BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH AT NEW DELHI

M. A. No. 44 of 2024
In
ORIGINAL APPLICATION NO. 170 OF 2021

IN THE MATTER OF:

NOORUL SEHAR LARI …APPLICANT(S)
Versus
STATE OF UTTAR PRADESH & ORS. …RESPONDENT(S)

INDEX N.D.O.H.13.05.2026

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NEW DELHI
DATED: 07.05.2026

(PRADEEP MISRA & DALEEP DHYANI)
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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

M. A. No. 44 of 2024
In
ORIGINAL APPLICATION NO. 170 OF 2021

Girijesh Kumar Gupta NOTARY GORAKHPUR 8/5/26 NOTARIAL NOTARIAL

IN THE MATTER OF:
NOORUL SEHAR LARI **...APPLICANT(S)**

Versus

STATE OF UTTAR PRADESH & ORS. **...RESPONDENT(S)**

COMPLIANCE AFFIDAVIT ON BEHALF OF THE RESPONDENT, UTTAR PRADESH POLLUTION CONTROL BOARD.

I, Ashutosh Chauhan, aged about 45 years, S/o Late Shri Ratan Singh Chauhan presently posted as Regional Officer, Uttar Pradesh Pollution Control Board (hereinafter referred to as UPPCB), Gorakhpur do here by solemnly affirm and state on oath as under:

1. That I in the above noted capacity and being authorized by U.P. Pollution Control Board, am well conversant with the facts and records of the present case, hence competent to swear this affidavit.

NOTARY GOVT OF UTTAR PRADESH (INDIA) Girijesh Kumar Gupta Civil Court, Gorakhpur H. O. Gorakhpur Regd. No:37(43)/2000

2. That the above noted matter came up for hearing on 24.02.2026 when this Hon'ble Tribunal pleased to pass the following order:

"...2. *Meanwhile, the UPPCB is directed to calculate the environmental compensation for the past violation and place it on record along with its Report within four weeks.*

3. *The Report dated 16.02.2026 filed by the Nagar Panchayat, Laar states about the chlorination treatment of water stored in the oxidation and stabilization pond. The UPPCB will examine the feasibility of such chlorination process and submit the report in this regard. It will also explore the*

Girijesh Kumar Gupta NOTARY 8/5/26 GORAKHPUR

possibility of such treatment through natural synergistic process..."

3. That in compliance of aforesaid direction, UPPCB have undertaken the site visit of Nagar Panchayat, Laar and carried out the inspection on 29.04.2026 and prepared a compliance report dated 05.05.2026.

A true copy of compliance report dated 05.05.2026 being annexed herewith and marked as **Annexure-A**.

4. That as per the project report as submitted by the Executive Officer (E.O.) of Nagar Panchayat, Laar, Deoria, the population of Nagar Panchayat in the year 2026 is 32725 and the total quantity of sewage generation by the present total population is approximately 1.16 MLD.

5. That as per the information provided by the Executive Officer, Nagar Panchayat Laar, Deoria vide its letter no. Memo/Nagar Panchayat, Lar/2025-2026, dated 03.08.2025, presently local body has made arrangement for treatment of 0.57 MLD sewage in the form of bio-remediation, phytoremediation, settling tank so called oxidation pond and stabilization pond.

NOTARY Girijesh Kumar Gupta Civil Court, Gorakhpur H. O. Gorakhpur Regd. No.-37(43)/2000 GOVT OF UTTAR PRADESH (INDIA)

6. That as per the inspection carried out on 06.07.2024, it was found that the Nagar Panchayat, Laar has completed the work of Bio-remediation, phytoremediation, settling tank and stabilization pond before 07.06.2024.

7. That at this juncture, it is necessary to mention here that in view of direction passed by this Hon'ble Tribunal in the matter of O.A. No.593/2017 (W. P. (Civil) No.375/2012, Paryavaran Suraksha

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Samiti & Anr. Vs Union of India & Ors.),the CPCB has framed a formula for Environmental Compensation to be levied on concerned Urban Local Bodies (ULB) for discharge of Untreated/Partially Treated Sewage by that ULB. The formula framed by CPCB for calculation of Environmental Compensation is given below –

EC(Lacs Rs.)=[17.5(Total Sewage Generation – Installed Treatment Capacity) + 55.5(Total Sewage Generation – Operational Capacity)] + 0.2 (Sewage Generation – Operational Capacity) x N + Marginal Cost of Environmental Externality x (Total Sewage Generation – Operational Capacity)] x N

Where; N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority. Quantity of sewage in MLD.

8. That further in compliance of the direction passed by this Hon'ble Tribunal and in accordance with the methodology developed by the CPCB, values of different parameters are given as below:

- Total Sewage Generation – 1.16 MLD
- Installed Treatment Capacity – 0.57MLD
- Operational Capacity – 0.57MLD
- Marginal Cost of Environmental Externality – Rs 0.05 per MLD/day (Report of the CPCB in-house committee on Methodology for Assessing Environmental Compensation & Action Plan to Utilize the fund)
- Sewage Generation – 1.16 MLD

NOTARY ★ GOVT OF UTTAR PRADESH (INDIA) ★
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- Number of days of default – 500 (Considering dated 22.02.2023 in the light of Hon'ble Supreme Court Order 22.02.2017 and Last date of making default dated 05.07.2024 as per inspection report dated 06.07.2024)
- On Computing Environmental Compensation (EC) against Nagar Panchayat, Laar on the basis of above data, it comes Rs. 116.82 Lacs.

9. That furthermore, presently the Nagar Panchayat, Laar is treating 0.57 MLD sewage by adopting practice of Bio-remediation, phytoremediation followed by settling tank and stabilisation pond, which does not seem adequate in principle.

A true copy of the letter dated 03.08.2025 is being enclosed herewith and marked as **Annexure-B.**

10. That this Hon'ble Tribunal has directed to explore the possibility of such treatment through natural synergistic process. In this regard, it is to mention that treatment of Total and Fecal Coliforms is highly possible and widely utilized in nature-based systems like constructed wetlands, maturation lagoons and phytoremediation. These systems leverage a combination of physical, chemical and biological mechanisms to significantly reduce bacterial loads, often achieving 90% to 100% removal depending on design and conditions. These "natural synergies" typically involve the interaction between plants, soil, microorganisms, and solar radiation to reduce bacterial loads.

The effectiveness of natural systems stems from the simultaneous action of several processes are as mentioned below -

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Physical Filtration & Adsorption: Plant roots and granular media (sand, gravel, or biochar) trap bacteria through physical entrapment and electrostatic attraction.

Biological Predation: Beneficial microorganisms within biofilms and the rhizosphere (the area around the plant roots) actively preyon coliform bacteria.

Photo-oxidation: Exposure to solar UV radiation in open systems like maturation lagoons and surface wetlands causes DNA damage and cell-death (inactivation) in coliforms.

Phytoremediation Synergies: Plants and their associated rhizosphere microbes work together to improve water quality. Plants provide oxygen and root surfaces for microbial growth, while microbes decompose pollutants and inhibit pathogens.

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Competitive Suppression: Increasing the concentration of heterotrophic bacteria can naturally suppress coliform growth by outcompeting them for nutrients.

11. That further, key natural treatment systems and their performances are as given below:

System Type	Typical Coliform Removal	Key Synergistic Factors
Constructed Wetlands	1 to 3+ log reduction (90 -99.9%)	Sedimentation, root filtration, microbial predation, and biofilm interaction.
Maturation Lagoons	Significant reduction, though total removal is rare.	High dependance on sunlight (UV) and natural die-off over long retention times.
Phyto-remediation	Up to 98% reduction	Photosynthetic 0xygenation and pH

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(Algae)		changes that create a hostile environment for coliforms.

Limitations and considerations of natural synergistic processes are given as below:

While natural synergies are powerful, they are often used as secondary or tertiary treatment steps due to following reasons –

Variable Efficiency: Performance varies with seasonal temperature, sunlight, and hydraulic loading rates.

Post-Treatment Needs: For high-risk water (e.g., hospital waste or direct reuse), natural systems may require supplemental disinfection like chlorination or UV to meet strict safety standards.

Natural Indicators: Total coliforms are ubiquitous in the environment; however, fecal coliforms (specially E. coli) are more accurate indicators of human or animal waste contamination.

NOTARY ★ GOVT OF UTTAR PRADESH (INDIA) ★
Sirijesh Kumar Gupta
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H. O. Gorakhpur
Regd. No.-37(43)/2000

Thus, Nagar Panchayat, Laar, Deoria may adopt any of the above mentioned natural synergistic process in place of chlorination for removal of Total and Fecal coliforms.

12. That the present affidavit is being submitted before this Hon'ble Tribunal for its kind perusal and consideration.

DEPONENT

Sirijesh Kumar Gupta
NOTARY
GORAKHPUR

VERIFICATION:

Verified at Gorakhpur on this the 8th day of May, 2026 that the contents of above affidavit are true and correct to my knowledge based on records and information received and believed to be true, no part of it is false and nothing material has been concealed therefrom.

