

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

Original Application No. 200/2014
(C.W.P. No. 3727/1985)
(I.A. No. 340/2022)

M.C. Mehta

Applicant

Versus

Union of India & Ors.

Respondent

Date of hearing: 11.09.2023

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

Appellant: Ms. Katyayni, Adv. for Applicant
Respondent: Ms. Garima Prasadh, AAG with Ms. Priyanka Swami, Adv. for the
State of UP
Mr. Pradeep Misra & Mr. Daleep Dhyani, Adv. for UPPCB
Mr. Gigi C. George, Adv. for NMCG

ORDER

1. The issues relate to prevention and control of pollution of River Ganga. The Tribunal vide order dated 28.08.2023 had clarified that the matter will be taken up State/District wise i.e issue relating to Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal will be taken up separately.

2. On 05.09.2023 Tribunal had taken up the issue relating to State of Uttarakhand and had considered the River Ganga (Rejuvenation, Protection and Management) Authorities order 2016 in detail. In terms of clause 53 of the order District Ganga Protection Committee is to be constituted in each of the District. The order also takes note of the

functions and power of the District Ganga Protection Committee, Designation of Nodal Officer, Preparation of Plan, etc.

3. It has been pointed out to us that there are following 27 Districts on the main stream of River Ganga in the State of Uttar Pradesh:-

S. No.	Name of District
1	Bijnor
2	Muzaffar Nagar
3	Meerut
4	Hapur
5	Amroha
6	Bulandshahar
7	Aligarh
8	Budaun
9	Kasganj
10	Shahjahanpur
11	Kannauj
12	Farrukhabad
13	Kanpur Nagar
14	Hardoi
15	Unnao
16	Raebareli
17	Pratapgarh
18	Fatehpur
19	Kaushambi
20	Prayagraj
21	Mirzapur
22	Varanasi
23	Ghazipur
24	Ballia
25	Chandauli
26	Bhadohi
27	Sambhal

4. There is a dispute between the State of U.P. and NMCG as to whether Muzaffar Nagar and Aligarh fall on the main stream or on the Tributary of River Ganga. Both the Counsels are directed to clarify the position in this regard on the next date.

5. River Ganga has a long stretch through which it passes in the State of Uttar Pradesh and there are number of Districts involved. It has been pointed that the entire stretch of River Ganga in the State of UP has been divided into two phases as under:

- i) Phase – I : From Bijnor to Unnao
- ii) Phase – II : From Unnao to Balia

6. It has been pointed that District Level Committees have been notified for all the Districts falling in the main stream of River Ganga and also on the Tributaries of River Ganga flowing in the State of Uttar Pradesh. Learned Counsel appearing for the Applicant has given Town wise details of drains/River/Tributaries on the River Ganga as under:

LIST OF DRAINS IN UP DISTRICTS OF THE GANGA RIVER (on the Ganga River)

City/ town	Drain/ River/ Tributaries
Bijnore	Malan R. Nazibabad drains (4) Banganga Hemraj drain (joined by Bijnore drain) Choiya River
Gajraula	Bagad river
Garh	Garh Drain Fuldhera drain
Bulanshahar	Kaali nadi Neem Karwan nadi
Meerut	Abu Nala 1 Abu nala 2 Slaughter house (odean drain) Kharauli nala City drain Choiya River (nala) Kaali nadi
Moradabad	Lalbagh drain Jigar colony Nawabpura 1 drain Nawabpura 2 Daheria Kudaghar drain Jhabbu ka nala

