

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(By Hybrid Mode)

Original Application No. 493/2022

In re : News item published in the Newspaper named, The Times of India dated 05.07.2022 titled **“Dead fish in Najafgarh drain, pollution could be to blame”**

WITH

Original Application No. 470/2022

Rao Satvir Singh &Anr.

Applicant(s)

Versus

Union of India &Ors.

Respondent(s)

Date of hearing: 30.11.2022

**CORAM: HON’BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON’BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON’BLE PROF. A. SENTHIL VEL, EXPERT MEMBER**

Applicant(s): Mr. Ravinder Yadav, Applicant in Person in OA 470/2022
Mr. Akash Vashishtha, Advocate for Applicant in E.A 16/2019

Respondent(s): Mr. Narender Pal Singh & Ms. Urvashi Bhardwaj, Advocates for DPCC
Mr. Rahul Khurana, Advocate for HSPCB & MCG with Mr. Sandeep Singh, RO, HSPCB
Mr. Rahul Pratap, Advocate for MoEF & CC

ORDER

1. This order will deal with Original Application No. 493/2022 and Original Application No. 470/2022.

2. In O.A No. 493/2022, the Tribunal took initiative *suo motu* proceedings in the light of media report of death of fishes in Najafgarh drain in Delhi due to heavy pollution. The Tribunal sought a factual and action taken report from a joint Committee of CPCB, DPCC, DJB, Irrigation and Flood Control Department, Govt. of Delhi and District Magistrate, South West Delhi.

3. In pursuance of above, DPCC has filed a status report to the effect that joint Committee met and decided to take samples from the drains at various locations. Samples were taken and analysed and were found non-compliant. Recommendation in the report is for preventing pollution of the drain. The results of the samples taken have been given as follows:-

“Table 2: Analytical results of sampling locations (Najafgarh drain) monitored on 1/9/2022

S. No.	Sampling Location	pH	COD (mg/L)	BOD (mg/L)	TSS (mg/L)	NH ₃ -N (mg/L)	PO ₄ -P (mg/L)
General Standards for Discharge of Environmental Pollutants under Schedule -VI Of the Environment (Protection) Rules 1986		5.5-9	250	30	100	50	5
1	S1: Leg 1 Drain/ (Palam Vihar Drain)	7.1	165	62	129	27	0.34
2	S2: Leg-2 Drain/ (Dharampura Drain)	6.9	244	85	214	26	0.11
3	S3 I: Leg-3 Drain / (Dhanwapur STP Drain, Gurugram)	7	343	97	256	20	0.74
4	S3 II: Badshahpur Drain	7	268	91	204	16	0.56
5	S4: Najafgarh Drain at Galibpur Bridge	7.4	56	11	51	03	0.06
6	S5: Najafgarh Drain at Ghumanherra Bridge	7.4	58	11	64	03	0.06
7	S7: Najafgarh Drain at Jhatikara Bridge	7.3	131	33	97	11	0.30
8	S8: Najafgarh Drain at Chhawla Bridge	7.3	135	42	90	17	0.46

4. Thereafter, a further meeting was held and considering the water quality depicted in the sample, following findings, conclusions and recommendations have been made:-

“3.0 FINDINGS:

About Najafgarh Drain and Jheel

The Najafgarh Drain is old course of Sahibi River Basin which starts from Jaipur district of Rajasthan, draining areas of Haryana as Drain No.8 and enters Delhi at Dhansa and cuts across the heart of Delhi flow over 57 KM of length before it outfalls into the river Yamuna at Wazirabad, Delhi. The drain in its 1st phase in Delhi, flows through un-urbanized area in a length of 18 KM from Dhansa to Chhawala and thereafter runs through urbanized area in length of 39 km before it outfall in River Yamuna. It's catchment area not only for 2/3 of discharge of Delhi but beyond the state boundary i.e. from Haryana and Rajasthan. Najafgarh Drain is basically a storm water drain but due to rapid urbanization in catchment area particularly in Delhi & Gurugram, it not only carries storm water but also carries untreated sewage water containing both Biological & Chemical pollutants.

