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Eco-Politics and Failed Promises: Why Delhi's Yamuna Remains a 'River of Grief'

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Abstract : *The level of water pollution in Yamuna River in the National Capital Territory (NCT) of Delhi has recently become a topic of hot discussion among the leaders of the Aam Aadmi Party (AAP) and that of the BJP. It had happened just prior to the Delhi Legislative Assembly Elections held on 2 February, 2025. Taking note of it, the present study has examined the problem of water pollution in Yamuna River in general and in the NCT of Delhi in particular. The study has come out with a serious thought provoking idea that true salvation for the river lies not in rituals alone but in collective, science-backed efforts to restore its ecological integrity. Numerous efforts that have already been made and a new plan that has emerged with the formation of a new government in the NCT of Delhi for making Yamuna pollution free are also discussed. The study is largely theoretical-conceptual in nature and arguments laid down are supported with relevant published data also. In order to make Yamuna River pollution free, the study concludes with dual recommendation of implementing rigorous environmental measures along with respecting its cultural and spiritual legacy.*

Key words: *Yamuna River, Delhi, Pollution, Spirituality.*

Introduction

In Indian electoral contests, issues related to environment by and large remain absent from the agenda framed by political parties. However, something unique has happened recently on the electoral landscape of Delhi. A few days prior to the Delhi Legislative Assembly Elections, which were held on February 2, 2025, quality of water of Yamuna River (henceforth Yamuna) became an issue of very serious concern. Very hot arguments had taken place between the leadership of the AAP—the party in government at that time in Delhi—and those representing the Haryana state government. The point of debate was the quality of Yamuna water supplied to Delhi through Haryana. It was alleged that the level of ammonia in the water coming from Haryana was very high. The then Delhi Chief Minister, Atishi, treated it as a deliberate act by the Government of Haryana and termed it as a case of 'water terrorism' (The Hindu, 2025, January 28). It was alleged by the AAP chief, Arvind Kejriwal, that it was a deliberate attempt to kill the people of Delhi as they were not voting in favour of the BJP. In a letter to the Election Commission, Delhi Chief Minister, Atishi, had mentioned about the note received from the Delhi Jal Board (DJB) CEO which points to "the fact that the ammonia levels have steadily increased in the water coming from

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Haryana to Delhi via River Yamuna due to mixing of untreated sewage or industrial waste from Haryana, with levels rising over 7 ppm [parts per million] in the last two days, i.e. 700 % beyond the treatable limit" (Indian Express, 2025, January 29). Kejriwal had claimed that "had the Delhi Jal Board not stopped the water coming into Delhi, it would have triggered a mass genocide…The BJP government has mixed such a kind of poison in the water that cannot be treated even by the water treatment plants. It has caused water scarcity in one-third of Delhi. Such politics is done by two enemy countries…But, the same has been done by the BJP government" (Hindustan Times, 2025, January 27). In his response, the Haryana state Chief Minister, had accused Kejriwal for "failing to make proper arrangements for water distribution which had forced Delhi residents to consume contaminated water" (The Hindu, 2025, January 28). Even Haryana Revenue and Disaster Management Minister, Vipul Goel, also accused Kejriwal of making baseless allegations against Haryana just to save his political image before the elections. He further argued that the "water supplied to Delhi is the same water consumed by the President, Prime Minister, and Union Ministers" (The Times of India, 2025, January 29).

Objectives

The prime objective of the study was to analyse and discuss the issues related to quality of water in Yamuna in the NCT of Delhi. The other related objectives were to:

1. provide a brief account on Yamuna, its course, and its cultural, spiritual and economic significance;
2. discuss and analyse the efforts that have already been made,
3. discuss and analyse the new policy that has emerged with the formation of government by the BJP in Delhi towards making the Yamuna clean, and
4. provide possible recommendations for making Yamuna a living entity.

Methodology

The article is largely a theoretical-conceptual construct; however, in order to support the arguments given in the text, data are taken from various published sources. The main sources of data were the publications of Government of Haryana, Central Pollution Control Board, Delhi Pollution Control Committees, Centre for Science and Environment and other publications duly referred to in the study.

Yamuna: Its Course, and Cultural, Spiritual and Economic Significance

The Yamuna (also called as *Jumna* or *Jamuna*) originates from the Yamunotri glacier in Uttarakhand. It is the second largest tributary of the river Ganga (Ganges). In geographical terms, it "travels a total length of 1,376 kilometers and has a drainage system of 366,223 square kilometers, 40.2 % of the entire Ganges Basin (Govt. of Haryana, 2018, November). It merges with other two most worshipped rivers, as believed in Hindu mythology, i.e. the Ganges and the (invisible)

Saraswati at *Triveni Sangam*, Prayagraj (formerly Allahabad). For millions of people living in the country, Yamuna has enormous cultural, spiritual and economic significance.

