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# WATER QUALITY ASSESSMENT OF PRAVARA RIVER AT SANGAMNER TEHSIL, AHMEDNAGAR DISTRICT, INDIA: AN IMPACT OF ANTHROPOGENIC ACTIVITIES

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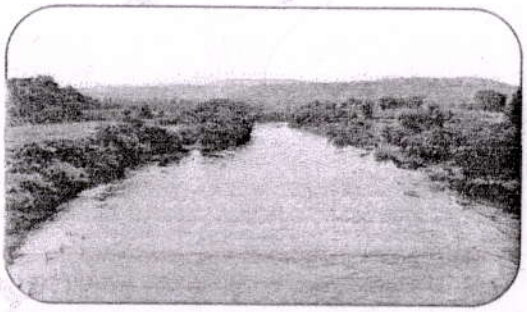
**ABSTRACT :**



*Rivers plays vital role in human life. Many human activities relies on river water. Rapid growth of population enhanced the anthropogenic activities along river which pose a concerned impact on river system. The water quality and quantity is under constant pressure by presence of different anthropogenic activities like instream construction, removal of vegetation, sand mining, industrial activities, encroachment, domestic and religious activities. It all activities resulted in degradation of water quality. Keeping this view in account systematic study has been carried out the water quality of Pravara River in Sangamner Tehsil. Water samples for 10 sampling stations have been collected during 1st week of November 2018. Physico-chemical parameters have been analyzed by standard method. The Field observations reveals that water quality is declined due to many human activities mainly domestic,religious and industrial. To analyze that Physio-chemical characteristics of water is the main aim of the research with remedial measures for mitigate the deterioration and related consequences in future.*

**KEYWORDS :** *Water quality, Pravara River, Physio-chemical analysis.*

## INTRODUCTION

River water is a precious natural resource for human being. Many human activities like agriculture, industrial, tourism and domestic etc. River has great potential of economic change. Many villages which are situated along river experienced rapid economic changes, many of them convert into important towns and cities. It has been observed that from past few decades population growth, urbanisation, industrilisation and enchroachment put immense pressure on river system.Many human activities like sand excavation, construction of bridges, vegetation destruction, diversion of channel, brick making, agricultural have been deteriorated the water resource. It lead to degradation of water quality. Rivers have capacity to detoxify a certain quantity of pollutants discharged into them (Kochi Fujie et al. 2010) but if discharged of pollutants are exceed, water quality will be deteriorate. These all problems are largely concentrated in and around urban area.Taking this view in account Pravara River in Sangamner Tehsil has been selected for further research. Pravara River is an important drainage system of Sangamner Tehsiland prove as a boon for

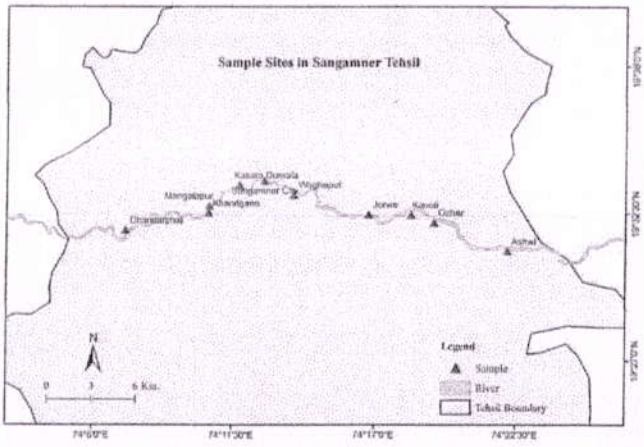
drinking, irrigation and industrial and tourism purpose. Many important town and cities are located on the bank of Pravara River. Many human activities along river badly affects on quality of thewater.

To understand inaapropriate anthropogenicactivities and its impact on water quality is the main objective of the paper. Furture research will helpful to minimize such activities which are responsible for water contaminating and creating awareness among local people, farmers, entrepreneur etc.

## STUDY AREA-

For further study Pravara river in Sangamner Tehsil has been selected. Pravara River is an important drainage system of Ahmednagar district. The northern part of district is drained by Pravara. The total length of River is about 230 Km.The River Pravara rises at an elevation of 1080 meters near Ratanvadi village in Akole Tehsil. Sangamner Tehsil is the one of the developed Tehsil in the district which located about 58 km. downstream from the origin of Pravara River. It is on the confluence (*sangam*) of river Pravara, Mahlungi and river Nataki that's why city got its name Sangamner. Sangamner is located at 19°57'north and 72° 22'east. Sangamner has an average elevation of 549 meters from mean sea level. Sangamner is the second largest city in Ahmednagar district by population. After 1967 establishment of co-operative sugar mill at Sangamner, the agriculture in the area has witnessed rapid changes. Sugarcane has become dominant commercial crop in the area(Socio-Economic Survey of Ahmednagar, 2016). Pravara River is a major irrigation source for the agriculture.