*Total 126 sub-drains, carrying discharges from different localities of Gurugram and Delhi, falls into Najafgarh drain from Dhansa to its outfall into river Yamuna. Outfalling drains carries huge quantity of silt, sewerage, industrial effluent, MSW, cow dung, malba etc along with discharge into Najafgarh drain **(Line Diagram of Najafgarh Jheel and Najafgarh Jheel Map in Annexure-1).***

Based on the joint inspection of the committee dated: 01.09.2022, observations are given below:

- I. Out of 08 monitoring locations of Najafgarh drain, none was complying with the General Standards for Discharge of Environmental Pollutants under Schedule -VI of the Environment (Protection) Rules 1986 w.r.t parameter BOD, except two location which are S4: Najafgarh Drain at Galibpur Bridge and S5: Najafgarh Drain at Ghumanherra Bridge.*
- II. High concentrations of organic and chemical pollution was found discharging from three drains (Leg-1, Leg-2, Leg-3) from Haryana discharging heavy pollution load w.r.t TSS which eventually contributes to Najafgarh Jheel.*
- III. Leg-3 drain S3 I (i.e. Dhanwapur STP drain, Gurugram) sample was found most polluted among all drains samples followed by Leg-3 drain S3 II (Badshahpur Drain) having high content of COD, BOD and TSS.*
- IV. BOD of Najafgarh Jheel were not complying with Primary Water Quality for Outdoor Bathing notified under the E(P) Rules, 1986.*

- V. *Silting in Najafgarh Jheel due to addition of wastewater from Haryana in the form of treated/untreated industrial and domestic wastes.*
- VI. *Agricultural, Pisciculture and dairy farms activities in the catchment area of Najafgarh drain were observed.*
- VII. *There is a possibility of surface run off from the cultivated lands during the rainfall before the instance of fish mortality.*

*Earlier after the news published on 02.07.2022 regarding massive fish kill in Najafgarh Jheel/Drain, DPCC has carried out sampling and testing immediately on 03/07/2022 and 04/07/2022, the test results received showing alarming pollution level prevailing at the time. The test results at various locations are enclosed in **Annexure-VII**.*

Based on the joint inspection of the committee constituted by Wetland Authority of Delhi dated: 03.07.2022, following observations are given:

- I. *Sampling was done at 18 locations of drains which includes 7 small drains discharging between Dhansa regulator to Ghummhera bridge (U/s of Najafgarh Jheel) in the region of Delhi and four major drains Leg-1, Leg-2, Leg-3 and Drain No.8 of Haryana. Analysis result enclosed in **Annexure-VIII**.*
- II. *Fish mortality was observed in the Najafgarh drain between Dhansa Regulator and Ghummanhera bridge. The mortality was observed in Tilapia fishes which are mainly fresh water species according to the Fisheries Department representatives.*
- III. *Drain L-3(part-1 and part-2), No.8 (from Haryana) and Galibpur village(RD 2100) location had high amount of Total Suspended Solids out of all 18 sampling locations.*
- IV. *16 out of 18 sampling locations were not complying with the General Standards for Discharge of Environmental Pollutants under Schedule -VI of the Environment (Protection) Rules 1986 w.r.t parameter BOD. Only sampling locations Dhansa Regulator -1 and Dhansa Regulator-2 were complying.*
- V. *9 out of 18 sampling locations were not complying with the General Standards for Discharge of Environmental Pollutants under Schedule -VI of the Environment (Protection) Rules 1986 w.r.t parameter COD.*
- VI. *Leg-3 drain (part 1 and part 2) both were found to be most polluted among all samples in respect with COD, BOD & TSS which shows high amount of pollution in the drain.*
- VII. *COD and BOD levels of Najafgarh Jheel were also found not complying with Primary Water Quality for Outdoor Bathing notified under the E(P) Rules, 1986 which may be due to the pollutant discharge from Leg-3 and Leg-2 (Haryana Drains). Analysis result enclosed in **Annexure-IX**.*