Irrespective of the fact that worshiping of rivers is one of prime practices followed by different cultural groups across the world, "India honors its rivers more than any other nation, seeing them as the manifest form of divine female powers sent to earth to assist humanity" (Aitken, 1992, cited in Haberman, 2006). Yamuna is rated as one of the holiest rivers in the Hindu literature and personified as a Hindu goddess. Even the main attraction for devotees at Yamunotri is the temple devoted to the Goddess Yamuna. The river is also called as *Yami* and *Kalindi*. As per the Hindu scriptures, Yamuna is the daughter of *Surya* (the Sun God) and *Sanjna* (the Cloud Goddess—the daughter of *Vishwakarma*—the Chief Artisan of the Gods). Yamuna is also considered as the twin sister of *Yama* (God of Death). It is also believed that when "Lord Krishna was born, his father put him in a basket and crossed the Yamuna to reach the avatar of Vishnu to safety in the house of *Yashoda* and *Nand*. This was to escape the cruelty of *Kansa*, the evil uncle of Lord Krishna. All the tales of Lord Krishna's childhood have beautiful imagery of the Yamuna" (Down to Earth, 2012, January 5). Besides cultural and spiritual significance, the river has enormous economic significance as its water is being used for irrigation, agriculture, hydro-power generation, industrial products etc. "Nearly 60 million people depend on the river to sustain their livelihoods" (Srivastava & Prathna, 2022).

The anomaly of the present times is that despite having enormous cultural, spiritual and economic significance, Yamuna itself is in danger. One can draw the related inference from the fact that it is considered "to be among the most polluted rivers of the world" (Srivastava & Prathna, 2022). It is also described as "the "River of grief" and "dirty river" in Delhi, Agra, and Mathura", "unsafe to drink or take a bath" (Sharma et.al. 2024), "an open sewer in the Delhi-Agra stretch" (Kayastha, 2024), an "industrial sewer" (Sarkar et.al. 2017, Sarker et.al., 2021), and "a sewer" (Nehra & Singh 2020). In March 2025, "a report of the parliamentary standing committee on water resources pointed out that the river is virtually non-existent in Delhi. It underlined that the river loses all its environmental flows—the volume and quality of water required by a water body to maintain its health and perform its ecological functions—downstream of the Wazirabad Barrage" (Indian Express, 2025, May 3). Even through a casual glance on the high level of froth on the Yamuna River at various locations in Delhi one can easily judge about the quality of water passing through Yamuna. To somebody coming for the first time in Delhi, the poisonous froth can even give a false idea about glaciers floating on the Yamuna. Further linking the present state of Yamuna and "What if Lord Krishna were to come today and his father were to take him across the Yamuna! The putrid stench emanating from water would be unbearable. And if the child Krishna were to sip the water, he would need to summon all the supernatural powers at his disposal to stay alive" (Down to Earth, 2012, January 5). This clearly demonstrates the horrible scene presently we are living with in regard to Yamuna in Delhi.

From the perspective of the belief it is a fact that majority of Indians believe in the Vedic culture and the related concept of *panchbhootas* (five elements of nature: *Prithvi* (earth), *Jala*

(water), *Agni* (fire), *Vayu* (air), and *Aakash* (space)). These five elements make up any living organism on the planet earth. This is the reason; these elements are worshipped in one way or the other. However, quite surprisingly this belief is generally forgotten and those kinds of activities are done that are extremely harmful for these elements. Rivers which look so beautiful and flow so majestically are also suffering on this account. On the one hand these are considered as sacred, life giving, pure and worship them, on the other hand, these are made polluted through dumping of half-burnt bodies, immersion of innumerable Idols laced with chemical paints, desecrating sewers, immersion of industrial waste etc. Surprisingly, the problem related to deteriorating water quality of rivers is more pronounced in city spaces. The problem is that in "developing countries, not all parts of the city are connected to sewer systems and untreated wastewater finds its way into lakes and rivers, which deteriorates the water quality" (Srivastava & Prathna, 2023). All along with growth of population, the mushroom growth of unauthorized colonies in cities with no or limited sewer system exacerbates the problem of water pollution. Should the city spaces, which are generally treated as better living spaces than the rural ones, needs to be developed in such a way? Where this kind of urbanization is leading to? Whether the anthropogenic activities such as converting a freshwater flowing river into a polluted drain filled with filth and garbage; water abstraction from a river by creating barrage/dam on it, encroachments on a river's floodplain in the name of urbanization or agricultural practices, can be termed as 'Development'?

