer lines in the Taj Trapezium Zone (TTZ) and the City of Agra in particular****. It is said that the waste water from these drains/sewer lines overflows and spreads on the streets. If this is correct,* ***it is a clear threat to the sanitary and hygiene in the TTZ area and Agra City.*** *It would result in breeding of mosquitoes and flies and spread of disease and cause ecological damage. We therefore consider it appropriate to direct that Mr. M. C. Mehta, Petitioner-in-Person who is present before us, and NEERI would inspect the area of TTZ and Agra City and submit a detailed report to this Court. Mr. Mehta and NEERI would, if the assertions are correct, highlight the remedial action and steps, both short term and long term, which the Commissioner of TTZ or the Agra Municipal Corporation should take. The Commissioner of TTZ shall provide access to NEERI and Mr. Mehta as and when they desire to visit the aforesaid TTZ area and*

the Agra City for the above purpose. The report shall be submitted by Mr. Mehta and NEERI to this Court in eight weeks from today. List the matter thereafter on receipt of the said Report."

In the compliance of the above direction Shri M.C Mehta, Petitioner- in- person and NEERI representative Dr. S.K Goyal, Chief Scientist and head visited Agra, Mathura, Firozabad in Feb-March, 2021 and on 16.02.2023. The report is to be submitted by the joint team.

<u>Recommendations:</u>

- ***Proposed STPs having capacity of 177.6 MLD should be constructed in a time bound manner, all the untapped/partially tapped drains should be connected to the proposed STPs, so that no untreated sewage should be discharged into river Yamuna.***

- *Bio-Remediation/Phyto-Remediation should be continuously done on* ***61 untapped drains and 06 partially tapped drains until the construction of 03 STPs*** *and 10 DSTPs having total capacity of 177.6MLD should be completed.*

- ***Regular operation and maintenance of all STPs should be done by concerned agencies and monitoring of STPs should be ensured by U.P Jal Nigam (Urban). So that STPs should comply with the norms****.*

- *Chlorine treatment should be ensured in all STPs, so that Faecal coliform must comply with the norms before discharging for irrigation or in River Yamuna.*

- *Treated sewage should be discharged in such a way that no untreated contaminated effluent should meet before the final disposal.*

- ***Tertiary treatment capacity should be installed at all STPs for better utilization of treated sewage****.*

- *Online Continuous Effluent Monitoring System (OCEMS) should be installed in all STPs and connected with CPCB/UPPCB server.*

- ***Treated effluent should be used for water sprinkling, dust suppression activities, irrigation, horticulture and gardening purpose to increase the greenery and forests***

cover and other related areas."

11. The above Report acknowledged discharge of 131 MLD of untreated sewage into River Yamuna and failure on the part of the authorities to take necessary remedial action.

Tribunal's order dated 11.04.2023:

12. Tribunal considered Report dated 23.02.2023 on 11.04.2023. It observed that there are huge gaps and deficiencies in sewage management in an important city like Agra. Some major deficiencies noticed by Tribunal in para 4 read as under:

> *"i. Out of 91 drains in Agra, 21 drains (58.25 MLD flow) are tapped, 8 drains are partially tapped (210.82 MLD) and 61 drains (16.93 MLD) remain untapped and* ***thus untreated effluent goes to river Yamuna****. 286 MLD of sewage flows into drains and only 58.25 MLD is tapped.* ***No information is actually furnished about sewage received through sewage network and by interception of drains.***
>
> *ii. There appear to be no urgency for providing STPs****. No STP appears to have been set up after the year 2014****.*
>
> *iii. As per Table 2 in the report* ***9 STPs have installed capacity of 220.75 MLD but utilization capacity is only 175 MLD****.*
>
> *iv. Treated sewage is still being discharged into Yamuna instead of its utilization.*
>
> *v.* ***90.25 MLD of sewage treated in 3 STPs does not conform to feacal coliform standards****.*
>
> *vi. There is* ***no fixed timeline for setting up of 3 STPs and DSTPs at 10 locations****."*

13. Tribunal also noticed that the issue of solid and liquid waste management in State of UP in general was under consideration in ***OA 606/2018, Compliance of Municipal Solid Waste Management Rules, 2016 and other environmental issues*** which proceedings were initiated

pursuant to Supreme Court's order dated 02.09.2014 in ***Writ Petition No. 888/1996, Almitra H. Patel vs. Union of India & Others*** and ***in Paryavaran Suraksha vs. Union of India, (2017) 5 SCC 326***. Consequently, **Tribunal directed Chief Secretary** to co-ordinate with other authorities in the State, ensure remedial action by holding a special meeting of concerned officers to ensure that all the existing 9 STPs are fully utilized, comply with the standards and treated effluents are utilized for secondary purposes with defined sources/command area, untapped, partially tapped drains be intercepted and diverted to STPs, performance of In-Situ projects is evaluated, fortnightly monitoring of existing treatment of waste water with reference to consent conditions take place. An action taken report was required to be filed within four months. Tribunal also directed that on the pattern of the order dated 11.04.2023 in ***OA 773/2022, Rejesh Pareek vs. State of UP***, Report may be filed giving details of chlorination, ferti-irrigation, performance of STPs and in-situ remediation projects at Agra.

Compliance/Action Taken Report dated 22.08.2023 filed by Municipal Commissioner, Nagar Nigam Agra:

14. Municipal Commissioner, Nagar Nigam Agra filed a Compliance/Action Taken Report dated 22.08.2023, placing on record number of test reports of waste water at different locations at the bank of river Yamuna at Agra. Details of drains and quantity of sewage handled by such drains is also given in the form of a chart and it is said that there are 7 STPs maintained by UP Jal Nigam with total installed capacity of 180.25 MLD but capacity utilization in July 2023 was only 157.46 MLD and all the said 7 STPs are meeting prescribed standards. Further, it is said that there is total 90 drains in Agra city, whereof 21 are fully tapped

with sewage discharge capacity of 60.37 MLD, 08 are partially tapped with sewage discharge capacity of 208.48 MLD and 61 drains with sewage discharge capacity of 17.99 MLD are untapped.

Tribunal's order dated 12.09.2023:

15. OA-I was taken up by Tribunal again on 12.09.2023 when it was found that as directed vide order dated 11.04.2023, **no Report was submitted by Chief Secretary and none was present either on behalf of State of UP or to represent Chief Secretary**. Giving further opportunity, Tribunal granted six weeks' time for filing report by Chief Secretary, State of UP.

16. **Despite the above order, no Report has been filed by Chief Secretary**. However, one Report has been filed by CPCB dated 05.12.2023, another by State of UP through Joint Secretary, Urban Development dated 06.12.2023 and an Action Taken Report dated 06.12.2023 by Regional Officer, UPPCB, Agra.

Report dated 05.12.2023 filed by CPCB:

17. CPCB in its Report has given details of 9 STPs functioning at Agra. Report deals with the subject of ferti-irrigation at Agra, in-situ remediation of drains, chlorination and also gives concluding remarks. Relevant extract of the report reads as under:

> ***"2.0 ACTION TAKEN BY CPCB AS PER THE DIRECTIONS OF HON'BLE NGT ORDER DATED 11/04/2023***
>
> *In compliance to the directions of Hon'ble NGT, following actions initiated by CPCB for compliance of directions:*
>
> ***2.1 REGARDING PERFORMANCE OF STPs IN AGRA:***
>
> *CPCB carried out* ***inspection of 09 STPs*** *in Agra on 24/08/2023*

and during the inspection ***all STPs were found operational****. Relevant photographs taken during monitoring of STPs is annexed as Annexure III. Analytical results of STPs are depicted in Table 1:*

Table 1: Analytical results w.r.t physico-chemical and biological parameters of STPs in Agra

S No	STP location	Techn-ology	Installed Capacity (MLD)	Source	Parameter								
					pH	COD, mg/l	BOD, mg/l	TSS, mg/l	Nh3-N (MG/l)	No3-N (mg/l)	No3-N (mg/l)	Total-P	Fecal Coliform
	As per NGT direction dtd 30/4/ 2019 in OA No 1069 of 2018				5.5-9.0	50	10	20	10			1	230
1	Buri Ka Nagla	WSP	2.25	Inlet	7	315	116	354	20	1.50	BDL <0.01	5.06	$68x10^9$
				Outlet	7.3	108	28	35	14	1.66	BDL <0.01	3.64	$21x10^4$
2	Pilakhar	WSP	10	Inlet	7	395	125	890	15	1.68	BDL <0.01	2.24	$23x10^{12}$
				Outlet	6.9	72	10	24	8	8.89	BDL <0.01	2.84	<1.8
3	Dhandh upura-I	UASB	78	Inlet	7.2	163	40	128	17	0.71	BDL <0.01	3.79	$92x10^{14}$
				Outlet	7.1	72	11	25	2	9.83	BDL <0.01	2.59	<1.8
4	Jaganpur, Sikan darpur	UASB	14	Inlet	7.1	287	107	200	19	1.15	BDL <0.01	5.40	$12x10^8$
				Outlet	7.2	93	19	21	13	0.74	BDL <0.01	3.04	$33x10^4$
5	Bhim Nagri, Devri Road	UASB	12	Inlet	7.1	193	60	163	28	1.76	BDL <0.01	6.20	$17x10^{10}$
				Outlet	7	24	5	12	7	1.68	BDL <0.01	2.21	<1.8
6	Sadarwan (Bichpuri)	UASB	40	Inlet	6.9	204	71	157	27	0.81	BDL <0.01	4.86	$33x10^6$
				Outlet	6.5	127	39	34	14	0.79	BDL <0.01	3.16	$35x10^4$
7	Dhandh upura-II	UASB	24	Inlet	7.3	154	56	125	20	1.93	BDL <0.01	4.31	$63x10^9$
				Outlet	7.2	58	9	32	2	10.30	BDL <0.01	3.26	<1.8
8	Sadarwan (Bichpuri) New	SBR	36	Inlet	6.7	67	14	70	16	0.71	BDL <0.01	2.05	$40x10^6$
				Outlet	6.9	52	9	54	11	0.79	BDL <0.01	4.09	$17x10^5$
9	Kalindi Vihar	UASB	4.5	Inlet	6.8	105	22	67	20	BDL <0.03		0.05	5.05	$17x10^9$
				Outlet	7.1	54	10	29	16	1.47	BDL <0.01	3.80	$78x10^2$

Based on the inspection and analytical results, major observations are summarized as under:

1. ***All 09 STPs in Agra were not meeting with norms*** *for one or the other parameters as prescribed by Hon'ble NGT in the matter of Nitin Shankar Deshpande Vs UOI & Others in O.A. 1069 of 2018.*

2. *Out of 09 STPs,* ***07 STPs are operating with valid Consent order from UP PCB*** *except Sadarwan (Bichpuri) and Kalindi Vihar.*

3. ***All STPs except Bhim Nagri, Devri Road discharge their treated effluent into river Yamuna****.*

4. *Chlorination facility was found in the all the STPs and dosing being done at rate of 4-5 ppm.*

2.2 REGARDING FERTI-IRRIGATION IN AGRA

In respect of ferti-irrigation, it is observed that there was ***no permanent structure/distribution network found connected to the outlet of the STP for the use of treated effluent,*** *however it was informed that* ***nearby farmers are using partially, the treated sewage by putting temporary pipe arrangement****; mostly treated effluent going to river Yamuna.*

2.3 REGARDING IN-SITU REMEDIATION OF DRAINS

(i) *As per the information provided by Agra Nagar Nigam (ANN), there are total 90 no. of drains Agra, out of which, 23 drains are tapped/partially tapped and waste water is diverted to STPs for treatment & disposal of effluents.* ***At present ANN is doing in-situ remediation project through hired firm (M/s Sign-Age (India) Pvt. Ltd) on 67 no. untapped/partially tapped drains*** *(<20MLD – Minor Drain) located in different locations of Agra. Relevant photographs taken during monitoring of drains is annexed as Annexure IV.*

(ii) *CPCB* ***inspected randomly 08 no. drains in Agra****, where in-situ remediation project was going on. Inspection team collected relevant information and waste water samples of 08 drains (pretreatment and after treatment both). The water quality of drains is compared with General Standards for discharge of Environmental Pollutants. Analytical results are depicted in Table 2:*

Table 2: Analytical results of drains in Agra

S No	*STP location*	*Flow (MLD)*	*Sampling Locations*	*Parameter*								
				pH	*COD, mg/l*	*BOD, mg/l*	*TSS, mg/l*	*P O4 - N (mg/ L)*	**N H3 - N (mg/ L**	**Total Coliform**	**Fecal Coliform**	**TKN (mg/ L)**
As per General Discharge Standards				5.5-9.0	250	30			50			100
1	Taj West Gate	1.1	Before Remediation	6.9	218	77	179	2.97	28	$28x10^{9}$	$14x10^{9}$	36
			After Remediation	7.1	205	68	133	5.05	25	$16x10^{11}$	**$92x10^{10}$**	32
2	*Pilakhar*	3.2	Before Remediation	7	102	20	61	2.62	16	$92x10^{6}$	$54x10^{6}$	19
			After Remediation	7.1	94	15	**70**	2.90	15	**$94x10^{6}$**	$43x10^{6}$	18
3	*Dhandhupura-I*	0.6	Before Remediation	7	152	29	84	1.81	13	$43x10^{9}$	$12x10^{8}$	16
			After Remediation	6.9	106	17	**146**	1.66	11	$24x10^{8}$	**$13x10^{8}$**	14
4	*Jaganpur, Sikandarpur*	0.5	Before Remediation	6.8	155	47	80	2.12	14	$21x10^{8}$	$39x10^{7}$	17
			After Remediation	7	130	36	**84**	2.06	12	**$94x10^{7}$**	$32x10^{7}$	15
5	*Bhim Nagri, Devri Road*	1.3	Before Remediation	6.4	221	94	105	2.30	25	$70x10^{8}$	$21x10^{8}$	33
			After Remediation	6.8	213	89	96	2.51	13	$47x10^{7}$	**$47x10^{7}$**	15
6	*Sadarwan (Bichpuri)*	*1*	Before Remediation	6	188	58	132	0.49	15	$22x10^{7}$	$24x10^{6}$	18
			After Remediation	7.1	170	49	87	3.11	13	$11x10^{8}$	**$70x10^{7}$**	16
7	*Dhandhupura-II*	*0.3*	Before Remediation	7	146	45	95	1.13	18	$92x10^{9}$	$13x10^{9}$	22
			After Remediation	7.1	127	34	**120**	0.28	17	$70x10^{6}$	**$70x10^{6}$**	20
8	*Sadarwan (Bichpuri)*	0.05	Before Remedi-	6.9	162	59	76	2.82	18	$31x10^{9}$	$13x10^{9}$	23

	New		ation									
			After Remedi-ation	7	140	47	69	1.82	16	**$94x10^8$**	**$26x10^8$**	18

Based on the analytical results, it is observed that ***only 02 drains namely Mantola and Water works were meeting with discharge standard norms****. The* ***In-situ remediation of drains are not effective and there was no substantial reduction in organic load of wastewater in drains having higher hydraulic load***

2.4 REGARDING CHLORINATION: FORMATION OF STANDARDIZATION TO CONTROL FORMATION OF THMs

In compliance to directions of Hon'ble NGT dated 11/4/2023 in the matter of Rajesh Prateek Vs State of Uttar Pradesh (in OA No 773 of 2022), CPCB has submitted its findings on formation of THMs and effective dosing for fecal reduction on 29/11/2023 to Hon'ble NGT.

The major observations made in the report and results of STPs in respect of THMs and Fecal coliform reduction for Agra are produced below:

(i) ***CPCB carried out monitoring of 05 STPs in Agra on 21/9/2023****, wherein chlorination facility was available and during the visit all STPs were found operational. Analytical results of STPs are depicted in Table 3 & Table 4.*

Table 3: Analytical results of STPs (with chlorination) in Agra

S No	*STP location*	*Techn-ology*	*Installed Capacity (MLD)*	*Source*	*Parameter*					
					pH	*COD, mg/l*	*BOD, mg/l*	*TSS, mg/l*	*FC (MPN/100 ml)*	*NH3-N (mg/L)*
1	*Sadarwan (Bichpuri) Agra*	*SBR*	*36*	*Inlet*	*6.9*	*628*	*202*	*1030*	-	*24*
				Before chlorination	*7.3*	*148*	*49*	*65*	$70x10^5$	*16*
				Outlet	*701*	*139*	*55*	*67*	$27x10^5$	*15*
2	*Bichpuri Agra*	*UASB*	*40*	*Inlet*	*6.9*	*256*	*102*	*196*	-	*23*
				Before chlorination	*7.2*	*355*	*92*	*60*	$79x10^4$	*25*
				Outlet	*7.1*	*419*	*149*	*51*	$17x10^5$	*16*
3	*Devori Road AGra*	*UASB*	*12*	*Inlet*	*7.0*	*486*	*109*	*498*	-	*27*
				Before chlorination	*6.9*	*106*	*28*	*43*	$22x10^5$	*10*
				Outlet	*7.3*	*106*	*28*	*61*	$11x10^7$	*11*
4	*Dhandhupura*	*UASB*	*24*	*Inlet*	*6.9*	*256*	*75*	*186*	-	*26*
				Before chlorination	*7.0*	*147*	*61*	*166*	$13x10^4$	*10*

				Outlet	*7.1*	*128*	*36*	*125*	<1.8	*02*
5	*Jaganpura*	*UASB*	*14*	*Inlet*	*7.2*	*213*	*64*	*104*	-	
				Before Chlorination	*7.1*	*143*	*45*	*62*	$11x10^2$	*11*
				Outlet	*7.2*	*140*	*44*	***65***	**$14x10^6$**	*10*

Table 4: Analytical results of STPs in Agra with respect to THMs

S. No.	***STP locations***	***Source (Post Chlorination)***	***Parameters***				
			Bromoform	***Dibromo - chloromethane***	***Bromodichloromethane***	***Chloroform***	***Chloramines***
1	*Sadarvan, Bichpur, Agra (36 M LD)*	*First Dose – 5ppm*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.05)*	*BLQ LOQ-0.0 5)*	*BLQ (LOQ-0.1)*
		Second Dose - 2ppm	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.1)*
2	*Bichpuri, Agra (40 MLD)*	*First Dose – 5ppm*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.1)*
3	*Devori Road, Agra (12 MLD)*	*First Dose – 5ppm*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0. 05)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.1)*
4	*Dhandhupura, Agra (24 MLD)*	*First Dose – 5ppm*	*BLQ (LOQ-0.0 5)*	*0.282*	*0.166*	*0.272*	*3.12*
5	*Jaganpura Agra (14 MLD)*	*First Dose – 5ppm*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0.0 5)*	*BLQ (LOQ-0. 05)*	*BLQ (LOQ-0. 05)*	*BLQ (LOQ-0.1)*
Note: BLQ-Below Limit of Quantification, LOQ – Limit of Quantification							

(ii) Samples were collected from 05 STPs, based on SBR & UASB technology having manual/ automatic feeding of chlorine (3.0 – 5.0 ppm) in gaseous / liquid form.

(iii) Maximum reduction in fecal coliform from the order of 10^4 MPN/ 100 mL to < 1.8 MPN/ 100 mL in post-chlorination samples at chlorine dosing of 3.0 - 5.0 ppm was observed in 01 STP viz. Dhandupura.

(iv) The results also reveal that THMs formation is below the limit of quantification at all STPs except Dhandupura at chlorine dosing ranging between 03-06 ppm

3.0 CONCLUDING REMARKS

In view of above facts, following findings are made in respect of chlorination, ferti-irrigation, performance of STPs and in-situ remediation projects at Agra:

1. ***All 09 STPs in Agra were not meeting with norms for one or the other parameters*** *as prescribed by Hon'ble NGT in the matter of Nitin Shankar Deshpande Vs UOI & Ors in O.A. 1069 of 2018.*

2. *In respect of chlorination, it is observed that* ***there is no direct relation found between dosing of chlorination with corresponding BOD to control formation of THM****. It is also found that possibility of formation THMs arises only in case of dosing of chlorination beyond breakpoint i.e., 5 mg/L. However, the usual dosage of chlorine in STP in field practice is adopted between 3-5 mg/L.*

3. *Based on analytical results, it is found that dosing of chlorine at 05 ppm rate and required chlorine demand, possibility of formation of THMs in wastewater is negligible.* ***To meet the desired standards of 230 MPN/ 100 mL, optimum performance of biological secondary treatment and needed tertiary treatment shall be ensured****.*

4. *Out of 08 drains in Agra,* ***only 02 drains namely Mantola and Water works were meeting with discharge standard norms****.* ***In-situ remediation of drains are found not effective*** *and there was no substantial reduction in organic load of wastewater in drains."*

Report dated 06.12.2023 filed by State of UP:

18. Report of State of UP largely is a repetition of what has been said by CPCB in its Report. State of UP has said that there are 90 identified drains in Agra, wherein estimated discharge of sewage is 286 MLD. Out of 90 drains, only 21 are presently fully tapped and remaining are partially tapped or untapped. Details of the drains given in the form of chart is as under:

S.No.	Status	Total No. of Drains	Drain Discharge (in MLD)
1	Fully Tapped Drains	21	60.37
2	Partially Tapped Drains	08	208.48
3	Untapped Drains	61	17.15
	Total Drains in Agra City	90	286.00

19. With regard to tapping of 61 numbers untapped drains and 08 numbers partially tapped drains, details of projects which are sanctioned/proposed are given as under:

"

- *Agra Sewerage Scheme (Interception & Diversion and STP works) under Namami Gange Programme is sanctioned having project cost Rs 842.25 Cr. ANNEXURE A1*

- *In which 23 Nos, untapped and 3 nos partially tapped drains are to be tapped along with construction of 3 nos. of STPs namely 100 MLD STP Dhadhupura, 31 MLD STP Jaganpur and 35 MLD STP Peelakhar and 10 De-centralised STP's with total capacity of 11.60 MLD. The project is being executed by UP Jal Nigam (Rural) under Namami Gange programme.*

- *It is pertinent to mention here that the* ***construction of the project has already been commenced on 05.04.2023 and date of completion is 04.04.2025.*** *ANNEXURE 2 True copy of Progress report issued by SE, CC Jal Nigam (Rural) dated 05.12.2023*

- *That after completion of this project, sewage treatment will be enhanced by 177.60 MLD and total treatment capacity at Agra city will be 406 MLD. This project is being executed by UP Jal Nigam (Rural).*

- *It is imperative to note here that DPR of balanced drains of 38 nos. untapped drains and 5 nos. of partially tapped drains amounting to proposed cost of Rs 136.40 crores is submitted by UP Jal Nigam (Urban) on 19.10.2023 to NMCG, New Delhi for approval. ANNEXURE 3 Letter Written to the executive director (Project NMCG) by Project director SMCG dated 16.10.2023."*

20. With regard to 09 functional existing STPs at Agra, it is said that 07 are maintained by UP Jal Nigam (Urban) and 02 by Jalkal Vibhag, Nagar Nigam, Agra. Functional details of all 09 STPs are given in the form of chart as under:

Report							
At Agra Nagar Nigam, 7 nos. of STPs are maintained by UP Jal Nigam (Urban), Detail of these STPs is given below:-							
S. No	***Name of STP***	***Technology***	***Capacity of STP (in MLD)***	***Treatment Utilization in November 2023 (in MLD)***	***Comply with standards as per Designed parameter***	***Maintaining Agency***	*Reuse of treated effluent*
1	*78 MLD STP Dhandhupura*	*UASB*	*78.00*	*77.67*	*Yes*	*UPJN(U)*	*Treated effluent is reused for irrigation of agriculture land with command area of about 840 acres.*
2	*24 MLD STP Dhandhupura*	*UASB+ EA*	*24.00*	*17.68*	*Yes*	*UPJN(U)*	
3	*10 MLD STP Peelakhar*	*WSP*	*10.00*	*10.00*	*Yes*	*UPJN(U)*	*Treated effluent is reused for irrigation of agriculture land with command area of about 100 acres.*
4	*2.25 MLD STP Nagla Burhi*	*WSP*	*2.25*	*2.25*	*Yes*	*UPJN(U)*	*Treated effluent reuse proposal is taken under AMRUT 2.0.*
5	*14 MLD STP Jagan pur*	*UASB*	*14.00*	*14.00*	*Yes*	*UPJN(U)*	*Treated effluent is reused for irrigation of agriculture land with command*

							area of about 150 acres.
6	*12 MLD STP Deori Road*	*UASB*	*12.00*	*9.05*	*Yes*	*UPJN(U)*	*Treated effluent is discharged into Rohta irrigation canal for irrigation.*
7	*40 MLD STP Bichpuri*	*UASB*	*40.00*	*26.06*	*Yes*	*UPJN(U)*	
8	*36 MLD STP Sadarwan Bichpuri*	*SBR*	*36*	*21*	*Yes*	*C&DS, UPJN(U)*	*Treated effluent is reused for irrigation of agriculture*
9	*4.5 MLD STP Kalini Vihar*	*UASB*	*4.5*	*4.5*	*Yes*	*C&DS, UPJN*	*Treated effluent is reused for irrigation of agriculture*
			220.75	*182.21*			

21. Report further says that all STPs are meeting their designed parameters as per norms and test reports dated 25.11.2023, collectively filed as annexure 4. Report further says in para 6 to 12 as under:

> *"6. It is submitted that through centralised OCEMS (online continuous effluent monitoring system) is being monitored on Real Time basis. ANNEXURE 5 Report of OCEMS.*
>
> *7. That* ***chlorine treatment is also being done in all STPs. Therefore, fecal coliform is complying with the norms before the discharging for irrigation and in river Yamuna****. The parameter and norms are mentioned in UPPCB report which is ANNEXURE 4.*
>
> *8. It is submitted that 5 MLd of treated sewage of 10 MLd STP Peelakhar is proposed to be reused for electricity generation through waste energy plant at Kuberpur, Agra.*
>
> *9. It is further submitted that 1000 KLD underground treated effluent water tank is operational through which treated effluent is being used*

for water sprinkling continuously in the entire city. ANNEXURE 6 Photographs.

10. It is imperative to mention here that 61 untapped drains and 6 partially tapped drains are being treated through bio-remediation and Phyto-remediation process from October 2020. ANNEXURE 7 Photographs of the Bio-remediation and Phyto-remediation with testing report of water after treatment from UPPCB.

11. That the ***UPPCB has also analysed of STP outlet samples and has given report which clearly reflects that all STPs are meeting designed parameters*** *is annexed herein as ANNEXURE 8.*

12. It is submitted that the in the notified industrial area all industries are operating on zero liquid discharge (ZLD) basis."

Compliance Report dated 06.12.2023 filed by UPPCB:

22. Compliance Report dated 06.12.2023 filed by UPPCB is short and reads as under:

"1- There are total 90 drains carrying 286 MLD discharge, identified in the district Agra which ultimately meets river Yamuna. Out of these ***21 drains carrying 60.37 MLD discharge have already been tapped and have been connected to the STP****. The bio-remediation/phyto-remediation process have already been installed in the* ***remaining 61 untapped drains carrying 17.15 MLD discharge and 08 partially tapped drains carrying 208.48 MLD discharge since Oct, 2020****.*

2- Agra sewerage scheme (Interception & Diversion and STP works) under Namami Gange Programme is sanctioned having project cost Rs. 842.25 Cr. in which 23 nos. untapped and 03 nos. partially tapped drains are to be tapped along with construction of 03 nos. of STPs namely 100 MLD STP Dhandhupura, 31 MLD STP Jaganpur, 35 MLD STP Peelakhar and 10 decentralised STPs with total capacity of 11.60 MLD. The construction work of 100 MLD STP Dhandhupura, 31 MLD STP Jaganpur and 35 MLD STP Peelakhar have been started and expected dated of completion is 04.04.2025.

3- DPR of Rs. 136.41 Cr. regarding tapping of 38 untapped and 05 partially tapped drains have been prepared and submitted by UP Jal Nigam Urban for approval to NMCG, New Delhi on 19.10.2023.

4- There are at present 09 STPs operational in Agra, out of these 07

STPs are maintained by UP Jal Nigam (Urban), and 02 STPs are maintained by Jalkal Vibhag, Nagar Nigam Agra. ***U.P. Pollution Control Board is regularly monitoring the various parameter of these 09 STPs and as per the analysis report for the month of November, 2023 these 09 STPs are achieving the standards set by the notification dated 13-10- 2017 by MoEF&CC.*** *The detail of STPs and analysis report are annexed as Annexure-II*

5- *Joint Secretary, Nagar Vikas Vibhag-7 vide his letter no. NGT-279/Nau-5-2023- 11writ/2023 dated 05.12.2023 has directed to organise a review meeting under the Chairmanship of Chief Secretary, Uttar Pradesh along with the Principal Secretary of the concerned departments. The copy of the letter is annexed as Annexure-III."*

OA 773/2022 (hereinafter referred to as 'OA-II'):

23. This OA was registered by taking cognizance *suo-moto* of a letter petition dated 13.10.2022 sent by Rajesh Pareek, resident of Flat no. 1004, Madhvi B, Shri Radha Valley, NH.19, Mathura. Applicant has complained as under:

"1) At present sewage generation in Mathura- Vrindavan is 77.42 MLD.

2) There are 36 drains in Mathura- Vrindavan discharging sewage into river yamuna.

3) Water quality of Yamuna is unfit to sustain any life and contains fecal coliform, more than 68000 MPN/100 ml.

4) An access to water quality report for September 2022 on river yamuna, analysed at 9 locations by UP PCB, indicated BOD range from 8-10 mg/l and FC ranging 27000- 33000 MPN/100 ml, which is alarming, to say the least.

5) On record, it is learnt that, out of 36 drains in Mathura-Vrindavan, 30 drains are tapped, while 6 of them remain untapped.

6) As per official claims 70 mld sewage is being treated in Mathura-Vridavan. This claim, however, is truly fictitious, given the extremely polluted Yamuna water.

24. It is also said that River Yamuna is daughter of Sun and sister of Yamraj. As per belief of Hindus, it enjoys a very exalted place in Sanatan Dharma. Discharge of sewage causing pollution of river water of Yamuna is not only harmful and detrimental to eco-system but also hurts religious sentiments of Hindus globally. The ground reality is that in the name of treatment, dis-functional STPs are continuously discharging untreated sewage in holy water of Yamuna at Mathura-Vrindavan. It is imperative that discharge of treated or untreated sewage water in Yamuna should be stopped, bunching of drains should be done and sewage discharge from twin cities should be guided in oxidation ponds after so called treatment and put to agricultural/horticultural use depending upon water quality.

Tribunal's order dated 19.10.2022:

25. The complaint/application was considered by Tribunal on 19.10.2022. Considering the fact that earlier in some matters, complaint of pollution of river Yamuna was examined. Tribunal referred to its order dated 17.12.2021 in ***OA 102/2021, Acharya Damodar Shastri & Another vs. Union of India & Others*** wherein failure of State authorities in prevention of discharge of untreated sewage and other waste in river Yamuna at Vrindavan and Kosi was considered. Tribunal noted that STPs were inadequate to deal with the waste generated. There were violations of the directions contained in the order dated 13.01.2015 passed by Tribunal in ***OA 06/2012*** and ***OA 300/2013, Manoj Mishra vs. Union of India***, wherein rejuvenation of Yamuna as a whole was considered. Tribunal also considered a factual Report of Monitoring Committee constituted by order dated 15.12.2021 to the effect that quality of water in downstream of Mathura-Vrindavan was poor showing untreated pollution being added in river water whereafter Tribunal had observed/directed as under:

"5. From the above, it is seen that pollution is continuing and steps taken are inadequate to remedy the situation. The Committee has recommended further action to prevent ***discharge of untreated sewage effluents in the drains connecting river Yamuna which is a cause of deteriorated water quality and treatment of plastic waste. The State authorities have to ensure availability of necessary funds. The Mathura Vrindavan Development Authority (MVDA) has to undertake plantation drive and also take steps to clear encroachments. Grievance of the applicant including about discharge in Akroor Drain needs to be looked into.***

6. Accordingly, we accept the report of the Oversight Committee and issue directions in terms of recommendations in the report. We further direct that suggestions of the applicant be duly considered. ***There is also need to monitor performance of STPs with reference to fecal coliform and utilizing treated effluents for secondary purposes. Designed capacity of STPs including facility for septage treatment may also be duly utilized. NMCG may take decision on the projects referred to it by the State of UP as per applicable norms particularly on the subject of degraded river stretch downstream Agra. Compliance may be monitored by Chief Secretary, UP in coordination with other State Authorities which may also be overseen by the Monitoring Committee constituted by this Tribunal. MVDA may also take necessary measures, including preventing pollution, removal of encroachments and undertaking adequate plantation."***

26. Noticing that despite the directions issued earlier, still situation has not improved, Tribunal constituted a Joint Committee comprising Additional Chief Secretary/Principal Secretary, Urban Development, UP, Mathura-Vrindavan Development Authority (hereinafter referred to as **'MVDA'**), UPPCB, District Magistrate, Mathura, NMCG, CPCB and Vice Chairman, Braj Teerth Vikash Parishad, Mathura and required it to submit factual as well as action taken Report. Tribunal also directed that Report may specify the extent of sewage generation, installed treatment capacity, actual utilization, performance of STPs and utilization of treated sewage for irrigation and other purposes. Committee was also required to ascertain gap in terms of disposal of treated/untreated sewage into river

Yamuna through different drains and recommend compensation to be levied for remedial action on the pattern of order dated 03.08.2022 passed in ***OA No. 1002/2018, Abhisht Kusum Gupta vs. State of Uttar Pradesh & Others.***

Report dated 09.12.2022 filed by Regional Officer, UPPCB, Mathura:

27. Pursuant to order dated 19.10.2022, Regional Officer, UPPCB, Mathura submitted Report dated 09.12.2022 and relevant extract of Report reads as under:

> ***"About Mathura:***
>
> *Mathura is a well-known ancient and heritage city in the Uttar Pradesh state. The city of Mathura is situated along the western banks of the river Yamuna. Mathura city is an administrative center of Mathura district which falls under Agra division. City spatial extension falls at 27°35' North latitude and 78°12', East longitude at an average elevation of 174 meters (570 feet).*
>
> *The 2011 census of India estimates the population of Mathura to be 441,894, a decadal growth rate of 22.53 per cent from 2001 census of India. The total area of Mathura District is 3340 sq Km. (as per district Mathura NIC website https://mathura.nic.in/)*
>
> *In Mathura city, effluent from septic tank, open sewage and storm water drain network collects the waste water and sent them to Sewerage Treatment Plants (STP) for treatment. As per the enclosed information given by UP Jal Nigam (Rural),* ***there are total 23 no. of drains in Mathura, 19 of them are tapped, 01 partially and 03 no. of drains are untapped at present****. (annexure)* ***Total flow of all the drains of Mathura is 68.55 MLD****. In continuation it is also informed that the untapped drains will be tapped by I & D and 60 MLD STP DPR for construction of Estimated cost Rs.292.56 Crore (including O & M for 15 years) NMCG, New Delhi on 17.08.2022 E.C. has been approved in the meeting of AA & ES NNMCG New Delhi vide letter no Pr 11013/3/2022-O/o Dir (T III) NMCG, dated 25.10.2022 has been released. Necessary action is being taken for inviting tenders which is Annexed as Annexure-2.*
>
> *Vrindavan is also a famous religious place on the bank of River Yamuna. The population of the Vrindavan is 63005 (approx.).*

There are ***total 13 no. of drains in Vrindavan, 11 of them are tapped and 02 no. of drains are untapped at present****. (annexure)* ***Total flow of all the drains of Vrindavan is 10.95 MLD.***

As per the enclosed information given by Regional Office UPPCB Mathura, there are ***total 04 no. STPs in Mathura and 02 no. of STPs in Vrindavan are working at present, Total installed capacity of 06 no. STPs is 79.3 MLD****, however as per details (last 06 months record) provided by UP Jal nigam (Rural)* ***75.3.8 MLD capacity of total 79.3 MLD capacity is being utilized****. In continuation it is also informed that the untapped drains will be tapped by I & D and 13 MLD STP DPR for construction of Estimated cost Rs.77.70 Crore (including O&M for 15 years) NMCG, New Delhi on 17.08.2022 E.C. has been approved in the meeting of AA & ESNNMCG New Delhi vide letter no Pr 11013/3/2022- O/o Dir (T III) NMCG, dated 25.10.2022 has been released. Necessary action is being taken for inviting tenders which is Annexed as Annexure-3.*

Total flow of all the drains in Matura and Vrindavan is ***79.50 MLD****; however Total treatment capacity of all STPs is* ***79.3 MLD.*** *So there is a gap of 0.2 MLD in the treatment capacity of STPs in Matura and Vrindavan.*

Observations made during field visit and analysis results are given as below:

1. Laxmi Nagar, Mathura (16.0 MLD):

This STP-I is working on UASB (Up flow Anaerobic Sludge Blanket) based technology. This ***plant is operated by private agency M/s Triveny engineering & Industries Ltd, Noida from July 2021 to till date****. Its main pumping station is Dairy Farm Nala for input. At the time of inspection, the STP was found operational.*

2. Laxmi Nagar, Mathura (14.5MLD):

It is working on Oxidation pond/ waste stablisation pond technology. It is ***operated by private agency M/s Triveny engineering & Industries Ltd, Nolda from July 2021 to till date****. Its main pumping station is Bangali Ghat for input. Plant was found operational at the time of inspection.*

3. STP, Masani (30 MLD):

30 MLD STP of Masani is working on SBR technology. It was found operational during inspection. Main pumping station of this STP is Masani (approx. 5km from STP). It is also ***operated by private***

agency M/s Triveny engineering & industries Ltd, Noida from July 2021 to till date

4. STP, Masani (6.8 MLD):

30 MLD STP of Masani is working on ***WSP technology****. It was found operational during inspection.*

5. Pagal Baba, Vrindaavan (4.0 MLD):

Pagal Baba STP (4.0 mld) is working on ***oxidation pond/waste stablisation pond technology****. Main pumping station for input is Mukharji Park. It is* ***operated by Private agency M/s Hindustan engineering Ltd, Lucknow from Jan. 2019 to till date****. At the time of inspection, the STP was found operational.*

6. Maant road, Vrindaavan (8.0 MLD)

It is based on ***UASB (Upflow Anaerobic Sludge Blanket) technology****. STP is* ***operated by Private agency M/s Vatavarn Techno, Agra*** *from July 2021 to till date. Main pumping station for input is Rukmani Vihar- 7MLD and Rajpur phatak-1 MLD. At the time of inspection, STP was found operational*

Analysis results of the STP samples are as below:

Parameter →		***pH***	***BOD, mg/l***	***SS, mg/l***	***COD, mg/l***	***Faecal Coliform (MPN/100 ml)***	***Compliance status (Yes/No)***
STP	*Masani (30 MLD)*	*7.9*	*22*	*58*	*156*	*830*	*Yes*
	Masani (6.8 MLD)	*8.1*	*27*	*62*	*192*	*910*	*Yes*
	Laxmi Nagar, Mathura (16.0 MLD)	*8.5*	*25*	*68*	*176*	*780*	*Yes*
	Laxmi Nagar, Mathura (14.5 MLD)	*7.9*	*26*	*74*	*228*	*930*	*Yes*
	Pagal Baba, Vrindaavan (4.0 MLD)	*7.9*	*27*	*68*	*172*	*21000*	*No In point of Faecal Coliform only*
	Maant raod,	*8.0*	*26*	*49*	*168*	*910*	*Yes*

	Vrindavan (8.0 MLD)						

The Analysis Reports is annexed as Annexure-4.