4.0 CONCLUSIONS:

- I. Fish mortality occurred in between Dhansa Regulator and Ghummanhera bridge location on the Najafgarh drain.
- II. Heavy rain occurred on the day before the instance of fish mortality may have caused sediment churning which choked the gills of fishes. During/After heavy rainfall the Dissolved Oxygen also gets depleted which leads to low levels of D.O. causing ecological hypoxia which led to suffocation of the fresh water fishes which may have resulted in mortality of fishes (As per Delhi Pollution Committee analysis of samples taken on 2nd July 2022).
- III. The rainfall occurred one day before the instance, STP's of Haryana along the upstream catchment area might have discharged the untreated waste water from the drains contributes to the Jheel which resulted in addition of high pollution levels in the Najafgarh Jheel.
- IV. Agricultural activities also are being done nearby Jheel & agriculture runoff may finds its way into Najafgarh Jheel.
- V. **Washout of Sludge/ Other Industrial Soild Wastes from Haryana and Delhi:** Washout of deposited sewage sludge and other toxic chemicals in the bottom of the drain during heavy rainfall also affected the water quality of Najafgarh Jheel.
- VI. As per IF&C Deptt. Of Delhi, Backflow occurred in the Najafgarh Drain from Jheel to Dhansa regulator which the Upstream region of the Jheel. High amount of flow was observed from the three drains (Leg 1, Leg 2, and Leg 3) carrying heavy discharge. Back Pressure Phenomenon in the Najafgarh Drain: The gradient of Najafgarh drain is very low (reported to be 1 m in 28 km). During heavy rainfall, back-pressure phenomenon is observed in Najafgarh drain (that is water moves towards Dhansa Regulator. Therefore, the wastes from L1, L2 and L3 drains carrying pollution moved upstream.
- VII. As seen in the above analysis reports, high values of TSS in Leg 1, Leg 2, and Leg 3 could have choked the gills of fishes as after rain, high turbulence and huge amount of sediments occurs because of Run-off water.

5.0 RECOMMENDATIONS:

- I. An independent monitoring mechanism need to be established for real time monitoring of pollution level in Najafgarh Drain and its subsidiaries at inter-state borders of Delhi and Haryana.
- II. To ensure 100 % treatment of generated sewage, industrial effluent and wastes, by providing adequate infrastructure on ground in a time bound manner in the state.
- III. Source apportionment including gap analysis study by the Haryana State Departments (Gurugram Metropolitan Development Authority and Haryana State Pollution Control Board) to identify the Pollutant Load in three Drains and resolve them respectively.

- IV. *Haryana State Departments (Gurugram Metropolitan Development Authority and Haryana State Pollution Control Board) to enhance monitoring frequency of Drains, Industries, STPs, CETPs and strict enforcement of discharge norms in the State (Gurugram and Manesar region).*
- V. *Haryana State Pollution Control Board (HSPCB) and Gurugram Metropolitan Development Authority should carryout random inspections and to ensure compliance to environmental rules of water polluting industries, Sewage Treatment Plants (STPs), Common Effluent Treatment Plants (CETPs) falling in the catchment of Drain and Jheel.*
- VI. *Irrigation & Flood Control Department, GNCTD to ensure cleaning/desilting of Canals prior to the monsoon season apart from periodic Dredging & De-weeding.*
- VII. *Irrigation & Flood Control Department, GNCTD to desilt drain to provide a required gradient to prevent backflow in drain in future.*
- VIII. *Gurugram Metropolitan Development Authority to ensure protection at Najafgarh Jheel by building up Bunds and should install silt traps where required.*
- IX. *If any illegal Dumping of Waste water, Septic tank waste noticed then action should be taken by concerned authorities.*
- X. *Promote Organic Farming in the areas, which will prevent run off into the Drain and Jheel.*
- XI. *Unprotected banks of Najafgarh drain and Jheel should be lined or suitable measure should be taken for bank protection.*
- XII. *Implementation and Execution of Environmental Management Plan (EMP) of Najafgarh Jheel (Already in pursuance of Hon'ble NGT(PB) order in EA No. 16/2019)."*

