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River Ganga pollution and Ganga action plan

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Abstract

Water become polluted when some undesirable substance and particles mix in it. Due to this quality of water is decreased. Due to quantity of O₂ decreased in polluted water, it become poisonous water. Deficiency of O₂ cause poisonous water. So due to this poisonous water disease takes place in human body or animals. From natural and human activities the biological, physical and chemical properties of water is change compare to general and normal water is called water pollution. The factors which create pollution in lakes nearly these factors also produce pollution in rivers. Generally domestic wastes, industrial wastes, fertilizers create pollution in rivers. In starting rivers have pure water but current time rivers are polluted?

Keywords: Poisonous, deficiency, sewage, religious, eutrophication, ecosystem, implementation

Introduction

Ganga is largest river of India. Ganga originates from the gangotri glacier in Uttaranchal. It is also known as Bhagirathi River. Another Himalayan river Alaknanda joins it at a place called Devprayag. After flowing in the Himalayan valleys, it descends into the plains at Haridwar. Many major cities of India's cultural and religious landscape are situated on the banks of this river. The description of this river is also found in Vedic literature. Ganga is a flowing water ecosystem. Some specific species are found only in this ecosystem. Changes caused by pollution in this ecosystem can threaten these species. Two types of dolphins are found in the Ganga, whose distribution has remained in very few places in the world. Apart from this a very rare type of fresh water shark is found in Ganga. The deltas of Sundarbans are ideal places for mangroves. Mangroves themselves are endangered plans. The pollution of Ganga can harm these living beings and plants.

Reason of Ganga River pollution

The main reason of Ganga river pollution is sewage. The reason for the pollution of Ganga is the sewage and waste coming from the cities, towns, villages and industries situated on its banks. There are 29 such cities situated on the bank of the Ganga, whose population is above one Lac. The population of 23 gangetic towns is between 50 thousand to 1 Lac and about 48 towns have less population. All this creates 5 BLD sewage which is found in Ganga or its tributaries river.

Industrial waste play a main role in Ganga river pollution. At the Ganga's corner Kanpur, Allahabad, Banaras, Patna, Kolkata like cities. That is industrial cities. These industrial waste affect river Ganga. Kanpur famous for tannaries. Chromium and other chemicals are used in the processing of leather, which creates water poisonous.

Religious beliefs and religious tourism make Ganga polluted. By performing the lost rites on the banks of the Ganga's or after immersing the ashes and bones of the deceased in the Ganga, due to the belief of attaining salvation, ashes and bones, half burnt human bodies etc. would have been included in the Ganga. On Kumbh and special occasions, a crowd of Lac of peoples go to the banks of the Ganga to take a bath. Every day lamps are lit on the rings and placed in both and flowed into the Ganga. All these increase the pollution of river Ganga.

The all factors pollute Ganga and the effect of this is that carbonic substance are mixed with water and produce eutrophication that means necessary nutrients are increased for microorganisms in water. When quantity of nutrients increased then microorganisms population also increased because of this demand of oxygen (BOD) is increased.

Due to deficiency of oxygen other oxygen sensitive organism faces bad effects.

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When toxic substances like chromium are mixed in water it gets incorporated into the body of living organisms and magnifies it in the food chain.

The water of the Ganga is believed to be bactericidal.

The quality of this river ends due to pollution when it comes to the plains. Due to the religious faith of Hindus on this river it's pollution also causes emotional damage.

Due to the pollution of Ganga, there is a possibility of affecting the health of those who bath in it.

Ganga action plan

In Dec. 1984 environmental department of India propose a plan. In April 1985 cabinet passes the plan Ganga. The plan is called Ganga action plan. In this regards, a central Ganga authority was formed to formulate policy and implement the work. A directorate was also formed for the implementation of the Ganga action plan, which was called the National River Conservation Directorate (NRCD). The initial action plan was called GAP-I and as a continuation of GAP-I, GAP-II was also started in 1991. The goal of Ganga action plan was to reduce the pollution of Ganga water and make it suitable for bathing.

Ganga action plan-I was launched in 25 first class cities of the three states of Uttar Pradesh, Bihar and West Bengal. The target was to intercept, divert and treat 882 MLD out of an estimated 1340 MLD sewage.

The Ganga action plan-II aimed to reduce the pollution affecting the Ganga in it's tributaries Jamuna, Damodar and Gomati and other towns.

