Integral Research
(ISSN: 3048-5991) Coden: IRABCA

Research Article
(Peer-reviewed, Open Access & Indexed Multidisciplinary Journal)
Journal home page: https://integralresearch.in/
Vol. 02, No. 12, December. 2025

The Ganga River as India's Cultural Heritage: Socio-Political Dimensions of Pollution and Conservation

[1]Dr. Ashish Kumar Gupta ✉ [2]Zeeshan Ahmad

[1]Asstant Professor, Department of Political Science, N.M.S.N Dass (P.G) College, Budaun, U.P. India.
[2]Research Scholar, Department of Political Science, N.M.S.N Dass (P.G) College, Budaun, U.P. India.
DOI: https://doi.org/10.57067/ir.v2.i12.465

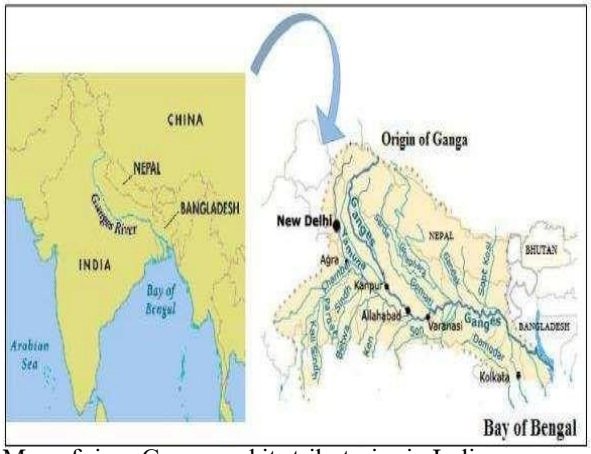
Ganga is a living symbol of the faith of the Indian people, and indeed of Indianness itself Ganga is the largest river in India with extraordinary religious significance. This river provides water to 40 percent of India's population in 11 states of India. In other words, the lifeline of India is Ganga. The holy Ganga, which descended from Gangotri, is becoming dirty day by day. Today it is considered the sixth most polluted river in the world. Not only an important water resource, but also a sacred entity encapsulating the essence of Indian cultural and spiritual heritage. Conservation of the Ganga involves a multidimensional effort integrating environmental, socio-cultural and political sectors, which aims to address the serious challenges of pollution, unsustainable water uses and habitat destruction, while recognizing the profound importance of the river to Indian life. This abstract delineates the dimensions of Ganga conservation, outlines the primary challenges it faces, and explores the political implications in the context of Indian cultural heritage. The environmental dimension of Ganga conservation includes combating pollution from industrial discharges, agricultural runoff and domestic waste. Efforts to revitalize the river require innovative and sustainable water management practices to ensure its ecological integrity and the health of its biodiversity. This includes measures to enhance water quality, maintain ecological flows and restore critical habitats. At present, programs like Namami Gange program and Swachh Mission etc. reflect the government's methodology for the work of Ganga conservation.

Keywords: Spiritual heritage, Ganga conservation, Namami Gange programme, water resources.

Introduction

River Ganga originates from Bhagirathi and Alaknanda rivers together. Covering a total distance of 2525 kilometers (km) in India and Bangladesh, it irrigates a vast area as the main river of India from the Gomukh point of Gangotri glacier in Uttarakhand to the Sundar bans of the Bay of Bengal is The socio-cultural dimension emphasizes the role of the Ganga in supporting the livelihood of millions of people who depend on it for agriculture, fishing and pilgrimage activities. Therefore, conservation strategies should incorporate traditional knowledge and practices that align with sustainable resource use, ensuring that cultural practices can be maintained in harmony with environmental objectives. The challenges for Ganga conservation are manifold. Industrialization and urbanization have led to significant ecological degradation through discharge of pollutants and encroachment on river ecosystems.

Agricultural practices dependent on chemical inputs contribute to nutrient loading, increasing malnutrition and harming aquatic life. Furthermore, climate change creates additional stresses through altered hydrological regimes, affecting water availability and increasing extreme weather events.