<i>City/ town</i>	<i>Drain/ River/ Tributaries</i>
	<i>MIT drain</i> <i>Ramganga</i>
<i>Anupshahr</i>	<i>Anupshahr I</i> <i>Anupshahr II</i>
<i>Gajraula & Babraula</i>	<i>Mahavan River</i>
<i>Badaun</i>	<i>Badaun drain</i> <i>Sot River</i>
<i>Kansganj/ Kannauj</i>	<i>Kaali Nadi</i>
<i>Farukhabad</i>	<i>Bhairoghat drain/Tokaghat Nala</i> <i>Dhinapur drain</i> <i>Hathikhana Nala-Fatehgarh</i> <i>Bargadiya Ghat drain</i> <i>Cantt Nala</i>
<i>Bithoor</i>	<i>Noon River</i>
<i>Kanpur</i>	<i>Dabka Nalla-1 (Kachha nala)</i> <i>Dabka Nalla-2 (Pakka nala)</i> <i>Dabka Nalla-3 (Pakka nala)</i> <i>Shetla Bazar (Kachha nala)</i> <i>Wazidpur Nalla</i> <i>Satti Chaura</i> <i>Golaghat Nala</i> <i>Bhagwatdas Nala</i> <i>Sisamau Nala</i> <i>Permiya drain</i> <i>Ranighat drain</i> <i>Sisamau</i> <i>Tefco Nala</i> <i>Parmarth drain</i> <i>Muir drain</i> <i>Police line drain</i> <i>Jail drain</i> <i>Budhiya ghat</i> <i>Airforce nala</i>
<i>Unnao</i>	<i>Loni drain</i> <i>City jail drain</i> <i>Kalyani nadi</i> <i>Sai nadi</i> <i>Loni nadi</i> <i>Behta nadi</i>
<i>Fatehgarh</i>	<i>Arihari drain</i> <i>NTPC drain</i> <i>Pandu River</i> <i>Rind river</i> <i>Noon river</i>
<i>Raibareilly</i>	<i>Sai river</i> <i>Loni river</i>
<i>Prayagraj</i>	<i>Rasulabad-1 (Pakka nala)</i> <i>Rasulabad-2 (Pakka nala)</i> <i>Rasulabad-3 (kuchha nala)</i>

City/ town	Drain/ River/ Tributaries
	<i>Rasulabad-4 (kuchha nala)</i> <i>Nehru drain</i> <i>Kodar drain</i> <i>Ponaghat drain</i> <i>Solari drain</i> <i>Maviya drain</i> <i>Mugalaha drain</i> <i>Mcferson lake</i> <i>Sasur khaderi river</i> <i>Loni</i> <i>Naina nadi</i> <i>Seoti nadi</i> <i>Gorma nadi</i> <i>Seepage</i> <i>Ahiyari/ NTPC drain</i> <i>Sadananda ashram</i> <i>Chuhara mandir drain 1</i> <i>Chuhara mandir drain 2</i> <i>Arail drain</i> <i>Sasurkhaderi drain</i> <i>Mehndauri drain</i> <i>Jhusi drain</i> <i>Chhatnag drain</i> <i>Mnnaiya drain</i> <i>Uta kila drain 1& 2 (into manshaita river)</i> <i>Triveni marg nala 1& 2</i> <i>Ganda nala Raiyapur (into daur river)</i>
<i>Sant ravidas nagar</i>	<i>Chauri drain</i> <i>Barbaspur drain</i>
<i>Mirzapur</i>	<i>Ghore Saheed drain</i> <i>Khandwa drain</i> <i>Chunar tikaaur drain</i> <i>Malhaniya drain</i> <i>Patengra drain</i> <i>Parashuram ghat</i> <i>Kachahari Drain</i> <i>Balughat Drain, Chunar</i> <i>Barahimiliya Drain</i> <i>Baswariya Drain</i> <i>Oliyar Drain</i> <i>Koniyaghat Drain</i> <i>Narghat Drain</i> <i>Lohandi (to Ojhala river)</i> <i>Tekur nagar drain 1 & 2</i> <i>Pashuchikitsalaya drain</i> <i>Nagar palika drain</i> <i>Adh nadi</i> <i>Belan nadi</i> <i>Bakhar nadi</i> <i>Barhi nadi</i> <i>Kehanjua nadi</i> <i>Seoti nadi</i> <i>Pahiri nadi</i> <i>Jargo nadi (Bharatpur kabristan drain)</i>

<i>City/ town</i>	<i>Drain/ River/ Tributaries</i>
<i>Varanasi</i>	<i>Rajghat drain Nagwa drain Bhaisasur drain Baluaghat Ramnagar drain Varuna River Assi River Jargo nadi Shivala drain Lalita ghat Jalasen ghat Manikarnika ghat Sankatha ghat Mehta ghat Ram ghat Panchganga ghat Brahma ghat Lal ghat Trilochan ghat Shakti ghat Salotri ghat Hanuman ghat</i>
<i>Ghazipur</i>	<i>Beso river Mangal Jauharganj Rajmahal ghat Malhiya basti Mahavir ghat Sangat ghat Pakka ghat Budhe Mahadev ghat Kot ghat Railway drain Kanpuimai drain Kankarwa Gorwa drain Adarsh bazar drain Pear nagar Gora bazar drain Khirki ghat DM Banglo Afeem factory colony Sai mandir Naupura Dadri ghat Collector ghat Maksud ghat Rul mandi drain Samshan Ghat Mahala Basti Harizen basti Stimer ghat Chetnat ghat Anzahi ghat</i>