DEPONENT

Ashutosh Chauhan

814/26

Solemnly affirmed before me on 8-5-26

Ashutosh Chauhan

I have satisfied myself by examining the deponent that he/she understands the contents of this affidavit which has been read over and explained by me

Sirijesh Kumar Gupta
Civil Court, Gorakhpur
H. O. Gorakhpur
Regd. No.-37(43)/2000
NOTARY
GOVT OF UTTAR PRADESH (INDIA)

Sirijesh Kumar Gupta 8/5/26
NOTARY
GORAKHPUR

Verified that the signature of Ashutosh Chauhan he signed before me self Att

8/5/26

RN. UP2989/88

Annexure- A

Compliance report regarding order dated 24.02.2026 passed by Hon'ble N.G.T., Principal Bench, New Delhi in the matter of M.A. No.44/2024(O.A. No.170/2021) Noorul Sehar Lari v/s State of U.P.

In the matter of M.A. No.44 of 2024 in the O.A. No.170 of 2021 Noorul Sehar Lari v/s State of U.P., Hon'ble National Green Tribunal, Principal Bench, New Delhi has passed an order on dt 24.02.2026. The related portion of the order dt 24.02.2026 is as given below: –

".....Meanwhile, the UPPCB is directed to calculate the environmental compensation for the past violation and place it on record along with its Report within four weeks.

The Report dated 16.02.2026 filed by the Nagar Panchayat,Laar states about the chlorination treatment of water stored in oxidation and stabilization pond. The UPPCB will examine the feasibility of such chlorination process and submit the report in this regard. It will also explore the feasibility of such treatment through natural synergistic process. ....."

The compliance report of order dated 24.02.2026 passed by Hon'ble N.G.T. is as given below-

1. Inspection of Nagar Panchayat, Laar was made by undersigned officials of Regional Office, Gorakhpur on dated 29.04.2026. At the time of inspection shri Yogesh Kumar Gupta (Computer Operator) was present as the representative of Nagar Panchayat.
2. As per the project report **(Annexure- 01)** submitted by Executive Officer (E.O.) of Nagar Panchayat, Lar, Deoria the population of Nagar Panchyat in the year 2026 is 32725.

3. As per the project report submitted by Executive Officer (E.O.) of Nagar Panchayat, Lar, Deoria the total quantity of sewage generation from present total population is approximately 1.16 MLD.
4. As per the letter no. Memo/Nagar Panchyat, Lar/2025-2026, dated 03.08.2025 **(Annexure-02)** of E.O. of Nagar Panchayat, Lar, Deoria, presently local body has made arrangement for treatment of 0.57 MLD sewage in the form of bio-remediation, phytoremediation, Settling Tank so called oxidation pond & stabilization pond.
5. As per the inspection of report dated 06.07.2024 **(Annexure-3)**, Nagar Panchayat, Lar, completed work of Bio-remediation, phytoremediation, Settling Tank and Stabilization Pond on before dated 07.06.2024.
6. As per the order passed by Hon'ble National Green Tribunal, Principal Bench, New Delhi in the matter of O.A. No.593/2017 WP (Civil) No.375/2012, Paryavaran Suraksha Samiti & Anr. Vs Union of India & Ors. directed Central Pollution Control Board (CPCB) to frame a Methodology for assessing Environmental Compensation.
7. In compliance of Hon'ble N.G.T. order, CPCB framed a formula for Environmental Compensation to be levied on concerned Urban Local Bodies (ULB) for discharge of Untreated/Partially Treated Sewage by that ULB. The formula framed by CPCB for calculation of Environmental Compensation is as given below –

   EC(Lacs Rs.)=[17.5(Total Sewage Generation – Installed Treatment Capacity) + 55.5(Total Sewage Generation – Operational Capacity)] + 0.2 (Sewage Generation – Operational Capacity) x N + Marginal Cost of Environmental Externality x (Total Sewage Generation – Operational Capacity)] x N

Where; N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority.

Quantity of sewage in MLD.

8. The Hon'ble Supreme Court of India in its order dated 22.02.2017 in the matter of Paryavaran Suraksha Samiti & another Vs Union of India and others [Writ Petition (civil)No.375 of 2012,directed State Governments (including the concerned Union Territories) to set up Sewage Treatment Plants(STPs), which are already under implementation, within the time line already postulated. Further, the STPs, which are yet to set up, to be completed within a period of three years, from today, i.e.22.02.2020. (Report of the CPCB in-house committee on Methodology for Assessing Environmental Compensation & Action Plan to Utilize the fund. **Annexure-4**)

9. For calculation of Environmental Compensation for Nagar Panchayat, Lar as per formula framed by CPCB , values of different parameters are as given below –

   i. Total Sewage Generation – 1.16 MLD
   ii. Installed Treatment Capacity – 0.57MLD
   iii. Operational Capacity -0.57MLD
   iv. Marginal Cost of Environmental Externality –Rs 0.05 per MLD/day (Report of the CPCB in-house committee on Methodology for Assessing Environmental Compensation & Action Plan to Utilize the fund)
   v. Sewage Generation –1.16 MLD
   vi. Number of days of default – 500 (Considering dated 22.02.2023 in the light of Hon'ble Supreme Court Order 22.02.2017 & Last

date of making default dated 05.07.2024 as per inspection report dated 06.07.2024)

On Computing Environmental Compensation (EC) against Nagar Panchayat, Lar on the basis of above data, it comes **Rs 116.82 Lacs.**

10. Further, Nagar Panchayat,Laar is presently treating 0.57MLD sewage by adopting practice of Bio-remediation, phytoremediation followed by Settling Tank and stabilisation Pond. which does not seems adequate in principle.

11. However, Hon'ble Tribunal has directed to explore the possibility of such treatment through natural synergistic process. Here in this regard, it is to say that treatment of Total, and Fecal Coliforms is highly possible and widely utilized in nature-based systems like constructed wetlands, maturation lagoons and phycoremediation. These systems leverage a combination of physical, chemical, and biological mechanisms to significantly reduce bacterial loads, often achieving 90% to 100% removal depending on design and conditions. These "natural synergies" typically involve the interaction between plants, soil, microorganisms, and solar radiation to reduce bacterial loads.

The effectiveness of natural systems stems from the simultaneous action of several processes are as mentioned below -

Physical Filtration & Adsorption: Plant roots and granular media (sand, gravel, or biochar) trap bacteria through physical entrapment and electrostatic attraction.

Biological Predation: Beneficial microorganisms within biofilms and the rhzosphere (the area around the plant roots) actively prey on coliform bacteria.

Photo - oxidation: Exposure to solar UV radiation in open systems like maturation lagoons and surface wetlands causes DNA damage and cell-death (inactivation) in coliforms.

Phytoremediation Synergies : Plants and their associated rhizosphere microbes work together to improve water quality. Plants provide oxygen and root surfaces for microbial growth, while microbes decompose pollutants and inhibit pathogens.

Competitve Suppression: Increasing the concentration of heterotrophic bacteria can naturally suppress coliform growth by outcompeting them for nutrients.

Further, key natural treatment systems and their performances are as given below:–

System Type	Typical Coliform Removal	Key Synergistic Factors
Constructed Wetlands	1 to 3+ log reduction(90 - 99.9%)	Sedimentation, root filtration.microbial predation,and biofilm interaction.
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Phycoremediation(Algae)	Up to 98% reduction	Photosynthetic Oxygenation and pH changes that create a hostile environment for coliforms.

Limitations and considerations of natural synergistic processes are as given below -

While natural synergies are powerful, they are often used as secondary or tertiary treatment steps due to following reasons -

Variable Efficiency: Performance varies with seasonal temperature, sunlight, and hydraulic loading rates.

Post-Treatment Needs: For high-risk water (e.g., hospital waste or direct reuse), natural systems may require supplemental disinfection like chlorination or UV to meet strict safety standards.

Natural Indicators: Total coliforms are ubiquitous in the environment; however,fecal coliforms (specially E. coli) are more accurate indicators of human or animal waste contamination.

Thus, Nagar Panchat, Lar, Deoria may adopt any above mentioned natural synergistic process in place of chlorination for removal of Total and Fecal coliforms.

The above compliance report is submitted regarding Hon'ble N.G,T., Principal Bench, New Delhi order dated 24.02,2026 passed in the matter of M.A. No. 44/2024 (O.A.No.170/2021).

Enclosure- As above.

