

A REVIEW OF THE SUGGESTIONS FOR THE CLEANLINESS OF THE GANGA

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Abstract

Among all rivers in India, the River Ganga is considered to be the holiest and its water is believed to have properties to cure diseases untreatable by traditional medicines. It is considered so sacred that this water is preserved by individuals in India to perform their loved ones' last rites. The Ganga River flows through India and Bangladesh and is a trans-boundary river. It runs from Gangotri to Ganga Sagar for more than 2,500 km, passing through 29 major cities, 23 small towns and 48 towns. However, Ganga has become one of the most polluted rivers in the world as a result of the industrial revolution and our cultural practices on its shore, and more than 400 million people are affected by its waterborne diseases. In 1986, the late Prime Minister Rajiv Gandhi launched the complicated "Ganga Action Plan (GAP)" to clean the river without any success. Now, under the "Namami Gange Programme," Mr. Narendra Modi has taken a task to clean the Ganga with a budget of Rs 20,000 crores over the next five years. This study will examine why GAP was ineffective, whether or not Ganga will be cleaned in this century? And what is the influence of the dream project plan of Modi Govt and the present situation of Ganga in Varanasi.

Keywords: Ganga, Ganges, Industrial revolution, Namami-Gange Programme, The Ganga action plan, Trans-boundary, Pollution, River.

I. INTRODUCTION

Since it is a transboundary river with tributaries stretching through the Himalayas in Nepal, India and Bangladesh, the Ganga River Basin has been called the "lifeline for millions." It is believed that this river was brought to Earth by the great-great-grandson of King Segar, Bhagiratha in Treta Yuga (18000BC to 5000BC), to give Moksha to the 60,000 children of King Sagar[1][2]. On our precious land, originating from Gangotri (Gomukh) to Ganga Sagar, passing through 29 major cities, 23 small towns and 48 cities, Mother Ganga runs through approximately 2525 km. The main towns that Ganga passes through are Haridwar, Allahabad,

Kanpur, Varanasi, Patna, etc. The river is considered sacred in India and was officially named in 2008 as the National River. The Hindus sprinkle their water for purification and worship and bathe in it in the belief that it cleanses their sins, backed by scripture. In the snow-bound Himalayan glacier, Gangotri and downstream at Haridwar, they trek arduously to its source, floating lighted oil lamps on its water after dusk in memory of their deceased elders. They bring with them small amounts of river water for use in rituals on the journey back home from the Ganges. In Varanasi, Ganga flows from south to north like a "half-moon" in a crescent shape. The 6.5 km long riverfront of the Ganga River, forming the eastern edge of the city, has a unique past, offering a particular vision of a majestic architectural row of lofty buildings and sacred sites. The riverfront Ganga in Varanasi offers a set of 84 Ghats (stairways to the bank) as a special sacred chain of locations. The first sunrise rays touching the Ganga's water current and their reflection on the majestic buildings along the Ghats recall the Hymn to the Dawn of the Rig Veda: "Arise; the breath of life comes back to us, the darkness is gone and the light is coming". Asi, Dashashvamedha, Manikarnika, Panchaganga, and Keshava are among the 84 Ghats, the mentioned as the most merit-giving and sacred named Panchatirthis. In these five Ghats, taking a holy bath gives the same merit as bathing all the Ghats. These five Ghats symbolize Vishnu's microcosmic body, as well as his head, shoulders, navel, legs, and feet. That's how the area along the Ghats is praised as the body of Vishnu. Ganga Aarti is a ritual performed at these famous Ghats every evening and morning in devotion to the goddess Ganga, using fire as an offering. A diya is lit with a candle that, along with some flowers, floats down the river.