<i>City/ town</i>	<i>Drain/ River/ Tributaries</i>
	<i>Their bazar</i> <i>Posta ghat</i> <i>Mugalpura</i> <i>Gangi</i> <i>Karamnasa</i> <i>Gomti</i> <i>Dhansoi</i> <i>Tons</i>
<i>Ballia</i>	<i>Kathar Nala</i> <i>Surha taal</i> <i>Ghaghara river</i> <i>Sarju nadi</i> <i>Bhagar nadi</i> <i>Lakda nadi</i>

7. The key issues which have been pointed out by learned counsel for the Applicant in the written note given today involving the pollution of River Ganga in the State of Uttar Pradesh are as follows:

KEY POLLUTION/ ISSUES

<i>SN</i>	<i>Pollution issues</i>	<i>Observation</i>
1.	<i>Surface water contamination (through Drains)</i>	<i>The Ganga River alongwith its tributaries have highly polluted in Segment B, phase 1 and 2. Most of the tributaries, such as, Kali east, Varuna, Assi, Gomti etc have been turned into drains with least sign of ecological life or flow).</i> <i>Sources:</i> <i>Domestic drains- carrying raw, partially treated or treated sewage into the river.</i> <i>Mixed drains- such drains are a challenge for the State authorities to remediate as they carry not only raw sewage but also industrial effluents and solid waste (tonnes of plastic)</i> <i>Intake of clean water/ river water for dilution of sewage and industrial effluents at STPs and CETPS.</i> <i>Plastic and other solid waste, raw sewerage, industrial effluent, bio medical waste, construction- demolition waste, no flow of clean water etc.</i>

SN	Pollution issues	Observation
		STPs- under performance/ non- utilisation, non compliance and absence of STPs at many places in the catchment. Not all households are yet connected with the interception/ treatment drain. Some STPs bypass additional sewage into the river directly.
2.	Pathogenic and organic pollution	This segment has severely high pathogenic pollution- i.e. Total Coliforms (TC) & Faecal Coliform (FC), organic matter as reflected through Biochemical Oxygen Demand (BOD) and salinity as reflected through conductivity. This may give rise to water borne diseases (which can already be seen in many areas, for instance River kali east)
3.	Ground water contamination	Source- Seepage from polluted surface water i.e. the rivers/ lakes, leachate from municipal illegal waste dumps (unsegregated waste includes hazardous chemicals, metals, plastic and even bio medical waste). For instance, ground water pollution has been impacting people's health in villages in the catchment of Kali east, Kanpur dehat etc.
4.	Industrial effluents	This segment has vast and varied types of industries that fall in the category of GPI and WPI (eg. slaughter houses, meat processing, chemical, pharmaceutical, refinery, glass industry, tanneries, textile, dyeing, paints and oils, distilleries, sugar mills, Agro based, food processing, thermal power plants, electro plating etc) Untreated/ partially treated or diluted industrial effluents ladened with harmful chemicals and heavy metals are discharged into industrial drain and domestic/ mixed drains that finally meet River Ganga at confluence point. This is not only a source of river pollution but also ground water and soil contamination that has adverse health impacts. Non compliance or underperformance of CETPs.
5.	Agro-based pollution	High pesticide (insecticides, herbicides etc) application along the river basin agricultural

SN	Pollution issues	Observation
		fields led to the bioaccumulation of these residues in the ecosystem through several means. This not only polluted the river water through run off, but contaminates the soil and ground water in the area of usage, thereby impacting food chain, human health and the ecosystem. Since, the topography and soil profile of the Ganga basin (downstream of Bijnor) is most suited for Agriculture (with the abundance of land, irrigation water and extensive canal networks), the entire basin (in catchment of all tributaries and canals) is extensively using chemicals to increase the harvest.
6.	Treated discharge from STP/ CETP	Use of treated water from STP and CETP (for irrigation, reuse in industrial units etc) is yet to be implemented. With most of the drains still finding its way into the main Rivers, the surface water pollution continues unabated.
7.	Biomedical waste	Towns like Delhi, Agra, Meerut, Kanpur, Varanasi, Moradabad, Lucknow etc. have emerged as centres for health care facilities. Biomedical waste disposal requires CBWTF for proper treatment and disposal of such waste.
8.	Hazardous waste dumping	Hazardous waste from industries, tanneries, health facilities etc are (at some places) dumped mindlessly in open areas without proper disposal mechanism. This leads to seepage/ leachate of chemicals into the soil/ goes into water or streams. For instance- Chromium IV disposal at Kanpur dehat (Khanchandpur and rania) since 1975.
9.	MSW/ legacy waste disposal	In almost every drain and rivers (flood plains) in this segment, there is presence of solid waste that chokes the whole system. Apart from this, the legacy waste mounds in big cities (eg. Delhi, Meerut, Ballia etc) also pose a threat for water pollution through leachate and seepage of highly toxic chemicals into the ground water table.
10.	Ecological flow	Most rivers in lean and dry seasons have negligible flow and are noted to be carrying toxic effluents only, thereby devoiding them of any aquatic life or microorganisms. This adversely