05/05/2026

(R.M.Verma)
Scientific Assistant

05.05.2026

(P.P.Singh)
Assistant Environmental Engineer

Regional Officer

05/05/26

आशुतोष चौहान
क्षेत्रीय अधिकारी
उ०प्र० प्रदूषण नियंत्रण बोर्ड
गोरखपुर

ANNEXURE-01

PROJECT REPORT

ANNEX 3B: CITY SANITATION ACTION PLAN (CSAP) FOR USED WATER MANAGEMENT

S. No.	Description	Particulars	Detailed Description
A	General Information		
1.	Location and Physical Aspects		
a.	Location	Name of the city, District, State	NP Lar Deoria (Uttar Pradesh)
b.	Physical Aspects	Town Area in sq.km and Class of town	10
		Number of wards	16
		Geographical description-Hilly area, River, Environmental sensitive area etc.	Plain Area
c.	Maps	Map depicting administrative boundaries, roads and railways, water bodies, Important landmarks etc. (if not available, to be prepared)	Attached with DPR
		Topo sheet (Ref: Survey of India, Scale - 1:50000) (If not readily available, get it)	Not available
2.	Demography and Growth pattern		
a.	Population	**Census Data** - Latest census data and previous census data (population projection)	
		Projected Population **(Year – 2026)**	32725
		Projected Population **(Year – 2041)**	37140
		Projected Population **(Year – 2056)**	41555
		Slum Population • Population • Households • Density	Not available
		Non Slum Population • Population **(Year-2026,2041,2056)** • Households **(Year-2026,2041,2056)** • Density **(Year-2026,2041,2056)**	

		Floating population Population per day (if available from tourism department)	5% Floating Population is adopted in Design Year
		Decadal Population Growth Rate (in %)	23%
3.	**Land Use information and Development**		
a.	**Land Use pattern**	Land use classification in the city: area under residential, commercial, institutional, open areas, slums (available / not available)	Residential, Commercial and Agricultural
		Details of Population and Projected Growth	Enclosed with DPR
b.	**Maps**	Map depicting the existing land use - residential, commercial, Institutional, slums, green cover, open land etc. (available / not available)	Attached with the DPR
B	**Technical Information: Information Regarding Used Water Infrastructure Facilities**		
4.	**Details of existing sewage infrastructure**		
a.	**Brief description of existing sewage infrastructure in the town**		
	STPs		Not available
	FSTPs		Not available
	Existing sewers		Not available
	Drains		28 Drains
	Number of cesspool tankers (govt./private)		Not available
	Funding Agencies & amount		Detail Attached with the DPR
5.	**Sewage Management**		
a.	**Sewage Generation**	**Estimated Sewage Generation**	
		For Year - 2026	1.16 MLD
		For Year - 2041	1.32 MLD
		For Year - 2056	1.47MLD

b.	Collection and Conveyance	**Network Coverage**	
		Present population covered with sewerage network	Not Covered
		Present population uncovered with sewerage network	10000
		SEPTAGE	
		Status of scheduled desludging (by ULB/ Licensed operator)	By ULB
		Drainage	
		Number of drains with length & material of construction etc. (width more than 75 cm) carrying sewage into the surface water body or open land	Enclosed on Page No.
		Status of drains with or above 75 cm width (covered/uncovered)	
		Number of outfall locations along with	
		Estimated quantity of sewage (dry weather) being discharged into surface water body or open land.	
		Outfall location	
		Mention the location of outfall points (river/ natural drain/surface water body/open land)	Surface Water Body
c.	Treatment (Septage, Used water)	**Used Water Treatment (including co-treatment)**	
		Treatment technology and capacity (MLD)	No
		Current capacity utilization–under/over (MLD)	
		Quantity of used water treated (MLD)	
		Quantity of septage co-treated (KLD)	
		Reuse (treated used water, sludge, biogas) Information along with respective quantity	
		Septage Treatment	
		Are the septage treatment facility available (Yes/No) – If 'yes'	No

		Quantity of septage to be treated (KLD)	-
		Treatment technology and capacity (KLD)	Waste Stabilization
		Current utilization - under/over (KLD)	Pond (1.16MLD)
		Reuse (treated used water, sludge, biogas) Information along with respective quantity	1.16(MLD) Treated Used Water
d.	**Operation and Maintenance**	For existing septage collection, conveyance and treatment facility	By ULB
		Responsible agency User charges for desludging, conveyance and disposal per household (Rs.)	1500/Tanker
		O&M cost for the treatment facility (Rs.) Cost recovery (%)	6.22
		Responsible agency	ULB
		Household sanitation tariff – Monthly (Rs.)	NIL
		Conservancy tax as part of property tax	NIL
		O&M cost for the conveyance and treatment facility (Rs)	1.73%
		Cost Recovery (%)	10.71%

e. **Service Level Benchmark Present**

Indicators	Benchmark	Before the Implementation of Project	After the implementation of Project
Coverage of sewerage network	100%	0	50%
Collection efficiency of sewerage network	100%	0	100%
Adequacy of sewage treatment capacity	100%	0	100%
Quality of sewage treatment	100%	0	100%

	Extent of reuse and recycling of sewage	100%	0	20%
	Extent of cost recovery in sewage/ used water management	100%	0	100%
	Efficiency in redressal of customer complaints	100%	0	80%
	Efficiency in collection of sewage / used water charges	100%	0	90%
	Access to toilets	100%	0	100%
	Scheduled desludging	100%	0	100%
	Notified tariff for desludging	-	Yes	Yes

f.	**Maps**	Map depicting the coverage of existing sewer network coverage and onsite system	
		Access to toilets	yes
		Scheduled desludging	yes
		Notified tariff for desludging	yes
C	**Institutional and Governance**		
6.	**Institutional framework**		
a.	**Regulatory Framework**	Whether Town Sanitation By Laws notify tariff for sanitation/sewage services (details)	No
		State Sanitation Strategy (available/not available)	Not Available
b.	**Institutional Arrangement**	Roles and responsibilities for dealing with sanitation/sewage services	No
c.	**Governance and Reforms**	Implementation of E-Governance in ULBs (available/ not available)	Not available
D.	**Capacity Enhancement**		
7.	**Capacity Management**		
a.	Human Resource Development	Details of the personnel engaged in sanitation services along with roles and responsibilities.	-

		Outsourcing of staff and services (available / not available)	Available
E.	Gap Analysis		
a.	Analyze the projected requirement of used water infrastructure/facilities in 2026		Yes
b.	Identify the available infrastructure in good condition		Yes
c.	Analyze the gap in various areas and suitably club as part of a project/DPR		
	Sewer network		-
	Septage conveyance		Enclosed
	STP cum FSTP		Enclosed
	Recycle and reuse potential		-
F.	Conclusion		
	On above lines identify various DPRs/ plan for projects related to		
	I&D and STP cum FSTP		Enclosed
	Sewer network		-
	Storm water drainage system		Enclosed
	Recycle and reuse projects		-
	Gap in human resources for execution and O&M etc.		-

Funding Requirement

Total fund Required	Central share @ 50%	State share @ 33%	ULB share@17%	Others (Pls specify)
526.48	263.24	173.73	89.50	

Roadmap For Achieving Mission Outcomes

Target/Year	2021-22	2022-23	2023-24	2024-25	2025-26	Remark
Cities ODF++	-	-	-	-	-	
Cities Water+	-	-	-	-	-	

(Er. Shubham Saxena)
Environmental Specialist
M. Tech Environmental Engg.

Er. A. Nigam
Director PHE
Retd. Executive Engineer (E/M)
U.P. Jal Nigam

अधिशासी अधिकारी
नगर पंचायत लार
देवरिया

ANNEXURE-02

कार्यालय नगर पंचायत लार, देवरिया

पत्रांक मेमो /न0पं0लार/2025–26

दिनांकः 03 अगस्त, 2025

सेवामें,

क्षेत्रीय अधिकारी महोदय,
उ0प्र0 प्रदूषण नियंत्रण बोर्ड,
गोरखपुर।

विषयः– मा0 एन0जी0टी0, नई दिल्ली में योजित एम0ए0 नं0–44/2024 (ओ0ए0 सं0–170/2021) नुरूल सहर लारी बनाम सटेट आफ यू0पी0 एवं अन्य में पारित आदेश दिनांक 09.07.2025 के अनुपालन के संबंध में।

महोदय,

कृपया उपर्युक्त विषयक के अनुपालन के साथ ही नगर पंचायत लार, देवरिया सीमान्तर्गत धरेलू एवं सामुदायिक, व्यवसायिक प्रतिष्ठानों आदि शैचालयों से निकलने वाला सिवेज वाटर के मात्रा आकलन की अपेक्षा की गयी है, जिसके कम में अवर अभियन्ता, जलकल–देवरिया द्वारा स्थलीय निरीक्षण कर 0.57MLD सिवेज वाटर जनित होने के आकलन से अवगत कराया गया है।

आख्या सेवा में सादर प्रेषित है।

अधिशासी अधिकारी,
नगर पंचायत लार,
देवरिया।

ANNEXURE – 03

मा0 एन0जी0टी0, नई दिल्ली में योजित ओ0ए0 सं0 170/2021 नूरूल सहर लारी बनाम स्टेट ऑफ यू0पी0 एवं अन्य में पारित आदेश दिनांक 23.04.2024 के अनुपालन के सम्बन्ध में निरीक्षण आख्या।