Image of field inspection (date- 24.11.2022):

Images omitted

Recommendations:

- ***Adequate capacity of STP should install to cover the gap of sewage generation and treatment capacity at present,*** *so that no untreated sewage will go to river Yamuna.*

- ***Operation and maintenance should be upgraded so that all STPs should comply with the norms.***

- *Chemical treatment process, especially chlorine treatment before effluent discharge must improve* ***so that Faecal coliform norm must comply****.*

- *Treated sewage should discharge through covered drains towards river Yamuna. It should be responsibility of the concerned authority to check that no untreated sewage/effluent should meet in that drain.*

- *Treated sewage should reuse as much as possible for various purposes like irrigation, road dust suppression, gardening etc.*

- *Tertiary treatment capacity at present installed at Laxmi Nagar STP should be enhance so that demand of Mathura refinery (up to 20 MLD) may full fill compared to present supply 8 MLD.*

- *Online monitoring system of effluent must link to central monitoring control system.*

- *Speed up the process for tapping of untapped drains, as soon as possible.*

- *No drains should be left untapped so that no untreated sewage should meet the river Yamuna in Mathura-Vrindavan region.*

- *Forests cover area should be increase and treated effluent can be used for irrigation /gardening purpose.*

- *Check the possibility for the construction of wet lands in both sides of river Yamuna for natural treatment of waste*

28. Report shows that there are 23 drains in Mathura, whereof 19 are tapped, 01 is partially tapped and 03 are untapped. Total sewage flow at Mathura is 68.55 MLD, whereagainst drains discharging 9.39 MLD are untapped and 01 drain carrying 26.49 MLD sewage is partially tapped. With regard to treatment facility of sewage, there are 4 STPs at Mathura with total installed capacity of 67.3 MLD.

29. At Vrindavan, there are 13 drains out of which 11 are tapped and 02 are untapped. Total sewage discharge in 13 drains in Vrindavan is 10.95 MLD. 02 STPs are functioning at Vrindavan with total installed capacity of 12 MLD.

30. It is also said that out of 04 STPs at Mathura, 03 are being operated by a private agency i.e., M/s. Triveni Engineering & Industries Ltd., NOIDA and at Vrindavan, both STPs are being operated by private agencies namely Hindustan Engineering Ltd., Lucknow and M/s. Vatavarn Techno, Agra.

Supplementary Report dated 17.02.2023 filed by Regional Officer, UPPCB, Mathura:

31. A Supplementary Report dated 17.02.2023 was also filed by Regional Officer, UPPCB, Mathura annexing copy of show cause notice dated 14.02.2023 issued to Municipal Commissioner, Mathura-Vrindavan Nagar Nigam, Mathura pointing out non-compliance of provisions of Water (Prevention and Control) Act, 1974 (hereinafter referred to as **'Water Act 1974'**) and requiring Municipal Commissioner to show cause as to why environmental compensation of Rs. 5 lakhs per drain per month be not

imposed and 02 drains discharge be not closed. Show cause notice shows that broadly discharge of sewage in 04 drains at Mathura was not meeting standards/parameters of water quality and, therefore, polluting river Yamuna in larger way.

Tribunal's Order dated 11.04.2023:

32. Report dated 09.12.2022 and Supplementary Report dated 17.02.2023 were considered by Tribunal on 11.04.2023. It observed that still there are untapped/partially tapped drains at Mathura in Vrindavan and there is no time schedule for interception of such drains; there is no mention of utilization of treated sewage laid ferti-irrigation plan instead of discharging of waste water in river Yamuna; the alleged phyto-remediation process followed was not showing any effective results and, therefore, massive violation of the provisions of Water Act 1974 was observed at Mathura-Vrindavan by the responsible authorities for which, besides other action, environmental compensation was leviable by application of principle of 'Polluter Pays'. Tribunal also found that looking to the importance of River Yamuna and also the earlier orders passed by Supreme Court and this Tribunal for maintaining purity of water in Yamuna River which remained un-complied with, the situation was alarming and matter required attention at the highest level of State of UP, hence Chief Secretary was directed to co-ordinate with all concerned authorities, ensure remedial action and file an Action Taken Report within four weeks. Relevant observations and directions of Tribunal contained in the order dated 11.04.2023 are as under:

> *"6. It is seen from the above report that still there are three un-tapped and are partially tapped drains at Mathura.* ***In Vrindavan, out of 13 drains, two are still untapped.*** *There is no time schedule for interception of such drains. There is no mention of utilisation of*

*treated sewage laid ferti-irrigation plan instead of discharging waste water in river Yamuna. In the course of chlorination for disinfection, density of chlorine with corresponding BOD values need proper standardization so as to control formation of tri-halomethane (THM). CPCB may specifically examine this aspect**.** Phyto-remediation is claimed to have been undertaken without showing its results which may be merely an excuse to waste public money which needs to be checked by the statutory regulators including CPCB. CPCB may **file its report within three months.***

7. Further, polluted water is being discharged into the rivers which is supposed to carry potable water. The channel for sewage or other effluent treated or untreated should be separated and treated water used for non-contact purposes including agriculture, horticulture and industries. Supply of such water to Mathura refinery may also be explored. Action be taken against industries discharging effluents in violation of consent conditions and the Water (Prevention and Control of Pollution) Act, 1974.

8. In view of the fact that Mathura is a heritage city of great significance, visited by large number of persons, urgent measures are called for particularly by senior level officers since huge funds stand allocated for the purpose without adequate results on the ground. Accountability for past violation should be fixed in terms of compensation on 'Polluter Pays' principle and/or otherwise. Recommendations made by the Committee including tapping of untapped drains and preventing discharge of untreated sewage and effluents need to be complied at the earliest.

9. We have recently reviewed the issue of compliance of solid and liquid waste management status in U.P. in O.A. No. 606 of 2018, Compliance of Municipal Solid Waste Management Rules, 2016 and other environmental issues, in pursuance of orders of Hon'ble Supreme Court dated 02.09.2014 in W.P. No. 888/ 1996, Almitra H. Patel vs. Union of India & Ors. (in respect of solid waste management) and in Paryavaran Suraksha vs. Union of India, (2017) 5 SCC 326 (in respect of liquid waste). In continuation of earlier proceedings, compliance status was reviewed vide order dated 23.03.2023 in the presence of Chief Secretary, U.P. along with other concerned officers. Data presented was as follows:

SUMMARY OF STATUS

A: Solid Waste Management			
Quantity of waste	*Waste Processed*	***Gap in generation***	*Quantity of Legacy waste in the State*

generation in the State (in TPD)	*(in TPD)*	***and Processing (in TPD)***	*(Tonnes)*
14,710 *(734 ULBs)* *Rural: 11,959 TPD*	*Capacity: 10,117* *Rural: 3,000 TPD*	***4593 (based on capacity only)*** ***Rural: 8,959 TPD***	*33.0 lakh MT plus 40 lakh in last 3 years as unprocessed waste (2020-2022)*

B): Sewage Management					
Quantity of sewage generation in the State (in MLD)	*Capacity (in MLD)*	***Current Gap in treatment (in MLD)***	*Utilization of treated sewage in*		
			Agriculture/ Horticulture purpose	*Industrial purpose*	*Any other purpose*
5,500	*Capacity: 3860*	***1640 (based on capacity and not actually utilized)***	*- Thermal Power Plants -*		

10. *The Tribunal, on detailed consideration of the matter, held that gaps in generation and treatment of solid and liquid waste are required to be addressed expeditiously considering timelines as per statutory Rules and Supreme Court judgement and officers responsible for failure were required to be made accountable. Progress report was to be filed after six months to this Tribunal.*

11. In the light of the said order and observations in the present case, the ***Chief Secretary, U.P, in coordination with other concerned authorities in the State, may ensure remedial action in the present case also for which a special meeting of concerned officers be convened preferably within one month to inter alia consider that untapped drains are intercepted and diverted to the identified STPs preferably within two months, treated sewage from each STP is provided to the identified command area for irrigation/agriculture and only during non-utilization period, treated sewage goes to river, performance of six STPs is evaluated and improved with defined mode of disposal, chlorination method and formation of THMs are studied in the light of protocol for chlorine dosing***

corresponding to BOD levels, treatment of effluent of industries individually or through CETP in terms of consented mode of disposal*. An action taken report be filed within four months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.*

List for further consideration on 23.08.2023.

A copy of this order be forwarded to the Chief Secretary, U.P, CPCB, State PCB and District Magistrate, Mathura by email for compliance."

Action Taken Report dated 11.08.2023 filed by Regional Officer, UPPCB, Mathura:

33. Regional Officer, UPPCB, Mathura filed an Action Taken Report dated 11.08.2023 annexing a copy of order dated 10.08.2023, whereby for 13 months i.e., for period of 01.11.2019 to 01.11.2020 at the rate of Rs.5 lakhs per drain per month, environmental compensation of Rs.3.25 Crores was imposed upon Municipal Commissioner, Mathura-Vrindavan at Mathura and it was required to pay the same.

Another Report dated 04.10.2023 filed by CPCB:

34. Another Report dated 04.10.2023 was filed by CPCB in compliance of directions contained in the order dated 11.04.2023 that results of the alleged treatment of sewage by applying the process of chlorination and phyto-remediation be examined as to whether it actually is causing some positive results or a mere wastage of public funds and this study was required to be undertaken by CPCB.

35. Report of CPCB is almost in the similar terms as it was in OA-I. Performance evaluation of STPs in Mathura-Vrindavan is given in table-3 of the Report which reads as under:

S. No	STP location	Technology	Installed Capacity (MLD)	Source	Parameters					
					pH	COD, mg/l	BOD, mg/l	TSS, mg/l	FC (MPN/100 ml)	Nh3-n (MG/l)
1	Laxmi Nagar, Mathura	UASB	16	Inlet	7.3	410	164	260	-	25
				Outlet	8.5	124	21	91	**78 x 10^4**	18
2	Laxmi Nagar, Mathura	Oxidation Pond	14.5	Inlet	7.0	331	90	497	-	22
				Outlet	7.6	149	41	123	**45 x 10^4**	14
3	Masani, Mathura	SBR	30	Inlet	7.1	270	71	201	-	15
				Outlet	7.1	111	13	24	**40 x 10^3**	6
4	Pagal Baba, Vrindavan	Oxidation Pond	4.0	Inlet	7.1	267	74	180	-	24
				Outlet	7.5	180	62	71	**14 x 10^4**	21
5	Maant Road, Vrindavan	UASB	8.0	Inlet	6.9	306	108	114	-	32
				Outlet	7.6	249	91	46	**27 x 10^3**	30
6	Masani Vrindavan	Oxidation Pond	6.8	**Plant was found non-operational**						

36. The observations based on analytical results have been summarized in respect of 5 STPs as under:

S.No.	STP location	Observation
1	Laxmi Nagar, Mathura (16 MLD)	▪ Chlorination facility was found at the point of outlet, and they are applying 3-8 ppm (Appx. 5 ppm avg.) chlorine at the outlet. ▪ **Except fecal coliform, all the parameters were meeting with discharge standard norms.**
2	Laxmi Nagar, Mathura (14.5 MLD	▪ Chlorination facility was found at the point of outlet, & they are applying 3-8 ppm (Appx. 5 ppm avg.) chlorine at the outlet. ▪ **Parameters were not meeting the discharge standard norms.**
3	Masani (30 MLD)	▪ Chlorination facility was found at the point of outlet, & they are applying 4-5 ppm chlorine at the outlet. ▪ **Except fecal coliform, all the parameters were meeting with discharge standard norms**.

4	*Pagal Baba, Vrindaavan (4 MLD)*	▪ *Chlorination facility was found at the point of outlet, & they are applying 4-5 ppm chlorine at the outlet.* ▪ ***Except TSS, no parameters were meeting with discharge standard norms.***
5	*Maant raod, Vrindavan (8 MLD)*	▪ *Chlorination facility was found at the point of outlet, & they are applying 4-5 ppm chlorine at the outlet.* ▪ ***Except TSS, no parameters were meeting with discharge standard norms.***

37. Conclusion and recommendation which are also similar as in OA-I, therefore, are not being repeated. However, the above report of CPCB contradicts the report of UPPCB on the issue of compliance of parameters of treated effluent released by STPs at Vrindavan. UPPCB said that STPs were complying while CPCB has reported otherwise.

Report dated 30.11.2023 filed by CPCB:

38. Another report dated 30.11.2023 was filed by CPCB which we find is almost repetition of its earlier report dated 04.10.2023.

Tribunal's order dated 30.11.2023:

39. On 30.11.2023, matter came up before Tribunal when it was found that vide order dated 05.10.2023 direction was given to Chief Secretary to submit an Action Taken Report and though order of Tribunal was communicated to Chief Secretary by Member Secretary, UPPCB on 25.10.2023, despite **no such report was filed by Chief Secretary**. Tribunal gave another opportunity to Chief Secretary by issuing fresh notice and require him to file its Report as already directed. Notice was also issued to Commissioner, Municipal Corporation, Mathura-Vrindavan.

Action Taken Report dated 05.12.2023 filed by State of UP:

40. Thereafter, an Action Taken Report has been filed on behalf of State of UP through Shri Devendra Singh Chauhan, Under Secretary, Environment, Forest and Climate Change Department vide letter dated 05.12.2023 which states that a meeting was convened under the Chairmanship of Chief Secretary, Government of UP on 02.12.2023 to discuss the matter relating to pollution of river Yamuna at Mathura. Report further says as under:

> *"3. That during the meeting, Special Secretary, Namami Gange & Rural Water Supply Department has informed that total 36 drains are identified carrying 110 MLD sewage in Mathura-Vrindavan Nagar Nigam area. Out of these 36 drains, 30 are tapped, 01 drain is partially tapped and 05 drains are untapped. All 30 tapped drains are linked with 07 sewage treatment plants having cumulative treatment capacity of 82.06 MLD.*
>
> ***As per the report of UP Pollution Control Board (UPPCB) of October, 2023, out of these 07 STPs, 06 STPs have installed chlorination unit for the removal of faecal coliform and is achieving the norms as stipulated by Ministry of Environment, Forest & Climate Change (MoEF&CC) vide its notification dated 13-10-2017.*** *The remaining 01 STP established at Trans Yamuna-Govardhan, Vrindavan is not achieving the standards for faecal coliform set by the notification dated 13-10-2017 of Ministry of Environment Forest & Climate Change (MoEF&CC). It was further informed by Municipal Commissioner, Mathura that the project for establishment of chlorination unit in this STP has been sent to Urban Development Department for sanction. The Chief Secretary, GoUP has directed the Urban Department to sanction of the said project immediately and ensure the establishment of chlorination unit in this STP in time bound manner. The monitoring reports of STPs in Mathura of UPPCB of month October, 2023 are enclosed as Annexure-I with this Action Taken Report.*
>
> *4. The sewage of 05 untapped & 01 partially tapped drain are presently treated in-situ by Bio-remediation process and the project for tapping these 06 drains and linking it with sewage treatment plant is under progress. The Officers from the UP Jal Nigam present in the meeting informed that the Letter of Acceptance (LOA) has been issued to the agency selected by*

tender process for the establishment of the proposed 60 MLD STP near Gokul Barrage on Irrigation Department land for the treatment of 03 untapped drains (Aurangabad upstream, Aurangabad downstream & Kala Patthar) and 01 partially tapped drain (Ambakhar drain). It was further informed that the tendering process has been initiated for the establishment of sewage treatment plant of treatment capacity 13 MLD for remaining 02 drains (Chaitanya Vihar-Sunrakh-I & II) at Gau Samadhi/Sadhu Samadhi Site near Sunrakh village. ***The process of establishment of these 02 STPs will be completed by May, 2026****. The Chief Secretary, GoUP has directed the concerned officers get the works related to these 02 STPs completed under the stipulated timelines and also directed concerned Additional Chief Secretary/Principal Secretary to decide the intermediate milestones for the progress of the work and review the progress from time to time and inform him accordingly.*

5. *The officials from UP Jal Nigam (Rural) has informed that at present 08 MLD treated effluent from Mathura Trans Yamuna Sewage Treatment Plant-I & II (treatment capacity-30.5 MLD) is being used for the different process in Indian Oil Corporation Limited (Mathura Refinery), Mathura and 12 MLD treated effluent is being used in irrigation process. The Chief Secretary, GoUP has directed Principal Secretary, Urban Development Department, GoUP should prepare and implement a time-bound action plan for maximum utilization of treated effluent of Sewage Treatment Plant established in Mathura-Vrindavan area after discussion with the officials of Indian Oil Corporation Limited (Mathura Refinery), Mathura, UP State Industrial Development Authority (UPSIDA) and representatives of different industrial units.*

   The minutes of the meeting held under the Chairmanship of Chief Secretary, Government of Uttar Pradesh dated 02.12.2023 is enclosed as Annexure-II with this Action Taken Report.

6. *That it is submitted that the Common Effluent Treatment Plant (CETP) of 6.25 MLD which treats the effluent from the textile industries in Mathura has been upgraded with the funds received from National Mission for Clean Ganga (NMCG) and is operational after upgradation.* ***That as per the report of UP Pollution Control Board of October, 2023, the CETP is complying with the environmental norms as stipulated by MoEF&CC.*** *The CETP monitoring reports of UPPCB is enclosed as Annexure-III with this Action Taken Report."*

41. However, neither any report has been filed Chief Secretary in terms of the directions issued by Tribunal vide order dated 05.10.2023 nor Municipal Commissioner, Nagar Nigam, Mathura-Vrindavan Corporation, Mathura has filed any response.

42. In these circumstances, we have proceeded further to decide both these OAs on merits after hearing Parties appearing in person/Learned Counsels appearing for the respective parties.

ARGUMENTS:

43. We have heard Dr. Sanjay Kulshresthra who is applicant and appeared in person in OA-I. In both OAs, Mr. Bhanwar Pal Singh Jadon, Mr. Chetan Jadon and Mr. Hardik Saxena, Advocates have appeared on behalf of State of UP, Mr. Atif Suhrawardy, Ms. Yogya Sharma and Mr. Pankaj Kumar, Advocates have appeared for CPCB. Ms. Priyanka Swami, Advocate has appeared for Nagar Nigam, Agra. For UPPCB in OA-I, Mr. Arvind Kumar and Mr. Ankit Kumar Vats, Advocates have appeared while in OA-II Mr. Daleep Dhyani, Advocate has appeared.

44. The applicant in OA-I, who had appeared in person, said that the condition of river Yamuna at Agra is pitiable. He said that his allegations made in OA are all undisputed and remain uncontradicted. Deposit of silt/sludge due to discharge of untreated sewage in river water, death of fishes on various occasions, mosquito menace, huge coliform presence in river water etc., are such facts which could not have been disputed by authorities. River water of Yamuna is not maintaining e-flow and water quality is extremely low; river water received from upstream is already polluted and getting further polluted due to addition of polluted effluent discharged by drains and STPs at Agra; it is admitted position of the

respondents-authorities in OA-I that installed capacity of sewage treatment at Agra is highly deficient; the estimated sewage generation is 306 MLD whereagainst installed treatment capacity is only 220.75 MLD and qua the total generation vis-a-vis installed treatment capacity, there is an apparent gap of about 85.25 MLD; in fact, the gap is much more in as much as the utilization treatment capacity of STPs is only 175 MLD and therefore actual gap in the daily generation of sewage and actual treatment is 131 MLD; moreover, even the so called treatment of 175 MLD is not as per the norms in as much as all the 9 STPs at Agra are not meeting prescribed standards/parameters as laid down by Tribunal in its judgment in ***OA 1069/2018, Nitin Shankar Deshpande vs. Union of India & Others, decided on 30.04.2019*** and entire effluent from STPs is admittedly being discharged in river Yamuna meaning thereby, in totality, the entire daily generated sewage is adding to the already polluted river water of Yamuna, making it more vulnerable and severely polluted causing damage to *flora and fauna* and health of people who use river water for different purposes.

45. In OA-II, none is present for the applicant since cognizance was taken by Tribunal *suo-moto* but from the facts disclosed above, we find that situation is somewhat similar as to what it is at Agra. Mathura is upstream to Agra. Total generation of sewage at Mathura and Vrindavan in 79.5 MLD which is carried out by 13 drains at Vrindavan with a total flow capacity of 10.95 MLD and 23 drains at Mathura with total flow capacity of 68.55 MLD. The above sewage is being treated by 02 STPs at Vrindavan and 04 STPs at Mathura. The total capacity of STPs at Mathura is as under:

Location of STP	**Capacity**	**Technology applied in STP**	**Operating Agency**
Laxmi Nagar, Mathura, STP-I	16 MLD	Up-flow Anaerobic Sludge Blanket i.e., UASB	M/s. Triveni Engineering & Industries Ltd., NOIDA
Laxmi Nagar, Mathura, STP-II	14.5 MLD	Oxidation Pond/Waste stabilization pond	M/s. Triveni Engineering & Industries Ltd., NOIDA
STP, Masani	30 MLD	SBR technology	M/s. Triveni Engineering & Industries Ltd., NOIDA
STP, Masani	6.8 MLD	Waste stabilization pond i.e., WSP technology	-
Total	67.3 MLD		

46. With regard to 02 STPs at Vrindavan, the details are as under:

Location of STP	**Capacity**	**Technology applied in STP**	**Operating Agency**
Pagal Baba, Vrindaavan	4.0 MLD	Oxidation Pond/Waste stabilization pond	M/s. Hindustan engineering Ltd, Lucknow
Maant road, Vrindaavan	8.0 MLD	UASB	M/s. Vatavarn Techno, Agra

47. It is argued that daily generation of sewage and installed capacity of STPs shows that there is a gap of about 1.23 MLD at Mathura while at Vrindavan, the installed capacity is more than the daily sewage generation. However, it is not stated anywhere as to what is the actual utilization capacity of the above STPs and to this extent Report submitted by UPPCB is silent. CPCB report clearly shows that 3 STPs at Mathura and 02 STPs at Vrindavan are/were not meeting such parameters as directed to be

followed by this Tribunal vide judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** and 01 STP at Mathura i.e., Masani Vrindavan with the installed capacity of 6.8 MLD was found non-operational. That being so, besides the fact that at Mathura, more than 8 MLD sewage is untreated, even otherwise the treated effluent of STPs is not meeting the prescribed standards, yet entire polluted effluent is being discharged in river Yamuna and obviously causing its pollution.

48. Learned Counsels appearing for respondents - Local Bodies and State of UP sought to submit that they are making all efforts to follow environmental norms and prevent pollution of river Yamuna which may take some time.

49. When we asked the question from Learned Counsel appearing for Statutory Regulator i.e., UPPCB as to why action has not been taken against the violators for causing pollution of river Yamuna by discharging polluted effluents therein, no satisfactory answer could be given and learned respective Counsel appearing for UPPCB said that the action would be taken but why no action has not been taken so far though the issue of pollution of river Yamuna by discharge of untreated sewage has been raised in several matters and various directions have been issued, no satisfactory answer could be given.

50. We may enquire from Learned Counsel appearing for UPPCB that to analysis whether the treated water is meeting prescribed parameters and standards those mentioned in MoEF's Notification dated 13.10.2007, has to be considered which has already been rejected by this Tribunal or the one which is prescribed in Tribunal's judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** has to be followed which

is operating and binding on UPPCB, he could not dispute that the parameters laid down by Tribunal's judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** have to be followed. He however could not give any satisfactory reply as to why in the Report UPPCB while mentioning their STPs treatment of waste water is meeting parameters has relied on the standards prescribed vide MoEF's Notification dated 13.10.2017 and said that the officers concerned kept silence on this aspect.

ISSUES:

51. In the light of the rival submissions quoted above, substantial questions raised in OA-I requiring adjudication by Tribunal, are:

(I) Whether untreated sewage from drains is being discharged in **River Yamuna at Agra**?

(II) Who is the authority responsible for such discharge of sewage in River Yamuna?

(III) Whether discharge of sewage in River Yamuna through drains is a violation of Section 24 of Water Act 1974 and also an offence u/s 43 of Water Act 1974?

(IV) What action(s) is/are required to be taken in the matter?

52. In OA-II, substantial questions which have arisen requiring our adjudication are:

(I) Whether untreated sewage from drains is being discharged in **River Yamuna at Mathura-Vrindavan**?

(II) Who is the authority responsible for such discharge of sewage in River Yamuna?

(III) Whether discharge of sewage in River Yamuna through drains is a violation of Section 24 of Water Act 1974 and also an offence u/s 43 of Water Act 1974?

(IV) What action(s) is/are required to be taken in the matter?

53. We propose to consider issue I of OA-I and OA-II both together since River is common; only place of flow and discharge of sewage is different. In OA-I, flow of River Yamuna at Agra is under consideration and in OA-II, it is at Mathura-Vrindavan Nagar Nigam, which is under consideration.

DISCUSSION ON MERITS:

54. **ABOUT YAMUNA:** River Yamuna is a revered waterway in India, holds profound significance in Hindu culture. It originates from frozen Champasar Lake located in Bandar pooch Glacier at a height of 6387 meters at Yamnotri glacier in Har-Ki-Doon Mountain range of Uttarkashi in Uttarakhand and travels a length of 1376 kms. before merging with River Ganges at Sangam in Prayagraj. The origin point of River Yamuna is famously known as 'Yamnotri' shrine. Total catchment area of the river spreads over 36,220 kms. It is the longest river in India which does not directly flow to the sea. Otherwise, it is the 5th longest river of India. River Yamuna has four main tributaries in the Himalayan region; Rishi Ganga, Hanuman Ganga, Tons and Giri. In the plains, the main tributaries are Hindon, Chambal, Sind, Betwa and Ken. Tons, being the major tributary contributes to about 60% flow of the River Yamuna. Flowing through States of Uttarakhand and Uttar Pradesh, river Yamuna forms a vital part

of sacred traditions in New Delhi. Arising from the source, river Yamuna flows through a series of valleys for about 200 Kms. in lower Himalayas and emerges into Indo-Gangetic plains. In the upper reaches, the main valley is over-looked by numerous hanging valleys, carved by glaciers during the last ice ages. The gradient of the river is steep here and the entire geomorphology of the valley has been influenced by the passage of the river. In the upper stretch of 200 kms, it draws water from several major streams. The combined stream flows through the Shivalik range of hills of Himachal Pradesh and Uttaranchal State of India and enters into plains at Dak Pathar in Uttaranchal where river water is regulated through weir and diverted into canal for power generation. From **Dak Pathar**, it flows through the famous Sikh religious place of Poanta Sahib. On the right side of Yamuna basin is the Mussoorie spur-along which, lies sprawled, the hill station of Mussoorie. Flowing through Poanta Sahib, river Yamuna reaches **Hathnikund/Tajewala** in Yamuna Nagar district of Haryana State, where the river water is again diverted into Western Yamuna canal and Eastern Yamuna canal for irrigation. During dry season, environmental flow (hereinafter referred to as **'e-flow'**) of 160 cusec is allowed to flow in the river downstream to Tajewala barrage and the river remains dry in some stretches between Tajewala and Delhi. The river regain water because of ground water accrual, contributions of feeding canal through Som Nadi (seasonal stream), upstream of Kalanaur and through drain no.8 upstream of Palla. It enters Delhi near Palla village, after traversing a route of about 224 kms. The river is again tapped at Wazirabad through a barrage for drinking water supply to Delhi. Generally, no water is allowed to flow beyond Wazirabad barrage in dry season since pond level is being maintained at Wazirabad as per Supreme

Court's Order. Whatever water flows in the downstream of Wazirabad barrage, is thus, the untreated or partially treated domestic and industrial waste water, contributed through several drains along with the water transported by Haryana Irrigation Department from Western Yamuna Canal to Agra Canal via Najafgarh Drain and Yamuna. After 22 kms. downstream of Wazirabad barrage, there is another barrage, Okhla barrage, through which Yamuna water is diverted into Agra Canal for irrigation. As already said, whatever water flows in the river beyond Okhla barrage, is contributed through domestic and industrial waste water generated from East Delhi, NOIDA (District Gautam Budh Nagar) and Sahibabad (District Ghaziabad) and joins the river through Shahdara drain.

Historical Origins of River Yamuna:

55. Yamuna River is often mentioned in ancient Indian scriptures, including Vedas and Mahabharata, dating back to around 1500 BCE. It is regarded as a divine river with sacred origin. According to Hindu scriptures, Yamuna is considered daughter of the Sun God, Surya, and sister to Yama, the God of Death. Her mythical origin add to her significance in Hindu culture.

Spiritual Significance:

56. Yamuna River is revered as a goddess, known as **Yamuna Devi** or **Yamunaji**, and is worshipped by millions of Hindus. Pilgrims consider bathing in its water a **purifying and spiritually uplifting experience**. The river is closely associated with **Lord Krishna**, one of the most revered deities in Hinduism. Krishna spent his childhood and youth in the region along Yamuna's banks, particularly in Vrindavan and Mathura. His divine

and playful activities in these areas have become the stuff of legend and are celebrated in Hindu texts and festivals.

Cultural and Religious Practices:

57. Yamuna River is the backdrop for numerous **Hindu rituals and ceremonies**. Pilgrims from across India visit the river to perform ablutions, seek blessings, and offer prayers. Festivals like **Karthik Purnima**, during which lamps and diyas are floated on the river water surface, and **Yam Dwitiya**, celebrating the bond between brothers and sisters, are observed with great fervour along the Yamuna's banks. Every year, on the 6th day of 'Summer Navratra', birthday of River Yamuna is celebrated at Mathura. Festival of 'Bhaiya Dooj' is also devoted to the love of Yamraj and Yamuna River. Besides, thousands of people every month take dip in Yamuna River at various places on occasion of full moon and no-moon nights and during Sundays and Saturdays to get rid of sins and worldly woes.

Historical Significance:

58. The River Yamuna has played a crucial role in the growth and development of ancient civilizations in the region. It has served as a **lifeline for trade and agriculture**, with several historical cities and settlements flourishing along its banks.

59. River Yamuna, also known as 'Jumna', is a significant river in North India. It plays a significant role in the cultural and historical heritage of India and its water is considered sacred. Devotees often visit its banks for religious rituals and ceremonies. River has been mentioned in ancient texts and scriptures, which further emphasises its spiritual significance.

Population Dependence:

60. Nearly 57 million people directly rely on Yamuna's water for their daily needs. The river serves as a lifeline, providing drinking water, supporting agriculture through irrigation, and fuelling industrial processes. Notably, more than 70% of Delhi's water supply comes from Yamuna. Its annual flow, amounting to 97 Billion Cubic Meters (hereinafter referred to as **'BCM'**), sustains livelihoods and economic activities along its banks.

61. River Yamuna accounts for 7.10 % of the total geographical area of the country. States of Uttarakhand (21.5%), Himachal Pradesh (1.6%), Haryana (6.5%), Rajasthan (29.8%), Madhya Pradesh (40.6%) and Delhi (0.4%) accounts for its basin. The general estimate is that the river annually carries 10000 CBM of water of which 4400 CBM is used for irrigation.

62. River Yamuna has seen a substantial development of civilization near its banks where several cities have developed. River plays significant role in shaping culture throughout history. It serves as a source of life and sustenance of civilization providing water for drinking, irrigation, transportation etc. Management of water, therefore, particularly, river water is of utmost importance not only for the habitats culture but also for economy of the area concerned. This is more important in the light of the fact that Article 21 of the constitution confers a right to life in liberty which includes life to get clean water. We know that global surface is approximately covers 71% by water but the fact is that drinking water is a precious commodity and a very limited availability and finite resource due to certain critical factors. Out of the total quantum of water, enveloping

the planet, 96.5% is residing in the oceans, vast salt water bodies stretch across the globe, shaping our climate, ecosystems, and weather patterns and this salt water is unsuitable for direct human consumption due to its high salinity. Freshwater which can be used for human survival, therefore, comprises 3.5% of the total water on earth but here also, surface water for human consumption is extremely low. This fresh water is available in various forms like glaciers and ice caps, ground water, atmosphere and soil moisture and lastly the surface water. Quantity of surface water available on the earth in the form of rivers, lakes and swamps is only 0.3% of the total water available on earth.

Challenges faced by River Yamuna like pollution etc.:

63. However, Yamuna faces formidable challenges. Rapid urbanization, industrial growth, and population pressure have taken a toll. The river, once revered, now grapples with pollution. Industrial discharges, untreated sewage, and agricultural runoff have rendered it one of the most polluted rivers globally. Efforts to restore its water quality are urgent, not only for human sustenance but also for ecological balance.

64. Such an important river which has high cultural and religious importance and values, unfortunately has gone highly polluted. River Yamuna, presently at Delhi and onwards, is one of the highly polluted rivers. Downstream of Delhi, upto Etawah, for about 600 kms, it is highly polluted and rarely supports aquatic life except a few water birds and turtles. At Etawah River Chambal with adequate flow and relatively clean water joins River Yamuna, as a result whereof, aquatic animals like Dolphin, Ghariyal, Turtles, several numbers of aquatic birds and fishes are visible downstream of Chambal-Yamuna confluence, upto Prayagraj.