**FIGURE NO. 1. LOCATION MAP OF STUDY AREA.**




## MATERIALS AND METHODS-

For furture study 10 sampling stations within Sangamner Tehsil have been selected. Selection of sampling stations is based on types of human activities and their intensity. For water quality analysis water samples have been collected from the surface water along river. Temperature of samples have been measured at in the field during collection. The water samples were analyzed at Water Quality Laboratory level- II, Nashik under Hydrology Project, Water resources department, Government of Maharashtra. The analysis was carried out in the laboratory as per BIS standard methods. Various Physio-chemical parameters like pH, Total solids(TS), Total dissolved solids (TDS),Dissolved oxygen(DO), Biological Oxygen demand (B.O.D.),and turbidity were analyzed for the evaluate the impact of anthropogenic activities on water quality. It all information summarize and analyzed with the help of graphs.

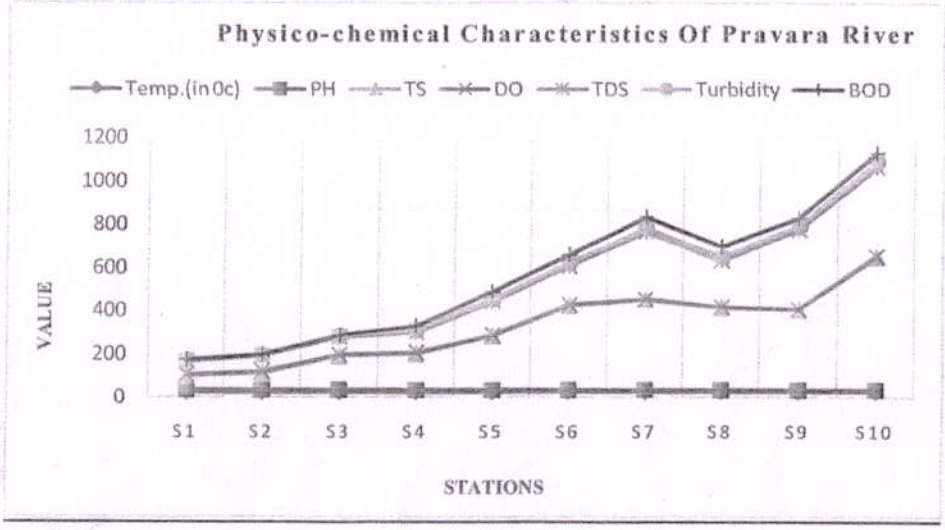
## RESULTS AND DISCUSSIONS-

The analysis report of sample sites has been carried out as per BIS limits, which are given in the Table No.1.

TABLE NO. 1.THE PARAMETERS OF THE PRAVARA RIVER IN SANGAMNER TEHSIL ( November, 2018 )

| Station No. | Location | Temp.(in $^0$c) | PH | TS | DO | TDS | Turbidity | BOD |
|---|---|---|---|---|---|---|---|---|
| S1 | Dhandharphal Bk. | 23.4 | 8.7 | 66 | 7.5 | 60 | 4.6 | 2.5 |
| S2 | Manglapur | 23.9 | 8.2 | 80 | 7.3 | 70 | 5.0 | 3.0 |
| S3 | Khandgaon | 24.2 | 8.5 | 156 | 7.2 | 82 | 5.3 | 3.5 |
| S4 | Kasara Dumala | 23.8 | 8.3 | 170 | 4.1 | 94 | 8.4 | 20 |
| S5 | Sangamner | 24 | 7.8 | 250 | 3.2 | 156 | 9.1 | 35 |
| S6 | Waghapur | 24.9 | 8.0 | 389 | 3.1 | 182 | 10.7 | 40 |
| S7 | Jorve | 25.3 | 8.5 | 416 | 1.9 | 314 | 15.42 | 52 |
| S8 | Kanoli | 24.7 | 8.3 | 381 | 2.0 | 216 | 15.48 | 50 |
| S9 | Ozher | 24.8 | 7.8 | 372 | 2.0 | 369 | 15.59 | 38 |
| S10 | Ashwi | 26 | 7.5 | 616 | 3.4 | 412 | 24.97 | 42 |

(Required desirable limits- As per standards prescribed For Drinking Water by Bureau of Indian Standards, 2002 (BIS) limits, 2012)




pH-pH is an indicator of amount of hydrogen ion concentration value. Normal water has pH value between 6.5 to 7.5. Sewage into water can change the hydrogen ion concentration (pH) in the water and it become more alkaline depending on the types of waste and chemical substances contained in them. (Ichwana& et.al, 2016). The present study shows that water at various stations is alkaline. The pH value has been ranged between 7.5 to 8.7 at various sampling sites.

Total solids (TS) – Total solids are sum of dissolved solids and suspended and settle able solids in water. The value of TS is high at Jorve, Kanoli, Ozher, it may due to sand mining carried out at these sites. At Ashwi TS value is highest.