कृपया उपरोक्त सदर्भित विषयक मा0 एन0जी0टी0, नई दिल्ली में योजित ओ0ए0 सं0 170/2021 नूरूल सहर लारी बनाम स्टेट ऑफ यू0पी0 एवं अन्य में पारित आदेश दिनांक 23.04.2024 के अनुपालन के सम्बन्ध में अद्यतन निरीक्षण दिनांक 06.07.2024 को किया गया। निरीक्षण के समय नगर पंचायत, लार, देवरिया के अधिशासी अधिकारी श्री मृदुल कुमार उपस्थित थे। विस्तृत निरीक्षण आख्या निम्नवत है:–

1. निरीक्षण के समय नगर पंचायत, लार से जनित सीवेज वाटर को मेसर्स मैपल आर्गटेक इण्डिया लिमिटेड नामक एजेन्सी द्वारा जल शोधन हेतु नाले पर बार स्क्रीन लगाकर बायो–रेमिडियेशन का कार्य किया जा रहा था।
2. बायो–रेमिडियेशन के उपरान्त शुद्धिकृत उत्प्रवाह को नगर पंचायल, लार द्वारा बनाये गये आक्सीडेशन पॉण्ड में एकत्रित किया जाता हुआ पाया गया।
3. नगर पचायत लार द्वारा प्रत्येक माह एन0ए0बी0एल0 सर्टिफाईड प्रयोगशाला मेसर्स ग्लोबल इनवायरो लैबोरेट्री, गाजियाबाद, मेसर्स इनवायरो टैक्स सिर्विस, गाजियाबाद द्वारा बायो–रेमिडियेशन के पूर्व एवं बायो–रेमिडियेशन के पश्चात् जल के नमूनों का विश्लेषण कराया जाता है। निरीक्षण के समय अधिशासी अधिकारी, लार, देवरिया द्वारा उपलब्ध कराये गये विश्लेषण आख्यानुसार नगर पंचायत, लार के सीवेज ड्रेन में बायो–रेमिडियेशन के पूर्व एवं बायो–रेमिडियेशन के पश्चात् जल के नमूनों में जल प्रदूषणकारी प्रचालको की मात्रा निम्नवत है:–

माह	बायो–रेमिडियेशन के पूर्व						बायो–रेमिडियेशन के पश्चात्					
	पी0 एच0	टी0एस0ए स0 (मि0ग्रा0)	सी0ओ0 डी0 (मि0ग्रा0)	बी0ओ0डी0 (मि0ग्रा0)	एफ0 सी0 (एम.पी.एन. / 100 एम. एल.)	टी0 सी0 (एम.पी. एन. / 100 एम.एल.)	पी0 एच0	टी0 एस0 एस0 (मि0ग्रा0)	सी0ओ0 डी0 (मि0ग्रा0)	बी0ओ0 डी0 (मि0ग्रा0)	एफ0 सी0 (एम.पी.एन. / 100 एम.एल)	टी0 सी0 (एम.पी.एन / 100 एम.एल)
अप्रैल, 2024	7.82	335	360	72	>1600	4.1×10^3	7.75	88	130	22	140	430
मई, 2024	7.78	192	398	74	>1600	4.3×10^3	7.75	86	148	27	540	920
जून, 2024	7.76	188	386	68	>1600	8.1×10^3	7.72	80	142	26	540	920

4. निरीक्षण के समय क्षेत्रीय कार्यालय, गोरखपुर की प्रयोगशाला द्वारा नगर पंचायत, लार के सीवेज ड्रेन में बायो–रेमिडियेशन के पूर्व एवं बायो–रेमिडियेशन के पश्चात् तथा आक्सीडेशन पॉण्ड से जल नमूनों का एकत्रण किया गया। प्रयोगशाला से प्राप्त विश्लेषण आख्यानुसार एकत्रित किये गये नमूनों में जल प्रदूषणकारी प्रचालको की मात्रा निम्नवत है:–

नमूना एकत्रण बिन्दु	प्रचालक			
	पी0एच0	टी0एस0एस0 (मि0ग्रा0)	सी0ओ0डी0 (मि0ग्रा0)	बी0ओ0डी0 (मि0ग्रा0)
बायो–रेमिडियेशन के पूर्व	6.62	162	252	42
बायो–रेमिडियेशन के पश्चात्	7.47	94	140	28
आक्सीडेशन पॉण्ड	7.52	88	100	20

अधिशासी अधिकारी, नगर पंचायत, लार द्वारा निरीक्षण के समय उपलब्ध कराये गये विश्लेषण आख्या एवं निरीक्षण तथा नमूना एकत्रण के समय लिये गये फोटोग्राफ्स आख्या के साथ संलग्न है।

उक्त आख्या आपके अवलोकनार्थ एवं अग्रिम आवश्यक कार्यवाही हेतु सादर प्रस्तुत है।

(विवेक कुमार सैनी)
जे0आर0एफ0

12-7-24
(अयोध्या प्रसाद)
वैज्ञानिक सहायक

कृते क्षेत्रीय अधिकारी

12/7/24

~~Exhibit-II~~

ANNEXURE – 04

Report of the CPCB In-house Committee on Methodology for Assessing Environmental Compensation and Action Plan to Utilize the Fund

CENTRAL POLLUTION CONTROL BOARD
"Parivesh Bhawan", East Arjun Nagar,
Delhi-110032

Table of Contents

Abstract

Environmental compensation is a policy instrument for the protection of the environment which works on the Polluter Pay Principal. Environmental compensation has already been implemented in various countries, although limited in scope. Experiences from these implementations are mixed and tend to stress the importance of certain principles in order to achieve the overall objective of protection of the environment.

The Hon'ble National Green Tribunal through its various judgments has empowered the Central Pollution Control Board to lay down the methodology to assess and recover compensation for damage to the environment and utilize such amount in terms of an action plan for protection of the environment.

An attempt has been made by the CPCB in-house Committee to develop a methodology for assessing environmental compensation to be levied on concerned industry, authority, individual etc. for the protection of environment. Expert institutions/ NGOs like The Energy and Resources Institute, Centre for Science and Environment-India, Institute of Economic Growth etc. were also consulted to finalize the report. Overall objective is to develop self-sense of responsibility towards the environment and to make defaulters realize their mistake by imposing compensation, which will be utilized for the protection/restoration of the environment.

Although, this is the first attempt in India towards development of methodology for assessing environmental compensation, however, efforts have been made to simplifying the process so that regulatory institutions can easily adopt the methodology for implementation.

Chapter-I: Environment Compensation to be levied on Industrial Units

1.1 Background

The Hon'ble National Green Tribunal (NGT), Principal Bench in the matter of OA No. 593/2017 (WP (CIVIL) No. 375/2012, Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors. directed Central Pollution Control Board (CPCB) that:

> *"The CPCB may take penal action for failure, if any, against those accountable for setting up and maintaining STPs, CETPs and ETPs. 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. Such action plan may be prepared by the CPCB within three months"* ***(Annexure-I).***

1.2 Constitution of the Committee

In this context, Chairman, CPCB constituted a Committee under the Chairmanship of Shri A. Sudhakar, I/c WQM-I with Shri A. K. Vidyarthi, I/c WQM-II, Shri P. K. Gupta, I/c IPC-VI, Shri Nazimuddin I/c IPC-II and Dr. S. K. Paliwal, Scientist 'D' as members. The Committee was asked to deliberate on this issue and come up with a draft formulation before 15.9.2018.

1.3 Methodology for Assessing Environmental Compensation

The Committee discussed the issue on 4.9.2018, 13.9.2018,17.9.2018 and 09.10.2018. A meeting was also held with Senior Officers of CPCB Head Office and Regional Directorates through video conferencing on 28.09.2018 to discuss the draft report and to seek comments/feedbacks. The comments/feedbacks received and deliberations of the Committee on the same are given in **Annexure-II.**

As per the Hon'ble NGT suggestion, CPCB has invited comments of 3 expert institution, namely, Centre for Science and Environment (CSE), Institute of Economic Growth (IEG) and The Energy Research Institute (TERI). A meeting to incorporate the comments of the expert institutions and to finalize the report, was held on 27/03/2019. The CPCB in-house committee on Environmental Compensation has deliberated on the comments and finalized the report accordingly. The Committee's deliberations are attached as **Annexure-III.**

It was deliberated for developing a formula for imposing environmental compensation on industrial units for violation of directions issued by regulatory bodies and this is the first attempt made. The committee discussed that environmental compensation should be based on "Polluter Pay Principle". The Committee decided to list the instances for taking cognizance of cases fit for violation and levy environmental compensation.

Cases considered for levying Environmental Compensation (EC):

a) Discharges in violation of consent conditions, mainly prescribed standards / consent limits.
b) Not complying with the directions issued, such as direction for closure due to non-installation of OCEMS, non-adherence to the action plans submitted etc.
c) Intentional avoidance of data submission or data manipulation by tampering the Online Continuous Emission / Effluent Monitoring systems.
d) Accidental discharges lasting for short durations resulting into damage to the environment.
e) Intentional discharges to the environment -- land, water and air resulting into acute injury or damage to the environment.
f) Injection of treated/partially treated/ untreated effluents to ground water.