5. In O.A No. 470/2022, same issue was raised which covered pollution from Gurgaon in Haryana also. Report was sought from a joint Committee of CPCB, State PCB, Commissioner Municipal Corporation, Gurugram and District Magistrate, Gurugram to ascertain whether and to what extent the Gurugram pollution was responsible for the pollution of Najafgarh drain at the time of entry in Delhi. Reference was made to the earlier order dated 21.01.2022 in E.A No. 16/2019, *Indian National Trust for Art & Culture Heritage v. Govt. of NCT of Delhi & Ors.*, which required preparation of Environment Management Plan (EMP) to prevent pollution of Najafgarh lake which was a transboundary water body partly

in Delhi, partly in Haryana. In the said order, the Tribunal had noted the directions of the MoEF&CC constituting Inter-Ministerial Expert Group.

The Tribunal had directed as follows:-

“11. In view of the above, further action of preparing integrated EMP by the MoEF&CC be taken and till it is done, EMPs prepared for rejuvenation and protection of the lake be enforced by the State of Haryana and the NCT Delhi. The EMPs of Delhi and Haryana do not make specific provision for budget which is necessary except saying that provision will be made immediately making of such provision may be ensured by the Chief Secretaries of Delhi and Haryana. Wetland (Conservation and Management) Rules, 2017 be strictly followed alongwith the Guidelines issued by MoEF&CC on the subject. Further, direction of the Hon'ble Supreme Court in Balakrishnan & Ors. v. Union of India & Ors.¹ and order of this Tribunal dated 25.11.2021 in O.A. No. 351/2019, Raja Muzaffar Bhat v. State of Jammu and Kashmir & Ors. to the extent applicable be complied. It will be open to any party to make representation to the respective Wetland Authorities. If any grievance survives, it will be open to the aggrieved party to take further remedies in accordance with law. The National Wetland Authority needs to monitor progress of implementation of action plans with both the States i.e. Haryana and Delhi through their respective State Wetland Authorities and resolve inter-state dispute, if any.

12. Action taken/status reports as on 31.07.2022 may be filed by the concerned Wetland Authorities with the Registrar General of this Tribunal 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, by 15.08.2022, who may, if necessary, place the matter before the Bench, for any further direction.”

6. The Tribunal also noted order of the Tribunal dated 27.01.2021 in OA No. 06/2012, *Manoj Mishra vs. Union of India & Ors*, relating to rejuvenation of river Yamuna as one of major sources of pollution of Yamuna is pollution of Najafgarh drain which finally joins Yamuna. Further reference was made to order dated 19.4.2022 in OA No. 887/2019, *Sukhwanti vs. State of Haryana & Ors.*, wherein status of water pollution in Gurugram has been noted. It was found that there is a gap of 86 MLD in generation and treatment of sewage. It was also noted that about 218 MLD of sewage through three STPs is being discharged into Najafgarh drain. Also, the order dated 11.07.2022 in OA 493/2022 was also noted. Directions in the said matters also need to be complied in the interest of environment and public health.