65. One of the biggest reasons of pollution of River Yamuna is diversion of water in various barrages in stretch of 700 kms from Dak Pathar, Dehradun (State of Uttarakhand) to Gokul-Mathura (in State of UP). There are 6 barrages in this stretch i.e., Dakpathar, Dehradun (State of Uttarakhand); Hathini Kund, Yamuna Nagar (State of Haryana); Wazirabad, I.T.O. and Okhla Barrage, (State of Delhi); and Gokul barrage, Mathura (State of UP). These barrages have damaged natural integrity of the River.

66. Another major reason of pollution of river Yamuna is discharge of polluted effluent/sewage in huge quantity, mainly between Delhi and Agra.

67. The loss of life supporting potential of the river is the major concern to public, Government and Courts. For example:

(i) The water quality in a specific stretch of the river in National Capital Territory of Delhi was characterized by 40 to 50 mg/l BOD and almost zero DO levels and extremely high coliform density (2,40,00,000/ml), as per Final Report submitted to this Tribunal by a Committee chaired by Prof. C.R. Babu pursuant to Tribunal's order dated 24.09.2013 in ***OA 6/2012 (supra)***.

(ii) The flowing water, the river bed, the floodplain forest and grassland ecosystems are locally extinct.

(iii) Further, the floodplain is so restricted in some segments by encroachments using combinations of bunds roads, guide bunds and spurs that not only reduced the recharging area for flood waters leading to the reduction in ground water recharge but also make the city highly vulnerable to floods

resulting in ecological disasters as has been happened recently in Kosi (Bihar) and Ganga river basin (Uttarakhand).

Cultural and Environmental Stewardship:

68. Despite these challenges, Yamuna remains intertwined with India's cultural fabric. Pilgrims flock to its banks for religious rituals, and ancient texts extol its sanctity. Environmentalists, government bodies, and local communities strive to rejuvenate the river. Cleaning campaigns, afforestation, and stricter waste disposal regulations are steps toward its revival.

69. In essence, Yamuna embodies resilience - a river that sustains millions, symbolizes reverence, and calls for collective stewardship.

70. In a nutshell, it can be said that River Yamuna is 5th longest river in India and for past many centuries, it has been integral part of Indian Culture. It has been sustaining means of livelihood to millions. Many, in pursuit of spiritual inspiration venerate it with great hope.

71. However, the challenge put forward due to its pollution, now, has to be attended with due expediency and complete devotion by every stakeholder.

Judicial intervention to protect Yamuna water from pollution:

72. Issue of huge pollution of River Yamuna was raised through a news item published in "Hindustan Times" titled "And Quite Flows the Maily Yamuna" in 1994. Supreme Court *suo-moto* took cognizance of the said report in ***Writ Petition (Civil) No. 725/1994, In Re: News Item Published in Hindustan Times "And Quiet Flows the Maily Yamuna"***. and passed various orders necessary for cleaning of River Yamuna in

National Capital Territory of Delhi covering the neighboring States of Haryana and Uttar Pradesh.

73. When the matter was pending in Supreme Court, ***OA 6/2012, Manoj Mishra vs. Union of India & Others*** was filed before this Tribunal, raising grievance with regard to pollution of River Yamuna. This OA was disposed of by Tribunal vide judgment dated 13.01.2015. Various directions were issued by Tribunal to Delhi Jal Board (hereinafter referred to as **'DJB'**) to take effective steps for functioning of STPs, installation of requisite capacity of STP to meet the gap, installation of CETP for industrial clusters in Delhi and directing the neighbouring State like State of Haryana to ensure that no industrial effluent is discharged in River Yamuna from the industries or industrial clusters located near or at the bank of River Yamuna. Directions were also issued for re-possessing flood plain area from unauthorized and illegal occupants and to take further steps so that flood plain zone remain free and unoccupied so as to protect river Yamuna from pollution.

74. Various directions issued by this Tribunal in ***OA 06/2012 (supra)*** as contained in para 94 of the judgment may be referred as under:

> *"94. We are not oblivious of the herculean task which will be required in carrying out the 'Maily Se Nirmal Yamuna' Revitalization Project, 2017, but we are of the firm view that any further deferment in taking stern and serious steps for preventing and controlling pollution of River Yamuna, is bound to expose Delhi and its residents to grave environmental disasters. Implementation of provocative action plan postulated by the Expert Committees and as described in this judgment is inevitable to protect public health, public interest and the environment. This is the only solution to bring down the highest contribution of pollutants (76% of the total Yamuna's Pollution level) to a negligible and preferably to zero percent, in the interest of ecology, environment and to provide clean water to the residents of Delhi. To ensure complete and effective implementation of the recommendations made by the Expert Committees in their reports*

dated 19th April, 2014 and 13th October, 2014 respectively, as well as, to identify the authorities responsible for compliance for timely preparation and execution of action plans, prepared in terms of this judgment, we hereby issue the following directions in the larger environmental and public interest:

i. *The Tribunal hereby accepts both the reports filed by the Expert Committees: first report dated 19th April, 2014, read with the gist of recommendations submitted by the Principal Committee on 2nd August, 2014, on the aspects of preservation, restoration and beautification of the banks of River Yamuna and the second report dated 13th October, 2014, read with its annexure, in relation to drainage system in Delhi, together with the Action Plan prepared by the DJB for revitalization of River Yamuna. Both these reports shall form integral part of this judgment. All the concerned authorities of NCT of Delhi, State of UP and State of Haryana shall implement the same without demur and default, expeditiously. The entire project contemplated under these reports and this judgment of the Tribunal shall be completed by 31st March, 2017.*

ii. *This project shall be called 'Maily Se Nirmal Yamuna' Revitalization Project, 2017.*

iii. *Implementation of both these reports and the components of the project shall be simultaneously executed by the concerned agencies, who shall prepare their respective Action Plans in terms of the reports as well as this judgment and submit it to the Principal Committee constituted hereinafter, in not later than four weeks from the date of pronouncement of this judgment.*

iv. *(a) Presently, under the jurisdiction of the DJB, there are 23 STPs in existence or planned to be made operational by 2015. Out of them, the oxidation pond at Timarpur is proposed to be closed, as it was commissioned in the year 1947. The STPs at Okhla and Kondli are lying closed due to inadequate sewerage and majority of the STPs are not operating to their optimum capacity. Thus, we direct that the DJB and other concerned Corporations under whose jurisdiction the existing STPs fall, shall, within two months from today, ensure that all these STPs, including the one proposed to be commissioned at Delhi Cantt., should be made fully operational, should operate to their optimum capacity and operate effectively 24x7, without compromising the quality of treated water released from such STPs.*

(b) It is further directed that the Action Plan in regard to installation of STPs on 32 major and minor drains shall be prepared, in accordance with the recommendations in the Expert Committee Report afore-referred and action taken in furtherance thereto, within three months from the date of passing of this order.

(c) All the newly proposed 32 STPs should be constructed and installed with the requisite capacity varying from 0.6 mgd to 10 mgd, at the sites specified in the report of the Expert Committee within the time frame indicated in this judgment. Once, the total of 55 STPs would operate effectively and to their optimum capacity, the water released from them shall be recycled and utilised for agriculture, horticulture and industrial purposes and least of this recycled water would be discharged into the River Yamuna.

(d) Action Plan to be prepared to utilize the treated water from the existing 23 STPs as well as from the 32 proposed STPs. It will be ensured that the release of water from these existing STPs should be strictly in accordance with the prescribed parameters and free of any odour and it should meet the faecal coliforms standards.

(e) Wherever necessary, the technology of the existing STP's should be upgraded to ensure proper performance and adherence to the prescribed standards of effluent discharge.

(f) The concerned authorities shall construct and install 26 pump stations at the locations and of the capacity as indicated in the Action Plan placed before the Tribunal. The process thereof should begin within three months from the date of passing of this judgment.

(g) Further, all the STPs shall be provided with a power backup to ensure that they operate effectively 24x7. It shall be ensured that the functional data of all STPs is online and is connected to the Delhi Pollution Control Committee as well as the Central Pollution Control Board, particularly in respect of COD, TDS, TSS and pH and it shall be ensured that the STP's are operational even during power failures.

(h) All the industrial clusters in Delhi shall be provided with Common Effluent Treatment Plants (CETPs). These CETPs shall be effluent–specific and capacity-specific, with reference to the particular industrial cluster. The installation cost of the CETP shall be borne preferably by the authority that owns and

maintains that industrial cluster. In the event of shortage of finances the authority concerned can require the persons running the industrial activity/unit in that cluster to share the cost on 'Polluter Pays Principle' in the ratio 2/3 and 1/3 respectively.

(i) We direct the State of Haryana to ensure that all the industries/industrial clusters that are located near or at the banks of River Yamuna, should preferably be no discharge units. If that is not possible, then such industrial clusters should be directed to install CETPs of the requisite size and standards, so as to ensure that the effluent discharged by them is strictly in accordance with the prescribed norms.

v. *(a) Having given our considered view to the various reports placed on record, submissions made by the Learned Counsel appearing for the parties and the Experts, we are of the opinion that presently the flood plain should be identified for the flood of once in 25 years in the interest of ecology, biodiversity and the river flow. Thus, we direct accordingly and also direct that the DDA shall prepare a map in this regard and would physically demarcate the entire flood plain.*

Above interim prescription of the flood plain is not rigid, but is subject to change, in the event any of the public authorities, including the MoEF, moves the Tribunal, based upon some collected data or any other specific information in that regard.

(b) We direct and prohibit carrying on of any construction activity in the demarcated flood plain henceforth. We further direct the Principal Committee to identify or cause to be identified, all existing structures as of today which fall on the so identified and demarcated flood plain. Upon identification, the Principal Committee shall make its recommendations as to which of the structures ought or ought not to be demolished, in the interest of environment and ecology, particularly, if such structures have been raised in an unauthorised and illegal manner.

(c) The Principal Committee may keep in mind that certain structures need to be protected, amongst other reasons, for their historical, mythological and heritage importance and/or are protected structures. The Committee shall clearly spell out the regulatory regime that should be provided for dealing with such existing structure in the flood plain.

(d) We direct all the concerned authorities including the DDA, Municipal Corporations and the NCT of Delhi, to take immediate and effective steps for repossessing the Flood Plain area under the unauthorised and illegal occupation of any person and/or any other body.

This direction is also necessitated for the reason that as per the records before the Tribunal, out of total area of 9700 hectares for River Front Development ('O' Zone), only 1452 hectare is presently available with the DDA for development and the remaining area is occupied in an unauthorised manner and is under agriculture activity for which leases had been granted by the DDA or even otherwise

(e) It is an established fact that presently, vegetables, fodder grown and allied projects at the flood plain of River Yamuna are highly contaminated. Besides containing ingredients of high pollutants, such produce is even found to contain metallic pollutants. Thus, it is an indirect but a serious public health issue as the persons eating or using such agricultural produce can suffer from serious diseases including cancer.

Therefore, we direct that no authority shall permit and no person shall carryout, any edible crops /fodder cultivation on the Flood Plain. This direction shall strictly be adhered to till Yamuna is made pollution free and is restored to its natural wholesomeness.

vi. *(a) During the pendency of this application, it was brought on record that nearly 37,000 cubic m. construction debris are lying on the eastern bank of River Yamuna, while 53,000 cubic m. debris is lying on the western bank of the River. The major part of this debris has already been removed under the orders of the Tribunal during pendency of this application. The local Commissioners appointed had reported to the Tribunal that major part of debris had been removed by the DDA, DMRC, Corporations, the PWD and the UP Government. DMRC has removed 33,000 cu. m. from Sarai Kale Khan and 20,000 MT from Shastri Park, the State of UP has removed 37,000 MT from the Flood Plain and DDA has removed 2500 cu. m. from Eastern Bank of River Yamuna and 7500 cu. m. from Western bank of River Yamuna, amongst others.*

(b) Indiscriminate dumping of debris and construction waste is a direct source of not only pollution of River Yamuna, but even the environment and ecology as a whole. In order to control and prevent such pollution, we confirm the interim order dated 22nd

July, 2013, passed by the Tribunal, with the variation in payment of amount of compensation payable by the offender and direct that no person, authority, corporation and/or by whatever name or designation it is called, shall dump any kind of construction debris, municipal, or any other waste on the floodplain/river bed of River Yamuna and its associated water bodies. There shall be complete prohibition on dumping of any material in and around River Yamuna.

(c) Whoever violates this direction relating to the dumping of debris, shall be liable to pay compensation of Rs. 50,000/- on the 'Polluter Pays' Principle and the Precautionary Principle. Such compensation shall be used for removal of such waste and restoration of environment.

(d) We hereby prohibit any person from throwing pooja material or any other material like, food-grain, oil, etc into River Yamuna, except on the designated site. Any person who is found disobeying this direction shall be liable to pay compensation of Rs. 5,000/- on the 'Polluter Pays' Principle. At the same time, we direct the concerned authorities, particularly, the Irrigation Department and concerned Corporations or authorities to build special Ghats on the banks of River Yamuna, where people could offer or immerse such materials, which shall then be duly collected by the concerned authorities for immediate and proper disposal in a scientific manner. It shall be ensured that no such material is permitted to join the main stream of the river at any point. In this regard they may take such steps, as may be technically advised, including, providing of screens and barricades.

(e) We have provided the above compensation payable by the offenders who are found to be throwing municipal or any other waste into the river or its flood plain and by the persons who are found to be dumping construction and heavy debris, based on the 'Polluter Pays' Principle. Even though, it is not practically possible to determine the amount of compensation with exactitude, that such offenders should be directed to pay, however, on a rough estimation based on manpower required, time and money spent for removal of such waste and debris as well as making the river free from adverse environmental impacts of such dumping into the river and on the flood plain, we have fixed the above compensation for environmental degradation under Section 15 of the NGT Act.

(f) Whatever remnant construction or other waste is still lying on the banks of the entire stretch of Yamuna in NCT Delhi,

would be removed positively within four months from today by the concerned authority/State under whose jurisdiction the said area falls.

vii. *We direct all the concerned authorities, corporations, bodies including Resident Welfare Associations to clean all the 157 natural storm water drains as identified by the Committee, within four months from the date of passing of this judgment and the drains should be made obstruction free and no waste should be permitted to be dumped in such drains. The drains may be cleaned mechanically or manually as the situation may demand. Such cleaning would include the dredging of the drains besides compliance of the specific recommendations of the Expert Committee. There shall be controlled dredging of River Yamuna to remove the huge accumulation of sediments and sludge for restoration of the cross section and flood carrying capacity of the River Yamuna.*

viii. *Existing wetlands and water bodies, both up-stream and downstream of Wazirabad reservoir, should be deepened and enlarged. This should be done in addition to providing more water bodies.*

We direct the Chief Secretaries of the States of Himachal Pradesh, Uttarakhand, NCT of Delhi, Haryana and Uttar Pradesh, Secretary, Water Resources, Government of India and Secretary, MoEF, to hold a meeting within four weeks from today to prepare an immediate action plan required to ensure proper environmental flows throughout the year, in the entire river and particularly the stretch flowing through Delhi.

ix. *The concerned Corporations under the guidance of the Principal Committee shall submit a report as to the identification and existence of the 44 drains (natural) which have been reflected in the Drainage Map of 1976, but were not traceable, as pointed out by the Expert Committee before the Tribunal. This report will be submitted to the Principal Committee within three months from the date of passing of this judgment.*

x. *The compostable material drawn out of such immersion or offering, should be used for manure purposes and should not be unduly stored. All other scientific method may be adopted for its removal and disposal.*

xi. *The Yamuna River Front i.e. the flood plain shall be restored, preserved and beautified, strictly in accordance with the report of the Expert Committee dated 19th April, 2014 as per its*

acceptance on 2nd August, 2014 by the MoEF as well as High Powered Committee.

xii. *However, restricted activities of floriculture and silviculture can be carried on, subject to such specific permissions and restrictions as may be imposed by the authorities/Principal Committee and also subject to the orders of the Courts, wherever, the matters are stated to be pending.*

xiii. *The respective Corporations and/or authorities would be responsible for execution of these directions directly under the supervision of the Principal Committee constituted herein.*

xiv. *The Government of the NCT of Delhi and the neighbouring States shall, within a period of three months from today, identify the site where the sludge/dredged material from the drains and River Yamuna is to be stored. The Principal Committee shall also issue directions as to the best way of utilisation of such sludge/dredged material including, for construction of tiles, particularly in reference to paver blocks.*

xv. *Sites for storage of fly ash are a direct source of air and water pollution. Therefore, in furtherance to the MoEF Notification dated 14th September, 1999 and this judgement, we direct proper covering of fly ash at the particular sites on the river bank of Yamuna. All the concerned authorities shall ensure that such fly ash should be disposed of at the earliest. Further, we direct that the Government should provide incentives for use of bricks made of fly ash in preference to red bricks. Since the Indraprastha Power Station generates considerable amount of fly ash and is located very close to the river bank, thus, the unit should take all effective steps to prevent pollution of the river water by dumping fly ash at suitable locations.*

xvi. *We are informed that Rupees Twenty Thousand Crores has already been provided under the planned expenditure to the NCT of Delhi, out of which Rs. Two Thousand Thirty One Crores have been specifically earmarked for providing sewage connection, sewage treatment, sewage disposal and water network. As per the Expert Committee the total expenditure of the present project is estimated at Rs. Four Thousand Crores, which can safely be met from the above head under the planned budget. However, still if there be need, we direct that the public authorities/Municipal Corporations could require the public at large to contribute to this expenditure based on the 'Polluter Pays' Principle. Funds/compensation so collected shall exclusively be used for this project and allied projects,*

with the object of ensuring pollution free Yamuna, clean and effective drainage system and for providing wholesome water to the residents of Delhi. Such environmental compensation may be determined by the Authority/Corporation with reference to the size of plots, construction raised thereupon, activity being carried on therein, consumption of water, quantum of sewage and domestic discharge and such other relevant considerations as the authority may deem fit and proper. The charges could be collected as part of the property/house tax.

xvii. *We direct all Public Authorities, Municipal Corporations and the concerned Departments, including the Department of Irrigation, to take effective steps to protect the Flood Plain as well as to educate all sections of society to co-operate and not to do any acts or deeds which are prohibited under this judgment and would have adverse consequences. These authorities should place large-sized dustbins, beyond the demarcated Flood Plain and towards the inhabitation, as well as in the bio-diversity parks. They shall request for concerted efforts both by the ones who are governing and ones who are governed. They shall issue circulars, display signages and may take recourse of Print and Electronic Media for educating people at large for effective completion of this project.*

xviii. *We direct all concerned to make every possible effort to ensure that the storm water drains do not carry sewage. Sewage may be carried through those drains upon which the STP's have already been installed, till the completion of the project. After the completion of the project, steps shall be taken so that only minimal quantity of treated water from the STPs reaches Yamuna.*

xix. *The CPCB, DPCC in coordination with the DJB, shall collect samples from River Yamuna, its floodplain and from the respective STP's at different places and sites for detailed analysis. This shall form the baseline data for implementation of this project. It will also be helpful in determining the improvement in the water quality.*

xx. *The authorities concerned shall take all steps to rejuvenate the water bodies associated with River Yamuna.*

xxi. *All concerned authorities shall deal with utmost priority and expeditiousness, in case any application in furtherance to any construction or authorization is moved by any of the authorities, Corporations or DJB, directly or through the Principal*

Committee, in execution of the Project. We grant liberty to the State Authorities, Corporation and DJB to approach the Tribunal in the event there is undue delay in dealing with such application in accordance with law.

xxii. *There shall be no construction and/or coverage of any of the drains in Delhi by any Authority or Municipal Corporation. All the drains shall be kept obstruction free by the concerned Corporation. Where substantial work (more than 85%) has been completed, such work is permitted to be completed by the Corporation after obtaining specific orders from the Tribunal in that regard. Rest of the work, where construction has just begun, the construction, including iron material, shall be removed. While completing such remnant work, Corporation shall ensure that the cross section of the drains to carry the requisite storm water for the flood of once in 25 years and other effluents, are not compromised. Such construction and/or removal shall be carried on in terms of paragraph no. 61 of this judgment.*

xxiii. *We constitute the 'Principal Committee' which shall be responsible and under whose supervision the directions contained in this judgment and the project reports shall be completely, effectively and expeditiously complied with. All concerned Authorities, Corporations, DJB and any other department, responsible for carrying out directives of this judgment, shall report the matters and submit the respective reports and data to the Principal Committee, for onward transmission to this Tribunal. The Committee shall file quarterly report of compliance before the Tribunal. The Committee shall consist of Special Secretary, MoEF, Joint Secretary of Ministry of Water Resources, Chief Secretary, Delhi Administration, Vice Chairman, DDA, Commissioner of all the Corporations, Commissioner, DJB, Secretary, Department of Irrigation, NCT of Delhi, concerned Secretaries of the States of Haryana, Uttar Pradesh, Himachal Pradesh and Uttarakhand.*

The four Members, namely, Professor C.R. Babu, Professor A.K. Gosain, Professor Brij Gopal and Professor A.A. Kazmi shall be the Members of the Principal Committee and shall be associated with commencement and completion of all the aspects of this project. The Delhi Jal Board along with Corporation under whose jurisdiction the required number of STP is to be constructed and established as well as the drains which are to be completed and made obstruction free shall be responsible for execution of the work as contemplated in the action plan, reports of the Committee and the judgment of the

Tribunal. They shall work in tandem and under the supervision of the Principal Committee.

xxiv. *All the Authorities, Corporation, DJB, CPCB, DPCC and any other department or authority, directly or indirectly connected with the compliance of these directions and the Project Reports, shall report to the Principal Committee in relation to all the actions taken in furtherance thereto and their progress from time to time. In the event of default, the Head of Department of such Authority/Corporation/Board would be held personally responsible.*

xxv. *These specific directions are in addition to any other direction that we have recorded in the entire judgment.*

xxvi. *By this judgment, we not only mandate but even request all the concerned Authorities, State Governments and the Principal Committee to ensure timely compliance of these directions, as this is the only plausible and practical way by which River Yamuna would become pollution free and its flood plain conducive for the biodiversity that it deserves. We have no doubt that with the concerted efforts of all concerned, 'Maily Se Nirmal Yamuna' Revitalization Project, 2017, would be a success. It would not only meet the ecological and environmental standards prescribed but would also provide clean air and water to the residents of Delhi, who are entitled to it and have a legal and constitutional right to receive the same. It will also help in providing sufficient water for agricultural and industrial purposes, thus, saving considerable quantity of potable water, so as to enable the concerned authorities to provide the same to all the colonies of Delhi. We also express a pious hope that residents of Delhi would render all help and assistance to all concerned and even abide by their fundamental duty for rejuvenating River Yamuna.*

xxvii. *We would be failing in our duty if we do not record our sincere appreciation for the contribution made, efforts put in and technical guidance provided, by the Members of the Principal Committee constituted by the Tribunal particularly the Expert Members, namely, Professor C.R. Babu, Professor A.K. Gosain, Professor Brij Gopal and Professor A.A. Kazmi.*

xxviii. *We grant liberty to all the parties, the applicants or even the public, to approach the Tribunal for any clarification or modification or for removal of any of the difficulties felt by them in implementation of the directions contained in this judgment and/or of the project reports."*

75. We may notice at this stage that another ***OA 300/2013 (supra)*** was also disposed of along with ***OA 06/2012 (supra)*** vide judgment dated 13.01.2015 but we have not referred to the facts of ***OA 300/2013 (supra)***, the reason being that therein the complaint was basically confined to construction, encroachment, obstruction and conversion of certain drains in Delhi.

76. ***Writ Petition No. 725/1994 (supra),*** pending before Supreme Court, continued for about 23 years during which period, Supreme Court issued various directions for improving water quality of River Yamuna and protection of flood plains. Lastly, vide order dated 24.04.2017, Supreme Court transferred the proceedings before this Tribunal for further monitoring and here, it was registered as ***OA 276/2017, News Item Published in Hindustan Times "And Quiet Flows the Maily Yamuna"***.

77. Again, in ***OA 6/2012 (supra)***, wherein, after disposal, several MAs were filed, various orders were passed and ultimately, vide order dated 27.01.2021, all the proceedings before Tribunal were disposed of by issuing certain directions in constitution of Oversight/Monitoring Committees.

78. This order dated 27.01.2021 was taken before Supreme Court in ***Civil Appeal No.3465/2022, Nizamuddin West Association vs. Union of India & Others*** which was decided vide judgment dated 21.10.2022. Supreme Court said that monitoring of River Yamuna by an expert adjudicating body is necessary. Therefore, while setting aside the order dated 27.01.2021, Supreme Court made it clear that ***OA 6/2012 (supra)*** shall continue to remain on file of NGT and it can proceed to monitor the matter further. Consequently, the matter is still pending before Tribunal

and various orders have been passed from time to time.

79. ***OA 329/2021, Devanshu Bose vs. Agra Development Authority & Others*** was filed, complaining about indiscrete abstraction of water from River Yamuna, affecting its e-flow resulting in pollution and in nutshell, the grievance of water management of Yamuna water was raised. This OA was disposed of by Tribunal vide order dated 18.01.2023. Therein Tribunal observed in para 6 of the judgment that sewage treatment capacity available at Agra is only 220.75 MLD against 286 MLD generation of sewage. Tribunal said that thus more than 85 MLD sewage is going untreated in River Yamuna or drains connected to it. Tribunal also observed that despite these facts, Agra Development Authority was allowing setting up of new colonies without infrastructure of sewage generated therein and this is against sustainable development principle. Under Doctrine of Public Trust, State has to protect environment by preventing pollution. Tribunal also referred a draft notification dated 25.02.2022 of MoEF&CC in the context of sewage and solid waste management which says, besides other that in no case, sewage or untreated waste water generated within the project area shall be discharged through storm water drains or otherwise into water bodies nor discharge/injected into the ground water by any more. Consequently, Tribunal observed that Agra Development Authority would ensure that no housing colony comes up without having requisite infrastructure for sewage management. If there is failure, there will be no remedy to prevent pollution of rivers.

80. In ***OA 562/2022, Ishika vs. Govt. of NCT of Delhi,*** referring to a media report published in 'Times of India' dated 17.01.2022 titled "Delhi;

Yamuna dirtier than it was 3 months ago", a complaint was made that pollution in River Yamuna has worsened with faecal bacteria level at a record high of 14 times than what existed three months ago. When Yamuna enters the city of Delhi, DO, BOD and Faecal Coliform are within permissible limits but during the time, it passages through Delhi, the level of above parameters increased multi-fold and several hundred times higher than the maximum permissible limit. Tribunal initially sought a Status report from Central Monitoring Committee constituted by it in ***OA 06/2012 (supra)*** but thereafter when the matter was taken up on 16.02.2023 along with ***OA 06/2012 (supra)*** and ***OA 21/2023, Ashwani Yadav vs. Govt. of NCT of Delhi,*** it disposed of this ***OA 562/2022 (supra)*** observing that since the issues are common, therefore, the same will be considered in ***OA 06/2012 (supra)***. However, in the order dated 16.02.2023, Tribunal observed that in Delhi in the quantity of sewage generation and treatment there is a gap of 238 MGD i.e., 1085.28 MLD. Similarly, in respect to State of Haryana, it Tribunal observed in para 16 that the gap of sewage generation and treatment in 34 towns in State of Haryana is 240 MLD.

81. In ***OA 21/2023 (supra),*** the issue of unabated pollution of River Yamuna and failure of authorities in taking adequate remedial measures despite Supreme Court's judgment in ***Paryavaran Suraksha Samiti and Another (supra)*** and this Tribunal judgment in ***OA 06/2012 (supra)*** was raised. Tribunal considered the matter on 09.01.2023 and constituted a High Powered Committee to look into the matter, take/proposed remedial action for compliance and submit report. Later, on 16.02.2023, this OA was disposed of so that the matter may be continued to be considered in ***OA 06/2012 (supra)*** as the issues were common.

82. Since the above matters pertain to pollution caused in River Yamuna at National Capital Region of Delhi and the issue is already pending, therefore, we are not looking into the matter except observing that so far as the cause of pollution and its remediation at River Yamuna in Delhi and nearby area particularly, National Capital Region of Delhi, it is subject matter of consideration in ***OA 6/2012 (supra)*** and, therefore, need not be gone into further details in the present case.

REGARDING AGRA CITY:

83. With regard to Agra City, ***Writ Petition (C) No. 426 of 1992, D.K. Joshi vs. Chief Secretary, State of U.P. & Others*** was filed in Supreme Court, raising the issue of scarcity of drinking water supply, problem of sewage, drainage and solid waste disposal. It was complained by Mr. D.K. Joshi that supply of drinking water in Agra city is extremely polluted, water is contaminated, filthy and totally unhealthy for human consumption. Despite several legislations, conferring power and duty on different agencies like Nagar Nigam Agra, UPPCB, State of UP, those authorities have not exercised their power as a result whereof, common man and citizens of Agra are suffering. Under the orders of Supreme Court, it was informed by State Government that some steps have been taken in respect of three aspects, mainly, supply of drinking water, providing adequate sewerage and drainage system and providing measures for disposal of solid waste in the city of Agra but Supreme Court did not find the said measures taken by State Government to be adequate. Writ Petition was disposed of vide judgment dated 19.11.1999 and was reported in ***(1999) 9 SCC 578***. Supreme Court directed that State of UP would set up a Monitoring Committee under the Chairmanship of Commissioner of Agra Division

which would also include District Magistrate, Agra, Chief Medical Officer, Agra, a representative of UPPCB as also the petitioner and Superintending Engineer of Yamuna Action Plan. The Monitoring Committee would be authorised to take help of any other person, whom they think necessary. The said Committee should implement the Reports submitted by NEERI, suggesting some long term measures for improvement in supply of drinking water as well as sewerage, drainage system and disposal of solid waste in city of Agra. State Government was directed to issue a Notification, forming Committee within three months from the date the order. The Monitoring Committee was directed to meet in every two months, discuss the steps already taken and prepare plan for future steps to be taken in the next two months.

84. After about 8 years, IA No. 8 of 2007 was filed in Supreme Court, complaining that situation has not improved and problem of drinking water, sewerage and drainage system and solid waste disposal has continued. It was stated that drainage system was chocked because of pollution and muck and water supply was inadequate; water in Yamuna was polluted; sewerage system was not in working condition; water quality was not consistent with the laid down standards; and situation with regard to solid waste management, sewerage and drainage was unsatisfactory. Therein, Supreme Court by order dated 09.01.2017 directed State of UP to file a Status Report which was filed on 25.01.2017 but thereafter, vide order dated 23.02.2017, the above matter was transferred to this Tribunal where further status Reports were directed to be filed. Status Report dated 04.07.2018 was considered by Tribunal on 12.10.2018 which shows that Monitoring Committee had conducted 71 meetings till January 2018. The problem of drinking water supply, sewerage drainage system and solid

waste disposal was considered and instructions were issued. There are two water works in the city for treatment of 369 MLD water against requirement of 400 MLD. Report said that after new project is operative, water supply shortfall will be covered. On the issue of sewerage, Report said that 514 kms. sewer line has already been laid and 336 kms. still remains. There were 9 STPs which were claimed to be operated. Tribunal in its order observed that only 17% area was covered by sewerage system, and 50% of sewerage system was not in working condition. Mostly sewerage was going into open drains. Tribunal found that earlier Report submitted by NEERI was more than 20 years back hence a fresh updated report is necessary and for this purpose, constituted a Joint Committee comprising Chairman, Central Pollution Control Board, a nominee of NEERI and District Magistrate, Agra. The said Committee submitted its Report vide e-mail dated 13.12.2018 which was considered by Tribunal on 29.01.2019 and it was observed that 216 MLD i.e., 61% of untreated sewage is being discharged into River Yamuna. Deprecating the role of authorities in failing to get the situation improved, Tribunal reminded that 'Polluter Pays' principle can be applied by every Regulatory Authority and compensation can be and must be recovered from every polluter. Mere passing of orders by the Tribunal is of no value unless the same are faithfully executed and Tribunal is under a duty to take such measures as may ensure compliance. In para 21 and 22 of the order dated 29.01.2019 passed in ***OA 306/2016 (supra),*** Tribunal said as under:

> *"21. 'Polluter Pays' principle can be applied by every regulatory authority and* ***compensation can be and must be recovered from every polluter and the amount which is to be recovered spent for the restoration of the environment. Mere passing of orders by the Tribunal is of no value unless the same are faithfully executed****. Execution is in the hands of the authority. As executing*

court, it is not only the right but also the duty of this Tribunal to take such measures as may ensure compliance. ***Mode of execution is laid down in CPC (Section 51), i.e., arrest and detention, appointment of a receiver or in such manner as nature of relief may require****.* ***There are provisions for prosecution, including of heads of departments of the Government****. On 'Polluter Pays' principle,* ***damages can be recovered not only from the polluters but also from the State functionaries who collude with the polluters****. The authorities have not been fully successful in their performance of duties to protect environment.*

22. On Precautionary Principle also, to ensure that statutory authority do not continue to ignore their duties of taking action of protecting the environment, this Tribunal instead of permitting pollution to continue can require Performance Guarantee to be furnished. The present is a fit case where such power must be exercised."

85. Further updated Compliance Report was considered by Tribunal in its order dated 10.08.2020 in ***OA 306/2016 (supra)*** and with regard to the status of sewerage system in Agra, it observed that installed capacity of 9 STPs is 220.75 MLD while sewage generation through 90 drains is about 286 MLD. Even sewer connections in part-IV Agra city and Agra Western Zone Sewerage Scheme were not complete in as much as only 62% work was done in Sewer house connecting chambers in Agra City (part – IV) and 25% work was done in respect of Agra Western Zone Sewerage Scheme. The defense was taken before Tribunal that Supreme Court's order passed in ***Writ Petition No. 13381 of 1984, M.C. Mehta vs. Union of India & Others*** is causing obstruction in installation of treatment plants as there is moratorium on expansion and setting up of new industry with a view to control air pollution at Taj Trapezium Zone Area (hereinafter referred to as **'TTZA'**). This contention was negated by Tribunal referring to Supreme Court's order dated 06.12.2019, in the above matter, wherein it was made clear that Environmental Clearance can be granted within TTZA for securing basic living conditions of TTZA's

residents which clearly include drinking water supply, Sewerage Treatment Plant, drainage system, solid waste disposal, Common Effluent Treatment Plant, etc. Para 6, 7, 8 and 9 of Supreme Court's order dated 06.12.2019 was quoted by Tribunal in its order dated 10.08.2020 which reads as under:

> *"6. Learned Counsel for Uttar Pradesh thus submits that in view of compliance of the "conditional" status quo order,* ***the State Government and other statutory authorities may now be permitted to grant environmental clearances which are necessary for providing essential public facilities including drinking water supply, sewerage treatment plant, drainage system, solid waste disposal, Common Effluent Treatment Plant, Bio Medical Waste Treatment Facility, and Waste to Energy Plants etc.***
>
> *7. In light of the aforementioned amenities being crucial for securing basic living conditions of TTZ's residents,* ***we are of the opinion that there need not be any impediment for granting necessary clearances for the same. We are conscious of the fact that citizens have a fundamental right to such essential amenities; and how counter intuitively, not allowing construction of such basic infrastructure can itself create new polluting waste and threaten the environment****.*
>
> *8. As regards permission for establishing non-polluting industrial units, it appears to us that only those small, micro and macro level industries which are both non-polluting and eco-friendly and which have necessary clearances from all statutory authorities as well as concurrence of the Central Empowerment Committee and NEERI, can be setup within the notified industrial area.*
>
> *9. We, thus, clarify that since the interim order dated 22nd March 2018 directing maintenance of status quo was passed to ensure timely submission of the Vision Plan by the State of U.P. and the said direction already stands complied with,* ***there shall be no impediment for the authorities to consider pending environmental clearances which are necessary to secure essential amenities within TTZ.*** *Simultaneously, the State and other statutory authorities are free to consider requests for relocating eco-friendly non-polluting industrial units, subject to them meticulously complying with environmental laws and all norms/conditions."*

86. The above OA was ultimately disposed of vide order dated 15.03.2021, observing that work executed is not adequate; there is need for enhancing sewage management by addressing infrastructure gaps, installing more equipments and by taking all other necessary measures.