This powerful ritual is carried out mainly in Varanasi, as well as in two other sacred cities in India, Haridwar and Rishikesh. Funeral rituals, unlike the elegance of Ganga Aarti, result in the foul sight and smell of corpses and decomposed pieces of human beings found floating in the sea. While traditional practices such as dumping corpses and ashes of the deceased are minor compared to industrial practices, because of their detrimental impact on the river, they do need to be considered in terms of pollution. Varanasi is an industrial city on the bank of the Ganga River that has one million inhabitants and thousands of pilgrims visit it every day to take the "holy dip" in the Ganges, releasing about 200 million liters of untreated human waste into the river every day, resulting in high concentrations of bacteria producing faecal coli. The dumping of industrial waste materials such as plastic bags, plastic tubing, egg cartons, etc. has resulted in Ganga water's heavy contamination and its water has become unfit for human and marine life in most areas. It is disturbing to note that there are 120 times more faecal coliform bacteria per 100 ml in Ghats in Varanasi compared to the specified standards of 500 faecal coliform per 100 ml of water, indicating a highly contaminated content in the river.

The Ganga was ranked in 2007 as the world's fifth most polluted river. Not only humans, but also more than 140 fish species, 90 amphibian species and the endangered Ganga river dolphin are threatened by pollution[3]. The Ganga suffers from high levels of pollution, impacting the 400 million people living along the river. More than 500 million liters of industrial waste water is dumped directly into the Ganga every day. This waste water entering the rivers is totally untreated in many areas. This industrial waste makes the Ganga toxic for

use as a drinking or bathing source, flooding its waters with harmful chemicals and heavy metals at levels far above any kind of safe or reasonable levels. With industrial development expanding, for example, the city of Kanpur has not been able to cope with its industrial pollution. Kanpur is now classified as Ganga's most polluted area, and the city generates nine million liters of industrial waste every day, much of which consists of tannery waste water, much of which is illegally pumped directly into Ganga without treatment. The issue is compounded by the fact that many poorer individuals rely on the river for bathing, washing and cooking on a daily basis. The World Bank reports that India's water contamination health costs are equivalent to three percent of India's GDP. It has also been suggested that water-born diseases can be attributed to eighty percent of all diseases in India and one third of deaths. Ganga therefore carries a high risk of infections after passing through Varanasi and receiving 32 streams of raw sewage from the city, drinking and bathing in its waters.

Issues with the Waters of the Gangs:

764 factories are in the main stream of the Ganga along the banks, absorbing 1123 MLD of water and discharging 500 MLD of waste water at the same time. Only in Uttar Pradesh is 90% of this industrial pollution[4]. More than 70% of emissions is related to sector-specific industries such as sugar, pulp, paper and distillery industries. The presence of large concentrations of carcinogenic metals such as mercury, chromium and arsenic in the water at Varanasi was detected in a report by the environmental biology laboratory, Department of Zoology, Patna University[5]. Small-scale factories continue to pollute the river Ganga with over a billion liters of toxic chemicals without affordable treatment technology.

Drive for the Cleanliness:

The Ganga Action Plan (GAP), an environmental river clean-up project, has been a major government failure due to corruption, lack of technological competence, inadequate environmental planning, and lack of religious support[6]. An significant question emerges in everyone's mind because of the failure of this project and after examining the polluted state of Ganga: can Ganga be cleaned up in this century? The Supreme Court asked the center to furnish its phase-wise plan for the cleaning of the Ganga River, Narendra Modi's "dream project." Back in 1986, the Rs 462-crore project to clean the Ganga in Varanasi was initiated by then Prime Minister Rajiv Gandhi[7]. Sewage treatment plants have been set up under this programme, raw sewage has been cut off and redirected, electric and wood crematoria have been set up and low-cost sanitation facilities have been provided. However, since this plan was not successful, it was closed on 31 March 2000, but its phase II was approved and Rs 939 crores were spent on 524 different schemes on the Ganga cleaning until Feb 2014 without achieving the desired results. The National Ganga River Basin Authority (NRBA), a regulatory body set up in February 2009 with the objective of minimizing pollution and preserving the Ganga, was headed by former Prime Minister Manmohan Singh[8][6]. However, due to a lack of transparency and dedication, he resigned from the seat along with two other members. The Rs 3,031 fund was granted to NRBA to run 56 schemes in 44 cities. Until September 2013, Rs 785 crores had been invested as per available data. NRBA has

obtained funding from the National Ganga River Basin Project. While many environmental laws exist against pollution in India, due to their weak implementation, effective control over river pollution has not been possible. Ultimately, it has been found that it is the courts that have to interfere and pass strict orders to the various agencies and sectors. The Supreme Court of India has also ordered the relocation and closure of polluting factories in this case. In 2010, the stretch of the river between Gomukh and Uttarkashi was classified as the 'eco-sensitive region.'