1.3.1 In the instances as mentioned at *a, b and c* above, Pollution Index may be used as a basis to levy the Environmental Compensation. CPCB has published guidelines for categorization of industries into Red, Orange, Green and White based on concept of Pollution Index (PI). The Pollution Index is arrived after considering quantity & quality of emissions/ effluents generated, types of hazardous wastes generated and consumption of resources. Pollution Index of an industrial sector is a numerical number in the range of 0 to 100 and can be represented as follows:

PI = *f* (Water Pollution Score, Air Pollution Score & HW Generation Score)

Pollution Index is a number from 0 to 100 and increasing value of PI denotes the increasing degree of pollution *hazard from the industrial sector.*

CPCB has issued directions to all SPCBs/PCCs on 07.03.2016 to adopt the methodology and follow guidelines prepared by CPCB for categorization of industrial sectors into Red, Orange, Green and White.

The concept of Pollution Index, which was deliberated widely with all stakeholders and agreed, shall be used for calculating Environmental Compensation. This may help in implementation of such provision throughout the country, a successful initiative in vital field of industrial pollution control.

After considering various factors including the policy implementation issues, Committee has come up with following formula for levying the Environmental Compensation in instances as mentioned at a, b and c including non-compliance of the environmental standards / violation of directions.

The Environmental Compensation shall be based on the following formula:

$$EC = PI \times N \times R \times S \times LF$$

Where,

EC is Environmental Compensation in ₹
PI = Pollution Index of industrial sector
N = Number of days of violation took place
R = A factor in Rupees (₹) for EC
S = Factor for scale of operation
LF = Location factor

The formula incorporates the anticipated severity of environmental pollution in terms of Pollution Index, duration of violation in terms of number of days, scale of operation in terms of micro & small/medium/large industry and location in terms of proximity to the large habitations.

Note:

a. The industrial sectors have been categorized into Red, Orange and Green, based on their Pollution Index in the range of 60 to 100, 41 to 59 and 21 to 40, respectively. It was suggested that the average pollution index of 80, 50 and 30 may be taken for calculating the Environmental Compensation for Red, Orange and Green categories of industries, respectively.
b. N, number of days for which violation took place is the period between the day of violation observed/due date of direction's compliance and the day of compliance verified by CPCB/SPCB/PCC.
c. R is a factor in Rupees, which may be a minimum of 100 and maximum of 500. It is suggested to consider R as 250, as the Environmental Compensation in cases of violation.
d. S could be based on small/medium/large industry categorization, which may be 0.5 for micro or small, 1.0 for medium and 1.5 for large units.
e. LF, could be based on population of the city/town and location of the industrial unit. For the industrial unit located within municipal boundary or up to 10 km distance from the municipal boundary of the city/town, following factors (LF) may be used:

Table No. 1.1: Location Factor Values

S. No.	Population* (million)	Location Factor# (LF)
1	1 to <5	1.25
2	5 to <10	1.5
3	10 and above	2.0

**Population of the city/town as per the latest Census of India*
#LF will be 1.0 in case unit is located >10km from municipal boundary
LF is presumed as 1 for city/town having population less than one million.

For notified Ecologically Sensitive areas, for beginning, LF may be assumed as 2.0. However, for critically Polluted Areas, LF may be explored in future.

f. In any case, minimum Environmental Compensation shall be ₹ 5000/day.
g. In order to include deterrent effect for repeated violations, EC may be increased on exponential basis, i.e. by 2 times on 1st repetition, 4 times on 2nd repetition and 8 times on further repetitions.
h. If the operations of the industry are inevitable and violator continues its operations beyond 3 months then for deterrent compensation, EC may be increased by 2, 4 and 8 times for 2nd, 3rd and 4th quarter, respectively. Even if the operations are inevitable beyond 12 months, violator will not be allowed to operate.
i. Besides EC, industry may be prosecuted or closure directions may be issued, whenever required.

A sample calculation for Environmental Compensation (without deterrent factor) is given at Table No. 1.2. It can be noticed that for all instances, EC for Red, Orange and Green category of industries varies from 3,750 to 60,000 ₹/day.

Table No. 1.2: A sample calculation for Environmental Compensation

Industrial Category	Red	Orange	Green
Pollution Index (PI)	60-100	41-59	21-40
Average PI	80	50	30
R-Factor	250		
S-Factor	0.5-1.5		
L-Factor	1.00-2.00		
Environmental Compensation (₹/day)	**10,000-60,000**	**6,250-37,500**	**5,000-22,500**

1.3.2 In other instances i.e. *d, e and f*, the environmental compensation may contain two parts – one requires providing immediate relief and other long-term measures such as remediation. In all these cases, detailed investigations are required from expert institutions/organizations based on which environmental compensation will be decided. CPCB shall list the expert institutions for this purpose.

In such cases, comprehensive plan for remediation of environmental pollution may be prepared and executed under the supervision of a committee with representatives of SPCB, CPCB and expert institutions/organizations.

1.4 Action Plan for Utilization of Environmental Compensation Fund

The Committee discussed about the utilization of funds, which will be received by imposing Environmental Compensation. The following Action Plan is proposed to utilize the fund for protection of the environment.

1.4.1. When Environmental Compensation is calculated through the Pollution Index:

The amount received by imposing the Environmental Compensation to the industries / organization non-complying with the environmental standards / violating any CPCB's directions shall be deposited in a separate bank account. The amount accumulated will be utilized for Protection of Environment. The following schemes were identified, which may be considered for utilization of Environmental Compensation Fund:

a. Industrial Inspections for compliance verification
b. Installation of Continuous water quality monitoring stations / Continuous ambient air quality monitoring stations for strengthening of existing monitoring network
c. Preparation of Comprehensive Industry Documents on Industrial Sectors / clean technology
d. Investigations of environmental damages, preparation of DPRs
e. Remediation of contaminated sites
f. Infrastructure augmentation of Urban Local Bodies (ULBs) /capacity building of SPCBs/PCCs

The above proposed list may include other schemes also, depending upon the requirement.

Considering the availability of accumulated funds, CPCB will finalize the scheme, keeping in mind the priority, to utilize the funds of Environmental Compensation.

1.4.2. When Environmental Compensation is assessed based on actual damage to the environment by Expert Organization/ Agency:

The amount of Environmental Compensation under this case will be remediation costs, measures requiring immediate and short-term actions, compensation towards loss of ecology, etc., and will be utilized exclusively for the purpose at specific site, based on the detailed investigations by the Expert Organizations/ agencies.

1.5 Recommendations

The Committee made following recommendations:

1.5.1 To begin with, Environmental Compensation may be levied by CPCB only when CPCB has issued the directions under the Environment (Protection) Act, 1986. In case of a, b and c, Environmental Compensation may be calculated based on the formula "EC = PI x N x R x S x LF", wherein, PI may be taken as 80, 50 and 30 for red, orange and green category of industries, respectively, and R may be taken as 250. S and LF may be taken as prescribed in the preceding paragraphs.

1.5.2 In case of d, e and f, the Environmental Compensation may be levied based on the detailed investigations by Expert Institutions/Organizations.

1.5.3 The Hon'ble Supreme Court in its order dated 22.02.2017 in the matter of Paryavaran Suraksha Samiti and another v/s Union of India and others (Writ Petition (Civil) No. 375 of 2012), directed that all running industrial units which require "consent to operate" from concerned State Pollution Control Board, have a primary effluent treatment plant in place. Therefore, no industry requiring ETP, shall be allowed to operate without ETP.

1.5.4 EC is not a substitute for taking actions under EP Act, Water Act or Air Act. In fact, units found polluting should be closed/prosecuted as per the Acts and Rules.

*****

Chapter-II: Environmental Compensation to be levied on all violations of Graded Response Action Plan (GRAP) in NCR.

2.1 Background

The CPCB In-house Committee also discussed that the EC shall also be levied on all violations of Graded Response Action Plan (GRAP) in NCR. The implementing agencies for each activity have been identified and the EC will be levied on these agencies. These violations attract graded amounts of EC depending on the state of ambient air quality, which is given in table below:

Table No. 2.1: Environmental Compensation to be levied on all violations of Graded Response Action Plan (GRAP) in Delhi-NCR.

Activity	State Of Air Quality	Environmental Compensation ()
Industrial Emissions	Severe +/Emergency	Rs 1.0 Crore
	Severe	Rs 50 Lakh
	Very Poor	Rs 25 Lakh
	Moderate to Poor	Rs 10 Lakh
Vapour Recovery System (VRS) at Outlets of Oil Companies		
i. Not installed	Target Date	Rs 1.0 Crore
ii. Non-functional	Very poor to Severe +	Rs 50.0 Lakh
	Moderate to Poor	Rs 25.0 Lakh
Construction sites (Offending plot more than 20,000 Sq.m.)	Severe +/Emergency	Rs 1.0 Crore
	Severe	Rs 50 Lakh
	Very Poor	Rs 25 Lakh
	Moderate to Poor	Rs 10 Lakh
Solid waste/ garbage dumping in Industrial Estates	Very poor to Severe +	Rs 25.0 Lakh
	Moderate to Poor	Rs 10.0 Lakh
Failure to water sprinkling on unpaved roads		
a) Hot-spots	Very poor to Severe +	Rs 25.0 Lakh
b) Other than Hot-spots	Very poor to Severe +	Rs 10.0 Lakh

2.2 Action Plan for Utilization of Environmental Compensation Fund

EC levied on all violations of Graded Response Action Plan (GRAP) in Delhi NCR will be deposited in the same fund and will be utilized in the same manner as mentioned in para 1.4.1 of Chapter-I of this report.