Water Pollution in Yamuna in NCT of Delhi

After crossing various districts of Haryana, the Yamuna enters the NCT of Delhi just before village Palla, i.e. about 23 km upstream of Wazirabad barrage. Before entering the NCT of Delhi, the Yamuna covers about 393 km from its source and about 220 km from the Hathni Kund barrage in Haryana (Fig. 1). It is the Hathni Kund barrage which regulates the supply of freshwater in Yamuna to Haryana, Uttar Pradesh and Delhi. There are various barrages along the course of Yamuna through which its water is being diverted to certain canals. Each barrage acts as a source of water abstraction, and affect the natural flow of Yamuna. Prior to entering Haryana, water from Yamuna is being diverted to canals at Dak Patthar (Uttarakhand) for the generation of hydro-electricity. From Hathni Kund barrage, its water is shifted to Western Yamuna Canal and Eastern Yamuna Canal for the purpose of irrigation in Haryana and Uttar Pradesh. After covering about 220 km when the river reaches Palla village to enter Delhi, its water is again tapped at Wazirabad barrage for the purpose of providing drinking water to Delhi. This barrage acts as a reservoir for Delhi and from here very little freshwater is released downstream, especially during the dry season. In fact, "the barrage at Wazirabad marks the lean-season end of the river as it ceases to flow downstream. Whence it is city's waste toxic water that offers Delhiites the mirage called Yamuna" (Misra, 2023). On account of abstraction of huge amount of water at Wazirabad and draining of a number of drains loaded with untreated/partially-treated sewage, muck, agriculture and industrial waste into it, the Yamuna turns into a sewage canal. After Wazirabad there is an another barrage, located 22 km downstream, i.e. Okhla barrage (Delhi) from where its water is being diverted to Agra Canal for irrigation purpose. This stretch of 22 km of Yamuna in Delhi from Wazirabad barrage

