

## **“STUDIES ON PH VARIANCE OF GOMATI RIVER AT THE ENTRY AND EXIT POINTS IN JAUNPUR CITY TOWNSHIP”**

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The quality of water is decided on the basis of hydrogen ion concentration in it. The probability of washing efficiency, nutrition value, digestibility and soil health of the irrigated fields depends on the water quality. Gomati river at Jaunpur is used for domestic, industrial and agri-agro purposes. The domestic drains and industries are vomiting chemical pollutants in the urban segments which affect adequately the pH of Gomati river. The hyperacidity and different water borne diseases have been observed to occur due to constant use of low pH level water.

In the present paper an average value of pH of Gomati river water at the entry and the exit points in Jaunpur city has been estimated positionally and periodically. The abnormal values have been correlated with the frequency of concerned disease in the segment.

### **INTRODUCTION**

**T**he environment has broadly been conceived as the grand totality of all the conditions and influences that affect the development and life sustainability of organisms. Human needs and deeds pour undesired materials into the atmosphere and with a certain rate the ecosystem of the universe mitigates the adverse effects through the ‘self-purification phenomenon’. The ‘self-purification’ has a definite limit and the deteriorating rate of the ecosystem is rising up day-by-day. The ultimate result is the increasing pollution in the atmosphere. The pollutants spread into air, soil and water. Water on the earth has a steemed relation with life. No one can survive without water for potability. humidity, laundrying, irrigation and refrigeration water with specific properties is required. The acidity and alkalinity of water are the prime properties of water that affect its applicability. The last century in the world has been credited to developments but blotted with pollution risks [1]. The pH of water after the deadly poisons is the most injureous and fatal parameter. The effect of pH on soil [2-7] and human health [8-14] has exhaustively been studied by several ecologists.

The geographic and demographic situation of Gomati river in Jaunpur city is unique in the sense that it passes centrally through the city bisecting it into two equal halves and being an old urbanization is feed by river water supply.

## METHODS AND MATERIALS

The method and materials used in the estimation of the pH of Gomati river are as adopted by the author [15] with the help of pH meter. The entry point is marked 100 metres prior to Chhatarighat and 100 meters latter to Ramghat, Jaunpur.

Table-1

Year	pH		pH gradient Year <sup>-1</sup>
	Entry point average pH	Exit point average pH	
1996-1997	7.75	8.05	+0.06
2001-2002	7.56	7.81	+0.05
2006-2007	7.23	6.18	-0.21
2011-2012	5.98	4.52	-0.292

## RESULTS AND DISCUSSION

The analysis of data leads to the conclusion that during 1996 to till 2002, the pH of Gomati river increases from entry point (Chhatarighat) to the exit point (Ramghat) while due to domestic and sewage pollution it is expected to decrease. It indicates that there are some alkaline rocks or soluble materials that render it alkaline. After some time the catchment area might be free from alkaline pollutants and the organic matter poured by urban sewage makes the river water acidic as the pH declines from 2006 to 2012.

The data reveal the pH of river water in Gomati due to Jaunpur township is continuously decreasing rendering it more acidic in nature which is harmful to human health. The alarming situation is such that the rate of declining of pH is also increasing with a caution of a risk for Jaunpur citizens to make the city a hub of hyper acidity and gas entitis.

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