Regn. No. S-E/150/Distt.South-East/16.12.2013

INSTITUTION OF WATER & ENVIRONMENT (INDIA)

committed to safe water & sustainable environment....

IWE News Letter

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NITI Aayog NGO DARPAN REGD ID : DL/2024/0431238

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This NGO Darpan portal **enables VOs/NGOs to enrol centrally and thus facilitates creation of a repository of information abot VOs/NGOs, Sector/State wise**. The Portal facilitates VOs/NGOs to obtain a system generated Unique ID, as and when signed.

By registering under Darpan registration, **NGOs will gain access to government schemes, grants, and partnerships, enhancing visibility and credibility**.

दर्पण पोर्टल **वीओ/एनजीओ को केंद्रीय रूप से नामांकन करने में सक्षम बनाता है और इस प्रकार वीओ/एनजीओ के बारे में सेक्टर/राज्यवार जानकारी का भंडार बनाने की सुविधा प्रदान करता है।** पोर्टल वीओ/एनजीओ को हस्ताक्षर करते समय सिस्टम द्वारा जनरेटेड यूनिक आईडी प्राप्त करने की सुविधा प्रदान करता है।

Institution of Water and Environment (INDIA) Registration No.

S-E/ 150 / Distt. South-East/2013

PAN NO.AAAAI7437A

The 1st Executive Committee Meeting and the 30th Council meeting of the "Institution of Water & Environment (India)" was held on 27th March 2026 at 02.30 PM and 3.30 PM were held on 27th March 2026, at the meeting Hall of Hotel Blue Stone, Kaushambi, Ghaziabad.

Minutes of Meeting of 1st Executive Committee Meeting Of the Year 2026

Agenda Item no 1.1

Confirmation of MoM of the 2nd Executive Committee meeting of Year 2025.

The 2nd Executive committee meeting of the Institution of Water & Environment of the year 2025 was held on 18th September 2025 at the Ground Floor Hall of Club 27, Sector 27 Noida. The Minutes of the meeting was forwarded to all the members of the Executive Committee by e-mail on 1st October 2025. No comments, have so far been received from any member.

Contd.

Therefore, "Minutes of the 2nd Executive Committee meeting of 2025 were confirmed by the Committee.

Agenda Item no 1.2
Action Taken Report of the 2nd Executive Committee Meeting of the Year 2025

1. **Discussion on activities to be undertaken in Future:** It was decided to pursue the matter with Chief Engineer, Ghaziabad Zone, UP Jal Nigam (Urban), after Er. R.M. Kant DG (Publication) is available.
2. **Discussion on activities required for printing of Rules & Regulations with MoA as per approved modifications:** The amendments in Rules and Regulations made do not fulfil the requisite conditions prescribed in the act and this matter was dropped in last meeting.
3. **Status of Annual account of the Institution for the FY 2022-2023**
   Annual account of the Institution for the FY 2022-2023 were approved in 7th AGM on 13th December 2025**.**
4. **Holding 7th AGM-**7th **AGM** already held on 13th December 2025**.**
5. **Election of 9 Council members.** 7 Council members were elected in 7th AGM on 13th December 2025. The Committee desired that the certification of their election from Registrar of Societies should be obtained.
6. **Regarding the Quarterly newsletter:** First Newsletter was published in April 2025 and afterwards it is being published in each quarter regularly.
7. **Hiring of Law Firm:** V P-1 and VP-2 requested to take assistance from the Office of Registrar of Sociétés for this matter.
8. **Status of Annual account for the year 2022-2023 & 2023-2024:** Audited account of 2022-2023 & unaudited account of 2023-2024 were approved in 7th AGM on 13th December 2025.

Agenda Item no 1.3
Expenditure incurred on 29th Council & 7th AGM held on 13th December 2025.

The Executive Committee approved the expenditure of Rs. 35,974/- incurred on holding 29th Council and 7th AGM on 13th December 2025.

Agenda Item no 1.4
Approval of Expenditure incurred during FY 2025-2026

The Committee approved the expenditure incurred during FY 2025-2026 till 26th March 2026 with the comment that expenditure shown under the head CA payment is actually payment made to the accounting agency.