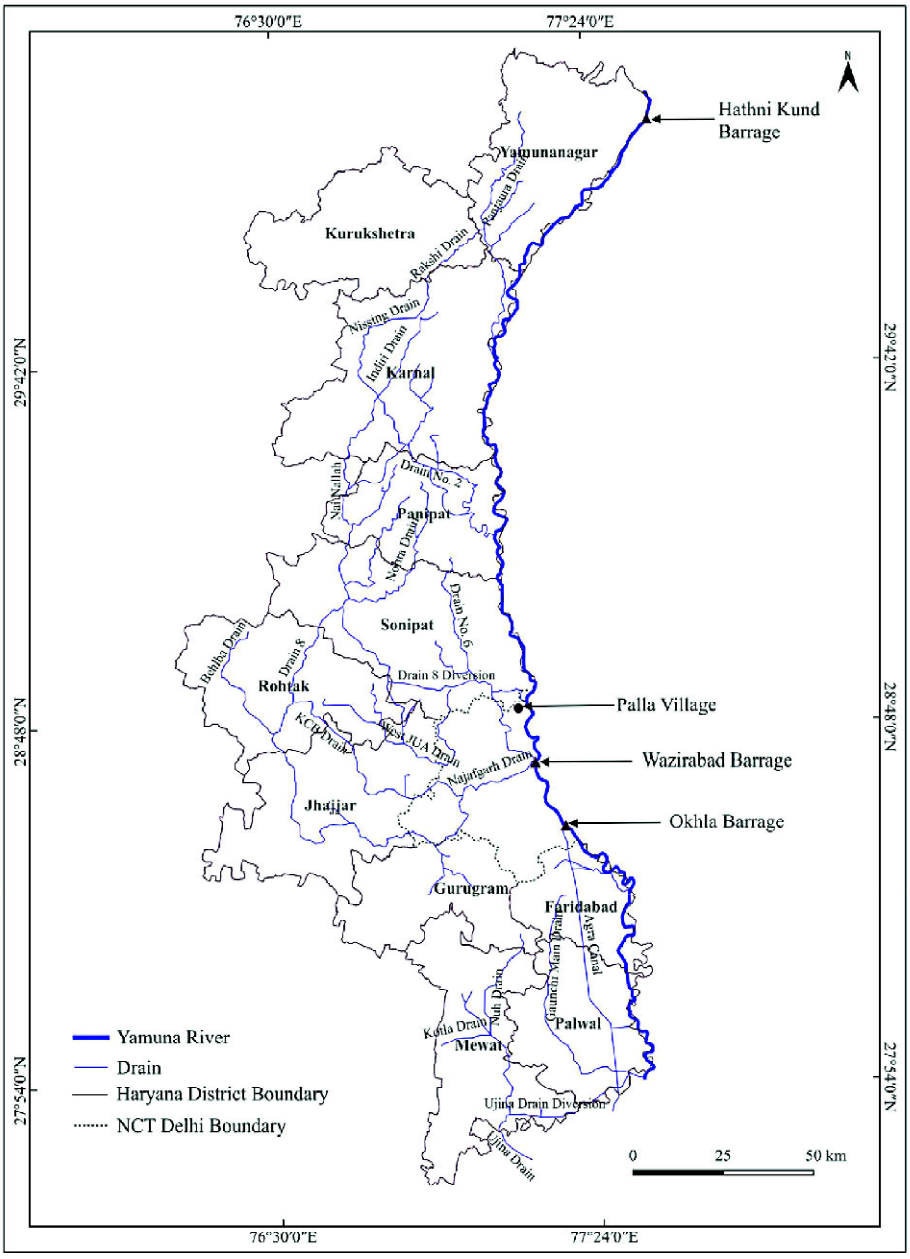

Fig. 1: Yamuna River and Drains in Haryana and NCT of Delhi.

Source: Modified from Govt. of Haryana (2019, p.7)

to Okhla barrage "constitutes only 02% of its total length but this 02% length accounts for nearly 76% of the total pollution load. It supports 70% of Delhi's water supply. Thus the areas after Okhla barrage till it joins in confluence with the Ganga are mainly affected by the changes that it undergoes during its 22 km journey." (Vrat, 2024).

It is on the record that the "water of Yamuna is of "reasonably good quality" through its length from Yamunotri in the Himalayas to Wazirabad barrage in Delhi…; below this, the discharge of wastewater through 63 drains between Wazirabad barrage and Okhla barrage renders the river severely polluted" (Govt. of Haryana, 2019). The quality of Yamuna water changes enormously from Palla to Okhla after meeting of Shahdara drain. This can be judged from the data analysis of four indicators related to water quality: Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD), Faecal Coliform (FC), and Total Coliform (TC) Palla to Okhla.

DO is the amount of oxygen available in dissolved form. It is vital for the survival of marine life. Low DO means high pollution in the water. BOD is the amount of oxygen required by microorganisms (bacteria) to decompose organic material in a water body. Higher BOD means higher amount of organic pollutants. FC is about a group of bacteria present in faeces of human/ homeotherms, indicating discharge of untreated sewage in a water body. It indicates about the sewage load in the river. Lesser the FC, better is the quality of water. TC indicates about bacteria found in environment as well as those found in intestines of human and animal. Lesser the TC, better is the quality of water. The standards in respect of DO, BOD, and FC (for TC also) are ≤ 5 mg./l, ≤ 3 mg/l, and ≤ 500 MPN/100 ml. (Delhi Pollution Control Committee, 2025, February). MPN (Most Probable Number) is a statistical technique that estimates the number of bacteria in a sample. High MPN means high level of contamination in the water.

The data results indicate that as one moves from Palla to Okhla, the quality of water of Yamuna deteriorates enormously (Table 1) if one go by the standards specified by DPCC (Delhi Pollution Control Committee, 2025, February). It is also important to highlight the fact that "Delhi leads the list of cities with 79 % pollution load in river Yamuna…" (Kumar et.al. 2019, cited in

Table 1: Water Quality Data of Yamuna at various locations, 2020

Location	DO (mg./L)		BOD (mg./L)		FC (MPN/100 ml.)		TC (MPN/100 ml.)	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Palla	5.6	17.1	1.4	7.9	78	79000	330	350,000
Nizamuddin	0.3	2.4	5.6	57.0	210,000	11,000,000	700,000	8,000,000
Okhla after meeting of Shahdara Drain	0.5	5.6	7.7	114.0	68,000	7,900,000	4,900,000	35,000,000

Source of data: Central Pollution Control Board (December 2021), pp.103-104.

Joshi et.al., 2022). Anybody not aware about severity of the quality of Yamuna in the NCT of Delhi would be astonished to note (Vrat, 2024): "… 90% of the domestic waste water of the city flows into the Yamuna…causing toxic froth in the river...The rapid growth of the population of Delhi, industrialization and contamination of water bodies is a health hazard affecting the nervous system, organ failures etc…Untreated sewage around 800 million litres/day is pumped into the river and 44 million litres of industrial effluents are discharged into the river Yamuna every day. Only 35% of sewage is treated before releasing into the river. Many STP's operate at the non-optimal level and having maintenance issues".