******

Chapter-III: Environmental Compensation to be levied in case of failure of preventing the pollutants being discharged in water bodies and failure to implement waste management rules

3.1 Background

The Hon'ble Supreme Court in its order dated 22.02.2017 in the matter of Paryavaran Suraksha Samiti and another v/s Union of India and others (Writ Petition (Civil) No. 375 of 2012), directed State Governments (including the concerned Union Territories) to set-up Sewage Treatment Plants (STPs), which are already under implementation, within the time lines already postulated. Further, the STPs, which are yet to set-up, to be completed within a period of three years, from today, i.e. by 22.02.2020.

The Hon'ble NGT in its order dated 06.12.2018 **(Annexure-III)** in the matter of Court of its own motion v/s State of Karnataka (Original Application No. 125/2017 and M.A. No. 1337/2018) has given following directions:

> *"Since failure of preventing the pollutants being discharged in water bodies (including lakes) and failure to implement solid and other waste management rules are too frequent and widespread, the CPCB must lay down specific guidelines to deal with the same, throughout India, including the scale of compensation to be recovered from different individuals/authorities, in addition to or as alternative to prosecution. The scale may have slabs, depending on extent of pollution caused, economic viability, etc. Deterrent effect for repeated wrongs may also be provided."*

3.2 Ideology of Environmental Compensation Formula

In compliance of the directions of the Hon'ble Tribunal, the Committee deliberated on the issue of environmental compensation to be recovered from individuals/authorities in case of failure of preventing the pollutants being discharged in water bodies and failure to implement solid and other waste management rules. The Committee has suggested that environmental compensation in these cases should be comprised of two components i.e.

1. Cost saved/benefits achieved by the concerned individual/authority by not having proper waste/sewage management system; and
2. Cost to the environment (environmental externality) due to untreated/partially treated waste/sewage because of insufficient capacity of waste/sewage management/treatment facility.

Cost saved/benefits achieved by not having proper waste/sewage management system includes the interest on capital cost of the waste/sewage management facility and daily operation and maintenance (O&M) cost associated with the facility.

The Committee suggested that annual interest rate as 10% on loan amount, borrowed by concerned individual/authority for setting-up waste/sewage management facility, may be assumed as Capital Cost Factor for calculation of environment compensation. Further, as whole O&M cost is saved by concerned individual/authority for not managing required waste/sewage management system, 100% of the O&M cost saved may be considered as O&M cost factor.

Therefore, generalized formula for Environmental Compensation may be described as:

EC= Capital Cost Factor x Marginal Average Capital Cost for Establishment of Waste or Sewage Management or Treatment Facility x (Waste or Sewage Management or Treatment Capacity Gap) + O&M Cost Factor x Marginal Average O&M Cost x (Waste or Sewage Management or Treatment Capacity Gap) x No. of Days for which facility was not available + Environmental Externality

Cost to the environment due to untreated/partially treated waste/sewage discharge by concerned individual/authority may be assumed as recommended by the committee, which is mentioned below:

Table No. 3.1: Environmental externality for untreated/partially treated sewage discharge

Sewage Treatment Capacity Gap (MLD)	Marginal Cost of Environmental Externality (Rs. per MLD/day)	Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. Per Day)
Up to 200	75	Min. 0.05, Max. 0.10
201-500	85	Min. 0.25, Max. 0.35
501 and above	90	Min. 0.60, Max. 0.80

Table No. 3.2: Environmental externality for improper municipal solid waste management

Municipal Solid Waste Management Capacity Gap (TPD)	Marginal Cost of Environmental Externality (Rs. per ton per day)	Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. Per Day)
Up to 200	15	Min. 0.01, Max. 0.05
201-500	30	Min. 0.10, Max. 0.15
501-1000	35	Min. 0.25, Max. 0.35
1001-2000	40	Min. 0.50, Max. 0.60
Above 2000	Max. 0.80	

The Committee further decided to fix a cap for minimum and maximum cost for capital and O&M component for Environmental Compensation, which are given in below tables:

Table No. 3.3: Minimum and Maximum EC to be levied for untreated/partially treated sewage discharge

Class of the City/Town	Mega-City	Million-plus City	Class-I City/Town and others
Minimum and Maximum values of EC (Total Capital Cost Component) recommended by the Committee (Lacs Rs.)	Min. 2000 Max. 20000	Min. 1000 Max. 10000	Min. 100 Max. 1000
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day)	Min. 2 Max. 20	Min. 1 Max. 10	Min. 0.5 Max. 5

Table No. 3.4: Minimum and Maximum EC to be levied for improper municipal solid waste management

Class of the City/Town	Mega-City	Million-plus City	Class-I City/Town and others
Minimum and Maximum values of EC (Capital Cost Component) recommended by the Committee (Lacs Rs.)	Min. 1000 Max. 10000	Min. 500 Max. 5000	Min. 100 Max. 1000
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day)	Min. 1.0 Max. 10.0	Min. 0.5 Max. 5.0	Min. 0.1 Max. 1.0

The application of formula for calculation of EC may be further understood with the example of two typical cases.

3.3 Environment Compensation for Discharge of Untreated/Partially Treated Sewage by Concerned Individual/Authority:

BIS IS-1172:1993 suggests that for communities with population above 100,000, minimum of 150 to 200 lpcd of water demand is to be supplied. Further, 85% of return rate (CPHEEO Manual on Sewerage and Sewage Treatment Systems, 2013), may be considered for calculation of total sewage generation in a city. CPCB Report on "Performance evaluation of sewage treatment plants under NRCD, 2013", describes that the capital cost for 1 MLD STP ranges from 0.63 Cr. to 3 Cr. and O&M cost is around Rs. 30,000 per month. After detail deliberations, the Committee suggested to assume capital cost for STPs as Rs. 1.75 Cr/MLD (marginal average cost). Further, expected cost for conveyance system is assumed as Rs. 5.55 Cr./MLD (marginal average cost) and annual O&M cost as 10% of the combined capital cost. Population of the city may be taken as per the latest Census of India. Based on these assumptions, Environmental Compensation to be levied on concerned ULB may be calculated with the following formula:

EC= Capital Cost Factor x [Marginal Average Capital Cost for Treatment Facility x (Total Generation-Installed Capacity) + Marginal Average Capital Cost for Conveyance Facility x (Total Generation -Operational Capacity)] + O&M Cost Factor x Marginal Average O&M Cost x (Total Generation- Operational Capacity) x No. of Days for which facility was not available + Environmental Externality x No. of Days for which facility was not available

Alternatively;

EC (Lacs Rs.) = [17.5(Total Sewage Generation – Installed Treatment Capacity) + 55.5(Total Sewage Generation-Operational Capacity)] + 0.2(Sewage Generation-Operational Capacity) x N + Marginal Cost of Environmental Externality x (Total Sewage Generation-Operational Capacity) x N

Where; N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority

Quantity of Sewage is in MLD

Table No. 3.5: Sample calculation for EC to be levied for discharge of untreated/partial treated Sewage

City	Delhi	Agra	Gurugram	Ambala
Population (2011)	1,63,49,831	17,60,285	8,76,969	5,00,774
Class	Mega-City	Million-plus City	Class-I Town	Class-I Town
Sewage Generation (MLD) (*as per the latest data available with CPCB*)	4195	381	486	37
Installed Treatment Capacity (MLD) (as per the latest data available with CPCB)	2500	220	404	45.5
Operational Capacity (MLD) (as per the latest data available with CPCB)	1900	140	300	24.5
Treatment Capacity Gap (MLD)	2295	241	186	12.5
Calculated EC (capital cost component for STPs) in Lacs Rs.	29662.50	2817.50	1435.00	0.00
Calculated EC (capital cost component for Conveyance System) in Lacs. Rs.	127372.50	13375.50	10323.00	693.75
Calculated EC (Total capital cost component) in Lacs Rs.	157035.00	16193.00	11758.00	693.75
Minimum and Maximum values of EC (Total Capital Cost Component) recommended by the Committee (Lacs Rs.)	Min. 2000 Max. 20000	Min. 1000 Max. 10000	Min. 100 Max. 1000	Min. 100 Max. 1000
Final EC (Total Capital Cost Component) in Lacs Rs.	**20000.00**	**10000.00**	**1000.00**	**693.75**
Calculated EC (O&M Component in Lacs Rs./day	459.00	48.20	37.20	2.50
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./day)	Min. 2 Max. 20	Min. 1 Max. 10	Min. 0.5 Max. 5	Min. 0.5 Max. 5
Final EC (O&M Component) in Lacs. Rs./Day	**20.00**	**10.00**	**5.00**	**2.50**
Calculated Environmental Externality (Lacs Rs .Per Day)	2.0655	0.2049	0.1395	0.0094
Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. Per Day)	Min. 0.60 Max. 0.80	Min. 0.25 Max. 0.35	Min. 0.05 Max. 0.10	Min. 0.05 Max. 0.10
Final Environmental Externality (Lacs Rs. Per day)	**0.80**	**0.25**	**0.10**	**0.05**

3.4 Environment Compensation to be Levied on Concerned Individual/Authority for Improper Solid Waste Management:

It is known that estimated MSW generation is approximately 1.5 lakh MT/Day in India (MoHUA Report-2016). As per the principles of SWM Rules, 2016 and PWM Rules 2016, as amended in 2018, the total cost of Municipal Solid Waste management in a city/town includes cost for door to door collection, cost of segregation at source, cost for transportation in segregated manner, cost for processing of MSW and disposal through facility like composting, biomethanation, recycling, co-processing in cement kilns etc.

