

**CULTURAL AND SCIENTIFIC ASPECT OF RIVER GANGA****RAMANUJ SINGH<sup>1</sup>**

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**ABSTRACT**

River Bhagirathi and river Alaknanda originate in Garhwal Himalayas and join at Devprayag to form River Ganga. River Ganga traverses through Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal and thereafter enters Bangladesh. The important tributaries of Ganga are the Yamuna, the Kali, the Ramganga, the Ghaghra, the Gandak, the Kosi, and the Sone. Various urban centers viz. Haridwar, Kannauj, Kanpur, Allahabad, Varanasi, Patna and Kolkata which are located on the banks of river Ganga, draw water from the river to meet their requirement and almost the entire wastewater generated by these centers is disposed off into the river. River Ganga's incarnation theory is too much popular in Indian cultural ideology. It is not only a river but it is also a representative river of Aryan culture since origin and development of Indian culture. Our life begins and ends with water Ganga, every rituals begin with her water, from 1500BC to till time, it is serving and nurturing our life, society, and nation. What we have given to her? After knowing its importance we are continuously neglecting its ecological character. Due to blind development process alike industrialization, urbanization and so called unscientific adaptation of westernization its ecological balance badly effected, which is a serious threat to entire Indian culture and civilization. Now it is right time to think and implement ancient tradition with new light of science for purification and rejuvenation of our divine river. Being a citizenship of India, it is our duty and responsibility to save environment and environmental flow of river Ganga. Constitution of India clearly reflects that dignitiful healthy life is our fundamental right under provision of (article 21). When we analysis river's physical, chemical and biological property in hilly areas it is completely justify their divine nature due to its self-purification capacity throw bacteriophage virus, herbs and shrubs mixed water, but in plain area their water quality is in worst condition. Due to industrial effluents, sewage water directly flow in river and other man practices our river highly polluted, water quality is neither drinkable nor bath able. Present condition is alarming to entire society of gangetic region, actually 37% of Indian population and 692 municipalities and 47% of crops of 5 state directly effected. Enormous problem of health disease, low fertility of soil day by day increasing, results ecological imbalance persist, due to this peoples, animals and crops containing heavy metals throw drinking water, irrigation and food chains process. River Ganga is polluted by Faecal Coliforms bacteria in its entire length to variable degree whereas the level of BOD an indicator of organic pollution is largely exceeding the criteria in the stretch that spans from Kannauj to Tarighat. To counter this problem very good initiative has been taken by center government throw (Namami Gange Project). In which time bounded implementation and regular monitoring throw national mission for clean Ganga (NMCG) and state level state programme management group (SPMG) designed. It is right time to emphatic participation for clean Ganga and save Ganga.

**KEYWORDS :** Cultural, Ganga, Industrialization, Development

River Ganga, s divine origin incarnation theory is very popular in Hinduism ideology. Its divine theory described and widely appreciated in Rig-Veda, Atharvaveda and puranas (Srimad Bhgwata Puran). This Aryan sacred river actually nurturing five states directly, Various urban centers viz. Haridwar, Kannauj, Kanpur, Allahabad, Varanasi, Patna and Kolkata which are located on the banks of river Ganga, draw water from the river to meet their requirement and almost the entire wastewater generated by these centers is disposed off into the river. In absence of proper sanitation, abstraction of surface and groundwater for irrigation and drinking purposes and partially treated domestic and industrial effluent turns Ganga into a polluted river in the stretch from Kannauj to tarighat in the state of Uttar Pradesh and also makes the water of river Ganga unfit even for bathing purposes, 37% of Indian population and 692 municipalities and 47% of crops of 5 state directly from Gomukh glacier to Gagasagar.

Indirectly effect is world- wide where Hinduism persist, therefore gaga means Indian cultural way of life irrespective of cast, creed, sect and religion. From 1500bc to till time it is serving and nurturing our life society and nation, what we given to her? After knowing its importance we are continuously neglecting its ecological character, due to blind development process like industrialization, urbanization and so called unscientific adaptation of westernization its ecological balance badly affected, which is a serious threat to entire Indian culture and civilization. To counter this problem very good initiative has been taken by center government throw Namami Gange project. In which time bounded implementation and regular monitoring throw national mission for clean Ganga (NMCG) and state level state programme management group (SPMG) designed. Massive participation of NGO, s, village task forces, religious groups, NRI, foreign countries along with center and state government corroboratory efforts definitely

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produce ray of hopes that we will success to save divine river Ganga.

### Cultural Aspect of Ganga

Ganga Tav Darsanarth Mukti is reflecting its cultural importance and Indian philosophy regarding Ganga, apart from this from birth to death every cultural ceremony begins with water Ganga which proved her cultural value. Ganga has been our religious deity since first Aryan literature to till time (Rig-Veda). It tells her story of incarnation on earth which is widely accepted in Hindu mythology (Srimad Bhgwata puran). It provides bio cum psychic satisfaction of five states people which is 37% population of India. Every year millions of people take holly bath in Haridwara, Allahabad, Varanasi, and Gangasagar from makar sankranti to shiva- Ratri. Festive season has many dimensions regarding socio, economical, religious and cultural, its wide impact can be seen in during Kumbha and Ardha- Kumbha festive season. It provides millions people employment and livelihood direct or indirect way. During kumbha entire political, social, religious policies discussed here for social cultural strengthening purpose in that manner which described in (Atharveda, 2013). Which clearly proclaimed that human service is sole duty of king and also applicable to entire society.

