iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** III **Month of publication:** March 2022

DOI: https://doi.org/10.22214/ijraset.2022.40802

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue III Mar 2022- Available at www.ijraset.com

Pollution Study Of Near By River (Nag River)

Kushal Rahangdale [1], Joshua Khaire [2], Vasundhara Bhoyar [3], Himani Patil[4], Gajendra Thakre[5], Yugandhara Bawne[6], Gaurav Parashar[7], Shubham Kamble[8]

[1]*Professor, Dept. of Civil Engineering, Dr. Babasaheb Ambedkar College of Engineering & Research., Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur (India)*

[2, 3, 4, 5, 6, 7, 8, 9]*Student of Civil Engineering Department, Dr.Babasaheb Ambedkar College of Engineering & Research, Rashtrasant tukadoji maharaj Nagpur University, Nagpur (India)*

Abstract: ***A nature is changing its form day by day. As we seen change in natures form, the quality of environment is depleting day by day and Environment mainly depends on the air & water. The water in the river exposes to environment during flowing and passes through various regions & may result in carrying polluted water. Water quality of river is depleting day by day due the wanted and unwanted activities of the human being. The majority of India's rivers are heavily polluted as a result of human activity, which is a huge worry. The water quality of the Nag river in Nagpur, Maharashtra, India, is determined in this project. Recently, different unending attempts have been done in this field to add Nag River to the city's historical list. This river runs through the city and serves as a waste water drainage system for Nagpur. Nagpur's urban waste pollution has severely harmed the environment of the rivers. Because such polluted waste affects all metabolic, physiological, and biological processes of aquatic organisms, it is critical to research physic-chemical features of water. The water will be tested for pH, dissolved oxygen, total dissolved solids, ammonia, and other important water quality characteristics. The effluent samples will be collected from different locations.***

Keywords: Quality of Water Nag River, Parameter.

I. INTRODUCTION

The Nag River is situated in Nagpur city of Maharashtra. This river is a part of the Kanhan River System. River originates from Ambazari Lake, through the city and finally pouring down into the Kanhan River. Constant dumping of sewage and industrial waste has resulted in river water quality deterioration and the river has since been emerging as a bad smelling river in city.

Within the city limits, the Nag River flows for 16.5 kilometers before meeting the Pili River in the eastern section of Nagpur, outside the Municipal boundary limits. These rivers flow into the Wainganga River after meeting at the Kanhan River. The river's quality began to deteriorate as a result of the frequent discharge of sewage without any prior treatment. The water quality of the Nag River in Nagpur, Maharashtra, India, is the focus of this research. The Nag river runs through the city and serves as a waste water drainage system for Nagpur. The ecosystem of rivers has been severely impacted by urban trash pollution. The management of river water quality necessitates an instantaneous assessment of pollution from numerous sources.

The majority of today's rivers in India have been seriously poisoned as a result of the community's carelessness and wrongdoing. The various cities of India are a perfect illustration of poor river management. The Nag river flows through the urbanized part of Nagpur city, which has a population of around 40 lakh people. Due to social and economic activities carried out by diverse population classes on various land use patterns, the Nag river eco-system is under extreme stress. Occupational and domestic activities in diverse houses usually result in the generation of varied types and volumes of liquid, solid, and gaseous wastes, which then make their way into the river.

II. LITRETURE REVIEW

Chaturvedi S. et.al., (2003). Study on some physico-chemical characteristic of flowing water Ganga river of Haridwar.The present study revealed, the physico-chemical quality of river Gomti is not reasonable. The parameters showed that the quality of water is not now in safe limit and not good for flora and fauna, but the situation is alarming and degradation is in continuous process, therefore to improve the quality of water ,there should be continuous monitoring of the pollution level is necessary and immediate action is required for its better management.

Singh,M. et.al. (2004). Physico-chemical studies of water river Yamuna of Mathura. The presence of safe and reliable drinking water is an essential prerequisite for a stable community. So quality of water is to be determined for a locality of various purposes. As water balances human life system in a positive way, its negative effect is attributed by consequence of various parameters beyond the permissible limits.

©IJRASET: All Rights are Reserved

Many studies have carried out on the quality of water in various parts of the country including Assam, but no such attempt was taken for Lumding Town, Nagaon District of Assam. The objectives of this study have been considered to investigate few water sources in Lumding Town, which are used for drinking purposes. To determine the quality of water sources with respect to physico–chemical parameters and to study the statistical correlations among various parameters with significant values.

Khanna D.R. et.al. (2003)**.** Assessment of water quality of river Ganga in district Bulandshahar (U.P.) India. It may be concluded that change in the normal range of a majority of observations, which have been recorded at the different sites of river Gomti during 2012-2013. The present study revealed, the physico-chemical quality of river Gomti is not reasonable. The parameters showed that the quality of water is not now in safe limit and not good for flora and fauna, but the situation is alarming and degradation is in continuous process, therefore to improve the quality of water ,there should be continuous monitoring of the pollution level is necessary and immediate action is required for its better management.

