

Water quality of an Indian tributary affected by various industrial effluents- a case study

Bharti*¹, J. S. Jangwan¹, Amrish Kumar² and Vivek Kumar³

¹Department of Chemistry, HNB Garhwal University, Srinagar, Uttarakhand, India

²Department of Paper Technology, Saharanpur campus, IIT Roorkee, Saharanpur, U.P, India

³Department of Rural Development and Technology, IIT Delhi, Delhi, India

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Abstract. Industrialization and urbanization are modern need and trends. Such trends affect the natural ecosystem of rivers. Indian rivers face such problems in a high ratio. The aim of this study is to investigate the cause and amount of pollution in a tributary river Krishni. Pre-monsoon sampling of Krishni river water was performed as per APHA standard. Water samples were collected from different sites of Krishni river. Physiochemical parameters as well as trace elements concentrations have been analysed and results were compared with BIS-2012, WHO-2017 and EPA-2001 recommendations. The presence of high BOD, COD, TDS and others physiochemical parameters along with heavy metals reveals that tributary is highly polluted owing to industrial and domestic discharge either directly or through drains. High values of these parameters are harmful for the ecological health of the river because it makes survival of aquatic flora and fauna at risk. On the basis of the results obtained by the present study, it was concluded that level of the pollution in river Krishni is at alarming phase, where if strong action for the rejuvenation of river not takes place, river becomes a dead pool.

Keywords: Krishni river; tributary; trace metal; rejuvenation

1. Introduction

India is a land of faith and religions. People worship plants, rivers etc from the ancient time. The water of river like Ganga and Yamuna used to purify ourselves as they called holy rivers. But today we reached at a point where we have to purify these rivers so that their holy nature remains constant. In addition to be a developing country India facing its worse water crisis from the past few decades. To mitigate these water crises rejuvenation of river is the need of hour. Several action plans take place for the rejuvenation of north flowing river like Ganga, Yamuna and also for Hindon but there is a lack of efforts in case of small rivers or tributaries. As we all know that until the pollution in these tributaries not taking seriously, the target of rejuvenation of large river can't be achieved. It is due to the fact that tributary rivers merges into large river at the end of their journey and puts their polluted water into the large river. No matter how many action plans for

*Corresponding author, Ph.D., E-mail: chemistry.bharti@gmail.com

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