### MATERIALS AND METHODS

Fresh water sample were collected to study water quality from different part of river bank viz Kanpur Allahabad Varanasi etc. The core water quality parameters studied are temperature, pH, conductivity, dissolved oxygen (DO), biochemical oxygen demand (BOD), nitrate, nitrite, total coli forms (TC), and faecal coli forms (FC). In sampling and analysis of water quality data, while the CPCB undertakes scrutiny, processing, and storage of data, along with the analysis of data for interpretation and preparation of action plans. The monitoring is undertaken yearly basis.

### RESULTS AND DISCUSSION

When we analysis river's physical, chemical and biological property in hilly areas it completely justify their

divine nature due to its self -purification capacity throw bacteriophas virus, herbs and shrubs mixed water throw this its holiness and purity clearly seen, but in plain area their water quality is in worst condition. Due to industrial and sewage effluents water directly flow in river and other man practices our river highly polluted, water quality is neither drinkable nor bath able(ERL). Her water quality is in class-d categories, ERL laboratories suggested that biological oxygen demand especially in Allahabad and Varanasi has reached 6.4mg/lit which shows how much river is polluted. It is known facts that biological oxygen demand (B.O.D) is permissible  $\leq 1$  for safe drinking water and  $\leq 3$  for bathing purpose. From Kanpur to Varanasi this river is highly polluted, due to heavy metals, industrials and sewage flux (ERL2015). Present condition is alarming to entire society of gangetic region, actually 37% of Indian population and 692 municipalities and 47% of crops of 5 state directly affected. Enormous problem of health disease, low fertility of soil day by day increasing, results ecological imbalance persist, due to this peoples, animals and crops containing heavy metals throw drinking water, irrigation and food chains process (CPCB Report, 2013).

Above mentioned water quality (Ganga pollution report) of Dalmau, Kala Kankar, Rasoolabad Allahabad D/S Kadaghat U/S Vindhyachal D/S Mirzapur Varanasi U/S Varanasi D/S Trighat .

River Ganga in Uttar Pradesh an overall summary of the trend in BOD, DO, FC and TC at various locations of lower stretch of Uttar Pradesh is presented in table 1. The results of this stretch clearly indicate that:

- Average values of DO comply with the standards for the period of 2006-2011 at most of the locations.
- BOD does not comply with the standards at most of the locations for the period of 2006-2011. An increasing trend of BOD is observed at all monitoring locations except Varanasi D/s, however every year (2006-2011) highest BOD is always observed at Varanasi D/s.
- Faecal Coliform and Total coliform both are observed higher than the criteria at most of the locations, while the highest value is always observed at Varansi D/s. No specific trend is observed in these two parameters.
- In overall analysis, the River Ganga in lower stretch of Uttar Pradesh is polluted.

Table 1 : Summary Report of River Ganga Between 2006-2011 in Uttar Pradesh

Year	No of Monitoring locations	Temp. (°C)	pH	Conductivity (µmhos/cm)	DO (mg/l)	BOD (mg/l)	Total Coliform (MPN/100 ml)	Faecal Coliform (MPN/100 ml)
2005	39	4-39	6.1-9	23-1696	3.2-12.8	0.1-15.2	13-45x10 <sup>5</sup>	11-7x10 <sup>5</sup>
2006	39	9-33	7-8.9	97-5620	2.2-11.9	0.1-16.4	1-25x10 <sup>5</sup>	13-11x10 <sup>5</sup>
2007	39	4-33	6.1-8.8	23-5040	1.4-11	0-14	0-28x10 <sup>5</sup>	17-11x10 <sup>5</sup>
2008	39	2.5-35.5	6.5-8.9	39-6320	1.2 - 11.6	0.5-21.0	0- 101x10 <sup>5</sup>	0-7 x10 <sup>5</sup>
2009	57	4-37	6.5-8.9	68-4460	4.3-11.2	0.2-16	2-65 x10 <sup>4</sup>	0-4 x10 <sup>5</sup>
2010	57	4-35	6.7-9	21-5250	3.6-12	0.2-15	3-14x10 <sup>5</sup>	2-4 x10 <sup>5</sup>
2011	57	3-37	6.5-9.1	49-10240	4-14.3	<b>0.2-11</b>	<b>5-25 x10<sup>5</sup></b>	<b>5-11 x10<sup>5</sup></b>

Unfortunately over crowded population and highly soil fertile zones future presently in dark, if massive and effective steps will not be taken then situation will be worst. Keeping this mind Ganga action plan initiated in 1985, but half hearted attempts is not solution regarding this Supreme Court comment is relevant(SCJ, 2015). Court observed that environmental flow of Ganga could not reach in two hundred years. Here are some facts which clearly reflects worrisome situations-

- 1- 2000 million liters industrial effluents daily directly flow in basin regions
- 2- 1000 million liters unrefined sewage water directly flow in basin regions daily.

This data based on parliamentary committee report(PCR, 2015), which show that what kind of awareness we have, and what is necessary to do. To counter this problem very good initiative has been taken by center government throw Namami gange project. In which time bounded implementation and regular monitoring throw national mission for clean Ganga (NMCG) and state level state programme management group (SPMG) designed. Massive participation of NGO, s, village task forces, religious groups, NRI, foreign countries along with center and state government corroboratory efforts definitely produce ray of hopes that we will success to save divine river Ganga. This programme have stringent action against 764 industries, and sewage treatment plants establishment for rectify impure sewage water, throw this till oct- 2016 first phase -1completed and result will be reflected and till 2020 gana will be cleaned.

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