Agenda Item no 1.5
Discussion on how to obtain Annual account from State Centers for FY 2025-2026 & of previous years

The Committee deliberated on this issue and suggested that when State Centres are not providing annual accounts the annual statement should be obtained directly from Bank for last FY & previous financial years.

Agenda Item no 1.6
Any other Agenda with the permission of the Chair

1. The Committee was informed by Er. Vijendra Vikramaditya (VP-I) that Er. Sunil Kumar (VP-III) has submitted his resignation on health grounds from the Vice President post on IWE E C WhatsApp group on 26th March 2026 and requested to accept his resignation. The Committee recommended the Council to accept his resignation and also nominate someone as Vice President-III.

The meeting ended with the Vote of thanks

MINUTES OF THE 30th GOVERNING COUNCIL MEETING

AGENDA NO. 30.1: Confirmation of Minutes of the 29th Governing Council meeting.

The 29th Council meeting of the Institution was held on 13th December 2025 at Conference Hal of Ganga Jal Project, Pratap Vihar, Ghaziabad, NCR. The Minutes of the Meeting were forwarded to all the Council members by e-mail on 11/02/2026 for their suggestions or comments. No comments, were received from any member. Therefore, the "Minutes of the 29th Council meeting" were confirmed by the Council members present.

AGENDA NO 30.2: Action Taken Report of the 29th Governing Council Meeting.

1. **Discussions on election of 9 Council members**
   No action needed as election of 7 recommended members were approved in 7th Annual General Meeting held on 13th December 2025.
2. **Discussions & rethinking on Modifications approved in 4th AGM**
   The amendments in Rules and Regulations made do not fulfil the requisite conditions prescribed in the act and hence this matter was dropped.
3. **Discussion on providing consultation to Local Bodies on Solid Waste Management**
   Er. Ravindra Kumar, from Uttarakhand, Dehradun informed that approval from Local Body is still awaited for preparation of the proposal.
4. **Discussion on holding 7th AGM & 29th Council meeting**
   No action is required as 7th AGM was held on 13th December 2025 (Saturday).

AGENDA No. 30.3: Action taken report of the 7th Annual General Meeting

The 7th AGM was held on 13/12/2025 at Conference Hall of Ganga Jal Project, Pratap Vihar, Ghaziabad, NCR. The minutes of the meeting were circulated, through e-mail, to all the members on 11/02/2026. No comments have been received from any member. Therefore, the minutes of the meeting were recommended by the Council for confirmation in next AGM.

1. **To receive & consider the Annual Report 2023-25 of the "Institution of Water & Environment (India)".**
   Done, hence no action is needed.
2. **To pass the audited account of the "Institution of Water& Environment (India)" for the FY 2022-2023 & 2023-24**
   Done, hence no action is needed**.**
3. **To appoint Auditor for the year 2024-2025 & 2025-26**
   The services of the Auditor were used in finalizing annual accounts of subsequent years. It was decided in the meeting that Axis Bank account opened by the other faction which was got blocked by us, should be included in the annual account of the Institution. Statement of bank account from Axis bank should also be sought and included in annual account of the Institution.
4. **Discussion on the matters with the permission of chair**
   1. **Election of Council members**
      The newly elected 7 members had been performing their duties. Their certification from Registrar of Societies may be obtained. The remaining two members will be elected in next AGM.
   2. **Estimated expenditure on 7th AGM**
      The details of expenditure will be discussed under Agenda 30.4
   3. **Change of category of Student membership**
      This issue and other category membership which has completed their duration of membership was discussed and a Sub Committee headed by President Er. A.K. Srivastava, Er. Vijendra Vikramaditya (VP-I) and Er. T.P.S. Arora (SDG) as members was formed to scrutinize the matter and submit their findings in next Council meeting.
   4. **To hold activities in collaboration with other institutions**
      It was decided in the meeting to celebrate World Environment Day on 5th June 2026 in collaboration with other likeminded Institutions.

5. **To obtain funds from Government Departments and Ministries**

Still awaiting proposals from State Centers. The State Units will be requested to prepare proposals for obtaining fund from the Government.

AGENDA No. 30.4: To approve expenditure on 29th Council & 7th AGM

In 7th AGM an estimated expenditure of Rs. 35000/- was allocated against which actual expenditure of Rs.35974/- was incurred on holding 29th Council & 7th AGM. The Council approved the actual expenditure incurred.