Angadi,S.B., et.al. (2005). Limnological studies of Papnash pond,Bidar (Karnatka). The aquatic environment is an area controlled by the changes such as light, heat, humidity and contamination of various effluents in the water body. It can also be said the overall productivity of a river is directly regulated by physico-chemical parameters. From the above investigation, it may be concluded that the values of different physico-chemical parameters at both spatial and at three different seasons (summer, monsoon and winter) are in the range prescribed by BIS (2003). So, the water at Bankura segment of Dwarkeshwar river can be conveniently used both for drinking and fishing purpose as well.

Shiddamallayya N. et.al. (2008). Impact of domestic sewage on fresh water body. The lowest alkalinity was observed during winter and the highest in monsoon due to decomposition of organic matter in the water body. The minimum hardness was found during the monsoon due to utilization of carbonates as a source of carbon by phytoplankton. The maximum hardness was in the monsoon due to run off carried from the surrounding areas. The lowest content of calcium was during the winter due to luxuriant growth of phytoplankton in the water body. The highest content was in the monsoon due to carry of Ca along with run off. The lowest Mg concentration was noticed during monsoon and the highest was in the summer. It was due to evaporation by high atmospheric temperature. The lowest and highest content of Cl and salinity were noticed during the summer.

Joshi Dhirendra Mohan et. al., 2009 collected a total of 90 water samples from 5 different spots during different seasons over a period of two years (Nov. 2006 to Oct. 2008). The samples were taken in BOD bottles and plastic jerry cans and brought to the laboratory with necessary precautions. All samples were labelled properly. Some parameters like temperature, pH & dissolved oxygen were measured on site. Grab sampling was generally applied during the sampling. Water samples were analysed by standard methods.

Varunprasath K. & Nicholas A. Daniel, (2010) have selected water samples form river Bhavani were from 3 stations, one at Pillur dam received water from the western ghats and other two are Mettupalayam. One year continuous monthly poriods in July 2007 to June 2008 were selected. The samples were collected from all stations at 11.00 to 12.00 noon in both the seasons for physico chemical examination & from Bhavani river. Most of the units discharge there handling were adopted based the standard procedures.

Tabrej Ahmed, et.al. (2010). Water quality assessment of river Gomti at Lucknow U.P. India. Pollution due to industrial and domestic wastes. At present, ornamental fishes are one of the most popular pets throughout the world and the high demand for this fishes has made the business of ornamental fishes into a global trade. In India the popularity of these fishes are increasing in a rapid rate. Throughout the world, the export of the ornamental fishes is mostly encircled around the south-East Asian countries, but India's share in this aspect in negligible.

West Bengal is a pioneering state in respect to the ornamental fish trade in India. The northern most part of west Bengal is the high fish resources, holding a number of the threatened and endemic fish species, specially the Darjeeling district because this district is with a number of rivers, canals and jhoras and is also thickly interspersed with innumerable hill streams, some of which are potential sources of indigenous ornamental fishes. Works regarding the availability of the indigenous ornamental fishes in this particular district are scanty and for that reason the present work was designed to get an over view about the available indigenous ornamental fish resources of Darjeeling district.

Yadav R. C. & Srivastava V. C., 2011 analyzed samples of the river Ganga water which were collected at monthly intervals from the selected site in the first week of each month (Form Sept. 2004 to Aug. 2006). Triplicate samples each of two liter in polythene bottles were collected between 8 am to 10.00 am from each sampling site and brought to the laboratory in the ice boxes for the analysis of physiccal-chemical parameters.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