Map of river Ganga and its tributaries in India.

Received **29 November 2025**; Accepted **01 December 2025**. Available online: **30 December 2025**. Published by SAFE. (Society for Academic Facilitation and Extension)

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Tackling these challenges requires a comprehensive approach that integrates environmental science, technology, policy and community engagement. The political implications of Ganga conservation are deep, reflecting the centrality of the river to India's identity and the contested nature of water governance. Initiatives like the Ganga Action Plan and the subsequent Namami Gange program highlight the government's commitment to revive the river. However, effective governance is challenged by issues of federalism, conflicting interests between the states through which the river flows, and the need for coordination between different government agencies. Furthermore, the sacred status of the Ganges imbues conservation effort switha political dimension, as action staken to protect the river may receive public support but meet resistance if cultural practices or economic interests are violated. May also have to do.

Importance of Ganga

Religious importance: River Ganga is considered the main river of Hindu religion. It is worshiped as Mother Ganga and its water is used in many religious festivals and festivals.

Cultural importance: There are many major cultural cities on the banks of river Ganga such as Varanasi, Patna, Rajgah, and Prayag. The cultural programs and fairs organized at these sites are an important part of Indian cultural heritage.

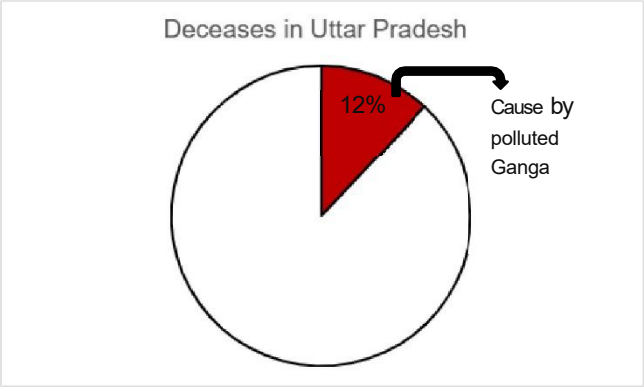
Economic importance: There are many cities on the banks of the river Ganga which are centers of business activities. Apart from this, the water of river Ganga is used in agriculture, industry and tourism etc.

Environmental importance: Cleaning and conservation of the river Ganga is important as it is a main water source and millions of people depend on its water. It also holds sea water in large quantities, which serves as an important water resource.

In this way, the importance of River Ganga can be seen in various fields, and it is extremely important for the Indian society and environment.

Key challenges

Industrial Waste: The abundance of industrial waste as well as plastic waste has highly polluted the Ganga water. According to investigation, it was found that 2 crore 90 lakh liters of polluted waste is falling into the Gangae very day. Which causes various diseases. According to a World Bank report, 12 percent of diseases in Uttar Pradesh are caused by polluted Ganga water. Pollution from wastes, dyes, metals, and other pollutants from industrial factories reaches the Ganges.



World Bank Report

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Agricultural Pollution: Pesticides, fertilizers, and by-products used for agriculture also pollute the Ganga.

Dirt: Dirt thrown out by local people, dirt from water factories, and sewerage pipelines are also important factors.

Metal Pollution: Waste and pollution from metal mines also affect the Ganga.

Overuse of water resources: More people and industries are overusing water, which aggravates the Ganga.

Religious rituals: Due to religious beliefs, Ganga is considered like a mother in Hindu religion, but Ganga is also getting polluted due to religious rituals, idol immersion, bone immersion etc.

There is a need for policy efforts regarding these reasons so that appropriate steps can be taken to make Ganga pollution free.

Major projects and programs for Ganga conservation

Namami Gange: It is a national level project whose main objective is to clean the Ganga, promote water harvesting and water conservation.

Prosperity of River Ganga: Under this project, water conservation of river Ganga, promotion of prosperity of riverbanks, and hydroponics are being promoted.

Ganga Campaign: The main objective of this campaign is to make the river Ganga clean and pure, which includes beautifying the coastal area of the river, reducing pollution, and conserving the natural resources of the Ganga.