87. Tribunal clearly observed that failure of authorities, apart from violation of right of citizens to clean environment, is also violation of the Statutory Rules under Environment (Protection) Act, 1986 (hereinafter referred to as **'EP Act 1986'**) which is a serious criminal offence, punishable under the law of the land, by jail sentence and heavy fine, upon violators including concerned Government officers. Such failure results in serious harm to public health and environment.

88. Tribunal, therefore, directed Chief Secretary to ensure further remedial action in a mission mode, taking into account recommendations of CPCB and Oversight Committee, by ensuring that adequate measures are taken to bridge the gap for solid and sewage management.

89. The issue of large-scale non-compliance of provisions of Municipal Solid Wastes (Management and Handling) Rules, 2000, dumping of solid waste in drains, water bodies etc., causing air and water pollution in the city of Agra including River Yamuna was raised before Tribunal in ***OA 306/2016, D.K. Joshi vs. Union of India & Others*** (subsequently, re-registered vide order dated 10.08.2020 as ***OA 176/2020, Social Action for Forest and Environment vs. Union of India & Others)***.

90. The pitiable condition of drains at Agra was brought to the notice of Tribunal in ***OA 306/2016 (supra)***. Tribunal in its order dated 12.10.2018 observed that situation of drains at Agra is grey and diversion of 19 drains

to STP was only a proposal; chocked drains were creating flood like situation; only 17% area was covered by sewerage system and 50% of sewerage system was not in working condition; mostly sewage was leading into open drains; STPs were working beyond capacity; drainage system is 55 years old and is in bad condition; 176.2 MLD of waste water is untreated and goes directly into River Yamuna.

91. In ***OA 306/2016 (supra),*** all the local bodies within the territory of District Agra were impleaded as respondents vide order dated 14.02.2017 and this included the following local bodies:

(i) Nagar Palika Parishad, Bah

(ii) Nagar Palika Parishad, Fatehpur Sikri

(iii) Nagar Palika Parishad, Achchnera

(iv) Nagar Palika Parishad, Shamsabad

(v) Nagar Palika Parishad, Etmadpur

(vi) Nagar Palika Parishad, Fatehabad

(vii) Nagar Palika Parishad, Pinahat

(viii) Nagar Panchayat, Jagner

(ix) Nagar Panchayat, Dayalbagh

(x) Nagar Panchayat, Kheragarh

(xi) Nagar Panchayat, Swamibagh

(xii) Nagar Panchayat, Kirawali.

92. Nagar Nigam, Agra through Municipal Commissioner was already impleaded as respondent 9.

REGARDING VRINDAVAN AND KOSI TOWN OF MATHURA DISTRICT:

93. The issue relating to discharge of untreated sewage and waste water effluent in River Yamuna at Vrindavan and Kosi town was brought before

Tribunal in ***OA 102/2021, Acharya Damodar Shastri & Another vs. Union of India & Others***. Applicant's complaint before Tribunal was that State Authorities have failed in preventing discharge of untreated sewage and waste water/effluents from Vrindavan-Kosi towns in river Yamuna and Kosi drain near Sunrakh. There are two drains at Pagal Baba Ashram (4 MLD) and 100 bed hospital (8 MLD) which are inadequate to deal with nearly 20 MLD of waste water being generated from Vrindavan town alone (excluding Kosi drain). Gigantic quantum of sewage generated from illegal and unauthorized colonies and construction on river bed and flood plains which have been allowed to flourish with the active collusion of the land mafia/realtors and the Government agencies and their officers. Numerous more such illegal constructions and encroachments in the form of houses, ashrams, car parking and shops etc. are continuing to take place, unabated, on the eco-fragile flood plains of Yamuna in Vrindavan, all of which are discharging their sewage/waste water directly into Yamuna River. Most of the sewer lines and storm drains in Vrindavan remain choked with silt and wastes of all kinds. As a result, waste water is constantly over-flowing from the drains, on to the roads, lanes etc. Water quality analysis conducted by UPPCB of Yamuna River in Vrindavan for January 2021 recorded BOD levels at 6.2 mg/lit, which is almost double the maximum permissible levels of upto 3 mg/lit. Total Coliform was detected as 68000 MPN/100 ml i.e., about 136 times higher than the maximum allowed levels of 500 MPN/100ml. Fecal Coliform was measured as 31000 MPN/100 ml i.e., about 12.4 times higher than maximum permissible levels of 2500 MPN/100 ml. On account of some misrepresentations on the part of field officers, in the letter dated 23.07.2020, National Mission for Clean Ganga stated that work of

sewerage has been completed but this is not the correct fact. UPPCB has failed to perform its duties to prevent, control and abate pollution in Vrindavan under Section 17 of Water Act 1974.

94. Noticing the complaint, Tribunal directed Chief Secretary, State of UP to look into the issue with the assistance of concerned officers, review remedial action which may include and cover the status of interception and diversion of drains, carrying sewage and sludge to river Yamuna, adequacy of treatment capacity, demarcation and greening of flood plains and removal of encroachments therefrom, management of septage and maintenance of ghats.

95. The matter was again considered in the light of Monitoring Committee Report dated 15.12.2021 and Tribunal in its order dated 17.12.2021 noticed the recommendations made by the said Committee, wherein it was clearly observed that water quality report received from Regional Officer, UPPCB, Mathura regarding samples taken from upstream and downstream of River Yamuna at Mathura-Vrindavan highlights that the quality of water in downstream is poorer than that of upstream indicating clearly that the drains falling in River Yamuna in this span is the cause of the deterioration in water quality. It also suggests that process of bio/phytoremediation is not efficient enough to treat the pollutants to permissible limits. Tribunal accepted the Report and issued directions in terms of the recommendations made in the Report of Monitoring Committee/Oversight Committee. However, while disposing the matter, in para 5 of the judgment, Tribunal observed:

> *"5. From the above,* ***it is seen that pollution is continuing and steps taken are inadequate to remedy the situation****. The Committee has recommended further action to prevent discharge of*

untreated sewage effluents in the drains connecting river Yamuna which is a cause of deteriorated water quality and treatment of plastic waste. The State authorities have to ensure availability of necessary funds. The Mathura Vrindavan Development Authority (MVDA) has to undertake plantation drive and also take steps to clear encroachments. Grievance of the applicant including about discharge in Akroor Drain needs to be looked into."

96. Tribunal also directed Chief Secretary, State of UP to monitor the compliance in co-ordination with other State Authorities.

97. The above proceedings show that time and again, issue of violation of the provisions of Water Act 1974 due to discharge of untreated sewage in River Yamuna in the area of Mathura, Vrindavan and Agra has been considered by Tribunal and repeatedly concerned authorities have been deprecated and reminded of their statutory obligations and have been requested, directed and mandated to take remedial steps for compliance of environmental laws. Even Chief Secretary, State of UP repeatedly has been made responsible to ensure compliance and monitor the steps taken for remedial measures but all the said authorities including Chief Secretary, State of UP have miserably failed to comply with the orders of Tribunal.

98. The approach of the authorities including statutory regulators under environmental laws is not only disregard of directions of this Tribunal but we find that even the directions of Supreme Court in ***Paryavaran Suraksha Samiti and Another (supra)*** have not been followed. We may hereat give a brief background of the dispute raised in ***Paryavaran Suraksha Samiti and Another (supra)*** and the directions given by Supreme Court. *Writ Petition No. 375/2012* was filed with a complaint that several industries are functioning without requisite consent or without

having a functional Effluent Treatment Plant (hereinafter referred to as **'ETP'**) and thereby causing damage to environment. Supreme Court in its judgment dated 22.02.2017 said that State PCBs shall issue notice to all industrial units which require Consent to Operate who made their primary ETPs fully functional within three months failing which the industries shall be closed. It also directed municipalities to take steps for establishment of Common ETP reminding them of their obligations under Article 243-W of the Constitution read with Item 6 of Schedule XII. In para 12 of the judgment, Court said that the manner it has suggested for ETPs and CETPs, the malady of sewer treatment shall also be dealt with simultaneously. Supreme Court directed that STPs shall also be set up and made functional within the time lines and format expressed above. In order to make the directions mandatory complied, Supreme Court said that department of Environment of concerned State Government and Union Territory shall be answerable in case of default. Secretaries to Govt. concerned shall be responsible for monitoring the progress and issuing necessary directions to concerned PCBs as may be required for the implementation of the above directions. They shall also be responsible for collecting and maintaining records of data.

Consistent defiance of Tribunal's orders by Chief Secretary, State of UP

99. STPs as directed by Supreme Court in ***Paryavaran Suraksha Samiti and Another (supra)*** to the extent of the required capacity have not been installed and if to some extent, the same are installed, they are not functioning meeting prescribed parameters. Neither the Secretaries of concerned departments have taken care nor appears to be quite serious or diligent to get the STPs installed or get properly functional. In both the

present matters, this is the situation at the ground level.

100. In order to give due opportunity to the State, Tribunal directed even the Chief Secretary to look into the matter, monitor and supervise, get appropriate remedial action and submit Action Taken Report. Unfortunately, such a high Authority has also shown a complete defiance to our orders.

101. In fact, role of Chief Secretary, State of UP in the present cases is highly disappointing as will be demonstrated hereinbelow.

102. Vide order dated 11.04.2023 passed in OA-I, Chief Secretary was directed to ensure remedial action in co-ordination with concerned authorities and submit an Action Taken Report but no such Report was submitted by him.

103. OA-I was taken up on 12.09.2023 when Tribunal found that neither any Action Taken Report by Chief Secretary UP was filed nor anyone was present to represent State of UP or Chief Secretary State of UP. Tribunal did not take any stern view of the matter and instead observed that it expect report from Chief Secretary, State of UP in terms of earlier order within six weeks. Tribunal also directed to forward a copy of the order dated 12.09.2023 to Chief Secretary of State of UP for compliance.

104. Thereafter, OA-I and OA-II were taken up on 07.12.2023 when again we did not find any action taken report from Chief Secretary, State of UP. Shri Bhawar Pal Singh Jadon, Advocate was present on behalf of State of UP but could not explain, why Tribunal's order has not been complied with by Chief Secretary, State of UP by submitting an Action Taken Report. This shows a consistent attitude of defiance and non-compliance on the part of

Chief Secretary, State of UP.

105. In OA-II also, after referring to the earlier orders and Reports dated 09.12.2022, Supplementary Report dated 17.02.2023 submitted by UPPCB, Tribunal observed that polluted water is being discharged into river which is supposed to carry potable water. The channel for sewage or other effluent treated or untreated should be separated and use of treated water for the purposes like agriculture, horticulture and industries should be deployed and action should be taken against industries discharging effluents in violation of consent conditions and Water Act 1974. Tribunal directed Chief Secretary State of UP to ensure remedial action in OA-II for which special meeting of the concerned officers be convened preferably within one month to consider that untapped drains are intercepted and diverted to the identified STPs preferably within two months, various other directions were also issued.

106. OA-II then was taken up on 05.10.2023 and Tribunal found that in terms of the order dated 11.04.2023, despite a clear direction to Chief Secretary, State of UP to submit Action Taken Report within four months, no such Report was submitted. Tribunal also observed that directions contained in para 11 of the order dated 11.04.2023 have not been complied till now. Again, instead of taking any stern view of the matter, Tribunal gave another opportunity to Chief Secretary, State of UP for filing Action Taken Report in pursuance to para 11 of order dated 11.04.2023 within six weeks.

107. OA-II was again taken up on 30.11.2023. Tribunal found that despite communication of the order dated 05.10.2023 to Chief Secretary, State of UP the same was not complied with and no Action Taken Report

by Chief Secretary was filed. Moreover, even State of UP remained unrepresented as no Counsel appeared on its behalf. Despite all these defiance shown by Chief Secretary, State of UP, Tribunal continued to take considerate view and directed to issue fresh notice to Chief Secretary, State of UP with a further direction to comply Tribunal's earlier order within one week.

108. Thereafter, on 07.12.2023, OA-I and OA-II, both were taken together but we find no compliance on the part of Chief Secretary, State of UP at all.

109. This attitude of defiance on the part of highest Administrative Officer of State cannot be appreciated. It appears that either the Chief Secretary, State of UP does not pay any heed or importance to environmental matters or has no interest to show compliance of Tribunal's order and for him Tribunal's orders are simply useless instructions, which can be disobeyed and ignored by him at his convenience.

110. We may remind of Section 26 of NGT Act 2010 which provides that non-compliance or disobey Tribunal's order is an offence for which severe punishment is provided. The said Section reads as under:

> ***"26. Penalty for failure to comply with orders of Tribunal.***
>
> *(1) Whoever, fails to comply with any order or award or decision of the Tribunal under this Act, he shall be* ***punishable with imprisonment for a term which may extend to three years, or with fine which may extend to ten crore rupees, or with both*** *and in case the failure or contravention continues, with additional fine which may extend to twenty-five thousand rupees for every day during which such failure or contravention continues after conviction for the first such failure or contravention:*
>
> *Provided that in case a company fails to comply with any order or award or a decision of the Tribunal under this Act, such company*

shall be punishable with fine which may extend to twenty-five crore rupees, and in case the failure or contravention continues, with additional fine which may extend to one lakh rupees for every day during which such failure or contravention continues after conviction for the first such failure or contravention.

(2) Notwithstanding anything contained in the Code of Criminal Procedure, 1973, every offence under this Act shall be deemed to be non-cognizable within the meaning of the said Code."

111. We have right and authority to initiate proceedings by getting a complaint lodged before the concerned Magistrate for initiating such punitive action/criminal prosecution but we thought it more important to concentrate on the steps necessary for protection of environment instead of wasting time in respect of officers who have no respect to the orders of this Tribunal.

112. However, we put our strong condemnation and disapproval to this kind of attitude and conduct shown, on the part of Chief Secretary, State of U.P.

Findings on Issues I in both OAs i.e., OA-I and OA-II:

113. The STPs installed at Agra as well as Mathura and Vrindavan are based on well-recognised technologies, commonly adopted for treatment of waste water. Record shows that 09 STPs working/operational at Agra, 4 STPs working/functional at Mathura and 02 STPs installed at Vrindavan (only one was found operational at Vrindavan) have adopted one of the following technologies:

(A) Stabilization pond/Oxidation Pond

(B) Up-flow Anaerobic Sludge Blanket Technology (hereinafter referred to as **"UASB"**)

(C) Sequencing Batch Reactor Technology (hereinafter referred to as **"SBR"**)

(D) Waste Stabilization Pond Technology (hereinafter referred to as **"WSP"**)

114. In order to understand the efficiency and capability of these STPs in functioning with different technologies, it would be appropriate to have a bird eye view as to how these technologies work.

(A) Oxidation Pond/Stabilization Pond -

115. Oxidation ponds, also called lagoons or stabilization ponds, are large, shallow ponds designed to treat wastewater through the interaction of sunlight, bacteria, and algae. Algae grow using energy from the sun and carbon dioxide and inorganic compounds released by bacteria in water. It is a secondary wastewater treatment that treats waste or sewage coming from municipal areas including commercial and residential etc. Oxidation pond is constructed 1-1.5 meter deep, inside the soil, and provided with inlet and outlet systems. Earlier symbolic algae and bacterial growth were used to treat waste water under the act of sunlight. Later on, it was found that not only Algae-bacterial association but also the fungal growth can purify industrial effluent or raw sewage.

116. Technologically, definition of 'Oxidation Pond' refers to the stabilization pond stabilizing domestic, trade, industrial waste etc. by the microbial interaction (primarily bacteria and algae).

117. The secondary treatment of organic and inorganic waste coming from raw sewage and industrial effluents is necessary since direct disposal of wastewater to the aquatic system can affect the life of water bodies and

quality of water as well.

118. The mechanism or working of the oxidation includes the following steps:

i. The bacterii present in the oxidation pond will oxidize the organic waste of the domestic as well as industrial sewage. In this way, bacterii release carbon dioxide, water and ammonia.

ii. Algal growth occurs in the presence of sunlight. It utilizes inorganic wastes formed by the organic matter decomposition and releases oxygen.

119. In other words, the mechanism/steps shown above makes it clear that algae and bacteria work mutually to fulfil each other's requirement. The bacteria use oxygen released by the algae to oxidize the biodegradable organics. The oxidation of organic waste by bacteria releases carbon dioxide. Later, algae harness carbon dioxide to reduce inorganic wastes like nitrogen, phosphorus compounds etc. As oxidation and reduction reaction co-occurs, an oxidation pond sometimes is called "**Redox Pond**".

120. The sludge of oxidation pond can be utilized as manure for irrigation processes. The quality of waste water is the factor that besides type of treatment method, has to be implied. Industrial organic waste can be treated effectively by deploying stabilization pond technology. The pollutant load in the waste water affects efficiency of entire stabilization pond community. Contaminants in the waste water can sometimes be toxic and may cause shock load and release effluent of poor quality.

121. The advantages and disadvantages of oxidation/stabilization pond system can be summarized as under:

ADVANTAGES:

(a) It reduces biological oxygen demand up to 90% naturally.

(b) It is a simple method to operate. It does not require sophisticated equipment's.

(c) Oxidation pond is a practical and effective method for the waste water treatment of domestic and trade wastes in tropical areas.

(d) The operation of a stabilization pond does not require much labour force.

(e) It is an economical method for treatment of wastewater from small and isolated units.

DISADVANTAGES:

(a) Construction of a stabilization pond requires more land area.

(b) Maintenance is quite intricate.

(c) Sometimes, it gives a foul smell and cause mosquito menace during the process if not appropriately maintained.

(d) There may get a chance of effluent seepage into the ground water, which may cause ground water contamination.

(e) It is biological system and takes about 10 to 40 days of detention time.

(B) Up-flow Anaerobic Sludge Blanket:

122. This technology is also known as **"UASB Reactor"**. It is a form of anaerobic digester, used in waste water treatment. UASB reactor is a methane producing digester, which uses an anaerobic process, forms a blanket of granular sludge, processed by anaerobic microorganisms. This is considered to be a high quality technology breaking complex organic substrates into biogas i.e., substantially composed of a mixture of methane

and carbon dioxide. Anaerobic digestion, being 100% renewable, is an effective and environmentally friendly waste water management technique. It can be considered as one of the most important renewable energy sources, due to CH_4 generation during digestion process. Anaerobic digestion requires less energy than other thermos chemical methods such as gasification and pyrolysis, due to the low operating temperature.

123. UASB Reactor was developed in 1970s in Netherlands and its application has rapidly increased, due to its excellent reported performances on different bio-degradable waste water streams. Operation of a UASB Reactor fundamentally revolves on its granular sludge bed that gets expanded as the wastewater is made to flow vertically upwards through it. The microflora attached to the sludge particles removes the pollutants contained in wastewater, thus biofilm quality and the intimacy of sludge waste water contact are among the key factors governing UASB Reactor success. Generated biogas facilitates mixing and contact between sludge and wastewater and the three phase gas-liquid-solid separator, located in the upper part of the Reactor allows to extract biogas, separating it from liquid effluent and residual sludge particles. In simple words, UASB Reactor as a single tank process in an anaerobic centralized or a decentralized industrial waste water or black water treatment system achieving high removal of organic pollutants. Waste water enters the Reactor from the bottom and flows upward. A suspended sludge blanket filters and treats waste water as the waste water flows through it. Bacteria living in the sludge break down organic matter by anaerobic digestion, transforming it into biogas. Solids are retained by a filtration effect of the blanket. The up-flow regime and motion of the gas bubbles allow mixing without mechanical assistance. Baffles at the top of the Reactor allow

gases to escape and prevent an outflow of the sludge blanket. In all aerobic treatments, UASB require a post-treatment to remove pathogens but due to a low removal of nutrients, effluent water as well as stabilised sludge can be used in agriculture. The generally recognized advantages and disadvantages of this System, in brief, are as under:

ADVANTAGES:

(i) High reduction of BOD.

(ii) Can withstand high organic and hydraulic loading rates.

(iii) Low sludge production (and thus infrequent desludging required).

(iv) Bio-gas can be used for energy (but usually first requires scrubbing).

(v) No aeration system required (thus little energy consumption).

(vi) Effluent is rich in nutrients and can be used for agricultural irrigation.

(vii) Low land demand, can be constructed underground and with locally available material.

(viii) Reduction of CH4 and CO2 emissions.

DISADVANTAGES:

(i) Treatment may be unstable with variable hydraulic and organic loads.

(ii) Requires operation and maintenance by skilled personnel; difficult to maintain proper hydraulic conditions (up-flow and settling rates must be balanced).

(iii) Long start-up time to work at full capacity.

(iv) A constant source of electricity is required.

(v) Parts and materials may not be easily locally available.

(vi) Requires expert design and construction.

(vii) Effluent and sludge require further treatment and/or appropriate discharge.

(viii) Though in the context of Agra, Mathura and Vrindavan, this technology can be easily applied otherwise it is not adopted for cold regions.

(C) Sequence Batch Reactor Technology:

(a) This technology also called as **"SBR Technology"** is also common and widely used water treatment system. It is a fill-and-draw activated sludge system for waste water treatment. In this system, waste water is added to a single "batch" reactor, treated to remove undesirable components, and then discharged. Equalization, aeration, and clarification can all be achieved using a single batch reactor. To optimize performance of the system, two or more batch reactors are used in a predetermined sequence of operations.

124. This system is considered quite efficient for both i.e., industrial and municipal waste. Discriminate quality for SBR Technology are (a) high removal capacity (b) versatile (c) stringent discharged standards and (d) high quality product generation.

125. The functioning of SBR of various phases often known as tank. When sewage water is sent to SBR Tank then the activated sludge system gets activated whereafter activities occur in a timely sequenced manner and the water gets purified. The sequence actions may be explained as

under:

- **Filling:** This is first stage in water purification. In this step, influent wastewater is filled in the tank in adequate quantity so that food to Microorganism Ratio remains appropriate.
- **Aeration:** This is the next step in which reaction occurs. Microorganisms utilize Ammonia, Nitrogen and Biochemical Oxygen Demand i.e., BOD. The rate at which treatment works is directly proportional to the sludge mass and time is taken for aeration. It also depends upon the level of impurities and degree of nitrification.
- **Settling:** This step takes around 60 minutes to 90 minutes. It also depends on the number of cycles per day. In this process, aeration stops and sludge gets settled.
- **Decanting:** This step itself is a process. Decanting is when the effluent is removed from the tank without disturbing the sludge settled at the bottom.
- **Idling:** It is described as the waiting time between two filling cycles.
- **Sludge Wasting:** After all the above steps, sludge gets accumulated in the tank. When it crosses threshold level, it needs to be discharged from the system.

126. Two parameters are considered to be better to keep control over the quality of sludge wastage. These two parameters are:

(i) Mixed liquor suspended solids (MLSS)

(ii) Mean cell residence time (MCRT)

127. The advantages and disadvantages of SBR Technology, in brief, may be stated as under:

ADVANTAGES:

(i) High treatment efficiency possible for BOD, COD, TSS, Nitrogen, Phosphorus.

(ii) High flexibility in operating conditions.

(iii) Possibility of producing electric energy from bio-gas (SBR plus Anaerobic sludge digestion).

(iv) Less land requirements due to compact tank construction.

DISADVANTAGES:

(i) Low pathogen removal.

(ii) Requires skilled personnel.

(iii) Dependence on uninterrupted power supply

(iv) More automation is required

(v) Bio-gas is explosive (risk in case of improper operation).

(vi) High maintenance require.

(vii) Dependence on some spare parts which cannot be easily available locally and may be at higher price.

(D) WSP Technology:

128. It is a natural technology which can be installed in centralized or semi-centralized sewerage systems for treatment of domestic and industrial waste water, septage and sludge etc. It is highly efficient, simple to construct, low cost and easy to operate. It can be used as secondary or tertiary treatment unit in a treatment plant either individually or in a coupling manner. Algal-bacterial symbiosis in WSP makes it completely natural treatment process for which it becomes economic as compared to other treatment technologies in terms of its maintenance cost and energy requirement. WSP operates by the

interaction of sunlight with algae and bacteria that helps in making this technology cost effective as energy requirement is fulfilled by natural process. Algae can be further used for creating bio-fuel, animal feed, vegetable oil, function as an energy source, etc. WSP is commonly constructed in areas where land is easily available and used for initial treatment of strong industrial waste water or tertiary treatment of domestic waste water. This is sometimes similar to Stabilization Pond/Oxidation Pond and sometimes, it is also known as oxidation ponds or lagoons. WSP ponds are basically large or shallow depth ponds, utilized for biological treatment of wastewater by the interaction of sunlight, bacteria and algae.

129. Whatever technology is adopted/deployed, all the above technologies by themselves are effective and efficient but ultimately, it depends on the quality of operation and maintenance of these technologies.

130. Despite merits of these technologies, if STPs are not achieving prescribed parameters, it only shows inefficiency or ineffectiveness on the part of the people who are operating and managing STPs i.e., lack of maintenance and deficiency in operation of STPs. Another reason may be that STPs are not regularly and continuously being operated which may also be a cause of failure on the part of STPs in meeting prescribed parameters in respect of treated water.

Contradiction in the reports of UPPCB and CPCB with regard to compliance of parameters in respect of 9 STPs at Agra:

131. We have also noticed a contradiction in the report of UPPCB and CPCB. UPPCB has relied on MoEF&CC's notification dated 13.10.2017

and submitted report that STPs at Agra are complying prescribed parameters. CPCB Report relies on the parameters set up in ***Nitin Shankar Deshpande vs. Union of India & Others*** **(supra)** and has submitted report that all STPs at Agra are non-compliant.

132. UPPCB's latest Report dated 06.12.2023 says that the samples were drawn from 9 STPs operational at Agra. Analysis Report for the month of November 2023 shows that STPs are achieving standards set by MoEF's Notification dated 13.10.2017 and not Tribunal' judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra).***

133. Copy of testing report has been filed and placed on record at page 302/303 which shows that samples at different points of drains were collected on 16.09.2023 and 19.09.2023 and even after bio-remediation, Faecal Coliform quantity found is very high comparing to the permissible limits prescribed by Tribunal in its judgment dated ***Nitin Shankar Deshpande vs. Union of India & Others (supra)***. Similarly, STP Report at page 318 shows that the samples were collected on 25.11.2023 and various parameters are not inconformity with the standards laid down in Tribunal's judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra).*** The level of Faecal Coliform is also very high besides BOD, COD level.

134. Attempt on the part of UPPCB to consider diluted parameters, ignoring this Tribunal's judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra),*** is neither understandable nor can be appreciated. It shows a deliberate defiance and disobedience on the part of UPPCB, by ignoring the directions issued by this Tribunal in ***Nitin Shankar Deshpande vs. Union of India & Others (supra),*** wherein

MoEF&CC's Notification dated 13.10.2017 has been considered and, thereafter, the standards, which are to be followed in operation of STP and discharge of treated effluent, have been laid down/approved.

135. In ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** the exact issue under consideration was effluent discharge standards for STPs as laid down vide Notification dated 13.10.2017 whereby Environment (Protection) Amendment Rules, 2017 were amended. Tribunal found that standards prescribed by amendment were not consistent for protection of environment but liable to deteriorate water quality, degrade environment and is a retrograde step. Comparative chart, given in para 3 of the judgment, shows old norms as per Serial No. 105, Schedule I to EP Rules 1986, as proposed by draft Notification dated 24.11.2015 and as sought to be implemented vide Notification dated 13.10.2017 as under:

Sr. No.	*Parameters*	*Old Norms 1986*	*Draft Norms Nov., 15*	*MoEF& CC Notification October 2017*
1.	*Biochemical Oxygen Demand (BOD) (mg/l)*	*<30*	*<10*	*<30 and <20 (metro cities)*
2.	*Chemical Oxygen Demand (COD) (mg/l)*	*<250*	*50*	*No limit*
3.	*Total Suspended Solids (TSS) (mg/l)*	*<100*	*<20*	*<100 and <50 (metro cities)*
4.	*Total Nitrogen (mg/l)*	*<100*	*<10*	*No limit*
5.	*Ammonical Nitrogen (mg/l)*	*<50*	*<5*	*No limit*
6.	*Total Phosphorus (mg/l)*	*No limit*	*No limit*	*No limit*
7.	*Fecal Coliform MPN/100 ml*	*No limit*	*<100*	*<1000*

136. Tribunal constituted an Expert Committee comprising nominees from IIT Kanpur, IIT Roorkee, NEERI and CPCB to give Report after examining best available technologies and best practices. After referring to Expert's study on the subject particularly CPCB Report on "River Stretches for Restoration of Water Quality, 2014-15" and Tribunal's order dated 20.09.2018 in ***OA 673/2018*** in ***News item published in "The Hindu" authored by Shri Jacob Koshy titled "More river stretches are now critically polluted: CPCB***" which was on the subject of polluted river stretches, implementation of Notification dated 13.10.2017 was stayed by Tribunal vide order dated 21.12.2018. Tribunal directed that till further order, pre-revised standards shall be followed.

137. Joint Committee constituted by Tribunal in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** submitted Report dated 30.04.2019, wherein current status of water quality of rivers, flow in India, was studied and it was said that 351 river stretches out of 323 rivers were polluted. Committee also observed that there was need for revised standards for BOD and COD with a view to protect water quality of the rivers/streams. There was also a need for revised standards for TSS, Nitrogen (Ammonia and Nitrates) and Phosphorus and Fecal Coliform. The need for revised standards for BOD, COD, TSS etc. was discussed in the Committee's Report, as quoted in para 7 of the judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra),*** and the same reads as under:

> *"7. The Committee while discussing the need for revised the Standards for BOD and COD observed that:*
>
> > *"Inclusion of COD in sewage discharge certainly offers advantages in terms of early diagnosis on functioning of STPs and thus helps in resorting immediate measures/corrective*

actions. This is because analysis of COD is completed within 5 Hours as against 5 days at 20oc or 3 days at 27oC for BOD (Sawyer & Mccarty, V. Edition). Moreover, if Government wishes to regulate STPs across the county through online monitoring system in future, inclusion of COD in Discharge Standards will prove beneficial for the reason that COD sensors are quite reliable and readily available in Indian market, however the same is not the case with BOD sensors. Thus, from regulatory point of view also, COD is an important parameter and needs to be included in sewage Discharge Standards."

While discussing the need for revised standards for TSS the Committee has observed that:

"The Microbial quality of wastewater could be linked with the TSS concentration. The larger the Suspended solids, the larger shall be the presence of bacteria, protozoa and viruses. High TSS wastewater cannot be easily disinfected, as the suspended particles "hide" these microorganisms and also react with chemical disinfectants."

Further the committee observed:

"A well designed and operated conventional sewage treatment system such as activated sludge process can meet 20 mg/L effluent TSS discharge standards. Many STPs bases on secondary wastewater treatment all over the globe are able to achieve 10-20mg/L. TSS without any tertiary treatment."

Further with regard to the need for revised standard for Nitrogen (Ammonia & Nitrates) and Phosphorus it has been elaborated by Committee that:

"Nitrogen and phosphorus in all forms are major rate limiting elements essential for the growth of algae and other vegetation in water bodies leading to a state called eutrophication. The greenish color water with large vegetation growth is common sight for not only lakes and ponds but also slow-moving rivers.

Eutrophication arises from the oversupply of nutrients (N & P), which leads to overgrowth of plants and algae. Degradation of dead algae and plants by microbes consumes dissolved oxygen in the water, thereby creating the state of hypoxia.

Eutrophication leads to many problems related to water quality:

- *Large Dissolved oxygen variation leads to fish kills*

- *Filling the water body with dead algae and other vegetation.*

- *Decomposition of dead algae and vegetation at the bottom causing oxygen depletion and further release of nutrient.*

- *Release of algal toxins and odors causing substances make the water unsuitable for human and animal consumption."*

The Committee has also observed that:

Due to the absence of dilution and worsening of our rivers and lakes, it is necessary to move towards nutrients (nitrogen and phosphorus) regulations in water bodies.

The Committee while discussing the revised standards for Fecal Coliforms observed:

> *"As per "Houses and Household Amenities, Latrine Facility, Census of India - 2011, Registrar General and Commissioner, India" available at http://censusindia.gov.in/ 2011census/hlo/ Data sheet/ India / Latrine. Pdf; Out of 7.9 Crores Urban Households (UHH), nearly 1.7 Crores UHH (i.e. 20 %) lacks adequate sanitation. At the same time more than 5 lakhs villages in the country are now open defecation free (ODF) (https:// sbm.gov.in/sbmdashboard/ODF.aspx.). Although rural parts are covered through sanitary toilets, effluent from septic tanks from newly built 9.2 crores toilets across the country is unavoidable. This may pose very high health risk owing to the fact that "Sanitation" including collection, conveyance and treatment is either absent or inadequate in such areas.* ***Relaxing FC pose risk to downstream cities/town/villages that rely on drinking water source on same water body in case of rivers. It appears quite reasonable to say that FC Standards be prescribed to 100 MPN/100 ml. considering its impact on human health in general and readiness of Indian wastewater sector to handle the same (Recommended value of FC in CPHEE0 Manual, 2013 is MPS230/100 mI.****).*
>
> *(emphasis added)*

> *Hence, CPHEE0 2013 recommended the following guidelines for treated sewage discharge into surface water which after some travel may join a* ***drinking water source to be used as source of supply for drinking water as given in following Table 5.20***

Table 5.20 Recommended Guidelines for Treated Sewage if Discharged into Surface Water to be used as source of Drinking Water.

Parameter	*MoEF Standards (A)*	*Recommended Values*
BOD, mg/L	*30*	*Less than 10*
SS, mg/L	*100*	*Less than 10*
TN, mg/L	*100*	*Less than 10*
Dissolved P, mg/L	*5*	*Less than 2*
Faecal Coliforms, MPN/100 mL	*Not specified*	*Less than 230*

(A) General Standards, Environmental Protection Rule, 1986 & as authorized by PCB

- *In order to achieve the above values, the treatment process would need to be designed for nutrient removal in addition to the conventional BOD and SS removal. It has also been reported that if the nutrients were removed to the levels mentioned in Table 3.20, then the amount of chlorine required for disinfection would be less at about 5 mg/ l.*

  Considering aforementioned analysis, the Chairman CPCB directed all State Pollution Control Boards to make it mandatory for local bodies to set up sewerage systems for treatment and disposal of sewage to meet the prescribed standards ie., pH 6.5-9, BOD (mg/L): Not more than 10, COD (mg/L): Not more than 50, TSS (mg/L) : Not more than 20, NH4-N (mg/L): Not more than 5, N-total (mg/L) Not more than 10 ,Fecal Coliforms (MPN/100 ml) Less than 230. The details are provided in Annexure 1."

138. Report also mentioned that stringent standards in terms of draft Notification dated 24.11.2015 are economically viable and technically feasible. Economic viability and resource position was referred to by Tribunal in para 8 of the judgment and relevant extract reads as under:

"8. The report further mentions that the stringent standards in terms of Draft Notification dated 24.11.2015 are not only economically

viable and technically feasible, the cost will not be significantly high. In this regard, it was observed:

"7.0 ECONOMIC VIABILITY & RESOURCE POSITION

1. For Nitrification (Conversion of ammonia to nitrate), 20-30% larger aeration tanks are required with additional 40-50 % aeration demand. The Total capital and O&M cost of the system increases by 10-20 & 5-10 % respectively.

2. For further removal of nitrate from wastewater, denitrification (conversion of nitrate to Nitrogen gas) is needed by additional anoxic tank in the system. The capital cost further increases by 5-10 %. Nevertheless, denitrification gives 25 % oxygen credit which reduces 25 % aeration requirement.

3. Finally, overall capital and operational cost implications for achieving standards for metropolitan and class-I cities shall be 20-30 %.

4. Typical total unit costs for wastewater treatment based on experience gained in Western Europe and the USA is presented in Figure XX (WHO/ UNEP 1997), The total unit cost for secondary treatment (BOD < 20-30 mg/L, & TSS < 50-100 mg/L) varies between 1.5-2.0 US$/m3, while for tertiary treatment (BOD, TSS & TN < 10 mg/L) it is 2.0-2.5 US$/m3. The additional burden is approximately 25-33 % which matches with Indian experience as well.