The following works were to be taken up in this plan

a) Sewer Line Related

Stopping the sewage of the cities which was found in the Ganga or it's tributaries from going directly into the rivers, diverting it and taking into the sewage treatment plant for less pollution. In this work for 160 plans total 600 km. Sewer line placed and total 65 treatment plants are planned.

b) Low Cost Sanitation

For cities 85 schemes were proposed to make the drainage effective.

c) Electric and improved wood crematoria

The cremation on the ghats of Ganga, on the banks of the river and in the coastal cities increases pollution in the Ganga. Many time half burned death bodies are thrown into the river from the crematorium or ghats. If the dead bodies are cremated with wood on the ground, more wood is spent, burning takes more time, ashes are more compared to this advanced crematoriums burn the body more effectively in less wood and minimum gas is saved in electric crematoriums, due to which pollution spreads less.

d) River front development

Both erosion and pollution can be reduced by the development of river ghats.

e) ETP for grossly polluting units

A total 735 industries were identified in the coastal areas of Ganga basin whose wastes polluted the river. A plan was made to set up a waste treatment plant for them. A plan was made to bring small industries together and set up a common ETP for them.

Conclusion

Result of Ganga action plan is that the goals of the Ganga action plan is tagging behind the time and goal have not been

achieved so far, but this plan has been successful in creating awareness about pollution, limiting and controlling pollution. It is known from the recent satellite images that the pollution of Ganga has decreased. The unfortunate thing is that the amount spent on the scheme has not yielded the expected results due to the various reasons.

Most of the river mix and the join the seas. Due to the setting of water on the banks of rivers, cities and villages are settled. They are also used in transportation. Human knowingly or unknowingly brings domestic and industrial waste to these rivers.

Most of the waste gets mixed with river water in the sea. Its amount is less in the total amount of sea water but it is not ineffective because the mount of this population is increasing day by day and it is increasing the pollution of the sea day by day. Also if this pollution is not diluted quickly, then its effects are visible locally as well.

References

1. Arif M, Husain I, Hussain J, Kumar S. Assessment of fluoride level in groundwater and prevalence of dental fluorosis in Didwana block of Nagaur district, central Rajasthan, India. *Int. J Occup. Environ Med.* 2013;4:178-184.
2. Ortyom YG. Water pollution: A menace to aquatic eco-diversity and human health: A review. *Int. J Agric. Food Sci.* 2021;3(2):47-53. DOI: 10.33545/2664844X.2021.v3.i2a.74
3. Arif M, Hussain J, Husain I, Kumar S. Fluoride toxicity and its distribution in ground water of south east part of Nagaur district, Rajasthan, India *International Journal of Scientific Research in Agricultural Sciences.* 2014;1(6):110-117.
4. Piyadasa RUK, Bandara SJS. Surface Water Pollution due To Hazardous Waste from Leather Tanning Industry in Colombo District-Sri Lanka. *Int. J Geogr Geol. Environ* 2021;3(1):31-33.
5. Babu H. Status of drinking water quality in Tarikere taluk with special reference to fluoride concentration. *Nature, Environment and Pollution Technology.* 2006 Mar;5(1):71-8.
6. Backer LC. Assessing the acute gastrointestinal effects of ingesting naturally occurring, high levels of sulfate in drinking water. *Critical reviews in clinical laboratory sciences.* 2000 Jan 1;37(4):389-400.
7. Banks D, Frengstad B, Midtgård AK, Krog JR, Strand T. The chemistry of Norwegian groundwaters: I. The distribution of radon, major and minor elements in 1604 crystalline bedrock groundwaters. *Science of the Total environment.* 1998 Oct 15;222(1-2):71-91.
8. Ayoob S, Gupta AK. Fluoride in drinking water: a review on the status and stress effects. *Critical reviews in environmental science and technology.* 2006 Dec 1;36(6):433-87.
9. Arif M, Hussain I, Hussain J, Sharma S, Kumar S. Fluoride in the drinking water of Nagaur Tehsil of Nagaur District, Rajasthan, India. *Bull Environ Contam Toxicol.* 2012;88:870-875.
10. Dr. Rai A. Toxicity of heavy metals in the water quality of Ganga River in Kanpur, Uttar Pradesh, India. *Int. J Adv. Chem. Res.* 2020;2(1):01-04. DOI: 10.33545/26646781.2020.v2.i1a.14