Ganga Raksha Yojana: Under this scheme, technical, natural, and social initiatives are being taken to promote the protection of river Ganga.

Literature reviews

Books

Ganga: The Many Pasts of an Indian River- Sudipta Sen -This book provides a detailed historical perspective on the Ganga, considering today's environmental and political challenges as well as its significance in Indian civilization, religion and culture. Searches.

River of Life: "The Biology of the Ganga-Brahmaputra-Meghna Basin"-S.C. Santra-Focusing on orangutan biology, this book provides insight into ecological aspects important for conservation efforts.

River of Life, River of Death: The Ganga and the Future of India-Victor Mallet

-Mallet explores the paradox of the Ganga as both sacred and a source of pollution. Let's examine the efforts and challenges to clean it up.

Research articles and reports

Assessing Water Quality and Sediment to Understand the Health of the Ganga River System in India" Journal of Environmental Management- This article provides scientific

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insight into pollution levels and their sources along the Ganges.

"Cultural Values and Human Activities Affecting the Conservation of River Ganga in Environmental Conservation"-This paper discusses how cultural practices affect conservation efforts and the health of the river.

World Bank Report on Namami Gange Program -The World Bank has published a report evaluating the progress and effectiveness of the Namami Gange program aimed at cleaning and conserving the Ganga.

Government and NGO publications

Namami Gange Program by National Mission for Clean Ganga (NMCG) -Official government publications and progress reports on Ganga conservation efforts can provide insight into policy and implementation strategies.

Central Pollution Control Board (CPCB) reports -CPCB publishes regular reports on water quality and pollution levels in the Ganga, which can be important for understanding the challenges faced.

Websites and Online Resources

The Third Pole (thethirdpole.net)- An excellent resource for articles and reports on environmental issues in the Himalayan region, including the GA publication.

India Water Portal (indiawaterportal.org) - Provides a wealth of information, articles and resources on water issues in India, including Ganga conservation efforts.

Research objective

To raise awareness about the historical, cultural and ecological importance of river Ganga in Indian heritage.

To evaluate the challenges like pollution, industrial waste etc. That threaten the health of river Ganga.

To evaluate the effectiveness of conservation measures to ensure long-term sustainability and resilience of the Ganga River ecosystem.

Research Hypothesis

The vision posits that an integrated approach to the River Ganga in India, including strong policies, widespread public awareness and inclusive sustainable development strategies, will pave the way for a resilient and ecologically balanced nation. This suggests that proactive measures to address challenges in Ganga conservation will not only reduce ecological threats but also contribute to cultural and economic progress.

Research methodology

Research is a means of attaining permanent knowledge because it is done with devotion and dedication. Although there are many methods of research in vogue, in my research paper, qualitative research methods of research have been used in which critical and critical method of research has been used.

Data collection

Secondary Data -Books, magazines, research papers etc. And various types of annual indices, government statistics etc. Recent

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developments related to rejuvenation of river Ganga:

Recent Development Related to Rejuvenation of Ganga

The Ministry of Tourism is working on a comprehensive plan for the development of tourism circuits along the Ganga in line with the Arth Ganga Project.

Arth a Ganga' aims to develop sustainable development model with focus on economic activities related to Ganga.

Exhibitions and fairs have been planned in 75 cities along the banks of river Ganga as part of Azadi Ka Arnrit Mahotsav.

The Ministry of Agriculture and Farmers Welfare (MoA & FW) is preparing to take several necessary steps for the creation of corridors for organic farming and natural farming along the banks of river Ganga.

MoA & FW is promoting eco-friendly agriculture along with efforts to improve water-use efficiency in villages near the Ganga.

The Ministry of Housing and Urban Affairs is focusing on mapping of urban drains and management of solid and liquid waste in Ganga cities under Swachh Bharat Mission 2.0 and AMRUT 2.0.

The Ministry of Environment, Forest and Climate Change is also working on a detailed plan to take forward afforestation activities in the Ganga belt and "Project Dolphin".