AGENDA No. 30.5: To approve expenditure incurred during the FY 2025-2026.

The Council approved the expenditure incurred during FY 2025-2026 till 26th March 2026 with the comment that expenditure shown under the head CA payment is actually payment made to the accounting agency.

AGENDA No. 30.6: Discussion on obtaining annual account from State Centres for FY 2025-2026 and of previous years.

The Council deliberated on this issue and suggested that when State Centres are not providing annual accounts the annual statement should be obtained directly from Bank for last FY & previous financial years.

AGENDA No. 30.7: Any other matter with the permission of chair

1. The Council was informed by Er. Vijendra Vikramaditya (VP-I) that Er. Sunil Kumar (VP-III) has submitted his resignation on health ground from the Vice President post on IWE WhatsApp on 26th of March 2026 and requested to accept his resignation. The council accepted his resignation and nominated Er. Ravindra Kumar from Dehradun, Uttarakhand as (VP-III).
2. As there is vacancy in the Council, Er. Vijendra Vikramaditya, V P -1 proposed to co-opt Er. C K Tyagi, Past working President into the council. It was seconded by Er. R K Garg, V P –II. The Council decided to nominate Er. C.K. Tyagi former President IWE (I) as Co-opted member of the Council.

The meeting ended with the Vote of thanks

Thanks and Regards

A.K. Srivastava

President IWE (I)



World Environment Day 2026 is centred around the theme **"Inspired by Nature. For Climate. For Our Future."**

Led by the United Nations Environment Programme (UNEP), the global campaign officially uses the hashtag #NowForClimate. This year's focus zeroes in on urgently stepping up climate action, highlighting nature-based solutions to global warming, and moving past mere awareness into measurable execution.

On 5th June 26 at 9 am, World Environment Day celebration event Quiz for Children at Prateek Laurel, Sector 120, is being organized.

Gravity-Based Raw Water Conveyance System under JICA-Assisted Agra Water Supply (Ganga Jal) Project, Sanctioned Cost Rs. 2887.92 Crore – Focus on Pipeline Alignment and Hydraulic Feasibility

1. Background and Need

Agra, one of the earliest Indian cities with a piped water supply system (since 1890), has historically depended on the River Yamuna due to high TDS in ground water which makes it unfit for drinking. Due to severe pollution caused by upstream wastewater discharge and absence of freshwater inflow, Yamuna water quality deteriorated beyond the treatment capacity of conventional WTPs.

To provide a **long-term, sustainable and energy-efficient solution**, the Government of India and Government of Uttar Pradesh implemented the **Agra Water Supply Project (Ganga Jal Project)** with financial assistance from **Japan International Cooperation Agency (JICA)**.

2. Selection of Source and Hydraulic Levels

The raw water source was selected on the **Upper Ganga Canal upstream of Palra Fall (Bulandshahar District)** based on assured canal water levels and inter-connectivity with the Middle Ganga Canal.

Strategic Importance of Palra Location

- Upper Ganga Canal at Palra is **interconnected with the Middle Ganga Canal**
- During canal closures for desilting, **Middle Ganga Canal water can be diverted**
- Ensures **uninterrupted raw water supply to Agra and Mathura**

This redundancy makes the system **robust and climate-resilient**.

Key Hydraulic Levels (RLs):

- Water Level of Upper Ganga Canal at Palra: **194.50 m**
- Lip Level of Aerator at Mathura WTP: **170.00 m**
- Lip Level of Aerator at Sikandra WTP: **172.30 m**
- Inlet Chamber Water Level at Jeoni Mandi WTP: **161.00 m**

These levels clearly establish that **gravity flow is feasible throughout the system**, enabling raw water conveyance **without pumping**, resulting in substantial savings in energy cost and carbon footprint.

3. Sedimentation Tank at Palra (370 MLD)

A **370 MLD Plain Sedimentation Tank** has been constructed at Palra to:

- Arrest silt load from Ganga Canal
- Reduce turbidity to **≤300 ppm**
- Protect downstream pipelines and treatment units

(Canal turbidity during monsoon reaches up to ~3000 ppm).