7. Report of the Haryana State PCB has been filed on 29.11.2022 acknowledging discharge of untreated sewage from the Gurugram Metropolitan Development Authority (GMDA). However, it is stated that some remedial measures have been taken. Waste water has been intercepted for treatment but deficiencies remain. GMDA has been asked to take remedial action and compensation has also been levied for non-compliance. Operative part of the report is reproduced below:-

“The observations of the Committee, considering the documents, reports and field visit, are summarised below:-

- I. *The Storm Water Drainage System of Gurugram comprises three drains, namely Leg-I, II & III eventually forms open water stagnant which outflows into Najafgarh drain. The master drainage system of Gurugram is maintained by the Gurugram Metropolitan Development Authority (GMDA). The Leg-I starts from Sikandarpur village Gurugram and ends near sector 115, Gurugram, Leg-II starts from sector 27, 43 dividing road near Super Mart Gurugram via Huda city centre ending near Dharampur Village, sector 107, Gurugram and the Leg-III starts near Ghata village sector 58 via Vatika chowk Sohna road and ends near Dhankot and Kherkimajra Village. All these 3 legs/drains lead to open stagnant water which outflows into Najafgarh drain and thus flows to Delhi. The map showing the drainage system is as **Annexure-B**.*
- II. *The untreated discharge in all three legs is estimated to be 43.4 MLD out of which 6.6 MLD is in Leg-I, 6.75 MLD in Leg-II & 30.05 MLD in Leg-III. The information related to discharge of sewage in all three legs was obtained from GMDA. It reveals that total number of locations from where waste water falls into leg-I is 28 out of which discharge from 17 locations (21.15 MLD) have been intercepted for treatment. Similarly locations from where waste water falls into leg-II is 47 out of which discharge from 41 locations (40.44 MLD) have been intercepted for treatment and locations from where waste water falls into leg-III is 93 out of which discharge from 61 locations (75.4 MLD) have been intercepted for treatment. Report received from GMDA is with detail of all points, estimate discharge, concerned responsible agency and estimated date for diversion enclosed as **Annexure-C**.*
- III. *The water quality monitoring of all the three legs (storm water drains) is conducted by HSPCB, on a monthly basis at 03 points each for Leg-I& II and at 09 points for Leg-III. The complete report is attached as **Annexure-D**.*
- IV. *In Gurugram City the master drainage system including Leg-I, Leg-II & Leg-III and treatment of the Waste domestic effluent is maintained/catered by Gurugram Metropolitan*

Development Authority. Total five STPs have been provided at two different locations namely, Behrampur & Dhanwapur to cater the treatment of sewage generated in Gurugram City. These STPs are maintained and operated by GMDA. The STPs at Behrampur having capacity of 120 MLD and 50 MLD and at Dhanwapur STPs having capacity of 100 MLD, 68 MLD and 50 MLD respectively. Total capacity of the treatment system is 388 MLD against which 330 MLD of sewage is received for treatment. The following information and details of STPs are provided by GMDA -

(i) 120 MLD STP at Behrampur is based on Sequencing Batch Reactors (SBR) technology and has 30 MLD tertiary treatment facilities. The process for installation of the tertiary system for the remaining 90 MLD is under tendering.

(ii) 50 MLD STP at Behrampur is based on Activated Sludge Process (ASP) technology and has installed tertiary treatment for the entire 50 MLD.

(iii) 100 MLD STP at Dhanwapur is based on ASP technology and has installed only 25 MLD tertiary treatment facilities.

(iv) 50 MLD STP at Dhanwapur is based on SBR technology and has installed tertiary treatment for the entire 50 MLD.

(v) 68 MLD STP at Dhanwapur is based on SBR technology and has installed tertiary treatment for the whole 68 MLD.

The detail of the parameters is attached as **Annexure- E**.

It is observed that all the STPs are not achieving BOD 10 mg/I limit always and 100 MLD STP Dhanwapur, Gurugram is not achieving even the BOD 30 mg/I limit.

- V. In addition to these there is one CETP (Combined Effluent Treatment Plant) of capacity 55 MLD operating at Manesar for the industrial units located at IMT Manesar. The CETP is treating the domestic effluent as well as industrial effluent generated by these units and is maintained and operated by GMDA and HSPCB is monitoring the same on monthly basis and Analysis Report for last Six months is attached as **Annexure-F**. The data evaluation has suggested that the treatment plant is complying with the standards stipulated by the SPCB.