5. In recent years, many STPs are constructed based on effluent BOD, TSS & TN < 10 mg/L) and all the well operated and maintained STPs are providing the desired effluent quality. Some of these STPs are monitored by lIT Roorkee in recent years under several research projects and NGT reports. The performance evaluation results for 20 MGD Nilothi STP, 20 MLD Pappan Kalan STP, 15 MLD Delhi Gate STP and 5 MGD Kapashera STP of Delhi submitted to NGT alongwith 3.0 MID STP, Rishikesh, 1 MGD STP, Delhi, 27 MGD STP, Haridwar etc., monitored under various research projects is attached as Annexure 3.

6. CPCB has also conducted study on technological achievability of proposed standards. Delhi Jal Board has installed and commissioned 04 STPs on advanced treatment technology along with coliform reduction facilities.

7. In addition, the following STPs all over India are producing the desired quality: 1.5 MLD STP, Cubbon Park, Bangalore, 2.0 MLD STP, Pahalgam, 3.5 MLD STP, Tapovan, Rishikesh, 4.0 MLD STP, IIT' Madras, 12.5 MLD STP, Tonca, Goa, 15.0 MLD STP, Gorakhpur, 17.3

MLD STP, Zirakpur, Punjab, 18 MLD STP, Sarai, Haridwar, 20.0 MLD STP, Hyderabad, 20.0 MLD Sangvi, Pune, 30 MLD STP, Hyderabad, 37.5 MLD STP, UP Housing Board, Lucknow, 40.0 MLD Kharadi, Pune, 40.0 MLD STP, Hubbali, Karnataka, 45 MLD STP, Mundhwa, Pune, 50 MLD STP Kalamboli, Navi Mumbai, 54 MLD STP, Noida, 55.0 MLD, Singanpure, Surat, 56 MLD STP, Indirapuram, Ghaziabad, 68.0 MLD STP, Dehradun, 100 MLD STP, Vashi Navi Mumbai, 130 MLD STP, Nagpur, 137 MLD STP, Greater Noida, 245 MLD STP Indore, etc.

8. ***In practical experience with actual tendered cost, the experience has been quite differing. Many tenders based on old and less stringent quality standards have been awarded at much higher per MLD cost as compared to STPs having more stringent standards. Plus on a long term basis, new technologies have lower life cycle costs. Other factors which are encouraging most corporations and contractors to adopt new technologies are more compact designs, less land requirement, less construction time, better material of construction, less maintenance cost, automation and less dependency on expensive trained manpower to operate plants in remote locations.****"*

139. Observations of Joint Committee constituted in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** referred to in para 9 of the judgment, read as under:

"9. Accordingly, the Committee further observed that:

"● The ***new stringent standards are devised considering the deterioration condition of water bodies and unavailability of adequate dilution water in our water bodies. If not stringent quality standards are not implemented then in the coming future with more population burden on rivers, situation will further deteriorate.***

- *The greatest benefit of these standards is to achieve all purpose non-portable reuse quality effluent. Each STP is to be treated as a source of water for reuse and recycling, helping in mitigating drought/climate change in the country. It will also reduce exploitation of groundwater reserves and dependency on rainfall which has become quite unpredictable in the past few years. Climate change is a reality that should be addressed and adopted for in the coming future. It will go a long way in reducing agricultural dependency on bore well water.*

- *If treatment of wastewater is not carried out with intention of reuse and recycle expenditure on conveyance/long distance transport of water/sewage will be much higher. Even as on toady in many cities cost of conveyance of water is much higher than the treatment of sewage to make it fit for most uses including domestic uses. For example the cost of transporting water from Narmada to fulfil water supply needs of Indore city (approximately @ Rs. 20/cum) is much higher than the cost of treating sewage to tertiary level."*

140. Committee, therefore, recommended standards for effluent discharge for STPs as under:

Sl. No.	*Industry*	*Parameters*	*Standards (Applicable to all mode of disposal)*			
1	*2*	*3*	*4*			
	Sewage Treat-ment Plants (STPs)		*Mega and Metropolitan Cities*	*Class I Cities*	*Others*	*Deep Marine Outfall*
		pH	*5.5-9.0*	*5.5-9.0*	*5.5-9.0*	*5.5-9.0*
		Bio-Chemical Oxygen Demand (BOD)	*10*	*20*	*30*	*30*
		Total Suspended Solids (TSS)	*20*	*30*	*50*	*50*
		Chemical Oxygen Demand (COD)	*50*	*100*	*150*	*150*
		Nitrogen-Total	*10*	*15*	*-*	*-*
		Phosphor us-Total (For Discharge into Ponds, Lakes)	*1.0*	*1.0*	*1.0*	
		Fecal Coliform (FC) (Most Probable Number per 100 mililiter, MPN/100 ml	*Desireable-100* *Permissible-230*	*Desireable-230* *Permissible-1000*	*Desireable-1000* *Permissible-10,000*	*Desireable-1000* *Permissible-10,000*

141. Tribunal after hearing the parties found that distinction drawn by Committee in regard to the standards to be followed in Mega-Metropolitan Cities and others like Class-I cities etc. is without any reason, justification or logic. Therefore, Tribunal accepted Report of Expert Committee and standards recommended by it with the modification that the standards recommended for Mega and Metropolitan Cities were made applicable to rest of the country. Tribunal directed that these standards will apply not only for new STPs but also for existing/under construction STPs without any delay and giving any time relaxation to such cities. The directions contained in para 14 of the judgment read as under:

> *"14. Accordingly,* ***we accept the report of the Expert Committee with the modification that the standards recommended for Mega and Metropolitan Cities will also apply to rest of the country. We also direct that the standards will apply not only for new STPs but also for existing/under construction STPs without any delay and giving of seven years time stands disapproved****.*
>
> *MoEF & CC may issue an appropriate Notification in the matter within one month from today."*

142. In view of the above, it is evident that as per judgment of Tribunal dated 30.04.2019 passed in ***Nitin Shankar Deshpande vs. Union of India & Others (supra),*** the standards to be followed for discharge of effluent for STP have to be consistent with the above judgment and not with reference to the Notification dated 13.10.2017 which has been relied by UPPCB in its Compliance Report dated 06.12.2023.

143. It has also been brought to our notice that Ministry of Housing and Urban Affairs, Govt. of India has issued a letter dated 18.12.2023 reviewing existing norms for re-cycle and re-use of waste water for specific uses given at table 7.19 of the manual on Sewerage and Sewage Treatment

System-2013 published by the said Ministry. These norms have been reviewed by Expert Committee constituted by the Ministry and, thereafter, the amended norms have been provided in table 7.19 of the manual on Sewerage and Sewage Treatment System-2013 which have been mentioned in Annexure-1 to the letter dated 18.12.2023 and reads as under:

"Table 7.19 Recommended norms of treated sewage quality for specified activities at point of use (Modified)

S. No.	*Parameters*	*Toilet protection*	*Fire protection*	*Vehicle Exterior washing*	*Recreational use (bathing etc.)*	*Non-contact impoundments (tanks, lakes etc.)*	*Landscaping, Horticulture & Agriculture*			
							Horticulture, Golf Course	*Non edible*	*Crops*	
									Crops which are eaten	
									Raw	*Cooked*
1	*Turbidity (NTU)*	*<2*	*<2*	*<2*	*<2*	*<2*	*AA*	*AA*	*AA*	*AA*
2	*SS*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*
3	*TDS*	*2100*								
4	*pH*	*6.5 to 8.5*								
5	*temperature*	*Ambient*								
6	*Oil & Grease*	*10*	*nil*	*Nil*	*nil*	*nil*	*10*	*10*	*nil*	*nil*
7	*Total Nitrogen as TN*	*10*	*10*	*10*	*10*	*10*	*AA*	*AA*	*AA*	*AA*
8	*BOD*	*≤6*	*10*	*≤6*	*≤6**	*10*	*≤6-10 (≤66 preferred)*			
9	*COD*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*
10	*Total Phosphorous as TP*	*1*	*1*	*1*	*1*	*1*	*AA*	*AA*	*AA*	*AA*
11	*Minimum Residual Chlorine*	*1*	*1*	*1*	*≤0.5*	*0.5*	*nil*	*nil*	*nil*	*nil*
12	*Faecal Coliform in 100 ml*	*nil*	*nil*	*nil*	*≤50*	*100*	*nil*	*100*	*nil*	*≤50*
13	*Helminthic Eggs/ litre*	*AA*	*AA*	*AA*	*AA*	*AA*	*AA*	*<1*	*<1*	*<1*
14	*Colour (Colour or Hazen units)*	*Colourless*						*AA*	*Colourless*	
15	*Odour*	*Aseptic which means not specific and no foul odour*								

All values are in mg/l for Turbidity, pH, Temperature, Faecal Coliform, Helminthic Eggs, Colour and Odour.
AA- as Arising when other parameters are satisfied.

**CPCB prescribes BOD less than 3 mg/l in water body for recreational purpose. Adequate storage shall be maintained in the water body for dilution to maintain 3 mg/l."*

144. We really find it an attempt on the part of UPPCB to defy and disobey the directions of this Tribunal passed in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** by submitting a Report observing that 9 STPs at Agra are complying with the standards, ignoring the standards which were to be followed and observed in the light of the judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra).***

145. Further, we find from the above Reports that CPCB has categorically found that 9 STPs in Agra are not meeting the norms and particularly, in respect of fecal coliform. In 5 STPs, outlets contain the quantity much-much beyond the prescribed limit. In respect of COD, BOD, TSS and Nitrogen level, most of the STPs have failed. In fact, all STPs in one or more aspects are failing to achieve the parameters as laid down by Tribunal in its order dated 30.04.2019 in ***Nitin Shankar Deshpande vs. Union of India & Others (supra).*** Report submitted by UPPCB is based on the standards which have been disapproved by Tribunal and, therefore, shows a clear attempt to protect the violators at Agra and for not taking appropriate action against such violators.

146. Learned Counsel appearing for UPPCB could not explain as to why UPPCB has referred to the standards set vide MoEF's Notification dated 13.10.2017 when its operation was stayed initially by Tribunal in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** and subsequently, in the final judgment, different parameters in the light of Expert Committees' Report have been laid down by this Tribunal. It shows a deliberate intentional default and collusion on the part of the officer

concerned and also an attempt to mislead Tribunal.

147. We direct Member Secretary, UPPCB to find out the officer responsible for such defiance of the order of Tribunal and take appropriate action in accordance with law and to ensure that in future, no such disregard of Tribunal's order is observed at any stage by any of the authorities of UPPCB.

Specific violations evident from record:

148. On the question, whether untreated sewage is being discharged in River at Mathura, Vrindavan and Agra, we find that various Reports noticed above are self-speaking and clearly shows a complete defiance and violation of provisions of Water Act 1974. The authorities responsible for non-discharge of sewage into river and to maintain sewerage system in an effective way so as to avoid pollution of river are failing in their duty.

(A) AT AGRA:

149. On the face of it, at Agra, there are 90 drains which are carrying total sewage load of 286 MLD. Thereagainst, 21 drains are fully tapped which are discharging 60.37 MLD of sewage. Partially tapped drains are 8 which discharge 208.48 MLD sewage and untapped drains are 61 which carry 17.15 MLD of sewage.

150. Thus, untreated or partially treated sewage constitute **225.63 MLD**. This is an admitted position as per the Action Taken Report dated 06.12.2023 filed by Joint Secretary, Urban Development Department, State of UP on behalf of State of UP.

151. Another aspect is that 09 STPs are functional at Agra which have total installed capacity of **220.75 MLD.** However, actual treatment

utilization even in November 2023 of these 9 STPs is only 182.21 MLD, as per Action Taken Report dated 06.12.2023 (annexure at page 296/298 of the paper book) filed on behalf of State of UP.

152. It shows that **there is a gap of about 183.79 MLD of sewage** which is not being treated by STPs and is directly being discharged in River Yamuna.

153. In OA-I, Joint Committee Report dated 24.02.2023 shows discharge of 131 MLD of untreated sewage into River Yamuna causing huge pollution thereof at Agra. Most STPs are not meeting the prescribed parameters. Though, requirement of additional STPs is there but no effective steps have been taken by Agra Municipal Corporation for setting up of new STPs. Tribunal in its order dated 11.04.2023 has observed that no new STP has been set up at Agra since 2014. Even utilization capacity of 9 installed STPs is substantially low in as much as installed capacity of 9 STPs is 220.75 MLD while utilization capacity is only 175 MLD. Treated sewage which is not meeting the parameters is also being discharged into River Yamuna.

154. Report dated 23.02.2023 of Joint Committee shows that estimated sewage generation in Agra city is 306 MLD which has been estimated considering the water demand of the city which is 441 MLD. Against this, though 9 STPs have been installed with total capacity of 220.75 MLD but actual utilization thereof is only 175 only and it leaves a gap of 131 MLD which sewage as per report is being directly discharged in River Yamuna. Analysis Reports of STP samples (samples were taken on 10.02.2023) show that the standards of BOD and Suspended Solids i.e., SS and COD exceeds the parameters provided in Tribunal's judgment in ***Nitin Shankar***

Deshpande vs. Union of India & Others (supra). Even Fecal Coliform in 3 STPs is very high.

155. The surface water analysis of river Yamuna at Agra also shows that the level of total Coliform is very high than the permissible limit. CPCB Report dated 05.12.2023 also shows much higher value of various polluting elements like BOD, COD, SS, Nitrogen etc. in STPs outlet water which do not match with the prescribed parameter as per ***Nitin Shankar Deshpande vs. Union of India & Others (supra).*** Even in respect of 8 drains, it has submitted its test report after treatment and shows all parameters violation of the prescribed standards. UPPCB's Action Taken Report dated 06.12.2023 has submitted two analysis reports of drains in Agra, one refers to 12 drains and another 15 drains wherein samples were collected on 16.09.2023 and 19.09.2023, respectively, and test report dated 27.10.2023 shows that even after bio-remediation, the standards/parameters prescribed in ***Nitin Shankar Deshpande vs. Union of India & Others (supra)*** are not being complied. Relevant extract of both the test reports is reproduced as under:

Before Bioremediation											
S. N	*Drain Name*	*pH*	*BOD mg/l*	*COD/ mgl*	*TSS mg/l*	*FC MPN/ 100ml*	*pH*	*BOD mg /l*	*COD mg/l*	*TSS mg/ l*	*FC MPN/ 100ml*
1	*Taj West Gate*	*8.1*	*56*	*144*	*102*	*110000*	*7.6*	*38*	*112*	*88*	*94000*
2	*Khairrai Tola Drain*	*8.0*	*58*	*160*	*98*	*94000*	*7.6*	*40*	*132*	*82*	*79000*
3	*Saxseria Drain*	*7.8*	*60*	*144*	*96*	*130000*	*7.4*	*44*	*116*	*82*	*110000*
4	*Transport Nagar*	*8.0*	*58*	*136*	*98*	*94000*	*7.6*	*44*	*96*	*80*	*79000*
5	*Lohiya nagar*	*7.8*	*54*	*152*	*96*	*120000*	*7.5*	*38*	*116*	*74*	*110000*
6	*Almari Factory*	*8.0*	*46*	*128*	*112*	*70000*	*7.6*	*36*	*96*	*76*	*63000*
7	*Toffee Factory*	*8.1*	*48*	*120*	*116*	*94000*	*7.9*	*34*	*96*	*74*	*70000*
8	*Monoharpur*	*8.4*	*60*	*104*	*110*	*110000*	*7.8*	*46*	*84*	*72*	*94000*

9	*Eklavya Water Plant*	*8.1*	*48*	*112*	*96*	*70000*	*7.9*	*34*	*88*	*74*	*63000*
10	*Bahadur pur*	*8.0*	*46*	*104*	*94*	*70000*	*7.8*	*34*	*84*	*72*	*46000*
11	*Poiya Drain-1*	*7.9*	*48*	*120*	*96*	*84000*	*7.8*	*36*	*88*	*74*	*70000*
12	*Poiya Drain-2*	*8.1*	*50*	*128*	*98*	*70000*	*7.6*	*34*	*92*	*76*	*63000*

Before Bioremediation											
S. N	Drain Name	pH	BOD mg/l	COD mg/l	TSS mg/l	FC MPN/100ml	pH	BOD mg/l	COD mg/l	TSS mg/l	FC MPN/ 100ml
1	Moti Mahal-1	8.0	48	120	88	94000	7.8	36	96	68	70000
2	Moti Mahal-2	8.1	46	104	84	70000	7.6	36	88	62	63000
3	Moti Mahal-4	8.2	46	136	84	63000	7.7	36	104	62	58000
4	Moti Mahal-5	8.1	46	136	86	94000	7.5	34	104	68	70000
5	Moti Mahal-7	7.9	58	144	88	120000	7.6	42	116	62	110000
6	Moti Mahal-8	7.8	60	152	92	110000	7.5	44	112	74	94000
7	Shambhunath Junior H.S	7.8	50	152	88	84000	7.6	38	116	66	63000
8	Ambedkar Drain	8.0	50	152	92	70000	7.9	38	120	74	63000
9	Chini Roza-1	7.8	46	144	86	94000	7.6	34	104	68	70000
10	Gali Subedar Nagar Drain	7.9	48	144	90	70000	7.6	36	112	72	63000
11	Gali Antram Bagichi Drain	7.8	50	136	88	94000	7.5	38	104	64	70000
12	Katra wajir Khan-2	7.9	50	144	84	120000	7.6	38	112	66	110000
13	Shyamlal Vidhaya Mandir	8.1	44	136	84	79000	7.8	32	104	66	70000
14	Dayanand ashram	8.0	48	144	90	84000	7.6	40	108	74	79000
15	Ganesh Nagar	8.1	60	176	94	79000	7.9	44	128	72	63000

156. In the Compliance Report dated 22.08.2023 filed by Municipal Commissioner, Nagar Nigam Agra, it is admitted position that out of 90 drains in Agra city, only 21 with sewage discharge capacity of 60.37 MLD

were fully tapped and rest were tapped partially or untapped.

157. With regard to treatment and discharge of sewage at Agra, we find that UPPCB to some extent has shown some consideration to Nagar Nigam Agra and submitted Report showing some extent of compliance but the position has been contradicted by Report dated 05.12.2023 filed by CPCB which clearly says that all 09 STPs at Agra were not meeting the norms or one or the other parameters as prescribed by Tribunal in ***Nitin Shankar Deshpande vs. Union of India & Others (supra).*** CPCB Report also says that all STPs except STP at Bhim Nagri, Devri Road with the installed capacity of 12 MLD, were discharging their treated effluent into River Yamuna and this treated effluent is that which is not meeting the parameters prescribed under Water Act 1974.

158. With regard of tapping of drains at Agra, Report dated 06.12.2023 filed by State of UP is also in affirmation stating that out of 90 drains, 8 are partially tapped and 61 are un-tapped leaving only 21 as fully tapped.

159. In nutshell, the above discussion and the documents referred clearly show that there is massive violation of environmental laws at Agra where huge quantity of untreated sewage is not meeting the parameters prescribed under Water Act 1974 and the Rules framed thereunder and the same is being directly discharged in River Yamuna, causing huge pollution of the river water.

160. Learned Counsel appearing for Agra Nagar Nigam states that steps are being taken for installation of new STPs but why such steps have not been taken with due earnest and expediency and what prevented the concerned authorities in not getting new STPs installed since 2014, could

not be answered by him.

(B) AT MATHURA AND VRINDAVAN:

161. With regard to Mathura and Vrindavan with which we are concerned in OA-II, the situation is somewhat similar. Report dated 09.12.2022 filed by UPPCB shows that at Mathura against 23 number of drains, 19 are tapped, 01 is partially tapped and 03 are un-tapped.

162. Similarly, at Vrindavan, against 13 drains, 11 are tapped and 02 are un-tapped.

163. The total flow of drains at Mathura is 68.55 MLD while at Vrindavan, it is 10.95 MLD.

164. 04 STPs at Mathura are functional while 02 are functional at Vrindavan. 01 STP at Mathura in respect of Fecal Coliform is not meeting the standard. STPs installed at Mathura and Vrindavan require upgradation. At Vrindavan, 4 MLD STP at Pagal Baba is working with oxidation pond/waste stabilization pond technology and this is not capable of meeting the industrial and chemical effluent mixed in the sewage. Same is the position in respect of Laxmi Nagar STP at Mathura which is also working on oxidation pond/waste stabilization pond technology and cannot treat industrial effluent though at Mathura dyeing and cotton industries are causing huge industrial pollution.

165. Report dated 09.12.2022 states that against total installed capacity of 79.3 MLD of 6 STPs, the functional/utilized capacity is only l75.3 MLD hence, admittedly, there is a gap of 4 MLD and this untreated sewage is being directly discharged in River Yamuna.

166. Analysis of samples of 6 STPs has also been given in the said report in the form of a chart which shows that the levels of BOD, SS, COD and Fecal Coliform are not meeting the standards/parameters as prescribed in Tribunal's judgment in ***Nitin Shankar Deshpande vs. Union of India & Others (supra).*** Therefore, as a matter of fact, the entire sewage is being discharged in river which does not meet the prescribed standards.

167. In the Supplementary Report dated 17.02.2023 submitted by UPPCB in OA-II, a copy of the order dated 14.02.2023 of UPPCB has been annexed which shows that from 15.02.2021 to January 2023, samples of all drains wherein bio-remediation treatment was being carried out, were collected monthly and tested. They were found not meeting the prescribed standards, therefore, environmental compensation at the rate of Rs. 5 lakhs per drain per month was imposed which comes to Rs. 415 lakhs. These 4 drains are Chaitanya Vihar, Vrindavan, Aurangabad upstream Mathura, Aurangabad downstream Mathura and Kala Patthar Mathura.

168. Another copy of the order dated 10.08.2023 has been placed on record by UPPCB along with its Report dated 10/11.08.2023 filed in OA-II (at page 37 in OA-II), which shows that earlier show cause notice dated 14.02.2023 was considered and final order was passed computing environmental compensation of Rs. 3.25 Crores at the rate of 5 lakhs per drain per month between the period of 01.11.2019 to 01.11.2020. The said order shows that the above drains were meeting directly River Yamuna.

169. The above Report also contains STPs Status Report of samples collected on 30.05.2023, 27.06.2023 and 25.07.2023 and there is complete non-compliance of the said parameters in the Status Reports which are reproduced hereinbelow:

(A) STATUS REPORT OF SAMPLES COLLECTED ON 30.05.2023:

STATUS OF S.T.P.s AT DISTT/-MATHURA

SN	Name & Address of STP	Capacity (MLD)	Date of Sample Collection	Colour	pH	BOD	COD	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Outlet, UASB, Near 100 Bed Hospital, Vridavan, Mathura	8.0	30.05.2023	Sl. Turbid	7.9	23.0	128.0	57.0	2400.0	830.0
2	STP 6.8 MLD (Oxidation pond) Outlet, Masani, Mathura	6.8	30.05.2023	Sl. Turbid	7.8	26.0	184.0	42.0	3200.0	920.0
3	S.T.P. (30 MLD) Outlet, SBR, Masani, Mathura	30.0	30.05.2023	C.Less	7.6	24.0	144.0	52.0	2700.0	910.0
4	04 MLD STP Outlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	30.05.2023	Turbid	7.7	25.0	192.0	71.0	4000.0	920.0
5	STP 14.5 MLD (Oxidation pond) Outlet, Trans Yamuna, Mathura	14.5	30.05.2023	Turbid	7.9	27.0	176.0	76.0	3400.0	930.0
6	S.T.P. (16 MLD) Outlet, UASB, Trans Yamuna, Mathura	16.0	30.05.2023	Sl. Turbid	8.1	26.0	176.0	64.0	2700.0	930.0

B. STATUS REPORT OF SAMPLES COLLECTED ON 27.06.2023:

STATUS OF S.T.P.s AT DISTT/-MATHURA

SN	Name & Address of STP	Capacity (MLD)	Date of Sample Collection	Colour	pH	BOD	COD	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Outlet, UASB, Near 100 Bed Hospital, Vridavan, Mathura	8.0	27.06.2023	Slightly Turbid	7.7	23.0	144.0	44.0	2600.0	910.0
2	STP 6.8 MLD (Oxidation pond) Outlet, Masani, Mathura	6.8	27.06.2023	Slightly Turbid	7.0	27.0	184.0	53.0	3300.0	930.0
3	S.T.P. (30 MLD) Outlet, SBR, Masani, Mathura	30.0	27.06.2023	C.Less	7.8	25.0	144.0	39.0	2600.0	920.0
4	04 MLD STP Outlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	27.06.2023	Turbid	7.8	26.0	216.0	51.0	3900.0	920.0
5	STP 14.5 MLD (Oxidation pond) Outlet, Trans Yamuna, Mathura	14.5	27.06.2023	Turbid	7.9	24.0	192.0	57.0	3200.0	920.0
6	S.T.P. (16 MLD) Outlet, UASB, Trans Yamuna, Mathura	16.0	27.06.2023	Slightly Turbid	7.8	25.0	176.0	58.0	2500.0	910.0

C. STATUS REPORT OF SAMPLES COLLECTED ON 25.07.2023:

STATUS OF S.T.P.s AT DISTT/-MATHURA

SN	Name & Address of STP	Capacity (MLD)	Date of Sample Collection	Colour	pH	BOD	COD	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Outlet, UASB, Near 100 Bed Hospital, Vridavan, Mathura	8.0	25.07.2023	Slightly Turbid	7.8	21.0	128.0	79.0	2200.0	820.0
2	STP 6.8 MLD (Oxidation pond) Outlet, Masani, Mathura	6.8	25.07.2023	Slightly Turbid	7.8	25.0	168.0	72.0	2700.0	930.0
3	S.T.P. (30 MLD) Outlet, SBR, Masani, Mathura	30.0	25.07.2023	C.Less	7.8	24.0	136.0	61.0	2500.0	910.0
4	04 MLD STP Outlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	25.07.2023	Turbid	8.0	23.0	176.0	83.0	3100.0	810.0
5	STP 14.5 MLD (Oxidation pond) Outlet, Trans Yamuna, Mathura	14.5	25.07.2023	Turbid	7.8	23.0	168.0	82.0	2400.0	820.0
6	S.T.P. (16 MLD) Outlet, UASB, Trans Yamuna, Mathura	16.0	25.07.2023	Slightly Turbid	8.0	24.0	184.0	81.0	2500.0	830.0

170. In the Action Taken Report dated 05.12.2023 submitted on behalf of Ministry of Environment, State of UP in OA-II, Status Report of inlet and outlet of 6 STPs has been given as annexure-1 which also shows non-compliance of the prescribed parameters in respect to the sewage treated water coming from STPs which is directly meeting River water of Yamuna. The said chart in which samples collected from inlet and outlet, has been given as under:

STATUS OF INLET OF STP

Date of Sample Collection – 03.10.2023 and 04.10.2023

S no	Name & Address of STP	Capacity	Date of sample	colour	pH	BOD	COD	T.S.	D.S.	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Inlet, UASB, Near 100 Bed Hospital, Vrindavan, Mathura	8.0	03.10.2023	Turbid	8.1	175.0	368.0	1768.0	1496.0	272.0	210000.0	31000.0
2	S.T.P. (30 & 6.8 MLD) Inlet, SBR, Masani, Mathura	30& 6.8	03.10.2023	Slightly Blackish	8.1	190.0	464.0	1777.0	1385.0	392.0	220000.0	33000.0
3	04 MLD STP Inlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	03.10.2023	Greyish	8.0	160.0	320.0	1794.0	1492.0	302.0	130000.0	27000.0
4	STP 14.5 MLD (Oxidation pond) Inlet, Trans Yamuna, Mathura	14.5	03.10.2023	Blackish	8.2	205.0	384.0	1866.0	1450.0	416.0	210000.0	38000.0
5	S.T.P. (16 MLD) Inlet, UASB, Trans	16.0	03.10.2023	Greyish	8.3	180.0	400.0	1822.0	1460.0	362.0	170000.0	27000.0

	Yamuna, Mathura											
6	S.T.P. (2.76 MLD) Inlet, (Oxidation Pond) Near, Udav Kund, Goverdhan Mathura	2.76	04.10.2023	Greyish	8.2	165.0	304.0	1768.0	1416.0	352.0	210000.0	32000.0

Date of Sample Collection – 17.10.2023

S no	Name & Address of STP	Capacity	Date of sample Collection	colour	pH	BOD	COD	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Inlet, UASB, Near 100 Bed Hospital, Vrindavan, Mathura	8.0	17.10.2023	Turbid	8.3	165.0	352.0	263.0	170000.0	27000.0
2	S.T.P. (30 & 6.8 MLD) Inlet, SBR, Masani, Mathura	30 & 6.8	17.10.2023	Slightly Blackish	8.2	160.0	368.0	324.0	130000.0	27000.0
3	04 MLD STP Inlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	17.10.2023	Greyish	8.4	155.0	296.0	292.0	120000.0	26000.0
4	STP 14.5 MLD (Oxidation pond) Inlet, Trans Yamuna, Mathura	14.5	17.10.2023	Greyish	8.3	195.0	384.0	373.0	110000.0	22000.0
5	S.T.P. (16 MLD) Inlet, UASB, Trans Yamuna, Mathura	16.0	17.10.2023	Turbid	8.4	190.0	368.0	312.0	94000.0	26000.0
6	S.T.P.	2.76	17.10.2023	Turbid	8.6	160.0	288.0	326.0	170000.0	27000.0

	(2.76 MLD) Inlet, (Oxidation Pond) Near, Udav Kund, Goverdhan Mathura									

Date of Sample Collection – 25.10.2023

S no	Name & Address of STP	Capacity	Date of sample Collection	colour	pH	BOD	COD	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Inlet, UASB, Near 100 Bed Hospital, Vrindavan, Mathura	8.0	25.10.2023	Turbid	8.1	155.0	320.0	252.0	140000.0	23000.0
2	S.T.P. (30 & 6.8 MLD) Inlet, SBR, Masani, Mathura	30 & 6.8	25.10.2023	Slightly Blackish	8.0	145.0	336.0	310.0	120000.0	26000.0
3	04 MLD STP Inlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	25.10.2023	Greyish	8.3	145.0	288.0	278.0	110000.0	22000.0
4	STP 14.5 MLD (Oxidation pond) Inlet, Trans Yamuna, Mathura	14.5	25.10.2023	Blackish	8.0	200.0	416.0	387.0	210000.0	38000.0
5	S.T.P. (16 MLD) Inlet, UASB, Trans Yamuna, Mathura	16.0	25.10.2023	Greyish	8.3	195.0	400.0	332.0	170000.0	27000.0
6	S.T.P. (2.76 MLD) Inlet,	2.76	25.10.2023	Greyish	8.4	175.0	336.0	342.0	220000.0	34000.0

	(Oxidation Pond) Near, Udav Kund, Goverdhan Mathura									

Status of Outlet of STP

Date of Sample Collection – 03.10.2023 and 04.10.2023

S no	Name & Address of STP	Capacity	Date of sample	colour	pH	BOD	COD	T.S.	D.S.	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Outlet, UASB, Near 100 Bed Hospital, Vridavan, Mathura	8.0	03.10.2023	Slightly Turbid	7.9	26.0	144.0	138.0	1310.0	72.0	2700.0	930.0
2	STP 6.8 MLD (Oxidation pond) Outlet, Masani, Mathura	6.8	03.10.2023	Slightly Turbid	7.8	26.0	184.0	1550.0	1460.0	90.0	2700.0	930.0
3	S.T.P. (30 MLD) Outlet, SBR, Masani, Mathura	30.0	03.10.2023	C.Less	7.7	26.0	152.0	1270.0	1208.0	62.0	2600.0	920.0
4	04 MLD STP Outlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	03.10.2023	Turbid	7.8	23.0	208.0	1462.0	1410.0	52.0	3200.0	920.0
5	STP 14.5 MLD (Oxidation pond) Outlet, Trans Yamuna, Mathura	14.5	03.10.2023	Turbid	7.8	24.0	184.0	1574.0	1502.0	72.0	2400.0	820.0
6	S.T.P.	16.0	03.10.2023	Slightly	7.9	23.0	160.0	1446.0	1390.0	56.0	2400.0	830.0

	(16 MLD) Outlet, UASB, Trans Yamuna, Mathura			Turbid								
7	STP (2.76 MLD) Outlet (Oxidation Pond) Near Udav Kund, Goverdhan, Mathura	2.76	04.10.2023	Slightly Turbid	7.9	26.0	192.0	1262.0	1180.0	82.0	49000.0	22000.0

Date of Sample Collection – 17.10.2023

S no	Name & Address of STP	Capacity	Date of sample Collection	colour	pH	BOD	COD	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Outlet, UASB, Near 100 Bed Hospital, Vridavan, Mathura	8.0	17.10.2023	Slightly Turbid	7.9	25.0	136.0	79.0	2600.0	910.0
2	STP 6.8 MLD (Oxidation pond) Outlet, Masani, Mathura	6.8	17.10.2023	Slightly Turbid	8.1	25.0	184.0	86.0	3100.0	910.0
3	S.T.P. (30 MLD) Outlet, SBR, Masani, Mathura	30.0	17.10.2023	C.Less	8.0	23.0	128.0	40.0	2100.0	820.0
4	04 MLD STP Outlet (Oxidation pond), Near Pagal Baba Mandir, Mathura	4.0	17.10.2023	Turbid	8.2	24.0	216.0	58.0	3200.0	920.0
5	STP 14.5 MLD	14.5	17.10.2023	Slightly Turbid	8.1	27.0	224.0	91.0	3300.0	930.0

	(Oxidation pond) Outlet, Trans Yamuna, Mathura									
6	S.T.P. (16 MLD) Outlet, UASB, Trans Yamuna, Mathura	16.0	17.10.2023	Slightly Turbid	7.6	25.0	208.0	82.0	2700.0	930.0
7	STP (2.76 MLD) Outlet (Oxidation Pond) Near Udav Kund, Goverdhan, Mathura	2.76	17.10.2023	Slightly Turbid	7.7	24.0	184.0	91.0	43000.0	17000.0

Date of Sample Collection – 25.10.2023

S no	Name & Address of STP	Capacity	Date of sample Collection	colour	pH	BOD	COD	S.S.	Total Coliform	Faecal Coliform
1	S.T.P. (08 MLD) Outlet, UASB, Near 100 Bed Hospital, Vridavan, Mathura	8.0	25.10.2023	Slightly Turbid	7.8	24.0	128.0	72.0	2500.0	910.0
2	STP 6.8 MLD (Oxidation pond) Outlet, Masani, Mathura	6.8	25.10.2023	Slightly Turbid	8.2	24.0	168.0	72.0	2700.0	930.0
3	S.T.P. (30 MLD) Outlet, SBR, Masani, Mathura	30.0	25.10.2023	C.Less	7.8	26.0	144.0	44.0	2700.0	830.0
4	04 MLD STP Outlet	4.0	25.10.2023	Turbid	8.1	23.0	200.0	54.0	3100.0	810.0

	(Oxidation pond), Near Pagal Baba Mandir, Mathura									
5	STP 14.5 MLD (Oxidation pond) Outlet, Trans Yamuna, Mathura	14.5	25.10.2023	Turbid	7.9	25.0	184.0	76.0	2600.0	910.0
6	S.T.P. (16 MLD) Outlet, UASB, Trans Yamuna, Mathura	16.0	25.10.2023	Slightly Turbid	7.7	24.0	192.0	68.0	2400.0	830.0
7	STP (2.76 MLD) Outlet (Oxidation Pond) Near Udav Kund, Goverdhan, Mathura	2.76	25.10.2023	Turbid	7.9	27.0	208.0	88.0	58000.0	23000.0

171. The above discussion shows that there is gross violation of environmental laws on the part of concerned authorities, untreated polluted sewage to the extent of huge quantity is being discharged in River Yamuna, both, at Agra and Mathura-Vrindavan. We may also add at this stage that the allegation of applicant's about death of fishes due to high pollution of river water of River Yamuna on several occasions, menace of insects and their green excreta disturbing ecology, discharge of leachate into river water due to non-management of solid waste and illegal dumping at the bank of river and violating SWM Rules 2016 are some of the facts which have not been disputed at all by the respondents which shows a flagrant violation of environmental laws on the part of respondents causing

huge pollution of River Yamuna.

172. Repeated opportunities have been given to the officers of both the places to take steps for preventing pollution of River Yamuna by discharging untreated sewage in water of River Yamuna in last several decades but all efforts have failed.