Among the 22 drains that are the main contributors of pollution in Yamuna in the Delhi stretch, the main contributors are only two, i.e. Najafgarh drain and Shahdara drain. In terms of total discharge of wastewater from these 22 drains, the Najafgarh drain contributed 68.7 percent and Shahdara drain 10.9 percent in 2023. Similarly the BOD percent contributed by these two drains were 84 percent (Najafargh drain 70 percent, Shahdara drain 14.0 percent) in 2023. The other disturbing fact is that the share of Najafgarh drain in the pollution load has increased much between 2017 and 2023 (Table 2). The Najafgarh drain is also "the major contributor of micropollutants such as chemical toxins and heavy metals" (Haberman, 2023).

Table 2: Percentage of Discharge wastewater and BOD from Najafgarh and Shahdara drains

Drain	Percentage contribution in discharge of waste water				Percentage contribution in BOD load			
	2017	2018	2019	2023	2017	2018	2019	2023
Najafgarh	59.2	63.2	64.1	68.7	48.8	47.0	50.6	70.0
Shahdara	14.9	14.5	16.6	10.9	15.2	18.1	23.2	14.0

Source of Data: (Narain and Sushmita, 2025:26).

Making Yamuna Pollution Free: Numerous Promises with limited results

The promise of cleaning the Yamuna water in Delhi is continuously making news since the day the BJP had won the Delhi Assembly elections and Prime Minister, initiated his victory speech on Feb. 8, 2025 with '*Yamuna Maiya ki Jai*" (Victory of Mother Yamuna). "Criticising the previous Delhi government of the AAP, the BJP had claimed that despite spending Rs. 8,500 crore, AAP had failed to clean the Yamuna" (Indian Express, 2025, May 3). Consequently, the river 'has turned into a polluted drain, filled with filth and garbage'. After winning the Delhi Assembly Elections, the BJP, came up with a 'new plan' to clean the Yamuna river (The Hindu, 2025, April 26). A proposal was discussed between Prime Minister, Union Home Minister, Delhi Chief Secretary, Delhi Chief Minister and other top officials. In the proposal which is going to be finalized by the Centre and the Delhi government, the plan is to enhance the water flow of Yamuna by diverting about 380 million gallons per day additional water from Ganga through Upper Ganga

Canal (U.G.C.) into Yamuna. Here it is important to mention that as U.G.C. neither cross Delhi nor directly connect to the Yamuna, hence water from U.G.C. will be diverted into Eastern Yamuna Canal and thereafter it will be diverted into the Yamuna. The diversion of water from the Ganga has been considered as a temporary solution to the problem and for long time solution, the proposal is to construct three dams in the upper reaches of the Yamuna so that excess water during the monsoon could be stored and used during the lean season.

A 30 point roadmap to rejuvenate the Yamuna was developed and circulated among the key agencies (Delhi Development Authority, National Mission for Clean Ganga, Central Pollution Control Board (CPCB), Delhi Jal Board, Municipal Corporation of Delhi) and the Delhi Government (Indian Express, 2025, May 2). Not only specific responsibilities are laid down but timelines are also laid for the proposed roadmap:

(i) discharging 773 million litres per day of treated water from the Coronation Pillar and Yamuna Vihar sewage treatment plants into the river downstream of Wazirabad by September 2026;

(ii) removing floodplain encroachments within a year, i.e. September 2026;

(iii) creating around 500 million litres per day of additional sewage treatment capacity by March 2029 and connecting 1,799 unauthorised colonies to the sewage network;

(iv) proposal to start new Sewage Treatment Plants (STPs) at Delhi Gate, Shastri Park and Kailash Nagar;

(v) several major drains (Barapullah, Maharani Bagh, Mori Gate, Sonia Vihar, Delhi Gate, Kailash Nagar, Shastri Park) will also be tapped and treated before discharge.

Notwithstanding the fact that the talks on making Yamuna water clean are now more vociferous since the day the BJP was voted to power in Delhi state it is also a fact that this is not for the first time that such calls are being made. An important milestone in this regard came way back in 1974 when 'Water Pollution Control Act' was passed. Had this Act was enforced fully and in time, there would have not been requirements of different policies/plans/debates/ Acts on the water pollution that followed. Even this could have saved huge government money. What has happened over the period of time is the upsurge in the number of environment related Public Interest Litigations and the fact remains is that the pollution in the Yamuna has rather increased. Here it also needs to be emphasized that there are various non-governmental organizations (NGOs) in the country working for the sake of environmental concerns—including water. Important NGOs which are working in the interest of Yamuna include: *Paani Morcha* (Water Front in Delhi), We for Yamuna (*SWECHHA* NGO based in Delhi), Yamuna Foundation for Blue Water (in New Delhi and Agra), Friends of Vrindaban (in Vrindaban). In addition, the Centre for Science and Environment (CSE) located at New Delhi has done very serious work on issues related to Yamuna. Some of the important plans, committees, boards etc. that had worked or workings for cleaning the Yamuna are as follows:

1. Yamuna Action Plan (YAP)

Yamuna Action Plan-I was launched by the Union government in 1993 to improve the quality of water of Yamuna. It was launched by the Ministry of Environment and Forests. It basically came as a result of the study undertaken by the CPCB in 1977 to do a comprehensive survey of the Yamuna entire course. In the study, it was found that the aquifer was heavily polluted. The plan's goals were "to stop the dumping of untreated wastewater into the Yamuna and to divert raw sewage through the building of public toilets and the installation of interceptor systems and sewage lines. Public education was also an important component of the plan" (Global Interfaith Wash Alliance, 2014). YAP was "a bilateral arrangement between the governments of India and Japan with financial assistance provided by the Japan International Cooperation Agency (JICA)" (Srivastava & Prathna, 2023). Haryana, Delhi and Uttar Pradesh were beneficiary states under YAP-I. It "covered pollution abatement works in 21 towns. The approved cost of YAP-I was INR. 5.09 billion" (Global Interfaith Wash Alliance, 2014). As a part of one of the main targets, 29 Sewage Treatment Plants (STPs) were built in Uttar Pradesh, Haryana and Delhi. After completion of one year of YAP-I, the Supreme Court stated: "It is repeatedly claimed that the Government is doing its best and has already spent thousands of crores of rupees in the name of 'Cleanse Yamuna' Project. But the common man does not find any visible change. Encroachments on river beds and embankments have become order of the day. No effective steps have been taken to make Yamuna free from encroachments and pollution of all kind…[Further in] 2009, India's Environment Minister, Jairam Ramesh admitted "with full responsibility that Ganga and Yamuna are no cleaner than 20 years ago" (Global Interfaith Wash Alliance, 2014).

After the completion of YAP-I, YAP-II was launched in December 2004 and it was scheduled to end by September 2008. However, its period was extended upto March 2011 to complete its unfinished tasks. The total budget of YAP-II was INR 6.24 billion of which INR 3.87 billion was allocated to Delhi, INR 1.24 billion to Uttar Pradesh and INR 639 million to Haryana. Regarding results of YAP-II, it was remarked that "the levels of pollution have increased despite increasing efforts under...[YAP-II] and the encroachments on to the floodplain have increased" (Gopal and Chauhan, 2007).

YAP-III, with "an estimated cost of Rs. 1656 crore, was launched in 2018 as an integrated component of the Namami Ganga Mission" (Joshi et.al., 2022). It is currently going on with special emphasis on:

(i) construction of the new Wastewater Treatment Plant (WWTP) at Okhla;

(ii) Rehabilitation and upgrading of WWTPs at Kondli and Rithala.

In overall terms the "results suggested that the projects have been unsuccessful in cleaning the river with respect to Biologial Oxygen Demand, Dissolved Oxygen levels and coliform contamination" (Srivastava & Prathna, 2023).

2. Yamuna Monitoring Committee (YMC)

National Green Tribunal (NGT) was established on October 18, 2010 to address and provide speedy justice in resolving environmental disputes in India. Prior to it, High Courts in different states were empowered to take environment related cases. Way back in 2015, the NGT had launched the Revitalization Plan for Yamuna '*Mailey se Nirmal Yamuna*' (Dirty to Clean Yamuna). In its judgment, dated January 13, 2015, the NGT had directed the "Chief Secretaries…to prepare an immediate action plan required to ensure proper environmental flows throughout the year, in the entire river and particularly the stretch flowing through Delhi" (The Hindu, 2025, April 26). The project basically came as a result of the tribunal judgment on a petition filed by Manoj Misra who was associated with *Yamuna Jiye Abhiyan*. Twenty eight directions were given under the Project. It was aimed to restore the river and its floodplains by March 31, 2017, however, the deadlines were never met. In its place, YMC was established in early 2018 to monitor the implementation of NGT orders. However, YMC was also dissolved in January 2021 and NGT directed the chief secretaries of Delhi, Haryana and Uttar Pradesh to personally monitor the progress and submit periodical reports to Central Monitoring Committee, headed by *Jal Shakti Abhiyan*.

3. Sewerage Master Plan for Delhi 2031

This proposal was drafted and finalized by Delhi Jal Board in 2014. The Plan involves laying 9,807 km of sewer networks and proposes 75 new STPs at 38 locations. It also plans to increase the city's total wastewater treatment capacity from 2,700 million litres of water per day (MLD) to 4, 383 MLD" (Sengupta, 2014, November 14).