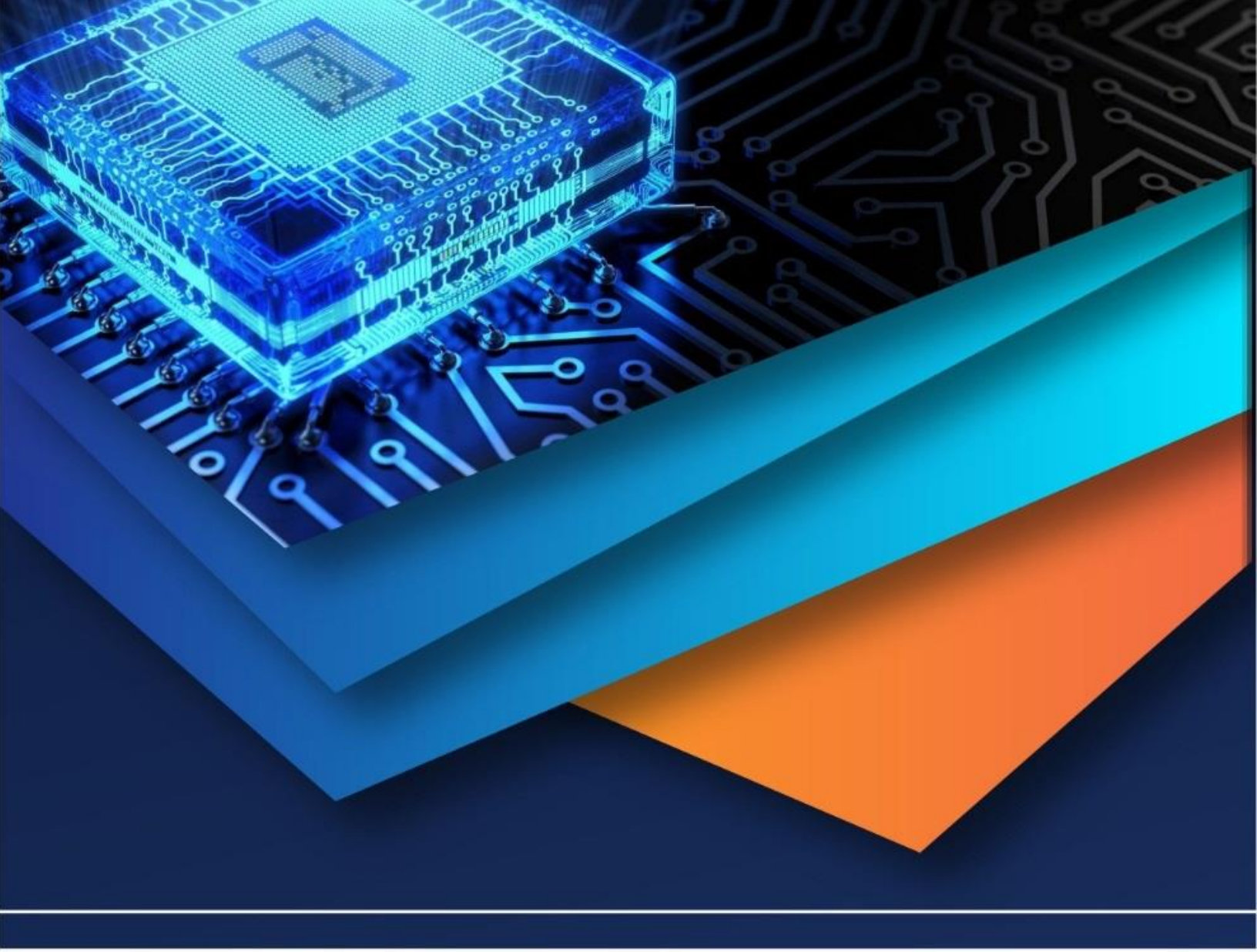
P. C. Sujitha et. al., (2012) used technique for quantitative analysis of Karamana River, various samples were collected from the station Mankattukkadavu (Station 1), Kundanankadavu (Station 2), Near Siva Temple (Station 3), Thiruvallam (Station 4) & Pallichal (Station 5). The study was carried out in pre mansoon. (March) & south west mansoon (July) period in 2009. Surface water samples & sediment samples were collected from the sampling stations. For the analysis of physico-chemical parameters, the surface water samples collected in new white colour 1 liter pearl pet bottle using clean buckets and in sterlise glass bottles, for the bacteriological parameters study

III. CONCLUSIONS

We are going to analyzed Physical-chemical parameters during project. The qualitative parameters was studied for selected sample from different locations. The water near Ambazari that is origination point of river can be use for drinking purpose as well as domestic purposes after treatment. We observed as the distance increases from the Ambazari (origination), the quality of water is become worse or lower quality and not permitted for any use.The above study would also lightened attention to river for its revival and conservation of environment.

REFERENCES

[1] Joshi Dhirendra Mohan, Kumar Alokand Agrawal Namita (2009), Studies On Physicochemical Parameters To Assess The Water Quality Of River Ganga For Drinking Purpose In Haridwar District, Rasyan, J. Chem, 2(1), pp 195-203.
[2] K. Saravanakumar and R. Ranjith Kumar (2011), Analysis of Water Quality Parameters of Groundwater Near Ambattur Industrial Area, Tamil Nadu, India; Indian Journal of Science and Technology, Vol. 4 No. 5 (May 2011), ISSN 0974-6846, pp.660-662.
[3] P.C. Sujitha, Mitra Dev D., Sowmya P.K. Mini Priya R.(2012), Physico-chemical Parameters of Karamana River Water in Trivandrum District, Kerala, India, International Journal of Environmental Sciences, 2(3),pp.1417-1434.
[4] Varunprasath K. and Nicholas A. Daniel (2010), Physico-chemical Parameters of River Bhavani in three stations, Tamilnadu , India, Iranica Journal of Energy & Environment, 1(4),pp.321-325.
[5] Water supply Engineering by B. C. Punmia, Laxmi Publication.
[6] www.google.co.in/maps
[7] http://en.wikipedia.org/wiki/Nagpur.
[8] Yadav R.C. and Srivastava V.C.(2011), Physico-chemical Properties of the Water of River Ganga at Ghazipur, Indian J.SCI.Res.,2(4),pp 41-44.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)