173. **We, therefore, answer questions I in both of the OAs i.e., OA-I and OA-II in affirmative** i.e., against the respondents and hold that untreated sewage is being discharged regularly in river water of Yamuna and there is a clear violation of Section 24 of Water Act 1974 on the part of concerned authorities.

Issues II in OA-I and OA-II:

174. Since these issues are also similar in both OAs and, therefore, being considered together.

175. The stand taken by Nagar Nigam Agra is that out of 9 STPs installed in Agra city, 7 are being maintained by UP Jal Nigam and 2 by Jal Kal Vibhag of Nagar Nigam Agra.

176. STPs at Dhandhupura (78MLD); Dhandhupura (24 MLD); Pilakhar (10 MLD); Boodhi Ka Nagla (2.25 MLD); Jaganpur (14 MLD); Devri Road (12 MLD) and Bichpuri (40 MLD) are being operated by UP Jal Nigam.

177. 02 STPs i.e., Sadarwan, Bichpuri (36 MLD) and KalindiVihar (4.5 MLD) are being operated by Jal Kal Vibhag of Nagar Nigam Agra.

178. CPCB report shows that 7 STPs maintained by UP Jal Nigam have consent under Water Act 1974 from UPPCB but 2 STPs at Sadarwan, Bichpuri and Kalindi Vihar are being operated without obtaining any valid

consent.

179. CPCB Report dated 05.12.2023 also says that out of 9 STPs, 8 are discharging their treated effluent/partially treated effluent into river Yamuna and STP at Bhim Nagri (Devri Road) of 12 MLD installed capacity is getting its treated water used in agriculture and other purposes.

180. Similarly, on behalf of Nagar Nigam Mathura and Vrindavan, stand taken is that 3 STPs out of 4, functional at Mathura being operated by private agency i.e., M/s. Triveni Engineering & Industries Ltd., NOIDA.

181. It is thus suggested that if there is any violation of environmental laws, the responsibility in respect of discharge of polluted sewage into river Yamuna has to be shared by the operating agencies and no responsibility cannot be lavelled upon Nagar Nigam Agra and Mathura- Vrindavan, respectively, as the case may be.

182. We do not find any substance in the above submission.

183. It is not disputed that Nagar Nigam Agra as well as Nagar Nigam Mathura-Vrindavan in the matter of their functioning are governed by the provisions of UP Municipal Corporation Adhiniyam, 1959 (hereinafter referred to as **'UPMCA 1959'**). Chapter 10 of UPMCA 1959 deals with Drains and Drainage vested in the concerned Corporation/Nagar Nigam and power to maintain construction etc. vest with Corporation/Nagar Nigam. It can alter, enlarge, deepen, lessen etc. any drain vested in Corporation or even discontinue or close.

184. Section 232 of UPMCA 1959 imposes obligation upon Nagar Nigam/Corporation with regard to the duty of Cleansing of drains.

Disposal of sewage is also responsibility of Nagar Nigam/Corporation by virtue of Section 250 and 251 of UPMCA 1959 and the said provision is reproduced as under:

> *"**250- Disposal of Sewage-** The Mukhya Nagar Adhikari may cause all or any [Corporation] drains to empty into any place, whether within or without the City, and dispose of the sewage at any place whether within or without the City, and in any manner which he shall deem suitable for such purpose:*
>
> *Provided that-*
>
> *(a) the Mukhya Nagar Adhikari shall not cause any [Corporation] drain to empty into any place into which a [Corporation] drain has not heretofore emptied, or dispose of sewage of any place or in any manner at or in which sewage has not heretofore been disposed of, without the sanction of the [Corporation] ;*
>
> *(b) no [Corporation] drain shall be made to empty into any place, and no sewage shall be disposed of at any place or in any manner which the State Government shall think fit to disallow.*
>
> ***251- Provision of means for disposal of sewage-***
>
> *The Mukhya Nagar Adhikari may, for the purpose of receiving, treating, storing, disinfecting, distributing or otherwise disposing of sewage, construct any work within or without the City or purchase or take on lease any land, building, engine material or apparatus either within or without the City or enter into any arrangement with any person for any period not exceeding twenty years for removal or disposal of sewage within or without the City."*

185. Besides even the Constitution of India has made provisions in respect to municipalities. Part 9A deals with "the Municipalities" and it was inserted in the Constitution by 74th constitutional amendment w.e.f. 01.06.1993. The definition of "Municipality" under Article 243P reads as under:

> *"**243P. Definitions***
>
> *In this Part, unless the context otherwise requires,--*

(e) ***'Municipality'*** *means an institution of self-government constituted under 243Q;"*

186. 243Q extends the term "Municipality" to "Nagar Panchayat", in respect of area in a rural or urban area, Municipal Council for a smaller urban area and Municipal Corporation for larger urban area. Article 243Q reads as under:

> *"**243Q. Constitution of Municipalities.** –(1) There shall be constituted in every State, –*
>
> *(a) a Nagar Panchayat (by whatever name called) for a transitional area, that is to say, an area in transition from a rural area to an urban area.*
>
> *(b) a Municipal Council for a smaller urban area; and*
>
> *(c) a Municipal Corporation for a larger urban area, in accordance with the provisions of this Part:*
>
> *Provided that a Municipality under this clause may not be constituted in such urban area or part thereof as the Governor may, having regard to the size of the area and the municipal services being provided or proposed to be provided by an industrial establishment in that area and such other factors as he may deem fit, by public notification, specify to be an industrial township.*
>
> *(2) In this article, "a transitional area", "a smaller urban area" or "a larger urban area" means such area as the Governor may, having regard to the population of the area, the density of the population therein, the revenue generated for local administration, the percentage of employment in non-agricultural activities, the economic importance or such other factors as he may deem fit, specify by public notification for the purposes of this Part."*

187. Article 243W deals with powers, authorities and responsibilities of municipalities and reads as under:

> *"**243W. Powers, authority and responsibilities of Municipalities, etc.** –Subject to the provisions of this Constitution, the Legislature of a State may, by law, endow–*
>
> *(a) the Municipalities with such powers and authority as*

may be necessary to enable them to function as institutions of self-government and such law may contain provisions for the devolution of powers and responsibilities upon Municipalities, subject to such conditions as may be specified therein, with respect to—

(i) the preparation of plans for economic development and social justice;

(ii) ***the performance of functions and the implementation of schemes as may be entrusted to them including those in relation to the matters listed in the Twelfth Schedule****;*

(b) the Committees with such powers and authority as may be necessary to enable them to carry out the responsibilities conferred upon them including those in relation to the matters listed in the Twelfth Schedule."

188. In 12th Schedule, which is referable to Article 243W of the Constitution, item 6 deals with public health, sanitation conservancy and solid waste management, therefore, the duties relating to sanitation is constitutionally as well as under the Statute is that of Nagar Nigam. If Nagar Nigam employs any agency for operational purposes or to discharge the duties and responsibilities which primarily have to be performed by Nagar Nigam, such agency may have a relationship of principle and agent qua Nagar Nigam but Municipality (in these cases 'Nagar Nigams/Corporations) cannot absolve of their own responsibility in failing to discharge the statutory functions.

189. So far as the agencies which are actually operating STPs in a manner whereby treated water fails to confirm the prescribed parameters/standards, in our view, even these agencies cannot absolve themselves from meeting the liability of payment of environmental compensation by application of the principle of 'Polluter Pays'. The

agencies which are actually discharging treated water directly in river without caring to see that such treated water is not conforming the prescribed parameters and, therefore, mandate of Section 24 of Water Act 1974 is violated, are also responsible for violation of environmental laws and liable to pay environmental compensation. The principle of 'Polluter Pays' is applicable to a violator of environmental laws. Section 20 of NGT Act 2010 provides that this Tribunal shall follow the 'principle of sustainable development', 'precautionary principle' and the 'principle of Polluter Pays' in adjudication of environmental disputes.

190. The discussion made above shows that the Nagar Nigams which are under the statutory obligation to maintain drains are liable to pay environmental compensation on the principle of 'Polluter Pays' and if the STPs installed within the jurisdiction of Nagar Nigam have been allowed to be operated by any other agency, in case of functioning of STPs in violation of environmental laws, such agencies as well as Nagar Nigams i.e., Principal and Agent, both shall be responsible and liable to pay environmental compensation.

191. For execution purpose, the Statutory Regulator shall be entitled to recover environmental compensation from the Principal, and it will be open to the principal to take steps for recovery of the amount of environmental compensation paid from the agents following such procedure of law as is available to it.

192. At this stage, it will also be necessary to mention about a Statutory order issued by MoEF&CC by exercising its powers under sub-section (1), read with clauses (i), (ii), (v), (vi), (vii), (viii), (ix), (x), (xii) and (xiii) of sub-section (2) and (3) of Section 3 and Sections 4, 5, 9, 10, 11, 19, 20 and 23

of EP Act 1986 and in supersession of Notifications of the Govt. of India in the erstwhile Ministry of Environment and Forest numbers S.O.1111(E) dated 30.09.2009, S.O.2493(E) dated 30.09.2009, S.O.2494(E) dated 30.09.2009, S.O.2495(E) dated 30.09.2009, S.O.287(E) dated 08.02.2010 and Ministry of Water resources, River Development and Ganga Rejuvenation No. S.O.2539(E) dated 29.09.2014 except as respects things done or omitted to be done before such supersession i.e., River Ganga (Rejuvenation, Protection and Management) Authority's Order 2016 published in the Gazette of India dated 07.10.2016 (hereinafter referred to as **'River Ganga Order 2016'**). The above Order is made applicable to the States comprising River Ganga basin namely Himachal Pradesh, Uttarakhand, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Haryana, Rajasthan, West Bengal and the National Capital Territory of Delhi and such other States having major Tributaries of River Ganga as the National Council for Rejuvenation, Protection and Management of River Ganga may decide for the purpose of effective abatement of pollution and rejuvenation, protection and management of River Ganga.

193. The term 'Basin', 'Flood Plain', 'River Ganga' and 'Tributaries of River Ganga' are defined in para 3(b), (l), (u) and (ze) which read as under:

> *"(b)* ***"Basin"*** *means the entire catchment of a water body or water course including the soil, water, vegetation and other natural resources in the area and includes land, water, vegetation and other natural resources on a catchment basis;*
>
> *(l)* ***"flood plain"*** *means such area of River Ganga or its tributaries which comes under water on either side of it due to floods corresponding to its greatest flow or with a flood of frequency once in hundred years;*

(u) ***"River Ganga"*** *means the entire length of six head-streams in the State of Uttarakhand namely, Rivers Alakananda, Dhauli Ganga, Nandakini, Pinder, Mandakini and Bhagirathi starting from their originating glaciers up to their respective confluences at Vishnu Prayag, Nand Prayag, Karn Prayag, Rudra Prayag, and Dev Prayag as also the main stem of the river thereafter up to Ganga Sagar including Prayag Raj and includes all its tributaries;*

(ze) ***"tributaries of River Ganga"*** *means those rivers or streams which flow into River Ganga and includes Yamuna River, Son River, Mahananda River, Kosi River, Gandak River, Ghaghara River and Mahakali River and their tributaries or such other rivers which National Council for Rejuvenation Protection and Management of River Ganga may, by notification, specify for the purposes of this Order."*

194. Para 53 of River Ganga Order 2016 talks of constitution of District Ganga Protection Committees comprising of following:

(a) District Collector in the specified District; - Chairperson, ex-officio;

(b) Not more than two nominated representatives from Municipalities and Gram Panchayats of the specified District nominated by the State Government- Members;

(c) One representative each of the Public Works, Irrigation, Public Health Engineering, and Rural Drinking Water Departments, and State Pollution Control Board working in the specified District abutting River Ganga to be nominated by the District Collector- Member, ex-officio;

(d) Two environmentalists associated with River Ganga protection activities and one representative of local industry association in the specified District to be nominated by District Collector- Members;

(e) One Divisional Forest Officer of the specified District- Member, ex-officio;

(f) One District official to be nominated by District Collector – Member.

195. Para 55 of River Ganga Order 2016 deals with functions and powers of District Ganga Committees, and reads as under:

> *"**55. Functions and powers of District Ganga Committees.**- (1) Every District Ganga Committee shall discharge functions and exercise powers for rejuvenation, protection, restoration and rehabilitation of River Ganga and its tributaries in each specified District as laid out in paragraph 6 and 7 as per the principles specified in paragraph 4.*
>
> *(2) In particular, and without prejudice to the generality of the provisions of sub-paragraph (1) for rejuvenation and protection and restoration or rehabilitation of degraded areas abutting River Ganga and its tributaries and subject to other provisions of this Order and rules made thereunder, every District Ganga Committee shall have the following powers and functions in relation to River Ganga and its tributaries abutting in the area in specified District, namely:-*
>
> *(a) identifying activities which may be threats in the area of specified District abutting the River Ganga for protection of River Ganga and its tributaries or its River bed and making a plan for remedial action and take remedial action in respect thereof;*
>
> *(b) taking remedial action at its own end for protection of River Ganga and its tributaries or its River bed abutting in the specified District (excluding enforcement of the provisions of this Order)*
>
> *(c) in the event of its inability to take remedial action, reporting (electronically as well as by sending written communication in hard copy) to the National Mission for Clean Ganga and concerned State Government, the State Ganga Committee, as the case may be, for issue of direction for protection of River Ganga and to formulate appropriate management or remedial actions.*
>
> *(d) taking suitable administrative and other measures, to give effect to the provisions of this Order so as to prevent the environmental pollution in the River Ganga and its tributaries, not being inconsistent with the provisions of this Order, or any law for the time*

being in force.

(3) In case, the District Ganga Committee is of the opinion that any contravention has been made of any other law for the time being in force or in respect of provisions of this Order, it shall take appropriate action in accordance with the law for the time being in force.

(4) The District Ganga Committee shall take all such emergency measures as specified in paragraph 7."

196. The above provisions show that under River Ganga Order 2016 which is law made under EP Act 1986, District Ganga Protection Committee (District Ganga Committee) is responsible for rejuvenation, protection, restoration or rehabilitation of River Ganga and its tributaries and if there is any contravention of any other law for the time being enforced or in respect of provisions of River Ganga Order 2016, to take appropriate action in accordance with law. Para 62 of River Ganga Order 2016 authorizes all the authorities under the said Order to be the Competent Authority to make complaint before a Court under Section 19 of EP Act 1986 for taking cognizance of any offence under the said Section. Para 63 further says that the provisions of Ganga Order 2016 are without prejudice to the discharge of functions of any local authority or other authority or Board or Corporation or any person for taking measures for the purposes of effective abatement of pollution and rejuvenation of River Ganga and its protection and management and any other law for the time being enforced.

197. River Ganga Order 2016 also provides principles to be followed for rejuvenation, protection and management of River Ganga vide para 4 thereof which reads as under:

"4. Principles to be followed for rejuvenation, protection and

management of River Ganga. *– (1) The following principles shall be followed in taking measures for the rejuvenation, protection and management of River Ganga, namely:-*

(i) the River Ganga shall be managed as a single system;

(ii) the restoration and maintenance of the chemical, physical, and biological quality of the waters of River Ganga shall be achieved in a time bound manner;

(iii) the River Ganga shall be managed in an ecologically sustainable manner;

(iv) the continuity of flow in the River Ganga shall be maintained without altering the natural seasonal variations;

(v) the longitudinal, lateral and vertical dimensions (connectivities) of River Ganga shall be incorporated into river management processes and practices;

(vi) the integral relationship between the surface flow and sub-surface water (ground water) shall be restored and maintained;

(vii) the lost natural vegetation in catchment area shall be regenerated and maintained;

(viii) the aquatic and riparian biodiversity in River Ganga Basin shall be regenerated and conserved;

(ix) the bank of River Ganga and its flood plain shall be construction free Zone to reduce pollution sources, pressures and to maintain its natural ground water recharge functions;

(x) the public participation in rejuvenation, protection and management, revision and enforcement of any regulation, standard, effluent limitation plan, or programme for rejuvenation, protection and management shall be encouraged and made an integral part of processes and practices of River Ganga rejuvenation, protection and management.

(2) National Mission for Clean Ganga may, having regard to the needs of the people of the country, advances in technology and socio economic conditions of the people and to preserve the rich heritage of national composite culture, specify additional principles in addition to the principles specified under sub-paragraph (1).”

198. Para 5 imposes an obligation upon every State Government to ensure uninterrupted flow of water to be maintained at all times in river Ganga as required under para 4(iv). We may reproduce para 5 of River Ganga Order 2016 as under:

> *"**5.Ecological flow of water in River Ganga to be maintained. –** (1) Every State Government, shall endeavor to ensure that uninterrupted flows of water are maintained at all times in River Ganga as required under clause (iv) of paragraph (4).*
>
> *(2) Every State Government shall also endeavor to maintain adequate flow of water in River Ganga in different seasons to enable River Ganga to sustain its ecological integrity and to achieve the goal, all concerned authorities shall take suitable actions in a time bound manner.*
>
> *(3) For the purposes of this paragraph, the average flow of water shall be determined by such Hydrology Observation Stations at such points of the River Ganga, as may be specified by the National Mission for Clean Ganga:*
>
> *Provided that the average flow of water in River Ganga may, having regard to ecology, be determined by the National Mission for Clean Ganga for different points of River Ganga."*

199. Para 6 restrains certain activities including pollution in River Ganga and its tributaries and reads as under:

> ***"6. Prevention, control and abatement of environmental pollution in River Ganga and its tributaries.**- (1) No person shall discharge, directly or indirectly, any untreated or treated sewage or sewage sludge into the River Ganga or its tributaries or its banks:*
>
> *Provided that where a local authority does not have, on the date of commencement of this Order, sewerage scheme or infrastructure for collection, storage, transportation and disposal of sewage or sewage sludge or such infrastructure is not functional on the said date in an area abutting the River Ganga or its tributaries, every such local authority shall, within a period, specified by National Mission for Clean Ganga from the date of commencement of this Order, develop such infrastructure or make such infrastructure functional, as the case may be, for collection, storage, transportation and disposal of sewage in the territorial area of the local authority.*

(2) No person shall discharge, directly or indirectly, any untreated or treated trade effluent and industrial waste, biomedical waste, or other hazardous substance into the River Ganga or its tributaries or on their banks:

Provided further that where an industry or industrial area management does not have, on the date of commencement of this Order, industrial effluent treatment scheme or infrastructure for collection, storage, transportation and disposal of trade effluents industrial waste, bio-medical waste, or other hazardous substance, etc. or such infrastructure is not functional on the said date in an area abutting the River Ganga or its tributaries, every such industry or industrial area management shall, within a period so specified by the National Mission for Clean Ganga from the date of commencement of this Order, develop such infrastructure or make such infrastructure functional, as the case may be, for collection, storage, transportation and disposal of trade effluent and industrial waste, bio-medical waste, or other hazardous substance in the jurisdiction of the industry or industrial area management.

(3) No person shall construct any structure, whether permanent or temporary for residential or commercial or industrial or any other purposes in the River Ganga, Bank of River Ganga or its tributaries or active flood plain area of River Ganga or its tributaries:

Provided that in exceptional circumstances like natural calamities or religious events at traditional locations, temporary structures can be raised after prior permission of the National Mission for Clean Ganga acting through the State Ganga Committee and the District Ganga Committee:

Provided further that in case any such construction has been completed, before the commencement of this Order, in the River Bank of River Ganga or its tributaries or active flood plain area of River Ganga or its tributaries, the National Mission for Clean Ganga shall review such constructions so as to examine as to whether such constructions are causing interruption in the continuous flow of water or pollution in River Ganga or its tributaries, and if that be so, it shall cause for removing them.

(4) No person shall do any act or carry on any project or process or activity which, notwithstanding whether such act has been mentioned in this Order or not, has the effect of causing pollution in the River Ganga.

(5) It shall be the duty of the National Mission for Clean Ganga, every

Specified State Ganga Committee or specified District Ganga Protection Committee, local authority and all other authorities and persons to disseminate widely and bring to public notice, using various means, information captured in reports and the aforesaid measures in the local language in every village, town, city and other areas abutting River Ganga and its tributaries."

200. Therefore, it is also evident from River Ganga Order 2016 that for maintaining River Yamuna which is a major tributary of River Ganga, pollution free, every possible steps are to be taken by the authorities constituted under River Ganga Order 2016 which include District River Ganga Committee whereof District Collector is the Chairman and if there is any laxity on the part of such authorities, an appropriate action needs to be taken against such authorities also by the Competent Authority.

201. **We, therefore, answer questions II in both the OAs i.e., OA-I and OA-II** holding that Nagar Nigam Agra and Nagar Nigam, Mathura-Vrindavan as well as their agents (the agencies which are actually operating STPs of Nagar Nigam) are responsible for violation of the provisions including Section 24 of Water Act 1974 by discharging polluting material through sewage into river water of Yamuna and thereby polluting it. Nagar Nigam Agra has also violated the provisions of Section 25 of Water Act 1974 by running/operating 2 STPs without any consent.

Issues III in OA-I and OA-II:

202. In view of our findings recorded in respect of issues I and II, above, **Issues III in both the OAs have to be returned in affirmative** holding that there is flagrant violation of the provisions of Water Act 1974 on the part of the concerned authorities and they are liable for consequential, preventive, punitive and remedial action in accordance with law.

Issues IV in both OAs i.e., I and II:

203. The facts and discussion above show that River Yamuna has gone polluted not by an act of God but it is man-made. More so, due to negligence, lack of sincerity, concern and reverence to river Yamuna on the part of the authorities who are continuously discharging polluted material through sewage directly in water of River Yamuna.

204. We may take judicial notice of the fact that River Yamuna was not actually polluted about a century back. In the last few decades, deterioration in municipal management on the part of the concerned local bodies, failure in discharge of their functions and apathy towards the cleanliness of rivers, in particular River Yamuna, in the present cases, and unregulated discharge of industrial effluent, it has resulted in huge pollution of River Yamuna.

205. River Yamuna is highly revered to majority people of this country. It also provides livelihood to a very large number of people irrespective of their religion, caste, creed etc. Important historical cities were established on its bank. Civilization has got nurtured by its water.

206. Purity of river water of Yamuna in past several thousands of years could be maintained due to foresight of our forefathers who placed environment and its protection at a very high pedestal.

PROTECTION OF ENVIRONMENT IN ANCIENT TIME:

207. Hindu Vedic scriptures deeply reveres sanctity of all life, whether on Earth or beyond. Supreme God holds absolute sovereignty over all creatures, including humans. According to Hindu scriptures, every form of life possesses an inherent right to existence. Human dominion over

other creatures is forbidden; instead, humans are encouraged to seek peace and coexist harmoniously with nature. Hindu faith emphasizes veneration, respect, and obedience to maintain delicate unity between God and natural world. This profound connection is exemplified through a series of divine incarnations, as articulated by Dr. Karan Singh in the Assisi (Italy) Declaration in 1986 organised by WWF International:

> *"The evolution of life on this planet is symbolized by a series of divine incarnations beginning with fish, moving through amphibious forms and mammals, and then on into human incarnations This view clearly holds that man did not spring fully formed to dominate the lesser life forms, but rather evolved out of these forms itself, and is therefore integrally linked to the whole of creation"*

208. In Hinduism, all lives whether human or non-human, including trees are regarded as having equal value and share the same right to existence. This principle underscores the deep-rooted sanctity of life within the religion.

209. The Vedic texts, particularly "Rigveda", convey the earliest and simplest form of nature worship. Environmental science traces its origins back to ancient Sanskrit literature, and the Vedic perspective on the environment is eloquently expressed in a verse from "Atharvaveda". Here, our surroundings are symbolically referred to as 'Chandamsi,' representing three essential elements: water, air, and plants or herbs. These elements have existed in the world since its inception and are considered universal coverings available everywhere.

210. Hindu teachings provide a profound perspective on environmental conservation grounded in spiritual tradition. In Hinduism, concept of Ahimsa (non-violence) has a profound philosophical foundation. It is rooted in the belief in karma and rebirth. According to Hinduism,

individuals may reincarnate as animals or birds as part of the cycle of birth and rebirth. As a result, Hindus not only respect but also venerate other animals. The practice of Ahimsa extends to treating both humans and animals with reverence. This principle is deeply cherished by Hindus.

211. Furthermore, Hinduism holds that the soul can reincarnate into various life forms. This belief leads to a strong opposition to the institutionalized killing of animals, birds, and fish for human consumption. In Hindu thought, Nature is revered as the “Body of God”. Different animals and birds are associated with specific deities and are either worshipped or protected. Hinduism provides a moral compass for environmental preservation and conservation, considering any abuse or exploitation of nature as unjust and sacrilegious.

212. Ancient India’s rich heritage encompasses profound environmental wisdom found in the Vedic, pre-Vedic, and post-Vedic texts. Vedas, world’s most ancient scriptures, reveal a deep understanding of natural phenomena. Seers and scholars of that time possessed remarkable awareness regarding climate change, ecological balance, and environmental protection. These texts delve into the theory of universe evolution, climatology, hydrology, and water management. They caution against human activities that disrupt the delicate cycles of nature, emphasizing the need for righteous conduct to maintain harmony with the environment.

213. Vedic literature though has been given identification with spiritualty, culture and religion but in fact, it is the most reliable source of knowledge about each and every aspect of life and cosmos as well. Though modern Philosophers and Researchers have given different

timings to the Indian Vedic Literature going back to more than 4000 B.C. but the fact is that Indians belief recognize Vedas as manifestation of Supreme God, hence Vedas are unborn and impermissible. The term 'Veda' does not denote any single book. It denotes, in effect, the entire divine literature comprising four Vedas, Brahmanas, Aranyakas, Upanisads and six Vedangs. Vedic literature has its genesis to human abilities i.e., Shruti (hearing) and Smriti (memory). In fact, gemology of Vedic literature is also founded in above two components.

214. In the Vedas, we encounter vivid and poetic descriptions of life's beauty and natural world. Nowhere else have the glory of dawn, the majesty of sunrise, and serenity of nature, been expressed with such richness and purity. These symbolic depictions remain intimately connected to life and the natural order.

215. Among the four Vedas, Rigveda stands as the most authoritative. Each Vedic verse carries the legacy of one or more sages (Rishis) and is dedicated to specific deities (Devatas). The Rishis are revered as recipients of revealed knowledge, while Devatas receive praise through these verses.

216. The Vedic literature provides authentic principles for harmonizing with our environment and leading a spiritually fulfilling life. Specifically, Vedas delve into various environmental aspects and demonstrate a deep concern for ecology. Many of today's environmental challenges are indeed human-made. Therefore, our role as stewards of the environment is crucial in maintaining perfect harmony. By adhering to Vedic techniques, methods, and principles, alongside insights gained from scientific and technological research, we can work toward safeguarding humanity from environmental degradation.

217. Hindu mythology holds that Lord Mahesh, also known as Lord Shiva, is the Destroyer of the Srishti; Lord Vishnu is the Operator of Srishti; and Lord Brahma is Creator of Srishti (Universe). This Srishti refers to the universe as a whole.

218. In modern Sanskrit, the term '***Paryavarana'*** refers to environment, signifying that which encircles us and exists all around our surroundings. However, in Atharvaveda, equivalent words with similar meanings are employed, such as Vritavrita, Abhivarah, Avritah, and Parivrita. Vedic perspective on the environment is eloquently expressed in a verse from Atharvaveda, where three coverings of our surroundings are referred to as 'Chandamsi'—meaning 'coverings available everywhere.'

219. These three fundamental elements—water, air, and plants or herbs have existed in the world since its inception. They are varied, visible, and imbued with qualities. This understanding underscores the profound knowledge of basic elements of the environment possessed by Vedic seers.

220. According to ancient Hindu mythology, five Great Elements—*Akash* (Earth), *Vayu* (Air), *Agni* (Fire), *Jal* (Water), and *Prithvi* (Earth)—make up *Panchamahabhutas*, or physical creation. Atharva Veda discusses the universe's beginnings (Srishti) in its eighth chapter, tenth sukta, and first shlokas.

221. Nature maintains a delicate balance among these constituents and their interactions with living creatures. Any disturbance beyond certain limits disrupts this natural equilibrium, leading to various challenges for living beings. The relationship between humans and environment is intrinsic, as we cannot exist without it. Since the dawn of creation, our

quest has been to understand the environment for self-protection and benefit.

222. Consistent with the Vedic concept of *Paryavaran*/environment, broadly, we find definition of environment in Section 2(a) of EP Act, 1986, which reads as under:

> *"2(a) "**environment**" includes water, air and land and the interrelationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property;"*

223. In Vedic literature, Mother Earth was personified as Goddess 'Bhumi' or 'Prithavi.' During the ancient Vedic era, people of India held great respect for environment and worshipped various objects and manifestations of nature with utmost devotion and sincerity. The wise seers of Indian subcontinent recognized the need to attribute religious sanctity to the environment for maintaining ecological balance and fostering societal acceptance. They worshipped every facet of environment: land/soil, water, rivers, plants, animals, birds, mountains, sky, and more.

224. The 'Prithvisukta' in Atharvaveda celebrates Mother Earth with all her natural bounties, particularly her gifts of herbs and vegetation. Her blessings were sought for prosperity in all surroundings and the fulfilment of righteous aspirations.

225. Vedic Seers deeply attuned to nature, meticulously observed its intricate drama. They marvelled at sandstorms, cyclones, intense lightning, thunderclaps, monsoon rains, swift mountain streams, scorching sun, and fiery red flames. These natural phenomena revealed a power beyond human control. Vedic sages not only appreciated these forces but also adored and worshipped them with reverence, surprise, and

fear. Their instinctive understanding recognized that the actions, movements, creations, changes, and destructions in nature stemmed from forces transcending human influence. Consequently, they attributed divinity to the natural world.

226. In Bhagavad Gita, Lord Krishna says, **"भूमिः अपो नलो वायुः खं मनो बुद्धिरेव च अहंकारः इति यम् मे भिन्ना प्रकृतिः अष्टधा"** —meaning that the environment necessary for human survival comprises two fundamental aspects: external (earth, water, air, fire, and space) and internal (primarily involving the mind).

227. In Atharvaveda, there is profound reverence for the earth (Prithivisukta). Mother Earth bestows love upon all living creatures inhabiting her. Vedic seers solemnly declare the enduring filial bond between humanity and Mother Earth: 'Mata Bhumih Putrohom Prirhivyah'. Earth is our mother, and we are her children. 'Mother Earth' is celebrated for her natural abundance, including precious herbs and vegetation. Her blessings are sought for prosperity in all surroundings and fulfilment of righteous aspirations. It is our duty to safeguard Earth from any environmental harm and ensure that she remains unoppressed.

228. When we go through the concept of earth (*Prithvi*), water (*Apah*), air (*Vayu*), ether (*Akasha*) and fire (*Agni*), we realize that ancient Vedic intellectuals knew various aspects of environment, cosmic order and importance of co-ordination between all natural powers for universal peace and harmony. When they pray for peace at all levels in Shanti mantra, they side by side express their believe about the importance of coordination and inter-relationship among all natural powers and regions. The prayer says that not only regions, waters, plants trees, natural

energies but all creatures should live in harmony and peace. Peace should remain everywhere. Mantra takes about the concord with the universe-

> "*peace of sky, peace of mid-region, peace of earth, peace of waters, peace of plants, peace of trees, peace of all-gods, peace of Brahman, peace of universe, peace of peace; May that peace come to me*!"

229. This mantra resounded United Nation when Union Minister, MoEF&CC started UNSC debate on climate change by reciting this verse which reads as under:

"ॐ द्यौः शान्तिरन्तरिक्षं शान्तिः

पृथिवी शान्तिरापः शान्तिरोषधयः शान्तिः ।

वनस्पतयः शान्तिर्विश्वेदेवाः शान्तिर्ब्रह्म शान्तिः

सर्वं शान्तिः शान्तिरेव शान्तिः सा मा शान्तिरेधि ॥

ॐ शान्तिः शान्तिः शान्तिः ॥"

Hindi Translation -

द्युलोक में शांति हो, अंतरिक्ष में शांति हो, पृथ्वी पर शांति हों, जल में शांति हो, औषध में शांति हो, वनस्पतियों में शांति हो, विश्व में शांति हो, सभी देवतागणों में शांति हो, ब्रह्म में शांति हो, सब में शांति हो, चारों और शांति हो, शांति हो, शांति हो, शांति हो।

English Translation -

May peace radiate there in the whole sky as well as in the vast Ethereal space everywhere. May peace reign all over this earth, in Water and all herbs, trees, and creepers. May peace flow over the Whole universe. May peace be in the Supreme Being Brahman. And may there always exist in all peace and peace alone. Aum peace, peace, and peace to us and all beings!

230. **PRITHVI (EARTH):** The Vedic people lived intimately connected to

nature. They held deep concern for the impact of nature on human life and recognized humanity's indebtedness to the natural world. In AV 12.1.12 it is said that "*माता भूमिः पुत्रोऽहं पृथिव्याः*" means "पृथ्वी हमारी माता है, मैं पृथ्वी का पुत्र हूं".

231. Indeed, this represents the utmost reverence one can hold for **Mother Earth**. To a devout Hindu, the earth is not merely a natural entity; she is a nurturing mother who sustains all life. The human being residing on this earthly plane feels a sense of guilt even for the slightest touch upon their mother. Therefore, each morning, they offer prayers to Mother Earth, seeking forgiveness for their unintentional transgressions.

समुद्रवासने देवी पर्वतस्तानमण्डले/ विष्णुपत्नी नमस्तुभ्यां
पादस्पर्शं क्षमस्वमे//

232. The depiction of the earth's form in the Rigveda is profoundly intriguing. It is often discussed in conjunction with heaven, forming a dual concept known as Rodasi and Dyavaprithivi. While there is a single hymn dedicated to Prithivi (the earth), six hymns are devoted to Dyavaprithivi. In Vedic tradition, Prithivi is revered as the mother, and Dyau (heaven) as the father, together constituting a harmonious pair. A beautiful verse from the Rigveda poetically expresses this relationship: "Heaven is my father, the atmosphere my navel, and the vast earth my mother". The union of heaven and earth is symbolized by the terms *Matara* (mother), Pitara (father), and *Janitara* (parents). They sustain all living beings and are considered the progenitors of the gods. Described as a goddess, the earth holds a significant place in Rig-vedic literature.

233. In the Atharvaveda, there exists a significant hymn comprising 63 verses that eloquently describes the earth. Known as the Bhumisukta or Prithivisukta, this hymn reflects the environmental consciousness of the

Vedic seers. Through their profound understanding, they attribute various names to the earth. She is called Vasudha, symbolizing her role as the repository of all wealth. Additionally, she is referred to as Hiranyavaksha, signifying her golden bosom, and Jagato Niveshani, denoting her status as the abode of the entire world. Importantly, the earth's significance extends beyond humanity, encompassing all creatures.

234. A soul-stirring prayer resonates in one of the hymns, advocating for preservation and conservation of hills, snow-clad peaks, and the brown, black, and red earth—unharmed, unwounded, unbroken, and well-defended by India.

235. To protect environment, Rigveda invokes divine intervention to bliss:

> *"मधु वाता ऋतायते मधुं क्षरन्ति सिन्धवः । माध्वीर्नः सन्त्वोषधीः॥6॥*
> *मधु नक्तमुतोषसो मधुमत्पार्थिवं रजः । मधु द्यौरस्तु नः पिता ॥7॥*
> *मधुमान्नो वनस्पतिर्मधुमान् अस्तु सूर्यः । माध्वीर्गावो भवन्तु नः ॥8॥"*

236. This Vedic hymn beautifully expresses gratitude for sweetness of life, importance of nourishment, and interconnectedness of nature.

237. **Vedic Sages** held a profound reverence for nature, and their hymns, found in Rigveda, reflect this connection. While these hymns cover various themes, a significant portion is dedicated to **natural forces**. Scholars in both India and West have interpreted Vedic gods in diverse ways, but a common thread emerges: the hymns addressed to deities (known as ***Devata***) draw inspiration from the awe-inspiring phenomena of nature and its aspects. The term "*Devata"* signifies divinity—bright, powerful, and benevolent. Within these hymns, we encounter prayers dedicated to specific natural elements: air, water, earth, sun, rain, and dawn. The

radiant brilliance of the sun, the fervent blaze of sacrificial fires, the sweeping rainstorms across the skies, the cyclic return of dawn, the unwavering currents of the winds, and the tempestuous tropical storms—all these fundamental aspects are **glorified and personified as divine entities**. Vedic seers' deep interaction with nature led to profound appreciation and prayer, rooted in keen observation. The attributes assigned to these deities align with their natural forms and activities: Soma embodies greenness, fire radiates brightness, air moves swiftly, and the sun dispels darkness. These verses attest to the Vedic seers' mastery of natural science.