4. Delhi Jal Board

It was constituted under the Delhi Jal Board Act, 1998. It is responsible for 'the production and distribution of potable water after treating raw water from various sources like river Yamuna, Bhakhra Storage, Upper Ganga Canal & Groundwater and also provides treatment and disposal of waste water. The Board provides water in bulk to the New Delhi Municipal Council and Cantonment areas. Sewage from these areas is also collected for treatment and disposal by the Board'.

5. Central Pollution Control Board (CPCB)

It is a statutory organisation constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974. It works under the Ministry of Environment, Forest and Climate Change. One of the mandates of CPCB is to collect, collate and disseminate technical and statistical data relating to water pollution.

6. Delhi Pollution Control Committee

It is an autonomous regulatory body that came into existence on 1.6.1991. It works for the 'prevention of air, water and noise pollution and conservation of natural resources, and efficient

and effective waste management practices to ensure that we reduce, reuse and recycle all types of Waste'.

Recommendations for making Yamuna a living entity

It is quite astonishing to note that it is not that the last state government (AAP) in Delhi or "even the government before the last were not serious about cleaning the Yamuna. All governments have had the intention to clean the river that has become a sewage canal. Huge funds have been spent—both by the Union and state governments" (Narain, 2025, March 4). This is to note that "Delhi's environment department, in response to an Assembly question on March 22, 2023, had said that more than Rs. 6,856.91 crore had been spent to clean the Yamuna in just four years between 2017 and 2022 by different departments of the Delhi government" (Narain & Sushmita, 2025). If this is the state of affairs that despite investing so much time and huge amount of money on cleaning the Yamuna, the river still remains one of the most polluted rivers of India, can we dare to think of cleaning so many other polluted stretches of rivers in the country. It is beyond imagination to think about the financial resources and time we would be requiring to clean such polluted stretches. As per Central Pollution Control Board (2018) there were more than 351 polluted stretches on 323 rivers spread across 31 states and union territories.

Keeping in view the problem of water pollution in Yamuna in the NCT of Delhi and numerous efforts that have already been made to make it a living entity again, the followings are suggested:

1. Requirement of proper data

For any policy to function properly and to monitor it regularly we require accurate and updated data, however, data on the amount of waste water in NCT of Delhi is estimated only. Similarly the latest population data for Delhi is estimated and there is no authentic data on the population living in unauthorized settlements in the city. "The Economic Survey 2021-22 estimates that more than 30 percent of Delhi's urban population lives in …unauthorized colonies…The 2019 Action Plan by the River Rejuvenation Committee for River Yamuna had also pointed out that 50 percent of the city population lives without sewerage and that this contributes to the discharge of untreated waste in the drains and eventually the river" (Narain & Sushmita, 2025). All data related to pollution in Yamuna needs to be collected and updated from time to time. With our established space programme and the number of satellites launched, it should not be a difficult exercise to know the sources of pollution in Yamuna. Once related data are collected, then only the experts in the field can give their valuable and workable suggestions and recommendations.

2. Discharge into the Yamuna River

It is true that "the master key to Yamuna rejuvenation or for that matter any other perennial river is to make it flow as close to its natural flow pattern as possible" (Misra, 2023), however, this is also true that unless and until we control the dumping of industrial/sewage/any other pollutant in it, control the indiscriminate sand mining from river bed and make free its catchment

area, the problem will not be solved. The fact remains is that "No river has the natural abilities to cleanse industrial and inorganic pollutants like heavy metals, synthetic dyes and fertilizers, pesticides, herbicides, medical waste etc. This necessitates that industries by design and law must be ZLD (Zero Liquid Discharge). Let them treat their effluents and recycle and reuse it within the industry's premises" (Misra, 2023). The COVID-19 has taught a lesson, if we want to learn and memorize it. During the lockdown, the Delhiites were witnessed to the change in the quality of water of Yamuna. We should have learnt a lesson from it; however, the unfortunate scene is that once COVID-19 was over, we went back to our long practices of polluting the rivers. Yamuna is one such case.

Let Yamuna live. Let it there as a perennial river, a source of quality water, otherwise we shall leave it as a 'sewer' for generations to come and children in schools will read as 'Once there was a river named Yamuna…'. For this not to happen, it must be ensured that no sewage (treated or otherwise) from any source drain into the Yamuna. There is an urgent need to implement real-time pollution monitoring systems at discharge points. Strict penalties should be imposed for dumping untreated waste in the river. There is also requirement to update laws to include stricter norms for emerging pollutants (e.g., microplastics, pharmaceuticals) and climate-resilient water management.