Usage of Treated Waste Water -

Presently, 263 MLD treated waste water is available at STPs & CETP i.e. 80 MLD at STP Behrampur and 138 MLD at STP Dhanwapur & 45 MLD at CETP Manesar. Out of which, 117 MLD treated waste water is being used for various purposes i.e. horticulture, industrial usage, development of water bodies and agriculture.

A) At Gurugram

- i) For Horticulture purposes = 25 MLD

ii) Textile Industries Sec -34 =	5 MLD
iii) Construction purposes by Builders / Developer =	9 MLD
iv) Development of water bodies and foresting purposes =	3 MLD
Sub Total =	42 MLD

(B) For Irrigation purposes

Usage of TWW for agriculture purposes in Gurugram& Jhajjar Distt. villages by Irrigation Deptt. through 188 MLD

STP Channel = 75 MLD

Grand Total = **117 MLD**

VI. The committee has also observed that the entire effluent carried by three drains (leg-I, II and leg-III) is getting accumulated near the confluence with Najafgarh drain fairly due to un-channelized flow. The accumulation of untreated sewage, obviously has caused water logging into the area. It is estimated that about 58 acres of land was under submergence during 1990 and this has gone up to a maximum of 5678 acres in 2021. (An increase of 100 times in nearly 30 years) Map is attached as **Annexure-G**.

- VI. The HSPCB has issued notice to GMDA for non-compliance of sewage treatment plant due to inadequate treatment and discharging untreated sewage into the drains, which are not designed to carry the sewage, thereby causing pollution and may have impacted the groundwater aquifers. Further, the HSPCB has initiated action for prosecution against GMDA.
- VII. Presently as per GMDA the capacity of STP's is sufficient to treat the present discharge and keeping in view of the floating population, seasonal variation in water consumption, mixing of surface run off with sewage in rainy days in Gurugram and to bridge the gap between existing capacity and future increase in waste water generation, the following STP's are under construction by the GMDA:

Location of the STP	Capacity of the STP	Present status
Jahajgarh, Gurugram	20 MLD	Civil Work completed.
Bajghera, Gurugram	02 MLD	Civil Work completed
Manesar, Gurugram	25 MLD	Civil work started
Behrampur, Gurugram	100 MLD	Under estimate preparation stage
Dhanwapur, Gurugram	100 MLD STP	Under tendering process

Further, HSPCB has imposed Environmental Compensation of Rs. 2.6 Crore on Municipal Corporation Gurugram for discharging untreated effluent in to Leg I and II. Further HSPCB is imposing the Environment Compensation to the tune of Rs. 5 Lakh per drain per month basis.

The said report is being filed by Regional Officer, HSPCB, Gurugram Region South on behalf of Haryana State Pollution Control Board being the nodal agency in the said case to apprise the Hon'ble NGT about the present progress of the case. The committee constituted by the Hon'ble NGT in the said case requires more information from GMDA (being the nodal agency for treatment of domestic waste water and its management), analysis & evaluation of the data. Accordingly a complete report with recommendations will be submitted before the Hon'ble National Green Tribunal.”

8. From the above, it is seen that pollution is being discharged in Gurugram as well as in Delhi and remedial action so far taken is inadequate. The problem remains which has to be remedied on war footing.

9. Since, it is pointed out by learned counsel for the parties that updated status has to be filed and the issue is also scheduled to be considered by the Tribunal in O.A No. 562/2022, *Ishika v. Govt. of NCT of Delhi* on 07.12.2022, Original Application No. 470/2022 may now be listed for hearing on 07.12.2022 along with connected matters.

Original Application No. 493/2022 will stand disposed of to avoid duplication, subject to the issue being considered in connected matters.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Prof. A. Senthil Vel, EM

November 30, 2022
Original Application No. 493/2022
With Original Application No. 470/2022
AB