238. In Vedas, the concept of 'Rita' represents order of the Universe. Rita serves to transform chaos into cosmos, providing integration and harmony to the natural world. Beyond its functional role, Rita carries an aesthetic essence, signifying splendor and beauty. Consequently, the Vedic gods, who uphold Rita, embody qualities of lawfulness, beauty, and goodness. Their inherent beauty holds significant meaning.

239. Scholars have defined Rita in various contexts within the Vedas. In a broader sense, it represents a cosmic order that governs all motion and existence, maintaining harmony in the world. Even the gods themselves adhere to Rita; they are born from it and remain bound by its influence. Rita acts as a controlling and sustaining force, ensuring sun's continuity in the sky. Universally, it functions as the Universal Law, governing all aspects of the cosmos. The entire manifested universe operates within the framework of Rita.

240. "**Varuna**", as depicted in the Vedas, assumes role of the Lord of Rita, the universal natural order. He holds sovereignty, akin to a great king and

lawgiver, governing not only the cosmos but also the gods themselves. While Varuna is often associated with water and the ocean, his primary function lies in maintaining order and balance in the world. From his celestial throne, he observes all that unfolds on Earth and penetrates into the hearts of humanity.

241. According to Varuna, heaven and earth remain distinct. He orchestrates sun's radiant journey across the sky, creating a wide path for its brilliance. The moon, guided by his ordinances, illuminates the night, while stars adorn the celestial canvas, vanishing with the day's light.

242. Varuna's influence extends to the flow of rivers, and as a moral governor, he transcends other deities. In essence, the concept of Varuna reflects the profound awareness of Vedic seers regarding the control and equilibrium of natural forces within the environment.

243. According to Vedic seers, the universe is meticulously structured based on scientific principles. It comprises three interconnected realms: Prithivi (the earth), Antariksha (the intermediate region between heaven and earth), and Dyau (the sky or heaven). These divisions are well-established in Vedic literature. Prithivi, often referred to as the 'observer space,' encompasses our familiar surroundings—the space in which we live, observe, and experience life. Dyau, on the other hand, can be described as 'light space' because it is the medium through which light propagates. Antariksha, positioned between observer space and light space, serves as the 'intermediate space'. Vedic sages discerned these subtle divisions, transcending the limitations of modern science. In the context of environmental study, universe's tripartite division remains a fundamental concept within the Vedas.

244. Vedas emphasize the utmost importance of environmental protection and purity. They advocate for safeguarding habitats, proper afforestation, and avoiding pollution. Man is forbidden from exploiting nature; instead, he is taught to live in harmony with the natural world and its animals.

245. A verse from Rigveda succinctly captures this wisdom: “Thousands and hundreds of years if you want to enjoy the fruits and happiness of life—then take up systematic tree planting”.

246. During that era, the term ‘pollution’ did not exist, but the learned sages in ancient scriptures referred to it as ‘poisoning the environment.’ They believed that the five elements—space, air, fire, water, and earth constituting environment were derived from *prakriti*, the primal energy. Our human bodies are composed of these elements and connected to them through our five senses: the nose to earth, the tongue to water, the eyes to fire, the skin to air, and the ears to space. This bond between our senses and the elements forms the foundation of our human relationship with the natural world.

247. A powerful verse from Rigveda (6:48:17) echoes the sentiment of protection of environment: “Do not harm the environment; do not harm the water and the flora; Earth is my mother, I am her son; **may the waters remain fresh, do not harm the waters**; do not cut trees, because they remove pollution”.

248. In Yajurveda, verse 5:43 states: “Do not disturb the sky and do not pollute the atmosphere”. Similar references can be found in Upanishads, other Puranas, as well as epic literature like the Ramayana, Mahabharata,

and Bhagavad Gita.

249. Kautilya's Arthashastra also contains significant knowledge about environmental conservation. The protection of trees was emphasized, and appointment of a Superintendent of Forest Produce was recommended. Violation of rules related to certain kinds of trees carried penalties. Additionally, specific forests were declared protected, known as 'Abhayaranya,' and severe punishments, including capital punishment, were prescribed for offenders in the Arthashastra.

250. In **Ishopanisad**, a profound statement resonates: "This universe is the creation of the supreme, meant for the benefit of all His creations. Individual species must, therefore, learn to enjoy its benefits by forming a part of the system in close harmony with other species. Let not any one species encroach upon the others' right".

251. In Ishopanishad, there is celebrated command which says, "Everything in the universe belongs to Supreme God, therefore, take only what you need, that is set aside for you. Do not take else, for you know to whom it belongs". It further says, "resources are given to mankind for their living. Knowledge of using the resources is absolutely necessary".

252. In Bhagavatam (Volume 2, Chapter 1, Verses 32-33), it is said that "the trees are the hairs of His body, the oceans His waist, the hills and mountains are His bones, the **rivers are the veins of the cosmic being** (*Brahman*), his movements are the passing of ages".

253. The ancient Vedic texts, handed down through generations in India, are remarkably clear, categorical, and profound. In Rigveda, it is stated that life's foundation rests upon five elements: earth, water, fire, space,

and air. Interestingly, Rigveda also alludes to a 'protective layer,' which we now recognize as the ozone layer a shield that filters harmful sun rays and safeguards us.

254. Yajurveda prescribes the performance of '*Yajna*' (or '*Yagya*') by offering butter and fire into the sacrificial fire. This ritual ensures that the mixture interacts with the atmosphere, purifying it from impurities. The Yajurveda also emphasizes keeping the sky clean and revering water bodies, recognizing their role in sustaining life.

255. Similarly, Samveda underscores the importance of maintaining natural season cycle, which can be disrupted by inappropriate human actions leading to climatic changes.

256. In Atharvaveda, the concept of 'give and take' is emphasized. It implies that we should take from the earth and atmosphere only as much as we give back. **Atharvaveda also highlights the purity of water**, the protection of wildlife, and the domestication of animals like cattle. In Atharvaveda (5.30.6), it beautifully states: 'Man's paradise is on earth; this living world is the beloved place of all; it has the blessings of nature and bounties; live in a lovely spirit.

257. In summary, Vedic wisdom invites us to contemplate the grandeur of the universe, our interconnectedness with nature, and the importance of environmental stewardship.

258. **JAL (WATER):** Water, with its cosmic significance, plays a vital role in our lives. It stands as the **essential principle of creation**. In the beginning, everything existed as formless water. Over time, water has been recognized not only as a life-giving liquid but also as one of the

fundamental elements within the microcosmic organism.

259. Indeed, water requires no proof of its indispensability to life—it **is life itself**. The very word **"*Jivana*"** (meaning 'life') is closely associated with water. The health of an individual greatly depends on the type of water they consume. If the water is impure, it can lead to various diseases.

260. Water is indispensable for all life forms. According to the Rigveda, water manifests in five distinct forms within the human environment:

- Rain water (*Divyah*)
- Natural spring (*Sravanti*)
- Wells and canals (*Khanitrimah*)
- Lakes (*Svayamjah*)
- Rivers (*Samudrarthah*)

261. In addition to the classifications found in the Taittiriya Aranyaka, Yajurveda, and Atharvaveda, water is further categorized into various types, including drinking water, medicinal water, and stable water. The Chandogya Upanishad expounds on the qualities of water, emphasizing its role as a source of joy and essential for maintaining a healthy life. Water serves as the immediate cause of all organic life forms, including vegetation, insects, birds, animals, and humans. Remarkably, even mountains, the earth, the atmosphere, and celestial bodies are interconnected with water. The cyclical nature of water is described: it flows from the ocean to the sky and returns to the earth as rainwater. Rain, symbolized by the deity Parjanya, is revered. The Rigveda recounts the legendary battle between Indra and Vritra, which holds multiple interpretations. One perspective views it as a struggle for control over

water. Indra, known as Apsu-jit (the conqueror of waters), contends with Vritra, who encircles the waters. Vritra, holding the rain and covering the waters, is defeated by Indra wielding his thunderbolt, the Vajra. This myth mirrors natural phenomena occurring in the aerial space. Through Indra's efforts, the seven rivers flow, emphasizing the importance of maintaining an uninterrupted water supply—a desire shared by humanity. The Vedic seers recognize water as nectar, the source of all plant life, and a bestower of good health. Water purifies and eradicates various ailments. The cultural tradition of riverbank pilgrimages likely stems from the concept of water purification. Ancient Indians, aware of water's vital role in life, diligently preserved its purity, avoiding pollution. The Manusmriti underscores the need to keep water clean, while the Padma Purana sternly warns that those who pollute ponds, wells, or lakes face dire consequences.

262. In the **Rigveda**, water is not merely a physical substance; it is also a **spiritual symbol**. The Rigveda identifies water as the **first abode** or **ayana** of **nara**, the Eternal Being. This recognition elevates water to the status of **pratishtha**, the underlying principle or the very foundation of the universe itself.

263. Furthermore, the **Satapatha** texts reinforce this perspective. They emphasize the importance of maintaining harmony with nature, including water. The texts caution against polluting rivers, ponds, and wells, and they warn against overexploitation of natural resources. In the Vedic worldview, every aspect of nature—be it water, air, birds, animals, plants, sky, earth, or mountains—is associated with divinity. These elements are to be worshiped, protected, and preserved.

264. In India, throughout its historical and cultural evolution, the environment has held a sacred and revered position. This reverence dates back to both the **pre-Vedic** and **Vedic eras**. The element of **"water"** has been particularly significant in this context.

265. Water is said to be *pratishtha*, the underlying principle, or the very foundation of this universe. In Sataptha, it is said:

> *"Water may pour from the heaven or run along the channels dug out by men; or flow clear and pure having the Ocean as their goal…In the midst of the Waters is moving the Lord, surveying men's truth and men's lies. How sweet are the Waters, crystal clear and cleansing…From whom… all the Deities drink exhilarating strength, into whom the Universal Lord has entered..."*

266. Early *Vedic* texts also identify "water" as a manifestation of the feminine principle, commonly as *Sakti*. *Rigveda* said:

> *"I call the Waters, Goddesses, wherein our cattle quench their thirst; Oblations to the streams be given…"*

267. It is said that the primordial cosmic man or Purusa was born of the Water. Later Vedic texts identify that, "*Water is female...*" (Satapatha). Philosophically, *vedas* bestows a sacred character on water, identified therein, a medium to attain spiritual enlightenment. V*edas* identify water as the very essence of spiritual sacrifice, or as stated in *Atharvaveda* "*the first door to attain the divine order*". The use of water in daily life as well as in ritualistic ceremony was referred to as spiritual sacrifice, a process of attaining eternity. *Rigveda* said:

> *"…Whatever sin is found in me, whatever wrong I may have done, if I have lied or falsely sworn, Waters remove it far from me…"*

268. Besides, philosophical and spiritual status given to environment

including water, in ancient vedic scriptures, even on the issue of hydrology, we find a lot of material in vedic literature showing that since ancient time science of water was well developed in ancient India. Certain concepts of modern hydrology, we find, scattered, in various verses of *Vedas, Puranas, Meghmala, Mayurchitraka, Vrhat Sanhita* and other ancient scriptures. Our forefathers in *Vedic* age, had developed the concept that water gets divided into minute particles due to the effect of sun rays and wind. In *Puranas*, at various places, it is alluded that water cannot be created or destroyed, and that, only its state is changed through various phases of hydrological cycle. Evaporation, condensation, cloud formation, precipitation and its measurements were well understood in ancient India as we find from the study of *Vedic* and *Puranic* scriptures. During the time of *Kautilya,* contrivances to measure rainfall were developed which had the same principle as that of modern hydrology, except that weight measures were adopted instead of modern linear measurement of rainfall.

269. In summary, the Vedic tradition in India reveres water as a sacred and essential component of existence, emphasizing the need for environmental conservation and balance. It teaches that humans should coexist harmoniously with nature, recognizing the interconnectedness of all living beings and the divine presence within the natural world.

270. The science of water in India is ancient but unfortunately forgotten in the last few centuries. Indian sub-continent was invaded and ruled by people from other areas having different concepts, convictions and religious culture. The ancient scientific knowledge went in dormancy. The invaders treated inhabitants in a very crude manner, did not hesitate in destroying treasure of knowledge given in this sub-continent by great

Saints and Rishis, and compelled common folk to believe that their cultural wealth was a myth. Huge collection of research and knowledge stored in educational institutes of repute were set on fire or damaged otherwise. Volumes of ancient knowledge treasure were also taken away by later invaders and rulers. The resultant subsequent unscientific, unmindful and irrational massive excavation, extraction and consumption, not only of surface water, but ground water, in the name of development of civilization, has created a situation where in some parts of country, even drinking water is not available or has become a serious scarcity.

271. Availability of water in all the areas is not uniform, whether it is surface water or ground water. Water covers about 71% of the earth surface. It comes to about 333 million cubic miles on the planet. In a U.S. Geological Survey's Water Science School, taking data source from Igor Shiklomanov's chapter "World freshwater resources" in Peter H. Gleick (editor), 1992, availability of earth water has been shown in three parts:

(i) For total global water available, 96.5% is in oceans, 0.9% is other saline water and only 2.5% is fresh water.

(ii) For 2.5% fresh water available, further division is that 68.7% thereof is in the form of glaciers and ice caps, 30.1% is ground water and only 1.2% is surface or other fresh water.

(iii) For 1.2% surface/other fresh water available, again it is in different forms, i.e. 69.0% as ground ice and permafrost, 20.9% lakes, 3.8% soil moisture, 2.6% swamps and marshes, 0.49% rivers, 0.26% living things and 3% in atmosphere.

272. In other words, as a rough estimate, out of total water supply of about 333 million cubic miles (1386 million km^3), more than 97% is saline. Only a small percentage, i.e., 2.5% fresh water is available. There against also, substantial part, i.e., 68% is locked up in ice and glaciers. A very small amount is available as surface water for human uses, i.e. 1.2%, which comes around 22300 cubic miles (93100 km^3) which is about 0.007% of total water available on earth. These figures should not surprise us. Despite a very small fragment of water, available on surface, is consumable by human being, yet rivers are source of most of the water, the people use.

273. The golden words of our forefathers have been missed out or ignored in the present and modern era under the pretext of development. It is no doubt true that development is also an integral part of advancement of society but protection on environment, simultaneously, is also of utmost importance. It is in this context, Supreme Court has recognized the principle of "Sustainable Development" as an integral part of environmental laws and norms.

274. In ***T.N. Godavarman Thirumulpad vs. Union of India & Ors., (2022) 9 SCC 306***, Supreme Court in its order dated 09.05.2022 in para 16 observed that adherence to the principle of "sustainable development" is a constitutional requirement. While applying the principle of sustainable development one must bear in mind that development which meets the needs of the present without compromising the ability of the future generations to meet their own needs. It was further held that it is the duty of the State under our Constitution to devise and implement a coherent and coordinated programme to meet its obligation of sustainable

development based on 'intergenerational equity'. While economic development should not be allowed to take place at the cost of ecology or by causing widespread environment destruction and violation; at the same time, the necessity to preserve ecology and environment should not hamper economic and other developments.

275. In ***Rajeev Suri vs. Delhi Development Authority & Ors., (2022) 11 SCC 1***, in para 520 of the judgment, Supreme Court said that the expression "sustainable development" incorporates a wide meaning within its fold. It contemplates that development ought to be sustainable with the idea of preservation of natural environment for present and future generations. It would not be without significance to note that sustainable development is indeed a principle of development – it posits controlled development. The primary requirement underlying this principle is to ensure that every development work is sustainable; and this requirement of sustainability demands that the first attempt of every agency enforcing environmental rule of law in the country ought to be to alleviate environmental concerns by proper mitigating measures. Court further said that right to development is intrinsically connected to the preservance of a dignified life. It is not limited to the idea of infrastructural development, rather, it entails human development as the basis of all development. The jurisprudence in environmental matters must acknowledge that there is immense inter-dependence between right to development and right to natural environment.

276. In ***Vellore Citizens Welfare Forum vs Union of India & Others (1996) 5 SCC 647***, Court held that 'precautionary principle' is an essential feature of 'sustainable development'. In para 11 of the judgment, Supreme

Court explained precautionary principle stating that in environmental measures the State Government and the Statutory Authorities must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The "onus of proof" is on the actor or the developer/industrialist to show that his action is environmentally benign.

277. In ***M.C. Mehta vs. Union of India, (2004) 12 SCC 118,*** Court observed that precautionary principle requires anticipatory action to be taken to prevent harm. The harm can be prevented even on a reasonable suspicion.

278. In ***Research Foundation for Science Technology National Resource Policy vs. Union of India, (2005) 10 SCC 510,*** Court said that precautionary principle is part of Indian jurisprudence, arising from Articles 47, 48-A and 51-A(g) of the Constitution.

279. In ***Hospitality Assn. of Mudumalai vs. In Defence of Environment & Animals, (2020) 10 SCC 589***, relying on earlier judgments, Court held that 'precautionary principle' has been accepted as a part of the law of our land. Articles 21, 47, 48-A and 51-A(g) of the Constitution give a clear mandate to the State to protect and improve the environment and to safeguard the forests and wildlife of the country. Precautionary principle makes it mandatory for the State Government to anticipate, prevent and attack the causes of environmental degradation.

280. In ***Municipal Corporation of Greater Mumbai vs. Ankita Sinha, (2022) 13 SCC 401,*** while considering the question as to whether Tribunal

has *suo-moto* jurisdiction to take cognizance of an issue involving environmental protection, Court said that Tribunal is itself required to carry out preventive and protected measures as well as hold governmental and private authorities accountable for failing to uphold environmental interests.

281. In ***Pragnesh Shah vs. Dr. Arun Kumar Sharma & Ors., (2022) 11 SCC 493,*** Court said in para 34 of the judgment as under:

> *"The precautionary principle requires the State to act in advance to prevent environmental harm from taking place, rather than by adopting measures once the harm has taken place."*

282. Similarly, ***Rajeev Suri vs. Delhi Development Authority (supra),*** in para 524, Court said that precautionary principle duly mandates that all agencies of the State, including Courts, must make their best endeavour to ensure that precaution is instilled in the process of development. Duly recognising the above law laid down by Supreme Court, in NGT Act, 2010 has provided in Section 20 that Tribunal shall, while passing any order or decision or award, apply principle of 'sustainable development', 'precautionary principle' and 'polluter pays' principle. Where pollution is being caused by a violator, a strict liability principle has to be applied and the violator must be held liable to compensate, such harm was recognised by Supreme Court in ***M.C. Mehta vs. Union of India, AIR1987SC1086*** **(Sodium gas leak case)** therein Supreme Court said that an enterprise must be absolutely held liable to compensate for harm it has caused and it should be not be answered to say that it has taken all reasonable care. Court also observed that larger and most and more prosperous enterprise, greater must be the amount of compensation payable for the harm caused on account of the activity being carried on by

the industry. Protection of environment from its degradation and providing clean and healthy environment is the Constitutional obligation of the State and a corresponding fundamental right of the citizens in part of Article 21 of the Constitution.

283. In ***Virendra Gaur vs. State of Haryana, (1995) 2 SCC 577***, Court said that word "environment" is of broad spectrum which brings within its ambit "hygienic atmosphere and ecological balance". It is duty of State and every individual to maintain hygienic environment. State in particular has duty to shed its extravagant unguided sovereign power and to forge in its policy to maintain ecological balance in hygienic environment. Further Court held,

> "*Enjoyment of life and its attainment including their* ***right to life*** *with human dignity encompasses within its ambit,* ***the protection and preservation of environment, ecological balance free from pollution of air and water, sanitation without which life cannot be enjoyed,*** *any contra acts or actions would cause environmental pollution. Environmental, ecological, air, water pollution etc. should be regarded as amounting to violation of Article 21."*

284. Court also held that hygienic environment is an integral facet of right to healthy life and it would be impossible to live with human dignity without a human and healthy environment. Court further said,

> *"Therefore, there is a constitutional imperative on the State Government and the Municipalities, not only to ensure and safeguard proper environment but also an imperative duty to take adequate measures to promote, protect and improve both the manmade and the natural environment."*

285. In light of the above discussion, we have no hesitation in holding that protection of water ecology of river Yamuna and its cleanliness was Statutory and Constitutional obligation of State but has miserably failed

to perform it. The statutory bodies like local bodies at Agra and Mathura-Vrindavan have failed in prevention of discharge of polluted material in River Yamuna and allowed its pollution by discharging huge quantity of polluted sewer therein. Tribunal, therefore, is entitled to ascertain the environmental compensation on the principle of 'Polluter Pays' and also to issue such direction for further preventive, punitive and remedial action in accordance with law as are necessary and consistent with the principle of sustainable development, precautionary principle.

286. For recovery of damage caused to the environment so the recovered amount may be utilized for remediation, rejuvenation and restoration of environment has been held part of 'Polluter Pays' principle.

287. **'Polluter Pays' principle** means absolute liability for harm to the environment, not only to compensate victims of pollution but also cost of restoring environmental degradation. Remediation of damaged environment is part of the process of 'sustainable development'. As such, **polluter is liable to pay cost to the individual sufferers as well as cost of reversing the damaged ecology**.

288. 'Polluter Pays' principle was also considered in detail in ***Indian Council for Enviro-Legal Action vs. Union of India, (1996)3SCC212.*** Certain industries producing assets were dumping their waste. Even untreated waste water was allowed to flow freely polluting atmosphere and sub-terrain supply of water which ultimately caused darkening and dirtiness of wells and the streams water rendering it unfit for human consumption. Certain environmentalists' organizations broadly alleging severe damage to villager's health, filed a Writ petition as PIL in 1989 before Supreme Court. By that time, some of the units were already closed.

Referring to Article 48-A in Directive Principles of State Policy and 51-A in the Fundamental duties of citizens, Supreme Court observed that said provisions say that State shall endeavour to protect and improve environment and to safeguard forest and wildlife of the country. One of the fundamental duties of citizens is to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creature. Where a **Proponent has established its commercial unit and operate contrary to law flouting norms provided by law, Statutory Regulator is bound to act and if it fails, a judicial forum can direct it to act in accordance with law**. Referring to Oleum Gas leak case, i.e., ***M.C. Mehta vs. Union of India, (1987) 1 SCC 395***, Court observed in para 58 that the constitution bench held that **enterprise must be held strictly liable for causing such harm as a part of social cost of carrying on the hazardous or inherently dangerous activity**. Hazardous or inherently harmful activities for private profits can be tolerated only on the condition that the enterprise engaged in such hazardous or inherently dangerous activity indemnifies all those who suffer on account of carrying on of such hazardous or inherently dangerous activity, regardless of whether it is carried on carefully or not.

289. Court also referred to its earlier decision in ***Indian Council for Enviro Legal action vs. Union of India, (1995) 3 SCC 77,*** wherein concerned Pollution Control Board identified about 22 industries responsible for causing pollution by discharge of their effluent and a direction was issued by Court observing that they were responsible to compensate the farmers. It was the duty of State Government to ensure that this amount was recovered from the industries and paid to the farmers. In para 67 of the judgment, Court said that the **question of**

liability of respondent units to defray the costs of remedial measures can also be looked into from another angle which has now come to be accepted universally as a sound principle, for example, 'Polluter Pays' principle. On this aspect, Court further observed as under:

> *"**67.** ...The **Polluter Pays principle demands that the financial costs of preventing or remedying damage caused by pollution should lie with the undertakings which cause the pollution, or produce the goods which cause the pollution.** Under the principle it is not the role of government to meet the costs involved in either prevention of such damage, or in carrying out remedial action, because the effect of this would be to shift the financial burden of the pollution incident to the taxpayer. The 'Polluter Pays' principle was promoted by the Organization for Economic Co-operation and Development (OECD) during the 1970s when there was great public interest in environmental issues. During this time there were demands on government and other institutions to introduce policies and mechanisms for the protection of the environment and the public from the threats posed by pollution in a modern industrialized society. Since then, there has been considerable discussion of the nature of the polluter pays principle, but the precise scope of the principle and its implications for those involved in past, or potentially polluting activities have never been satisfactory agreed.*
>
> *Despite the difficulties inherent in defining the principle, the European Community accepted it as a fundamental part of its strategy on environmental matters, and it has been one of the underlying principles of the four Community Action Programmes on the Environment. The current Fourth Action Programme ([1987] OJC 328/ 1) makes it clear that **the cost of preventing and eliminating nuisances must in principle be borne by the polluter**', and the polluter pays principle has now been incorporated into the European Community Treaty as part of the new Articles on the environment which were introduced by the Single European Act of 1986. Article 130-R(2) of the Treaty states that environmental considerations are to play a part in all the policies of the Community, and that action is to be based on three principles: the need for preventative action; the need for environmental damage to be rectified at source; and that the polluter should pay."*

290. Court further said that **according to the above principle of 'Polluter Pays', responsibility for repairing the damage is that of the offending industry**. Sections 3 and 5 of Environment (Protection) Act,

1986 empower Central Government to give directions and take measures for giving effect to this principle. Court further said:

> *"...In all the circumstances of the case,* ***we think it appropriate that the task of determining the amount required for carrying out the remedial measures, its recovery/realisation and the task of undertaking the remedial measures is placed upon the Central Government in the light of the provisions of the Environment [Protection] Act, 1986****. It is, of course, open to the Central Government to take the help and assistance of State Government, R.P.C.B. or such other agency or authority, as they think fit."*

291. The above principle has been followed in ***Vellore Citizen Welfare Forum vs. Union of India (supra)***. In para 25, direction no. 2 reads as under:

> *2. The authority so constituted by the Central Government shall implement the "precautionary principle" and the "polluter pays" principle. The* ***authority shall, with the help of expert opinion and after giving opportunity to the concerned polluters assess the loss to the ecology/environment in the affected areas and shall also identify the individuals/families who have suffered because of the pollution and shall assess the compensation to be paid to the said individuals/families. The authority shall further determine the compensation to be recovered from the polluters as cost of reversing the damaged environment****. The authority shall lay down just and fair procedure for completing the exercise.*

292. In ***Bittu Sehgal and Another vs Union of India & Others, (2001) 9 SCC 181***, referring the earlier judgments, Supreme Court has said that 'Precautionary Principle' and 'Polluter Pays Principle' have been accepted as part of the law of the land.

293. In ***Research Foundation for Science vs. Union of India & Ors., (2005) 13 SCC 186***, in para 26 and 29, Court, on 'Polluter Pays' principle, has said as under:

> ***"26.*** *The* ***liability of the importers to pay the amounts to***

be spent for destroying the goods in question cannot be doubted on applicability of precautionary principle and polluter-pays principle. These principles are part of the environmental law of India*. There is constitutional mandate to protect and improve the environment. In order to fulfill the constitutional mandate various legislations have been enacted with attempt to solve the problem of environmental degradation.*

29. *The* ***polluter-pays principle basically means that the producer of goods or other items should be responsible for the cost of preventing or dealing with any pollution that the process causes. This includes environmental cost as well as direct cost to the people or property, it also covers cost incurred in avoiding pollution and not just those related to remedying any damage. It will include full environmental cost and not just those which are immediately tangible****. The* ***principle also does not mean that the polluter can pollute and pay for it****. The nature and extent of cost and the circumstances in which the principle will apply may differ from case to case."*

294. In ***Karnataka Industrial Areas Development Board vs. C. Kenchappa & Others, (2006) 6 SCC 371***, principle of 'Polluter Pays' has been explained in detail referring to the earlier judgments in ***Indian Council for Enviro-Legal Action vs. Union of India (supra) and Vellore Citizen Welfare Forum (supra)***.

295. One of the questions raised is that what should be the quantum of environmental compensation and what are the relevant factors necessary to be considered for its computation.

296. The elements of nature like air, water, light and soil in materialistic manner may not be priced appropriately and adequately. Most of the time, whenever price is determined, it may be extremely low or highly exorbitant meaning thereby disproportionate. Still, since some of the assets of nature are marketable, on that basis price may be determined but when such elements are damaged or degraded, restoration thereof, in effect is

priceless. Many a times, it may be almost impracticable and improbable to recover and remediate damaged environment to its position as it was. Moreover, its cost might be very high. It also cannot be doubted that once there is a pollution or damage to environment, it would affect adversely not only the environment but also inhabitants and all biological organisms. Damage is there, only degree may differ whether to the environment or to the inhabitants and other organisms. To find out simultaneously degree of damage and to ascertain the same in many cases may not be possible or practicable with mathematical precision. For example, a polluted air causes respiratory diseases but the people do not get infected and starts reflection of the disease immediately but it takes some time. The time taken in reflection of injury on the person or body also differs from person to person depending upon his immunity and other health conditions. In some cases, damage to environment i.e., air pollution may be fatal to a person who already has respiratory problem. For some a minor inconvenience, minor injury to others, and some may not suffer to the extent of showing symptoms of any diseases at all. When we talk of environmental compensation for causing degradation to environment and for its restoration or remediation, it is not a formal or casual or symbolic amount which is required to be levied upon the violator. It is substantive and adequate amount which must be levied for restoration of environment. CPCB in determining values of fixed quotients and rupees etc., has been very lenient as if only symbolically violator is to be held liable and it must pay a petty amount.

297. Nature is extremely precious. It is difficult to price elements of nature like light, Oxygen (air), water in different forms like rain, snow, vapour etc. When nature is exploited beyond carrying capacity, results are

harmful and dangerous. People do not understand the value of what nature has given free. Recently, in COVID-19 Wave-II, scarcity of Oxygen proved its worth. In dreadful second phase of the above pandemic, any amount offered, in some cases, could not save life for want of Oxygen. Further, damage to environment, sometimes do not reflect in individuals immediately and may take time but injury is there. In such cases, process of determination of compensation may be different.

298. The amount of environmental compensation is needed for remediation and restoration of damaged environment; enough to be deterrent, to provide adequate compensation where inhabitants are affected adversely and where violator has proceeded in violation of environmental laws relating to consents, clearances, permissions etc., to penalize him for such violation to prove to be a deterrent to him and others.

299. Environmental compensation is not a kind of fee which may result in profiteering to violators and after adjusting a nominal amount of environmental compensation, a violator may find it profitable to continue with such violations. The objective of environmental compensation is that not only the loss and damage already caused, is made to recover and restore but also in future, the said violator may not repeat the kind of violation already committed and others also have a fear of not doing the same else similar liability may be enforced upon them. Unless amount of compensation is more than maximum permissible profit arising from violation, the purpose of environmental compensation would always stand defeated.

300. Loss caused to surroundings of the environment, may also include *flora-fauna* and human beings.

301. In fact, quantum of environmental compensation should have nexus with State's efforts for protection and preservation of environment and control of pollution. Compensation regime must be a deterrent to violators and incentivize eco-friendly proponents. No one should get profited by violating environmental laws and community should also not suffer for violation of environmental norms by defaulting proponents. There is no reason, if beside the aspects noticed above, the computation process also incorporates the elements of inflation, quality of life, and economic prosperity.

302. NGT Act 2010 nowhere makes any provision as to how environmental compensation is to be computed.

303. The question of **assessment of environmental compensation** includes the principles/factors/aspects, necessary to be considered for computing/assessing/determining environmental compensation. Besides judicial precedents, we find little assistance from Statute. Section 15 of NGT Act 2010 talks of relief of compensation and restitution. It confers wide powers on this Tribunal to grant relief by awarding compensation for the loss suffered by individual(s) and/or for damage caused to environment. Section 15 reads as under:

> *"**15. Relief, compensation and restitution**-(1) The Tribunal may, by an order, provide-*
>
> *a) **relief and compensation** to the victims of pollution and **other environmental damage arising under the enactments** specified in the Schedule I (including accident occurring while handling any hazardous substance);*
>
> ***b)** for **restitution of property damaged;***
>
> *c) **for restitution of the environment** for such area or areas, as the Tribunal may think fit.*

(2) The relief and Compensation and restitution of property and environment referred to in clauses (a), (6) and (c) of sub-section of (1) shall be in addition to the relief paid or payable under the Public Liability Insurance Act, 1991 (6 of 1991).

(3) No application for grant of any compensation or relief or restitution of property or environment under this section shall be entertained by the Tribunal unless it is made within a period of five years from the date on which the cause for such compensation or relief first arose:

Provided that the Tribunal may, if it is satisfied that the' applicant was prevented by sufficient cause from filing the application within the said period, allow it to be filed within a further period not exceeding sixty days.

(4) The Tribunal may, ***having regard to the damage*** *to public* ***health, property and environment****, divide the compensation or relief payable under separate heads specified in Schedule II so as to provide compensation or relief to the claimants and for restitution of the damaged property or environment, as it may think fit.*

(5) Every claimant of the compensation or relief under this Act shall intimate to the Tribunal about the application filed to, or, as the case may, be, compensation or relief received from, any other Court or authority.

304. Sub-section 1 of Section 15 enables Tribunal to make an order providing relief and compensation to (i) the victims of pollution, (ii) other environmental damage arising under the enactments specified in the Schedule I.

305. Tribunal is also conferred power to pass an order providing relief for restitution of property damaged. Section 15(1)(c) enables Tribunal to pass an order providing relief for restitution of the environment for such area or areas, as Tribunal may think fit. Section 15 sub-section 4 says that Tribunal may divide compensation or relief payable under separate heads specified in Schedules II, having regard to the damage to public health, property and environment so as to provide compensation or relief, (i) to the

claimants and (ii) for restitution of the damaged property or environment, as it may think fit.

306. Schedule II of NGT Act 2010 gives a list of heads under which compensation or relief for damage may be granted. It has 14 heads in total out of which items (a) to (f), (l), (m) and (n) relate to loss, damage etc. sustained to the person or individual or their property. Items (i) to (k) relate to harm, damage, destruction etc. of environment or environmental system including soil, air, water, land, and eco-system. Items (i) to (k) of Schedule II of NGT Act 2010 are as under:

> *"(i) Claims on account of any harm, damage or destruction to the fauna including milch and draught animals and aquatic fauna;*
>
> *(j) Claims on account of any harm, damage or destruction to flora including aquatic flora, crops, vegetables, trees and orchards;*
>
> *(k) Claims including cost of restoration on account of any harm or damage to environment including pollution of soil, air, water, land and eco-systems;"*

307. Items (g) and (h) relate to expense and cost incurred by State in providing relief to affected person; and loss caused in connection with activity causing damage.

308. The damage to environment covers a very wide variety of nature as is evident from definition of environment under Section 2(c) which is inclusive and says; 'environment includes water, air, and land and the interrelationship, which exists among and between water, air and land and human beings, other living creatures, plants, micro-organism and property'.

309. Even Rules framed under NGT Act 2010 are silent on this aspect.

Issue of determination of EC is significant in the sense that it should be proportionate to or bears a reasonable nexus with the environmental damage and its remediation/restoration. Similarly in case of compensation to be determined for a victim, it needs to co-relate to injury caused or damage suffered by such person as also cost incurred for treatment/remediation. Computation of environmental compensation may involve some degree of subjectivity but broadly it must be based on objective considerations as it saddles financial liability upon the violator.

310. Taking into consideration multifarious situations relating to violation of environmental laws *vis-a-vis* different proponents, nature of cases involving violation of environmental laws can be categorized as under:

(i) Where Project/Activities are carried out without obtaining requisite statutory permissions/consents/clearances/NOC etc., affecting environment and ecology. For example, EC under EIA 2006; Consent under Water Act, 1974 and Air Act, 1981; Authorisation under Solid Waste Management Rules, 2016 and other Rules; NOC for extraction and use of ground water, wherever applicable, and similar requirements under other statutes.

(ii) Where proponents have violated conditions imposed under statutory Permissions, Consents, Clearances, NOC etc. affecting environment and ecology.

(iii) Where Proponents have carried out their activities causing damage to environment and ecology by not following standards/norms regarding cleanliness/pollution of air,

water etc.

311. The above categories are further sub-divided, i.e., where the polluters/violators are corporate bodies/organizations/associations and group of the people, in contradistinction, to individuals; and another category, the individuals themselves responsible for such pollution.

312. Further category among above classification is, where, besides pollution of environment, proponents/violators action also affect the community at large regarding its source of livelihood, health etc.