In view of above, it is estimated that the total cost of processing and treatment of MSW for a city having population size of 1 lakh and generating approximately 50 tons/day of MSW is Rs.15.5 Crores, including capital cost (one time) and O & M cost for one year. The expenditure for subsequent years would be only Rs. 3.5 crores/annum.

CPCB sponsored a survey to ascertain the status of municipal solid waste disposal in 59 cities/towns of India. The survey was conducted by the Environment Protection Training Research Institute (EPTRI), Hyderabad. As per the survey, it is estimated that solid waste generated in small, medium and large cities and towns is about 0.1 kg (Class-III), 0.3-0.4 kg (Class-II) and 0.5 kg (Class-I) per capita per day respectively. The committee opined that 0.6 kg/day, 0.5 kg/day and 0.4 kg/day per capita waste generation may be assumed for mega-cities, million-plus UAs/towns and Class-I UA/Towns respectively for calculation of environmental compensation purposes. Based on these assumptions, Environmental Compensation to be levied on concerned ULB may be calculated with the following formula:

EC = Capital Cost Factor x Marginal Average Cost for Waste Management x (Per day waste generation-Per day waste disposed as per the Rules) + O&M Cost Factor x Marginal Average O&M Cost x (Per day waste generation-Per day waste disposed as per the Rules) x Number of days violation took place + Environmental Externality x N

Where;

Waste Quantity in tons per day (TPD)

N= Number of days from the date of direction of CPCB/SPCB/PCC till the required capacity systems are provided by the concerned authority

Simplifying;

EC (Lacs Rs.) = 2.4(Waste Generation - Waste Disposed as per the Rules) +0.02 (Waste Generation - Waste Disposed as per the Rules) x N + Marginal Cost of Environmental Externality x (Waste Generation - Waste Disposed as per the Rules) x N

Table No. 3.6: Sample calculation for EC to be levied for improper management of Municipal Solid Waste

City	Delhi	Agra	Gurugram	Ambala
Population (2011)	1,63,49,831	17,60,285	8,76,969	5,00,774
Class	Mega-City	Million-plus City	Class-I Town	Class-I Town
Waste Generation (kg. per person per day)	0.6	0.5	0.4	0.4
Waste Generation (TPD)	9809.90	880.14	350.79	200.31
Waste Disposal as per Rules (TPD) (*assumed as 25% of waste generation for sample calculation)*	2452.47	220.04	87.70	50.08
Waste Management Capacity Gap (TPD)	7357.42	660.11	263.09	150.23
Calculated EC (capital cost component) in Lacs. Rs.	17657.82	1584.26	631.42	360.56
Minimum and Maximum values of EC (Capital Cost Component) recommended by the Committee (Lacs Rs.)	Min. 1000 Max. 10000	Min. 500 Max. 5000	Min. 100 Max. 1000	Min. 100 Max. 1000
Final EC (capital cost component) in Lacs. Rs.	**10000.00**	**1584.26**	**631.42**	**360.56**
Calculated EC (O&M Component) in Lacs. Rs./Day	147.15	13.20	5.26	3.00
Minimum and Maximum values of EC (O&M Cost Component) recommended by the Committee (Lacs Rs./Day)	Min. 1.0 Max. 10.0	Min. 0.5 Max. 5.0	Min. 0.1 Max. 1.0	Min. 0.1 Max. 1.0
Final EC (O&M Component) in Lacs. Rs./Day	**10.00**	**5.00**	**1.00**	**1.00**
Calculated Environmental Externality (Lacs Rs. Per Day)	2.58	0.18	0.03	0.02
Minimum and Maximum value of Environmental Externality recommended by the Committee (Lacs Rs. per day)	Max. 0.80	Min. 0.25 Max. 0.35	Min. 0.01 Max. 0.05	Min. 0.01 Max. 0.05
Final Environmental Externality (Lacs Rs. per day)	**0.80**	**0.25**	**0.03**	**0.02**

3.3 Action Plan for Utilization of Environmental Compensation Fund

EC levied in case of failure of preventing the pollutants being discharged in water bodies and failure to implement waste management rules will be deposited in the same fund and will be utilized in the same manner as mentioned in para 1.4.1 of Chapter-I of this report.

3.4 Recommendations

1. The Committee recommended that to begin with, Environmental Compensation to be recovered from individuals/authorities in case of failure of preventing the pollutants being discharged in water bodies and failure to implement solid waste management rules may be calculated with the methodology described in the report.
2. If mixing of Bio-medical Waste or Hazardous Waste is found in Municipal Solid Waste than capital cost component of EC may be increased by a multiplication factor of 1.5.

3. In order to include deterrent effect for continuous violations, component of O&M and Environmental Externality in EC formula may be increased on exponential basis by 2, 4, and 8 times after every six-months, beyond the time prescribed by authority for ensuring complete treatment of sewage/waste of the city/town.

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Chapter-IV: Environmental Compensation in Case of Illegal Extraction of Ground Water

4.1 Background

The Hon'ble National Green Tribunal (NGT), Principal Bench in the matter of Shailesh Singh v/s Central Ground Water Board & Ors. (Original Application No. 327/2018) vide order dated 03/01/2019 **(Annexure-V)** directed Central Pollution Control Board (CPCB) that:

> *"CPCB may constitute a mechanism to deal with individual cases of violation of norms, as existed prior to Notification of 12/12/2018, to determine the environment compensation to be recovered or other coercive measures to be taken, including prosecution, for past illegal extraction of ground water, as per law."*

4.2 Constitution of the Committee

In compliance to Hon'ble NGT dated 03/01/2019, CPCB constituted a committee under the Chairmanship of Shri A. Sudhakar, DH, WQM-I Division with Shri P. K. Gupta, DH, IPC-VI, Shri Vishal Gandhi, Sc. D, UPC-I Division and Smt. Suniti Parashar, Scientist B, WQM-I Division as members. The committee was asked to deliberate on this issue and come up with draft formulation of mechanism to determine the Environmental Compensation for illegal extraction of ground water.

4.3 Methodology for Assessing Environmental Compensation

The committee discussed the issue on 07/02/2019, 07/03/2019 and 20/3/2019. The committee deliberated on the issue of Environmental Compensation to be recovered from individuals/industries such as domestic, packaging drinking water units, mining & infrastructure projects and industrial units in case of illegal extraction of ground water. The Guidelines/Criteria for evaluation of proposals/requests for Ground Water Abstraction, 2015 were also discussed and based on this further formulation to levy Environmental Compensation has been evolved.

4.4 Ideology of Environmental Compensation w.r.to illegal extraction of ground water

Ground water is becoming an increasingly scarce resource because of its unabated and indiscriminate over-exploitation. Growth in ground water exploitation, however, has led to a steep fall in water table in several parts of the country. Use of ground water is becoming unsustainable day by day. The falling water table is a matter of special concern since it tends to reduce the accessibility of the resource to small and marginal farmers due to increase in costs of extractions.

Specific conditions applicable in Notified/Non-Notified areas for various users, as mentioned in Guidelines/Criteria for evaluation of proposals/requests for Ground Water Abstraction, 2015 are given below:

For Notified Areas:

1. Permission to abstract ground water through any energized means will not be accorded for any purpose other than drinking water.

2. Central Ground Water Authority (CGWA) so far has notified 162 areas, in the country for the purpose of regulation of ground water development.
3. Regulation of Ground Water development in Notified areas is through District Administrative Heads assisted by Advisory Committees under the provisions of Section 4 of the Environment (Protection) Act, 1986.
4. In Notified areas, ground water use in individual houses, infrastructure complexes like group housing societies, hospitals, schools etc. and drinking water requirements of workers in industries can be allowed.
5. NOC for ground water withdrawal will be considered only if Water Supplying Department is not providing adequate water in the area/premises. Proof for this is to be produced from the concerned authority by the applicant.
6. For individual houses, the maximum diameter of the tube-well should be restricted to 4 inch only and the capacity of the pump should not exceed 1HP. For infrastructure projects, maximum diameter of the ground water abstraction structures should be restricted to 150 mm (6 inches) only and capacity of the pump should not exceed 5 HP.
7. Any violation of the above conditions will attract legal action under Section 15 of the Environment (Protection) Act, 1986.