3. Indian Federal Structure and Yamuna Water

It is understandable that India being a federal country and 'water' as a 'state subject' it is difficult to formulate and have a uniform policy even for a single river like Yamuna which passes through various states. However, central government or whatever possible way, a mechanism should be developed wherein all the states forming part of the Yamuna basin be able to sit together to work in the direction of protecting and restoring the life of Yamuna. All such states should be made party in the process of analyzing and addressing challenges faced for making comprehensive management strategies and solutions for making Yamuna clean. It can be done by establishing a Unified River Management Authority. In the absence of such a mechanism, the old story will continue wherein different political parties ruling different states in the Yamuna basin keep on blaming each other for deteriorating water quality in Yamuna.

4. Aligning the practice of Spirituality and practice of doing

People should be made aware about the fact that we are made up of *panchbhootas* and we cannot sustain on the planet earth just by worshipping these. Rather protection and preservation of these elements should become a part of our daily routine life. This fact has quite emphatically been highlighted in the context of Yamuna river by Manoj Misra: "If Yamuna is the 'mother' (*maiyya*) then should not its children (us) look upto it for what goodies it can provide, and not act like its master and end up sucking it dry?" (Misra, 2023). The need of the hour is that "one needs to look at the river as an ecosystem, not just as water. One wonders what is causing such

blindness in the eyes of these people…how many more rivers, animals, trees and people need to perish before their blinkers are lifted" (Jain, 2011).

The study argues that symbolic gestures (e.g., mass rituals or political promises) lack the systemic change needed for reviving Yamuna**.** Spiritual reverence must evolve into active conservation. We should rethink while making statements such as that a particular river is the 'mother' so it accepts everything. This only show our disconnect between our reverence and responsibility.

5. Which way to develop industries?

It is a fact that whenever an industry is established there will be generation of 'waste' from it and many-a-times this 'waste' is extremely hazardous for all species living on the planet earth. The proper management of this 'waste' is equally as important as that of establishing an industry. This question has arisen due to the fact that along with establishment of industries we have not learnt how to deal with the waste so generated. Only short-cuts either in terms of putting industrial waste in the drains or under the surface through borings have been learnt. This is going on without giving a single thought that through these actions what we are doing to the quality of water (river or underground). Is making people ill and unhealthy and building empires of Pharmaceutical Industry the ultimate objective of industrial development? Important related question is also that how these 'industrialists' are getting the clearance certificates from the Department of Environment? It must be ensured that no effluent from any industry is drained into any river or underground water. Simple requests to the industrialists not to pollute water may or may not work. This needs strict obedience and continuous surveillance. After all this is question of our own survival and that includes the survival of these industrialists also.

6. Focus on Main Polluting contributing drains

Keeping in view the share of Najafgarh and Shahdara drains in terms of pollution load to Yamuna, if policy makers and decision makers focus on these drains to begin with, the pollution load in the Yamuna in the NCT of Delhi can be controlled to a large extent. Controlling of pollution in these two drains will set example to the followed in the case of rest of the drains polluting the Yamuna and other rivers in the country.

7. Quality of Vegetables and Fruits produced in the vicinity of Yamuna

There is an urgent need to check scientifically the quality of various kinds of crops grown in the catchment area of Yamuna in the NCT of Delhi. This has two components: one, how the use of insecticides, pesticides, chemical fertilizers used to increase the productivity of various crops in the vicinity of Yamuna is affecting the quality of water in Yamuna, and two, the crops so grown through using Yamuna water having so much effluents are of what quality, i.e. whether these are fit to be consumed? Such findings will make people further aware about their responsibilities in making Yamuna clean.

Conclusion

The study concludes with a note that it is rather shocking that amongst its whole course, Yamuna is most polluted in the capital city of India. In this way, what example NCT of Delhi is setting? This is despite being the fact that "Each month, the DPCC files a monthly progress report to the Secretary, Ministry of Jal Shakti, Government of India, with information on the work done on the river cleaning action plan" (Narain & Sushmita, 2025). In fact, we have not been able to balance development with environment because "public institutions that are required to make decisions have been progressively weakened and disabled" (Narain, 2024, September 1-15). It is quite strange that when in the NCT of Delhi there is so much surveillance and strictness regarding the use of old petrol and diesel vehicles, why the same level of surveillance and strictness is missing in regard to pollution in Yamuna. Increasing level of pollution in the Yamuna water is a multifaceted problem characterized by inter-state blame games, severe and persistent pollution (especially high ammonia and BOD levels), direct public health impacts, and the slow, complex implementation of various governmental rejuvenation plans. Addressing it effectively requires sustained effort, significant investment, and improved coordination among all involved agencies and states. We all must remember that protection or guardianship of nature is not an option but a responsibility. In this context our guiding force should be the words:

There is no Need to Clean Rivers, Just do not Make Them Dirty.

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