313. The next relevant aspect is, whether damage to environment is irreversible, permanent or is capable of wholly or partial restoration/remediation/rejuvenation.

314. Determination/computation/assessment of environmental restoration/remediation/rejuvenation should also take care of damage caused to the environment, to the community, if any, and should also be preventive, deterrent and to some extent, must have an element of "being punitive". The idea is not only for restoration/remediation or to mitigate damage/loss to environment, but also to discourage people/proponents from indulging in the activities or carrying out their affairs in such a manner so as to cause damage/loss to environment.

315. To impose appropriate 'environmental compensation' for causing harm to environment, besides other relevant factors as pointed out, one has to understand the kind and nature of 'Harmness cost'. This includes risk assessment. The concept of risk assessment will include human-health risk assessment and ecological risk assessment. U.S. Environmental Protection Agency has provided a guideline to understand

harm caused to environment as well as people. For the purpose of human-health risk assessment, it comprised of three broad steps, namely, planning and problem formulation; effects and exposure assessment and risk categorization. The first part involves participation of stakeholders and others to get input; in the second aspect health effect of hazardous substances as well as likelihood and level of exposure to the pollutant are examined and the third step involves integration of effects and exposure assessment to determine risk.

316. Similarly, ecological risk assessment is an approach to determine risk of environmental harm by human activities. Here also we can find answer following three major steps, i.e., problem codification; analysis of exposure and risk characterization. First part encompasses identification of risk and what needs to be protected. Second step insists upon crystallization of factors that are exposed, degree to exposure and further comprised of two components, i.e., risk assessment and risk description.

317. In totality, problem is multi-fold and multi-angular. Solution is not straight but involves various shades and nuances and vary from case to case. Even Internationally, there is no thumb-rule to make assessment of damage and loss caused to environment due to activities carried out individually or collectively by the people, and for remediation/restoration. Different considerations are applicable and have been applied. As the term suggest, compensation means a return for loss or damage sustained. Therefore, it must always be just and not based on a whim or capricious.

318. In India, where commercial activities were carried out without obtaining statutory permissions/consents/clearance/NOC, Courts have determined, in some matters, compensation by fixing certain percentage

of cost of project. In some cases, volume of business transactions, turnover, magnitude of establishment of proponent have also been considered as guiding factors to determine environmental compensation. In some cases, a lump sum amount has been imposed.

319. In an article, *'the cost of pollution-Environmental Economics'* by Linas Cekanavicius, 2011, it has been suggested, where commercial activities have been carried out without consent etc., and pollution standards have been violated, Total Pollution Cost (hereinafter referred to as **'TPC'**) can be applied. It combines the cost of abatement of environmental pollution and cost of pollution induced environmental damage. The formula comes to **TPC(*z*)=AC(*z*)+ED(*z*)**, where ***z*** denotes the pollution level. Further, clean-up cost/remediation cost of pollution estimated to be incurred by authorities can also be used to determine environmental compensation.

320. When there is collective violation, sometimes the issue arose about apportionment of cost. Where more than one violator is indulged, apportionment may not be equal since user's respective capacity to produce waste, contribution of different categories to overall costs etc. would be relevant. The element of economic benefit to company resulting from violation is also an important aspect to be considered, otherwise observations of Supreme Court that the amount of environmental compensation must be deterrent, will become obliterated. Article 14 of the Constitution says that unequal cannot be treated equally, and this principle must also be given due consideration and be taken care.

321. Determination/assessment/computation of environmental compensation cannot be arbitrary. It must be founded on some objective and intelligible considerations and criteria. Simultaneously, Supreme

Court also said that its calculations must be based on a principle which is simple and can be applied easily. In other words, it can be said that wherever Court finds it appropriate, expert's assessment can be sought but sometimes experts also go by their own convictions and belief and fail to take into account judicial precedents which have advanced cause of environment by applying the principles of 'sustainable development', 'precautionary approach' and 'polluter pays', etc. In such circumstances, it is the ultimate responsibility of Court's to assess and compute environmental compensation, rationally.

322. Clean-up cost or TPC, may be a relevant factor to evaluate damage, but in the diverse conditions as available in this Country, no single factor or formula may serve the purpose. Determination should be a quantitative estimation; the amount must be deterrent to polluter/violator and though there is some element of subjectivity but broadly assessment/computation must be founded on objective considerations. Appropriate compensation must be determined to cover not only the aspect of violation of law on the part of polluter/violator but also damage to the environment, its remediation/restoration, loss to the community at large and other relevant factors like deterrence, element of penalty etc.

323. This Tribunal vide order dated 31.08.2018 passed in ***OA 593/2017, Paryavaran Suraksha Samiti and another vs. Union of India and others*** observed that *"CPCB may also assess and recover compensation for damage to the environment and said fund may be kept in a separate account and utilized in terms of an action plan for protection of the environment".*

324. Pursuant thereto, CPCB published a Report on 15.07.2019

suggesting methodology for assessment of environmental compensation which may be levied or imposed upon industrial establishments who are guilty of violation of environmental laws and have caused damage/degradation/loss to environment. The above Guidelines do not encompass individuals, statutory institutions and Government etc. and since in the present case, we are concerned with the Statutory bodies like Municipalities of Agra and Mathura-Vrindavan which are constituted under UPMCA 1959, therefore, we are not going into the details of the said Guidelines as the same have no application to the present case.

325. In some cases, compensation has been awarded by Tribunal on lump sum basis without referring to any methodology. For example: (i) ***in Ajay Kumar Negi vs Union of India, OA No. 183/2013***, Rs.5 Crores was imposed. (ii) In ***Naim Shariff vs M/s Das Offshore Application no. 15(THC) of 2016***, Rs.25 Crores was imposed (iii) ***Hazira Macchimar Samiti vs. Union of India***, Rs. 25 Crores was imposed.

326. In ***Goa Foundation vs. Union of India & Others (2014) 6 SCC 590***, Supreme Court relied on ***Samaj Parivartana Samudaya & Others vs. State of Karnataka & Others (2013) 8 SCC 209*** and held that **ten per cent of the sale price** of iron ore during e-auction should be taken as compensation. To arrive at the above view, Court observed that this was an appropriate compensation given that mining could not completely stopped due to its contribution towards employment and revenue generation for the State. Further, Court directed to create a special purpose vehicle, i.e., "Goan Iron Ore Permanent Fund" for depositing above directed compensation and utilization of above fund for remediation of damage to environment.

327. In ***Goel Ganga Developers vs Union of India and Others, (2018) 18 SCC 257***, Tribunal imposed Rs.195 Crores compensation since construction project was executed without EC. Supreme Court made it **Rs.100 Crores or 10% of project cost whichever is higher**. Supreme Court also upheld Rs. 5 Crores imposed by Tribunal vide order dated 27.09.2016. Thus, total amount exceeded even 10% of project cost.

328. In ***Mantri Techzone Private Limited vs. Forward Foundation & Others, (2019) 18 SCC 494***, Supreme Court affirmed imposition of environmental compensation by Tribunal, considering cost of the project, where there was violation regarding EC/consent and proponent proceeded with construction activities violating provisions relating to EC/Consent. Tribunal determined environmental compensation at 5% and 3% of project cost of two builders. 5% of project cost was imposed where PP had raised illegal constructions while 3% was imposed where actual construction activity was not undertaken by PP and only preparatory steps were taken including excavation and deposition of huge earth by creating a hillock. Besides, Tribunal also directed for demolition and removal of debris from natural drain at the cost of PP.

329. On the issue of assessment of compensation for damage to environment in the matter of illegal mining, recently Supreme Court in ***Bajri Lease LOI holders Welfare Society vs. State of Rajasthan and others, SLP (Civil) No. 10584 of 2019*** (order dated 11.11.2021) has said that compensation/penalty to be paid by those indulging in illegal sand mining cannot be restricted to be value of illegally mined minerals. The cost of restoration of environment as well as the cost of ecological services should be part of compensation. 'Polluter Pays' principle as interpreted by

this Court means that absolute liability for harm to the environment extends not only to compensate victims of pollution but also cost of restoring environmental degradation. Remediation of damaged environment is part of the process of "sustainable development" and as such the polluter is liable to pay the cost the individual sufferers as well as the cost of reversing the damaged ecology.

330. When we consider the question of computation of environmental compensation in OA I and II in the light of the above discussion, we find that it would be appropriate to compute environmental compensation applying following formula:

- **Environmental Compensation =** Quantity of polluting material discharged in River Yamuna directly or indirectly × number of days of such discharge/violation × Rupee, a fixed factor to be applied by Tribunal.

331. It cannot be doubted that when a polluted sewage is being discharged in River Yamuna and water of the river is being polluted, the violator must be held responsible and should pay environmental compensation for the entire quantity i.e., **each litre of such polluted sewage which is being discharged in River Yamuna**.

332. On the question of factor "**Rupee**", we gave our deepest thought and in the facts and circumstances of the present case, are of the view that minimum possible rate in terms of Rupees may be applied to compute environmental compensation which cannot be less than "one paisa per litre" of polluted sewage which is being discharged in River Yamuna.

Computation of Environmental Compensation in respect of Agra City:

333. The number of days for computation of environmental compensation at city Agra, payable by violators, in respect of discharge of polluted sewer in River Yamuna may be quite high since this violation is continuing since decades together. However, for the purpose of OA-I, though cognizance of OA was taken by this Tribunal on 25.11.2022 when the first order was passed but we find it appropriate to calculate compensation from the date when Joint Committee, pursuant to Tribunal's order dated 25.11.2022, visited the site for the first time i.e., 23.02.2023 till the date when we reserved judgment in the present case i.e., 07.12.2023. Therefore, number of days comes to 288 days (from 23.02.2023 to 07.12.2023, both inclusive).

334. Admittedly, STPs installed capacity is 220.75 MLD while all 9 drains are discharging 286 MLD of sewage in River Yamuna. Therefore, there is clear gap of 65.25 MLD i.e., 65250000 litres.

335. Environmental compensation in respect of 65.25 MLD i.e., 65250000 litres, which is admittedly totally untreated sewage being discharged in River Yamuna at Agra can be computed as under applying the above formula:

65250000 liters × 288 days × 1 paisa per litre = Rs.18,79,20,000/-.

336. While 9 STPs are said to be functional at Agra, it is also stated that installed capacity of 9 STPs is only 220.75 MLD i.e., 220750000 litres. The Joint Committee Report dated 24.02.2023 also shows that the actual utilisation capacity of 9 STPs is only 175 MLD i.e., 175000000 litres. Thus, functional capacity is much less than the installed capacity and there is gap of 45.75 MLD i.e., 45750000 litres.

337. Thus, environmental compensation for this gap of 45.75 MLD i.e., 45750000 litres sewage, will come to;

45750000 litres × 288 days × 1 paisa per litre = Rs.13,17,60,000/-.

338. CPCB Report dated 05.12.2023 has recorded a categorically finding that no STP after treatment is meeting prescribed parameters, therefore, the entire treated water is not meeting the parameters and comes within the category of polluted effluent/sewage. However, Joint Committee Report dated 24.02.2023 shows that treated water of following STPs is being discharged in River Yamuna and rest is being used for irrigation purposes:

Sl.No.	**Details of STP**	**Capacity/Quantity**
1	Boodhi Ka Nagla	2.25 MLD
2	Pilakhar, shahadara, Nunhai	10 MLD
3	Dhandhupura	78 MLD
4	Kalindi Vihar Agra	4.5 MLD

339. In respect of Kalindi Vihar, Agra, it is said that utilization capacity of this STP is only 3 MLD and partially, it is being used for irrigation purposes and partially being discharged in River Yamuna. Therefore, for the purpose of computation of environmental compensation, the discharge of treated water, which is not meeting the parameters and is being discharged into River Yamuna is taken to be 1.5 MLD.

340. The total quantity of treated water which is not meeting parameters and is being discharged in River Yamuna thus, comes to 91.75 MLD (2.25 MLD + 10 MLD + 78 MLD + 1.5 MLD) i.e., 91750000 litres. The computation of environmental compensation of the above quantity of

sewage comes as under:

91750000 litres × 288 days × 1 Paisa per litre = Rs.26,42,40,000/-.

341. The total environmental compensation for Agra for the period from 23.02.2023 to 07.12.2023 comes to **Rs.58,39,20,000/-** (Rs.18,79,20,000 + Rs.13,17,60,000 + Rs.26,42,40,000).

342. In respect of the subsequent period of violations, UPPCB shall make computation of environmental compensation on the formula as stated above after giving due opportunity of hearing to the concerned violators/proponents and, thereafter, take appropriate action for recovery of environmental compensation so computed.

Computation of Environmental Compensation in respect to Mathura:

343. Similarly, for Mathura, it is admitted case that the total discharge from 23 drains at Mathura is 68.55 MLD i.e., 68550000 litres. 04 STPs are said to be functional as per UPPCB's Report dated 09.12.2022 i.e.,

Sl.No.	**Details of STP**	**Capacity/Quantity**
1	Laxmi Nagar, Mathura	16.0 MLD
2	Laxmi Nagar, Mathura	14.5 MLD
3	STP, Masani	30 MLD
4	STP, Masani	6.8 MLD

344. Taking from the above Report, it is evident that there is gap of 1.25 MLD i.e., 1250000 litres in the installed capacity of STPs and the total discharge of sewage by all 23 drains at Mathura. Therefore, computation of environmental compensation in respect to 1.25 MLD quantity of polluted sewage being discharged in River Yamuna can be made at the

first instance.

345. However, as per CPCB Report dated 04.10.2023, STP of the capacity of 6.8 MLD at Masani was non-operational, therefore, the quantity of 6.8 MLD i.e., 6800000 litres also have to be added to the gap and the total gap would come to 8.05 MLD (1.25 MLD + 6.8 MLD) i.e., 8050000 litres.

346. Coming to the number of days, we find, for the purpose of OA-II, that the cognizance of OA was taken by Tribunal for the first time on 19.10.2022 but for the present case, we take number of days from the date when pursuant to Tribunal's order dated 19.10.2022, first inspection was made by Joint Committee at the site on 24.11.2022. Thus, we find it appropriate to calculate environmental compensation from 24.11.2022 to 07.12.2023 (both inclusive) i.e., 379 days for the gap, which comes as under:

8050000 litres × 379 days × 1 Paisa per litre = Rs.3,05,09,500/-.

347. In respect of subsequent period of violations, UPPCB shall make computation of environmental compensation on the formula as stated above after giving due opportunity of hearing to the concerned violators/proponents and, thereafter, take appropriate action for recovery of environmental compensation so computed.

Computation of Environmental Compensation in respect of Vrindavan:

348. With respect to Vrindavan, it is said that there are total 13 drains which carry 10.95 MLD sewage. There are 02 STPs i.e., (i) Pagal Baba, Vrindavan (4.0 MLD) and (ii) Maant road, Vrindavan (8.0 MLD). Therefore, installed capacity of 02 STPs operational at Vrindavan is more than the quantity of sewage generation, hence no gap is there.

349. Then comes another aspect. With regard to the compliance of treated water of STPs with the parameters, Joint Committee Report dated 09.12.2022 shows that STP at Pagal Baba, Vrindavan with the capacity of 4 MLD is not meeting prescribed standards in respect of Faecal Coliform. Further, annexures 1 and 2 to UPPCB Report dated 10/11.08.2023 shows that STPs are not meeting parameters of the treated water as per ***Nitin Shankar Deshpande vs. Union of India & Others (supra).*** In this view of the matter, the entire treated water being discharged by 02 STPs has to be taken into account for the purpose of computation of environmental compensation.

350. Hence, environmental compensation will come for 10.95 MLD i.e., 10950000 litres as under:

10950000 litres × 379 days × 1 paisa per litre = Rs.4,15,00,500/-.

351. The total environmental compensation for Mathura and Vrindavan payable by Mathura-Vrindavan Nagar Nigam comes to Rs.7,20,10,000/- (Rs.3,05,09,500 + Rs.4,15,00,500).

352. In respect of the subsequent period of violations, UPPCB shall make computation of environmental compensation on the formula as stated above after giving due opportunity of hearing to the concerned violators/proponents and, thereafter, take appropriate action for recovery of environmental compensation so computed.

353. The act on the part of the responsible authorities by such discharge is violation of Section 24 which is also an offence under Section 43 of Water Act 1974. Section 47 provides, if offence has been committed by a company, the person responsible for its day-to-day management shall be

deemed to be guilty of the offence and if the violator is the Government department, Section 48 provides that head of the department shall be deemed to be guilty of the offence.

354. In ***Noorulla Khan vs. Karnataka State Pollution Control Board & Anr., (2021) SCC OnLine SC 601,*** Supreme Court while referring to ***Karnataka State Pollution Control Board vs. B. Heera Naik and Others, (2020) 16 SCC 298*** said that in the context of Section 48 of Water Act 1974, Commissioner of Municipal Corporation or Chief Officers of Municipal Councils may not strictly be called "heads of the departments" but such officials would still come under the provisions of Section 47 of Water Act 1974. The law laid down in ***Karnataka State Pollution Control Board vs. B. Heera Naik (supra)*** was summarized in para 11 of judgment in ***Noorulla Khan (supra),*** as under:

> "***11.*** *What emerges from these decisions of this Court is:*
>
> *i. If the violation of the provisions of the Water Act was at the hands of a Department, subject to the satisfaction of the requirements under Section 48 of the Water Act, "the Head of the Department" would be deemed to be guilty. This would of course be subject to the defences which are available to him to establish whether the offence in question was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.*
>
> *ii. By virtue of the decision of this Court in V.C. Chinnappa Goudar (Supra), because of deeming fiction under Section 48 of the Water Act, the protection under Section 197 of the Code would not be available and the matter ought to be considered de hors such protection.*
>
> *iii. If the concerned public servant happens to be a Chief Officer or Commissioner of a Municipal Council or Town Panchayat, he cannot strictly be called "the Head of the Department of the Government". Therefore, in terms of decision of this Court in B. Heera Naik (Supra), the matter would not come under Section 48 of the Water Act.* ***But***

the matter would come directly under Section 47 of the Water Act. *According to said decision, even in such cases, the deeming fiction available under Section 47 of the Water Act would dis-entitle the public servant from the protection under Section 197 of the Code.*

iv. If the offenders are other than public servants or where the principal offenders are corporate entities in private sectors, the question of protection under Section 197 would not arise."

355. We may also observe that cognizance can be taken by Magistrate, of offence, without insisting for sanction under Section 197 Cr.P.C. since Supreme Court in ***V.C. Chinnappa Goudar vs. Karnataka State Pollution Control Board & Anr., (2015) 14 SCC 535*** and ***Noorulla Khan (supra)*** has held that Section 197 is not attracted for offences when prosecution is initiated under Water Act 1974 against the public servants with reference to Sections 47 and 48 of Water Act 1974.

356. In view of above, UPPCB is also directed to take appropriate penal and preventive action against the concerned authorities and agencies by initiating appropriate criminal proceedings under Water Act 1974 and submit a Compliance Report.

THE CRIMINAL LIABILITY - Offence under Prevention of Money Laundering Act, 2002:

357. When environmental norms are not observed and in violation thereof there is discharge and/or emission of pollutants causing pollution, such activities also attract provisions of Prevention of Money Laundering Act, 2002 (hereinafter referred to as **'PMLA 2002'** as amended from time to time).

358. PMLA 2002 was enacted pursuant to resolution no. S-17/2 adopted

by General Assembly of United Nation (hereinafter referred to as **'UNGA'**) at 17th Special Sessions held on 23.02.1990 on political declaration and global programme of action; and political declaration adopted by UNGA in the Special Session held on 8th to 10th June, 1998.

359. PMLA Act 2002 came into force however on 01.07.2005. The term "money laundering" and "proceeds of crime" are defined in Section-2(p) and (u) which read as under:

> *"2(p). "Money Laundering" has the meaning assigned to it in Section-3.*
>
> *2(u). "**Proceeds of Crime**" means any property derived or obtained directly or indirectly, by any person as a result of **criminal activity** relating to a "**scheduled offence**" or the value of any such property or where such property is taken or held outside the country, then the property equivalent in value within the country or abroad.*
>
> *[Explanation: for the removal of doubts, it is hereby clarified that proceeds of crime include property not only derived or obtained from the "scheduled offence" but also any property which may directly or indirectly be derived or obtained as result of criminal activity relatable to the "schedule offence";"*

360. "Scheduled Offence" is defined in Section 2(y) and says;

> "*2(y). "**Scheduled Offence" means**-*
> *(i) The offences **specified under Part-A of the Schedule**; or*
> *(ii) The offences specified under Part-B of the Schedule, if the total value involved in such offences is one crore rupees or more; or*
> *(iii) The offences specified under Part-C of the schedule.*"

361. Section 3 of PMLA 2002 talks of offence of money laundering and says:

> "*3. **Offence of money laundering**: whosoever directly or indirectly attempts to indulge or knowingly assists or knowing is a party or is actually involve **in any process or activity connected proceeds of crime** including in concealment, possession, acquisition or use **and projecting or claiming it as untainted property** shall be guilty of offence of money laundering.*"

362. There is an explanation also inserted by Finance Act, 2019 w.e.f. 01.08.2019, but for the issue under consideration, it is not relevant, hence omitted.

363. Attachment of property involved in "money laundering" is governed by Section 5 of PMLA 2002 which permits attachment by Director or any other officer not below the rank of Deputy Director authorised by Director for the purpose of such attachment and if he has reason to believe (to be recorded in writing) on the basis of material in his possession that **any person is in possession of any proceeds of crime** and such proceeds of crime are likely to be concealed, transferred or dealt with in any manner which may result in frustrating any proceedings relating to confiscation of such proceeds of crime under this chapter (by order in writing), may provisionally attach such property for a period not exceeding 180 days from the date of the order, in such manner as may be prescribed.

364. First proviso of Section 5(1) imposes a condition that no such order of attachment shall be made unless, in relation to the "Scheduled offence", a report has been forwarded to a Magistrate under Section 173 Cr.P.C. or a complaint has been filed by a person authorised to investigate the offence mentioned in that schedule, before a Magistrate or Court for taking cognizance of the "Scheduled offence".

365. There is an exception in 2nd proviso of Section 5(1) authorising Director or the officers authorised by him to attach any property of any person referred to in Sub-Section 1, if he has reason to believe (to be recorded in writing), on the basis of material in his possession that if such property involved in money laundering is not attached immediately, it is

likely to frustrate proceeding under PMLA 2002.

366. Section 5(5) requires the Director or the other officer, who has provisionally attached property under Sub-Section 1 to file a complaint within 30 days from such attachment stating facts of such attachment before Adjudicating Authority which is appointed under Section 6.

367. Section 8 provides the procedure to be observed by **Adjudicating Authority** to pass an order confirming attachment of property under Section 5(1). When such order of confirmation is passed, attached property would remain under attachment till trial completes and if Special Court under PMLA 2002 recorded finding of conviction of commission of offence of money laundering, such property shall stand confiscated to the Central Government but where Special Court finds that offence of money laundering has not taken place or properties not involved in money laundering, it shall release such property to the person entitled to receive it.

368. Section 5 shows that except the cases covered by second proviso, no attachment is permissible unless report under Section 173 Cr.P.C. submitted to the Magistrate or complaint has been filed before the Magistrate or concerned **to take cognizance of "Scheduled offence"**.

369. Schedule to PMLA 2002 as initially came into force on 01.07.2005, was having Part-A, divided in paragraph 1, dealing with Section 121 and 121(A) of IPC; paragraph-2 covering certain offences under Narcotic Drugs and Psychotropic Substances Act, 1985 and Part-B paragraph 1 offences under Sections 302, 304, 307, 308, 327, 329, 364(A), 384 to 389, 392 to 402, 467, 489A and 489B of IPC; paragraph 2 contains some offences of

Arms Act, paragraph 3 referred to offences under Wild Life Protection Act 1972, Paragraph 4, offences under Immoral Traffic Prevention Act, 1956 and Paragraph 5, offences under Sections 7, 8, 9 and 10 of Prevention of Corruption Act, 1988 (hereinafter referred to as **'PCA 1988'**).

370. Thus, PMLA 2002, at the time of enforcement in 2005, did not cover Sections 120-B, 468, 420 and 471 IPC and Section 13 of PCA, 1988 and environmental enactments. In other words, offences under these Sections/Statutes were not "Scheduled offences" for the purpose of Section 3 PMLA 2002.

371. The Schedule underwent amendment for the first time vide Prevention of Money Laundering (Amendment) Act, 2009 published in Gazette of India, Extraordinary dated 06.03.2009. In Part A paragraph 1, Sections 489A and 489B were inserted. We are not concerned with the offences referred under paragraph 2 of the Schedule, hence amendments made therein are omitted. After paragraph-2, paragraph-3 and paragraphs-4 were inserted relating to offences under Explosive Substance Act, 1908 and Offences under Unlawful Activities (Prevention) Act, 1967. In Part-B, paragraph 1 was substituted and a number of offences of IPC were added and this included Section 120-B, 420, 467 and 471 IPC. Some amendments were made in paragraph 3 and 5 of Part-B and thereafter, paragraphs 6 to 25 were inserted covering offences under several enactments which are not relevant for the purpose of issue before us. Part C was also inserted in the schedule to cover cross border offences and the same is also omitted. Even after this amendment, Sections 468 IPC and 13 PCA, 1988 were not "scheduled offence" so as to attract offence under Section 3 of PMLA 2002. The amendment was given effect from

01.06.2009.

372. Next amendment was made vide Prevention of Money Laundering (Amendment) Act, 2012 published in Gazette of India, Extraordinary dated 04.01.2013. Paragraph A part-1 of the Schedule was substituted adding some more offences of IPC. In fact, entire Part A was substituted by a new Part-A which had paragraphs 1 to 28 covering offences under various Statutes, some were earlier in Part A and also Part B and some newly added. Paragraph 8 Part 1 as substituted in 2012 covered offences under Sections 7, 8, 9, 10 and 13 of PCA, 1988. Thus, Section 13 was included therein only in 2013. In Part B, paragraphs 1 to 25 were omitted and in Part C serial No. 2 and entries relating thereto, were omitted. This amendment came into force from 15.02.2013.

373. The offences under environmental laws have been included in the Schedule to PMLA 2002 inasmuch as paragraph 23, 25,26,27 have been inserted by Section 30 of PML (Amendment) Act, 2012 which came into force on 15.02.2013 and said insertion of paragraphs is as under:

"*PARAGRAPH 23*
OFFENCES UNDER THE BIOLOGICAL DIVERSITY ACT, 2002
(18 of 2003)

Section	*Description of offence*
55 read with section 6.	*Penalties for contravention of section 6, etc.*

PARAGRAPH 25
OFFENCES UNDER THE ENVIRONMENT PROTECTION ACT, 1986
(29 OF 1986)

Section	*Description of offence*
15 read with section 7.	***Penalty for discharging environmental pollutants, etc., in section 7 excess of prescribed standards.***

15 read with section 8.	*Penalty for handling hazardous substances without section 8 complying with procedural safeguards.*

PARAGRAPH 26
OFFENCES UNDER THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT, 1974
(6 OF 1974)

Section	*Description of offence*
41(2)	*Penalty for pollution of stream or well.*
43	*Penalty for contravention of provisions of section 24.*

PARAGRAPH 27
UNDER THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981
(14 OF 1981)

Section	*Description of offence*
37	*Failure to comply with the provisions for operating industrial plant.*"

374. All these provisions relating to offences under various Environmental Statutes have been placed in part A of the Schedule. Application of PMLA 2002 in respect of the aforesaid offences has to be seen in the light of Section 3 read with schedule as amended vide Amendment Act, 2012.

375. In ***A.K. Samsuddin vs. Union of India, Writ Petition No. 15378/2016*** **decided on 19.07.2016**, Kerala High Court said that the time of commission of the "scheduled offence" is not relevant in the context

of the prosecution under the Act. What is relevant in the context of the prosecution is the time of commission of the Act of money laundering. It has to be established that the money involved are the proceeds of crime and having full knowledge of the same, the person concerned projects it as untainted property.

376. In ***Smt. Soodamani Dorai vs. Joint Director of Enforcement, Writ Petition No.8383 of 2013*** **decided on 04.10.2018**, a Single Judge of Madras High Court observed that sub-stratal subject of the Act is to prevent money laundering and to confiscate proceeds of crime.

377. PMLA 2002 brings in a different kind of offence on the statute book. In ***Janta Jha vs. Assistant Director (2013) SCC Online (Odisha) 619***, High Court of Odisha held that even if an accused has been acquitted of the charges framed against him in Sessions Trial, a proceeding under PMLA 2002 cannot amount to double jeopardy where procedure and nature of proof are totally different from a criminal proceeding under IPC.

378. On the contrary in ***Rajeev Chanana vs. Deputy Director (2014) SCC Online (Delhi) 4889***, it was held by Delhi High Court that after acquittal of a person from a "Scheduled offence", trial for an offence under Section 3 of PMLA 2002 will not survive. Court said it is hard to imagine as to how a trial for an offence of money laundering can continue where the fundamental basis, i.e., the commission of a Scheduled offence has been found to be unproved.

379. Recently, Supreme Court has settled issue in ***Pavana Dibbur vs The Directorate of Enforcement, Crl. Appeal No. 2779/2023*** **decided on 29.11.2023** wherein it has held that the condition precedent for the

existence of proceeds of crime is the existence of a scheduled offence. It further says that if the prosecution for the scheduled offence ends in the acquittal of all the accused or discharge of all the accused or the proceedings of the scheduled offence are quashed in its entirety, the scheduled offence will not exist, and therefore, no one can be prosecuted for the offence punishable under section 3 of the PMLA as there will not be any proceeds of crime.

380. The question of simultaneous investigation by Police or CBI or any other Investigating Agencies in respect of schedule offences and Enforcement Directorate (hereinafter referred to as **'ED'**) under Section 3 of PMLA 2002 was considered by a Single Judge (Hon'ble S.P. Garg, J) of Delhi High Court in ***Rohit Tandon vs. Enforcement Directorate in Bail Application No. 119 of 2017*** **and** ***Crl.M.B. 121 of 2017***. In the judgment dated 05.05.2017, Court found that Delhi Police registered FIR under Section 420, 406, 409, 467, 468, 188 and 120-B on 25.12.2016 and very next date ED registered ECIR on 26.12.2016. Court said that presence of "Scheduled offence" is only a trigger point for initiating investigation under PMLA 2002. Act nowhere prescribes, if ED is debarred from conducting investigation under Sections 3 and 4 PMLA 2002 unless investigating agency concludes its investigation in the FIR or charge sheet is filed therein for commission of "Scheduled offence". The proceedings under PMLA 2002 are distinct from the proceedings of the "Scheduled offence". In the Investigation of FIR by Police, ED has no control. The proceedings under PMLA 2002 are not dependent on the outcome of the investigation conducted in the "Scheduled offences". More over to avoid conflicting and multiple opinions of court, Section 44 PMLA 2002 provides trial by Special Court in case of "Scheduled Offence" and offence under

PMLA 2002.

381. Against the judgment of Delhi High Court in ***Rohit Tandon vs. The Enforcement Directorate***, Appeal was filed in Supreme Court and judgment is reported in ***(2017) SCC Online SC 1304***. Supreme Court upheld, the order of High Court rejecting Bail. Then meeting further argument raised on behalf of Rohit Tandon that the incriminating material recovered, would not take the colour of proceeds of crime as there is no allegation or the prosecution complaint that un-accounted cash deposited by appellant was result of criminal activity, it was observed that the expression "criminal activity" has not been defined but very nature of the alleged activities of the accused referred to in the predicate offence are criminal activities. Court observed:

> *".... however, the stated activity allegedly indulged into by the accused named in the commission of predicate offence is replete with mens-rea. In that the concealment, possession, acquisition or use of the property by projecting or claiming it as untainted property and converting the same by bank drafts, would certainly come within the sweep of criminal activity relating to a "scheduled offence". That would come within the meaning of Section 3 and punishable under Section 4 of the Act, being a case of money laundering."*

382. In ***P. Chidambaram vs. Directorate of Enforcement (2019) SCC Online SC 1143,*** Court considered scheme of PMLA 2002, and observed that **money laundering is the process of concealing illicit sources of money and launderer transforming the money proceeds derived from criminal activity into funds and moved to other institution or transformed into legitimate asset**. It is realized world around that money laundering poses a serious threat not only to the financial system of the country but also to their integrity and sovereignty. **"Schedule offence" is a sine qua non for the offence of money laundering which would**

generate the money i.e., being laundered.

383. In the present case, when environmental norms were not followed, this resulted in commissioning of Scheduled offence and revenue earned by committing such crime is proceeds of crime as defined in PMLA 2002 and by showing it in accounts amounts to projecting or claiming it as untainted property. The entire activity is covered by Section 3 of PMLA 2002.

384. It appears that initially PMLA 2002 was enacted so as to cover activities of terrorists, illegal traffic in narcotics, enemies of the country etc., applying to a very limited number of statutes, Enforcement Directorate had been taking action under PMLA 2002 in a narrow sphere. It has forgot to take note of the fact that scope of PMLA 2002 has been enhanced or widened, a lot, at least after amendment Act of 2012 w.e.f. 15.02.2013. More than eleven years have passed but not a single action has been taken by Enforcement Directorate, against violators committing offences under environmental Statutes which have been included in the Schedule, part A of PMLA 2002. The offences under Environmental Acts, as such are non-cognizable but under PMLA 2002, offences are cognizable. Since Competent Authority has never resorted to proceed against violators of environmental Statutes despite committing offences thereunder, which are included in PMLA 2002, this inaction has encouraged polluters to continue violation with impunity. Parliament's intention of treating environmental violations as very serious offences is writ large from the fact that, offences under environmental laws as noticed above, have been included in Schedule, Part A of PMLA 2002 yet enforcement machinery has frustrated entire attempt. It is incumbent upon the Competent

Authorities regulating and enforcing PMLA 2002 to take action against such violators.

385. In view of our discussion, **issues IV in OA-I and OA-II are answered in the above manners and in affirmance i.e., against respondents**.

CONCLUSION:

386. In the light of the above discussions, OAs - I and II are partly allowed with the following directions:

(i) Agra Nagar Nigam is liable to pay environmental compensation of Rs.58,39,20,000/- and shall deposit the same with UPPCB within 3 months from today.

(ii) Mathura-Vrindavan Nagar Nigam is liable to pay environmental compensation of Rs.7,20,10,000/- and shall deposit the same with UPPCB within 3 months from today.

(iii) For subsequent period of continued violations, in the light of the discussion made above, UPPCB shall compute environmental compensation in the manner discussed above after giving due opportunity of hearing to the concerned parties.

(iv) It shall be open to the concerned Nagar Nigams to realise amount of environmental compensation from working agencies of STPs proportionately in accordance with law and after following such procedure as prescribed in law.

(v) UPPCB shall also take punitive action for committing offence of Section 24 r/w Section 43 of Water Act 1974, and River Ganga Order 2016 r/w Sections 15,16,17 and 19 of EP Act 1986

against concerned authorities etc., and initiate appropriate proceedings within 3 months.

(vi) The amount of environmental compensation shall be used for remediation/rejuvenation/restoration of environment in the Agra, Mathura and Vrindavan region on the basis of a rejuvenation plan which shall be prepared jointly by a Joint Committee comprising of CPCB, UPPCB and concerned District Magistrates.

(vii) Compliance Report shall be submitted by UPPCB and Joint Committee constituted above, as the case may be, before Registrar General of this Tribunal after expiry of the period mentioned above and if finds necessary, the matter may be placed before the Bench for further orders.

387. Copy of this judgment shall also be forwarded to Chief Secretary, State of UP, Additional Chief Secretary/Principal Secretary, Urban Development and Local Bodies, State of UP, CPCB, MoEF&CC, Ministry of Water Resources & River Development, Directorate of Enforcement Headquarter, New Delhi, Commissioners of Nagar Nigam, Agra, Mathura-Vrindavan, UPPCB and District Magistrates, Agra and Mathura by e-mail for information, necessary action and compliance.

PRAKASH SHRIVASTAVA,
CHAIRPERSON

SUDHIR AGARWAL,
JUDICIAL MEMBER

DR. A. SENTHIL VEL,
EXPERT MEMBER

April 24, 2024
Original Application No. 840/2022
With
Original Application No. 773/2022
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