For Non-Notified Areas:

NOC for ground water withdrawal will be considered for industries/infrastructure/packaging as per safe, semi critical, critical and over-exploited criteria.

4.5 Formula for Environmental Compensation for illegal extraction of ground water

The committee decided that the formula should be based on water consumption (Pump Yield & Time duration) and rates for imposing Environmental Compensation for violation of illegal abstraction of ground water. The committee has proposed following formula for calculation of Environmental Compensation (EC_{GW}):

EC_{GW}	**=**	**Water Consumption per Day x No. of Days x Environmental Compensation Rate for illegal extraction of ground water (ECR_{GW})**

Where water Consumption is in m^3/day and ECR_{GW} in Rs./m^3

Yield of the pump varies based on the capacity/power of pump, water head etc. For reference purpose, yield of the pump may be assumed as given in **Annexure-VI.**

Time duration will be the period from which pump is operated illegally.

In case of illegal extraction of ground water, quantity of discharge as per the meter reading or as calculated with assumptions of yield and time may be used for calculation of EC_{GW}.

4.6 Environmental Compensation Rate (ECR_{GW}) for illegal use of Ground Water

The committee decided that the Environmental Compensation Rate (ECR_{GW}) for illegal extraction of ground water should increase with increase in water consumption as well as water scarcity in the area. Further, ECR_{GW} are kept relaxed for drinking and domestic use as compared to other uses, considering the basic need of human being.

As per CGWB, safe, semi-critical, critical and over-exploited areas are categorized from the ground water resources point of view (CGWB, 2017). List of safe, semi-critical, critical and over-exploited areas are available on the website of CGWB and can be accessed from- http://cgwa-noc.gov.in/LandingPage/NotifiedAreas/CategorizationOfAssessmentUnits.pdf#ZOOM=150.

Environmental Compensation Rates (ECR_{GW}) for illegal use of ground water (ECR_{GW}) for various purposes such as drinking/domestic use, packaging units, mining and industrial sectors as finalized by the committee are given in tables below:

4.6.1 ECR_{GW} for Drinking and Domestic use:

Drinking and Domestic use means uses of ground water in households, institutional activity, hospitals, commercial complexes, townships etc.

Sl. No.	Area Category	Water Consumption (m^3/day)			
		<2	2 to <5	5 to <25	25 & above
		Environmental Compensation Rate (ECR_{GW}) in Rs./m^3			
1	Safe	4	6	8	10
2	Semi Critical	12	14	16	20
3	Critical	22	24	26	30
4	Over-Exploited	32	34	36	40
Minimum EC_{GW}=Rs 10,000/- (for households) and Rs. 50,000 (for institutional activity, commercial complexes, townships etc.)					

4.6.2 ECR_{GW} for Packaged drinking water units:

Sl. No.	Area Category	Water Consumption (m^3/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
		Environmental Compensation Rate (ECR_{GW}) in Rs./m^3			
1	Safe	12	18	24	30
2	Semi critical	24	36	48	60
3	Critical	36	48	66	90
4	Over-exploited	48	72	96	120
Minimum EC_{GW}=Rs 1,00,000/-					

4.6.3 ECR_{GW} for Mining, Infrastructure and Dewatering Projects

Sl. No.	Area Category	Water Consumption (m^3/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
		Environmental Compensation Rate (ECR_{GW}) in Rs./m^3			
1	Safe	15	21	30	40
2	Semi critical	30	45	60	75
3	Critical	45	60	85	115
4	Over-exploited	60	90	120	150
Minimum EC_{GW}=Rs 1,00,000/-					

4.6.4 ECR_{GW} for Industrial Units:

Sl. No.	Area Category	Water Consumption (m^3/day)			
		<200	200 to <1000	1000 to <5000	5000 & above
		Environmental Compensation Rate (ECR_{GW}) in Rs./m^3			
1	Safe	20	30	40	50
2	Semi critical	40	60	80	100
3	Critical	60	80	110	150
4	Over-exploited	80	120	160	200
Minimum EC_{GW}=Rs 1,00,000/-					

For better understanding of implementation of EC_{GW} policy, some example calculations are given below:

Example No. 1 (For drinking and domestic Use):

It is observed that a household in safe zone is extracting ground water illegally from past 2 year and 3 months with the help of 1 HP pump, dia 4 inches and head as 25 meter. It is assumed that the house-owner runs the pump for 0.5 hr/day. What Environmental Compensation (EC_{GW}) will be charged to the owner?

Solution:

Pump Yield *(Please refer Annexure-VI)* = 3 m^3/hr

Daily Consumption = 3 x 0.5 =1.5 m^3

ECR_{GW} = 4 Rs./m^3 *(Please refer para 4.6.1)*

EC to be levied = 4 x 1.5 = 6 Rs./day

Total time period = 820 days

Then, EC_{GW}= 6 x 820

Calculated EC_{GW}= 4,920 Rs.

EC_{GW} to be levied = 10,000 Rs. (minimum prescribed EC_{GW}, *please refer para 4.6.1*)

Example 2 (For Industrial Units):

It is observed that an industry in critical zone is extracting ground water illegally from past 1 year with the help of 5 HP pump, dia 6 inches and head as 50 meter. It is assumed that the industry runs the pump for 3 hrs/day. What Environmental Compensation (EC_{GW}) will be charged to the owner?

Solution:

Pump Yield *(Please refer Annexure-VI)* = 12 m^3/hr

Daily Consumption = 12 x 3 =36 m^3/day

ECR_{GW} = 60 Rs./m^3 *(Please refer para 4.6.4)*

EC to be levied = 60 x 36 = 2,160 Rs./day

Total time period = 365 days

Then, EC_{GW}= 2,160 x 365

EC_{GW}= 7,88,400 Rs.

4.7 Relaxation

Central Ground Water Authority (CGWA) reserves to right to relax or interpret these mechanisms in case of any exigency or situation of National strategic importance, as per Guidelines/Criteria for evaluation of proposals/requests for Ground Water Abstraction, 2015.

4.8 Recommendations

The committee has given following recommendations:

- The minimum Environmental Compensation for illegal extraction of ground water for domestic purpose will be Rs. 10,000, for institutional/commercial use will be 50,000 and for other uses will be 1,00,000.
- In case of fixation of liability, it always lies with current owner of the premises where illegal extraction is taking place.
- Time duration may be assumed to be one year in case where no evidence for period of installation of bore well could be established.
- For Drinking and Domestic use, where metering is not present but storage tank facility is available, minimum water consumption per day may be assumed as similar to the storage capacity of the tank.
- For industrial ground water use, where metering is not available, water consumption may be assumed as per the consent conditions. Further, where in case industry is operating without consent, water consumption may be calculated based on the plant capacity (on the recommendation of SPCB/PCC, if required). SPCB/PCC may bring the issue of illegal extraction of ground water in industries in to the notice of CGWA for appropriate action by CGWA.
- Authorities assigned for levy EC and taking penal action are listed below:

S. No.	Actions	Authority
1.	To seal the illegal bore-well/tube-well to stop extraction of water and further closure of project	District Collector
2.	To levy EC_{GW} as per prescribed method	District Collector, CGWA
3.	To levy EC on water pollution, as per the method prescribed in report of CPCB- "EC on industrial pollution"	CPCB/SPCB/PCC
4.	Prosecution of violator	CGWA under EP Act
		SPCB/PCC under Air and Water Act

- CGWA may maintain a separate account for collection and utilization of fund, collected through the prescribed methodology in this report.

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Annexure – B

कार्यालय नगर पंचायत लार, देवरिया

पत्रांक मेमो /न0पं0लार/2025–26 दिनांकः 03 अगस्त, 2025

सेवामें,

क्षेत्रीय अधिकारी महोदय,
उ0प्र0 प्रदूषण नियंत्रण बोर्ड,
गोरखपुर।

विषयः– मा0 एन0जी0टी0, नई दिल्ली में योजित एम0ए0 नं0–44/2024 (ओ0ए0 सं0–170/2021) नुरूल सहर लारी बनाम सटेट आफ यू0पी0 एवं अन्य में पारित आदेश दिनांक 09.07.2025 के अनुपालन के संबंध में।

महोदय,

कृपया उपर्युक्त विषयक के अनुपालन के साथ ही नगर पंचायत लार, देवरिया सीमान्तर्गत धरेलू एवं सामुदायिक, व्यवसायिक प्रतिष्ठानों आदि शैचालयों से निकलने वाला सिवेज वाटर के मात्रा आकलन की अपेक्षा की गयी है, जिसके कम में अवर अभियन्ता, जलकल–देवरिया द्वारा स्थलीय निरीक्षण कर 0.57MLD सिवेज वाटर जनित होने के आकलन से अवगत कराया गया है।

आख्या सेवा में सादर प्रेषित है।

अधिशासी अधिकारी,
नगर पंचायत लार,
देवरिया।