SN	Pollution issues	Observation
		impacts the natural cleaning mechanism of the river. <i>Bacteriophage in Ganga River-</i> scientists documented the "self-cleansing and special healing properties" of Ganga water and identified bacteriophage as the reason behind the same. Bacteriophages are viruses that kill bacteria. In fact, some of the early studies on Ganga water by British and French microbiologists introduced the phage virus to the world. The river is the most pristine in the first 100-200 km (upstream of Haridwar) while the self-cleansing properties diminish in the middle and lower stretches, with increased human activities leading to a rise in pollution load. The high bacterial load doesn't allow the bacteriophage to overpower the bad ones. ** NMCG has commissioned a projected (through NEERI) to study this property in rivers. https://www.deccanherald.com/india/scientists-take-a-deep-dive-to-get-to-the-bottom-of-ganga-mystery-1180177.html
11.	Flood plain zoning/ demarcation and encroachment removal	Segment B, Phase 1& 2 lies in the densely populated stretch of the Ganga River basin. At many places, the river islands can be seen encroached and used for farming. Houses and hotels have cropped up in the floodplains. Floodplain notification, demarcation and removal of encroachment maybe undertaken for timely restoration of the damaged river land.
12.	Tributaries identified as drains (character of river changed permanently)	The names/ identification of tributaries has been permanently changed to be addressed as Drains/ nallas. For eg., chhoeya river, sahibi river (Najafgarh drain), Assi river (known as nalla) etc. This practice must be checked and rivers, howsoever polluted, must never be robbed of their identity.
13.	Mining	Unregulated and illegal sandmining can be seen in noticed in the basin of River Ganga, Yamuna, Hindon, Gomti, Sone etc.

SN	Pollution issues	Observation
		<i>Such mining (undertaken in absence of a replenishment study) not only impacts the aquatic ecology and safety at the point source, but also has an impact on ground water levels and recharge.</i>
14.	<i>Odour/ smell nuisance from all drains and some rivers as well</i>	<i>Most drains as well as rivers/ tributaries and sub tributaries emanate foul smell (especially during non- monsoon season)</i>
15.	<i>Tourism</i>	<i>Tourist cities like Garh, Lucknow, Prayagraj, Varanasi, Agra, Mathura etc, witness lakhs/ crores of people visiting the Ganga river for performing rituals, darshan or just for holidays. The high floating population puts immense pressure on the resources and environment of the place visited.</i> <i>In last few decades, there has been rise in construction activities in the tourists cities of UP to facilitate the visitors (such as Hotels, dharamshalas, public toilets, eateries etc) that needs to be regulated as per environmental norms.</i>
16.	<i>Afforestation/ Plantation/ restoration of floodplains</i>	<i>NMCG (after demarcation of Ganga land is done)</i>

8. We have perused the report filed by the oversight Committee dated 11.08.2023 giving the status of drains, STPs, CETPs and water quality. Since, further proceedings will be based on District wise reports, further report of Oversight Committee may not be required.

9. So far as the Tributaries are concerned, we find that there are large number of Tributaries and since the Tribunal is taking up the issue district wise, Counsel for the Applicant is directed to produce a chart disclosing the details of main stream of River Ganga and Tributaries which are flowing from each of the District so that the entire area can be covered.

10. Under the order of 2016, District Collector is the Ex-Officio Chairman of the District Ganga Protection Committee and these committees have been entrusted with certain responsibility hence can effectively assist the Tribunal in this matter, therefore, at the first instance we call for the report from each of the 75 District Ganga Protection Committee notified in the State of Uttar Pradesh in respect of the issues which have been pointed out and noted above. The Report will be submitted by the District Collector on behalf of the District Committee within eight weeks. Counsel for the State of Uttar Pradesh is directed to convey this order to the District Collectors of each of the above 75 Districts. Additionally, notice be issued by Registry of Tribunal to each of the above 75 District Ganga Protection Committee, State of Uttar Pradesh through their Ex-Office Chairman.

11. The issue relating to State of Uttar Pradesh will be taken up on 04.12.2023

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

September 11, 2023
Original Application No. 200/2014
HB