The tank operates with **three RCC compartments (round-robin mode)** ensuring uninterrupted supply during desilting.

4. Raw Water Conveyance Pipeline System (Core Component)

4.1 Palra to Karab (CH 0–98 km): Twin Pipeline

- **Configuration:** Twin MS pipelines
- **Diameter:** DN 2100 mm
- **Length:** ~98 km
- **Capacity:** 370 MLD
- **Purpose:** Convey partially settled raw water by gravity along Mat & Mat Branch Canal alignment

This stretch forms the **hydraulic backbone** of the entire project.

4.2 Off-Take to Mathura WTP

- **Off-take Point:** Karab village (CH ~98 km)
- **Pipeline:** DN 800 mm MS
- **Length:** ~11 km
- **Supply: 25 MLD raw water** to Mathura WTP
- **Hydraulic Adequacy:** Driven purely by gravity (Palra RL 194.5 m → Mathura aerator RL 170.0 m)

This arrangement ensures **independent yet integrated supply** to Mathura without disturbing Agra conveyance.

4.3 Karab to Agra (CH 98–130 km): Single Trunk Main

- **Pipeline:** Single MS pipeline
- **Diameter:** DN 2800 mm
- **Length:** ~32 km
- **Capacity:** ~345 MLD
- **Function:** High-capacity trunk main conveying raw water to Agra city limits

4.4 Bifurcation to Agra WTPs

At Agra (near Yamuna bank):

- Pipeline bifurcates into **two DN 1600 mm MS pipelines conveying -**
    - **144 MLD raw water to → Sikandra WTP &**
    - **198 MLD raw water to → Jeoni Mandi WTP**

A **Break Pressure Tank (BPT)** is provided at the bifurcation point to:

- Control excess hydraulic head
- Prevent pipeline surges

- Safely divert water during sudden grid power failure at WTPs *(Hydraulic diversion without electronic/manual intervention)*.

6. Key Outcomes of the Pipeline-Based Gravity System

- Zero recurring pumping cost → **₹12+ crore annual energy savings**
- Reduced carbon emissions and operational expenditure
- Enhanced reliability of raw water supply
- Protection of WTPs from high turbidity and hydraulic shocks
- Foundation for long-term self-sustainability of urban water supply

7. Conclusion

The gravity-based raw water conveyance pipeline system under the Ganga Jal Project is a **technically sound, energy-efficient and strategically resilient infrastructure**. The careful selection of source level, pipeline diameters, alignment, and pressure management has enabled **simultaneous supply to Agra and Mathura** with high reliability and minimal operational cost.





















The water quality of the Yamuna River on the left bank (UP side) as it exits

Delhi is characterized by extreme organic pollution and high bacterial contamination, primarily due to the discharge of the Shahdara drain. Monitoring at Asgarpur, located on the border between Delhi and Uttar Pradesh, consistently shows that the river is "ecologically dead" with near-zero dissolved oxygen (DO) levels.

The Latest Water Quality Parameters (As of March/April 2026)

The Delhi Pollution Control Committee (DPCC) and CPCB monitor the river at several interstate points. The Asgarpur monitoring station represents the water quality flowing into Uttar Pradesh.

Parameter Current Level (Asgarpur) Permissible Limit Status:

BOD (Biochemical Oxygen Demand)34 - 64 mg/l< 3 mg/lCritical (Up to 20x the limit)

DO (Dissolved Oxygen)0.0 - 0.4 mg/l> 5 mg/lLethal (Nearly zero)

Faecal Coliform Peaks up to 46 x 10^5 MPN/100ml< 2,500, MPN/100ml, Hazardous (Thousands of times over limit)

Key Pollution Sources on the Left Bank

• Shahdara Drain: This is the most significant pollutant source on the left bank (East Delhi/UP side). It contributes approximately 10.9% of total wastewater and 13.95% of the total organic pollution load (BOD) to the river.

• Untreated Sewage: Heavy contamination from human excreta is evidenced by faecal coliform levels reaching 32,000 times the desirable limit at the exit point.

• Industrial Effluents: Excess phosphate from laundry waste and industrial detergents often leads to the formation of toxic white foam.