Statistics of major programs of Ganga Conservation

Swachh Sarveshan 2023

In the Swachh Sarveshan, Varanasi and Prayagraj of the state have got first and second position as clean Ganga cities. Both these cities were honoured with awards by the President for their dedication towards cleanliness. Varanasi has also got the three-star garbage free city rating and Prayagraj has also got the status of water plus city.

Namami Gange Program

A total of 450 projects has been undertaken so far under the Namami Gange program at an estimated cost of Rs38,022.37crore, out of which 270 projects have been completed and commissioned. of these 450 projects, 195 sewerage infrastructure projects have been undertaken, of which 109 projects have already been completed, resulting in creation and rehabilitation of 2,664.05 MLD STP capacity and laying of 4,465.54 km of sewerage network. From 2014-15to 31 October 2023, Government of India released Rs 16,0ll .65crore and NMCG disbursed/released Rs 15,015.26 Crore to State Governments, executing agencies and other institutions.

National Mission for Clean Ganga targets cumulative sewerage treatment capacity of 7,000 MLD by December 2026

Under the Namami Gange programme, in the Ganga basin, a total of 195 sewerage infrastructure projects has been undertaken at a cost of Rs 31,344.13crore for construction and rehabilitation of 6,173.12 million liters per day (MLD) sewage treatment plant (STP) capacity. At present, l09 sewerage projects have been completed resulting in construction and rehabilitation of 2,664.05 MLD STP capacity.

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The National Mission for Clean Ganga (NMCG) aims to sanction accumulative treatment capacity of 7,000 MLD by December 2026.

A total of 450 projects has been undertaken so far under the Namami Gange program at an estimated cost of Rs 38,022.37 crore, out of which 270 projects have been completed and commissioned. of these 450 projects, 195 sewerage infrastructure projects have been undertaken, of which 109 projects have already been completed, resulting in creation and rehabilitation of 2,664.05 MLD STP capacity and laying of 4,465.54 km of sewerage network.

From 2014-15 to 31 October 2023, Government of India released Rs 16,011.65crore and NMCG disbursed/released Rs 15,015.26 crore to State Governments, executing agencies and other institutions.

Attachment

State wise sewage treatment details

State	State sewage production (asper2011 census)	STP capacity created InMLD		STP capacity under constructio n In MLD		STP capacity under tender InMLD		Difference In MLD
		Total Capacity Created	capacity created under NMCG	Total capacity created	Capacity created under NMCG	Total capacity created	Capacity created under NMCG	
Uttarakhand	554.5MLD	427.90	164.5	118.87	43.41	69.95	15.23	O*
Uttar Pradesh	5,500MLD	4074.5	944.76	850.20	863.8	836	644	O**
Bihar	1,100MLD	224.5	273.50	392.5	392.5	118.6	118.6	364.4
Jharkhand	452MLD	1,23.74	15.50	89	14	246	232	O***
West Bengal	4,158MLD	1,647.60	379.07	554.3	281	695	330.15	1261.1
TOTAL	11,764.5MLD	6,498.25	1,777.33	2,004.87	1594.71	1,965.55	1,339.98	1,625.50

Surplus in Uttarakhand is 62.15 MLD

**Surplus in Uttar Pradesh is 260.7 MLD

***Surplus in Jharkhand is 6.74 MLD

Data source: Final monthly progress reports received from the respective states in NGT case OA No. 673 of 2018.

Note: Data pertains to the entire state (all rivers).

Conclusion

Conservation of Ganga is a complex and important endeavour that spans environmental, socio-cultural and political dimensions. Successful conservation efforts must address the multi-faceted challenges of pollution, unsustainable resource use and climate change while respecting the cultural and spiritual significance of the river. Achieving this requires an integrated approach that fosters collaboration between government entities, local communities and international partners, leveraging scientific and traditional knowledge to ensure the conservation of the

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Ganga for future generations. Thus, the Ganga conservation effort serves as a perfect example of how cultural heritage and environmental sustainability can be intertwined, providing lessons for the conservation of other culturally significant rivers around the world.

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