**Total dissolved solids (TDS)** –TDS shows similar trends as TS. It is observed that value TDS is highest at Ashwi it may due to excessive sand mining.

**Dissolved oxygen (DO)**–DO refers to the level of free non-compound oxygen presents in water. In stagnant water decaying matter utilizes oxygen. At Jorve it is minimum due to stagnation of water and at Dhandharphallots of vegetation is seen along river so DO is maximum.

**Biological Oxygen demand (B.O.D.)** – BOD is amount of dissolved oxygen needed by aerobic biological organisms to break down organic material presents in given water. Value of BOD is high at Ashwi due to organic pollution.

**Turbidity** – The turbidity is highest at Ashwi due to sand mining, it leads contamination of water. Other sand mining centers also having high turbidity.

## CONCLUSIONS-

Field observations revealed $S_{10}$ is more affected due to domestic activities and instream construction. $S_2$and $S_5$are confluence which developed for rituals. $S_5$, $S_6$, $S_7$, $S_8$ are famous for sand mining which disturbs water quality.sand mining pose a concerned impacts on river and Geo-environmental condition of the region, so government should put a complete ban on such activities. Study would be useful for creating awareness among local peoples, farmers and miners that may prevents further degradation of water resource.

## REFERENCES-

**Ajay D. Chavan, M.P. Sharma and Renu Bhargava (2009),** 'Water quality assessment of the Godavari River.' HydroNepal, Issue-5(1). Pp.31-34.

**BawaKalpana V. and V.B. Gaikawad (2013),**'Water Quality Assessment of Godavari River at Nashik, India: Impact of Sewage and Industrial Wastewater' Universal Journal of Environmental Research and Technology,ISSN 2249 0256 , Volume 3, Issue 4: 452- 457.

**DasD.N. (2013),** 'The impact of industrial and urban activities on the water quality of Tunia River, Assam.' Unpublished Ph.D. Thesis submitted to Gauhati University, Assam.

**Deshmukh B.S. and Sathe S.D., (2014),**'Physico-Chemical Characteristics of Pravara River, Maharashtra.' Journal of Aquatic Biology and Fisheries, Vol.2/Pp.101 to 105

**Deshmukh K.K. (2012),** 'Evaluation Of Groundwater Pollution Of Sangamner Area, Ahmednagar District, Maharashtra, India Journal of Environmental Research And Development ,Vol. 7 No. 1, July-September 2012

**Govorushko S.M. (2010),** 'Effect of Human activity on Rivers' International Congress on River Basin Managemant- pp. 464-476

**Ichwana, Syahrul, Widra Nelly (2016),** 'Water quality Index by using National Sanitation Foundation- Water quality Index (NSF-WQI).' International conference on technology innovation and society.

**Jyotiprakash G. Nayak & Dr. L. G. Patil (2016),** 'Assessment of water quality of Godavari River at Nashik, Maharashtra, India'International Journal of Civil Engineering and Technology (IJCIET) Vol.7/1, Pp.83-92.

**Kharake A.C. and Unde Maya (2018),** 'Socio-economic impacts due to human interventions along Pravara river: A Geographical analysis.' Review of Research, Vol.7 (05), Pp. 37-41

**Kharde A.K. (2014),**' Study of chemical Properties of ground water in Pravara area in Ahmednagar Dist., India 'Research Journal of Recent Sciences, Vol. 3, Pp.71-75.

**Kharke A.C. (2008),**'Analysis of Geo-environmental effects due to human interventions along Pravara River at Sangamner city, Ahmednagar, Maharashtra.' Multidisciplinary Approaches of Remote Sensing & GIS, ISSN: 2319-8648, Vol. 1(1), pp. 89-93

**Marle S.M. (2011),** 'Assessment of pilgrimage impact on river water quality and health along river Indrayani, District Pune.' Unpublished Ph.D. Thesis submitted to SavitribaiPhule Pune University.

**Muhammad Abo ul Hassan Rashid, Malik MalihaManzoor and Sana Mukhtar (2018),** 'Urbanisation and its effects on water recourses: An exploratory Analysis.' Asian Journal of water, Environment and pollution, Vol.15(1)., Pp.67-74.

**Patil S. &Ghorade I.B. (2013),** 'Assessment of physico-chemical characteristics of Godavari river water at Trimbakeshwar and Kopargaon, Maharashtra.' Indian Journal of Applied Research, Vol.3 (3), Pp. 149-152.

**Satyavati Shuklaa, Mohan V. Khirea, Shirishkumar S. Gedama (2013),** 'Effects of Increasing Urbanization on River Basins',International Journal of Engineering Research & Technology (IJERT)ISSN: 2278-0181,Vol. 2 /12, Pp.2742-2747.

**Socio-Economic Survey of Ahmednagar (2016),**District Statistic Department

**Unde Maya and TurkundeKantilal (2008),** 'Geo-environmental effects of urbanization in the river channel: A case study of River Sina around Ahmednagar city.',Multidciplinary International Research Journal, Vol.1(03), Pp.

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