As its backers, the Gandhian non-violent campaign involving social science activists helped to save Ganga from more pollution. National Women's Organization (NWO), Ganga Calling-Save Ganga: a movement to save this river, sponsored by the Indian Council for Environmental Legal Action (ICELA) and many other such organizations. The Namami Gange Project or Namami Ganga Yojana is an ambitious project of the Union Government launched in May 2015, combining the efforts to clean and protect the Ganga River with a budget of Rs. 2037 Crores in a comprehensive manner[9]. The project is officially recognized as the 'Namami Ganga Yojana' project of the Integrated Ganga Conservation Mission. This project aims at Ganga Rejuvenation by integrating the current ongoing efforts and preparing under it to create a clear action plan for future

Solutions Already Implemented:

Following solutions have been implemented but have not been fully successful:

(i) 51 percent Ecological Flow restore:

According to the CPCB, so much water is collected from the Ganga that "river water quality to bathing level can not be achieved in lean season flow in the absence of adequate flow, unabated discharge of treated sewage, even with 100 percent treatment." Therefore, the outflow of water from the river needs to be reduced.

(ii) Establishment of the Special Police Ganga Force:

A Special Ganga Police Force should be immediately empowered by investigations, fines, imprisonment and other measures against repeat corporate and industrial criminals to enforce the law.

(iii) Implementation of the Act on Environmental Rights:

It is important to enforce a comprehensive National Ganga Rights Act.

(iv) Transparency of accounts:

In order to achieve zero discharge, industrial units may be requested to apply their action plan within a maximum time of one year and State Pollution Control Boards may be requested not to extend their approval after one year unless they have achieved zero discharge.

Suggestions for the betterment:

1. In leading institutions such as IITs, Sanction research projects to identify strategies for cost-effective water management techniques.
2. Organizing tournaments for river cleaning where team members will participate.
3. Establish a worldwide research team to review river cleaning techniques.

4. In all villages located on the banks of the Ganga, each committee will be responsible for cleaning the Ganga near their village.
5. It will bind millions of people to this initiative, build a massive social media campaign, and this will spread awareness among the masses.
6. Develop a movie that will motivate people to avoid river pollution and encourage them to volunteer.
7. Develop a documentary film similar to "The Day After Tomorrow" that will demonstrate how slowly Ganga is dying... its past glory and repercussions if we haven't taken timely action.
8. Raise the cost of water treatment from factories and city councils that dump their waste water in Ganga.
9. Establish local transport in Ganga. So the movement of people in Ganga would be helpful in keeping an eye on the perpetrators of waste dumping in Ganga.
10. Invite Ganga Ghats to adopt and beautify corporate buildings.
11. Large scale Ads on a regular basis along the Ghats of Ganga to generate additional revenue
13. Creating free plastic zones along the Ganga bank.
14. Ganga chapter in school\collegiate textbooks
15. Promote religious tourism in Ganga, such as building centuries of birds along the Ganga
16. Stop the illegal mining of stones and sand on the bed of the Ganges River.
17. A Sea-bin technology was recently developed in Australia to purify the water, and this technology can also be used to purify Ganga water.

II. CONCLUSION

Over the last 30 years, the river Ganga has not only turned from a pure river to a polluted river. It is of utmost importance that this holy river be restored to its earlier condition, considering its holy existence as well as the source of life for millions of people living on its banks. In this respect, a lot of work has already been done by different governments and the judiciary in India. In Varanasi, an analysis was carried out to find the reasons for the failure of these plans and to suggest some remedies for cleaning Ganga.

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