Environmental Impact

• Biological Death: Stretches between Wazirabad and Okhla, including the UP-side banks, frequently record zero dissolved oxygen, making it impossible for aquatic life (fish and flora) to survive.

The water quality of the Yamuna River in Delhi

It remains in a critically polluted state as of early 2026. While the river enters the city with relatively clean water at Palla, it deteriorates drastically over its 52 km journey through the capital, primarily due to the discharge of untreated domestic sewage and industrial effluents from over 22 major drains.

Key Water Quality Parameters (March–April 2026), Recent data from the Delhi Pollution Control Committee (DPCC) highlights that most segments of the river fail to meet primary bathing standards.

• Biological Oxygen Demand (BOD): BOD levels, which indicate organic pollution, range from 2 mg/l to 60 mg/l. The maximum recorded value of 60 mg/l (at Asgarpur) is 20 times higher than the safe limit of 3 mg/l.

• Dissolved Oxygen (DO): In several stretches downstream of Wazirabad, DO levels often drop to zero, making the water uninhabitable for aquatic life and rendering the river "biologically dead".

• Faecal Coliform (FC): Levels remain alarmingly high, reaching up to 1,60,000 MPN/100 ml at the ISBT Bridge in March 2026. This is significantly above the desirable limit of 500 MPN/100 ml.

• Ammonia Surges: Frequent spikes in ammonia levels—often exceeding 3 mg/l (well above the 1 mg/l treatment capacity of Delhi's water plants)—frequently disrupt drinking water production.

Major Sources of Pollution

The "critical stretch" between Wazirabad and Okhla barrage (22 km) accounts for 76% to 80% of the total pollution load despite being only 2% of the river's total length.

• Najafgarh Drain: The single largest contributor, responsible for approximately 70% of the total wastewater pollution load in the river.

• Shahdara Drain: Contributes about 13.95% of the pollution load.

• Untreated Sewage: Delhi generates nearly 3,800 MLD (million litres per day) of sewage but treats only about 2,700 MLD, leaving a gap of

• Public Health Risk: The water is considered completely unfit for bathing or irrigation. Toxins in the water pose severe health risks to those using the banks for religious rituals or cattle.
• Froth Formation: High ammonia levels (regularly exceeding 5 ppm vs a 0.5 ppm safe limit) cause frequent shutdowns of water treatment plants downstream.
For further data, you can refer to the monthly Analysis Reports published by the DPCC.
Would you like to see a comparison of current pollution levels against historical data from the last five years?





roughly 1,100 MLD that flows directly into the river.
• Industrial Effluents: Heavy metals and phosphates (up to 5.77 mg/l) from industries in Delhi, Haryana, and UP further contaminate the water.

Current Initiatives and Monitoring

• Real-Time Tracking: The DPCC Analysis Dashboard provides monthly water quality reports from eight key monitoring locations.
• STP Upgrades: Delhi is targeting a new sewage treatment standard of 10/10 (BOD/TSS) for all its plants by December 2026 to improve the quality of treated water discharged into the river.
• Judicial Oversight: The National Green Tribunal (NGT) continues to monitor rejuvenation progress under the "Maily Se Nirmal Yamuna" plan.
Delhi Pollution Control Committee +4
4. Seasonal Impacts
• Summer/Dry Season: Pollution spikes due to extremely low flow and high temperatures, which reduce the river's self-purification capacity.
• Monsoon: Heavy rainfall provides a dilution effect, temporarily improving DO levels and reducing chemical concentrations, though the water remains unfit for bathing.



About Authors :

1. **Gravity-Based Raw Water Conveyance System under JICA-Assisted Agra Water Supply (Ganga Jal) Project, Sanctioned Cost Rs. 2887.92 Crore – Focus on Pipeline Alignment and Hydraulic Feasibility – Script By Er. R.K.Pankaj, Chief Engr (Ghaziabad) & Ex-Project Manager, Ganga Jal Project, Agra and Photos of Ganga Jal Project By Er. P.K.Chauhan, Ex-Chief Engineer & Project Director, Ganga Jal Project, Agra**

2. Water Quality of Yamuna, U.P.Side and Delhi Side By Er. P.K.Chauhan, D.G.(Finance), IWE(India) using data obtained by AI.

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