



‘SOCIO-ECONOMIC IMPACTS DUE TO HUMAN INTERVENTIONS ALONG PRAVARA RIVER: A GEOGRAPHICAL ANALYSIS.’

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ABSTRACT:

Today the problem of protecting water resources has become major issue for all developing countries. The rapid growth of population and acceleration of economic activities in and along river impairing the river system. The cities which situated along river are facing more of such types of problems. Water resource is becoming scarce in certain places due to human interventions. Keeping this view in mind, Sangamner city has been selected for assessing the socio-economic impacts due to human interventions along Pravara River. The present study aimed at conducting a detailed investigation of the same impacts. Field observations revealed that many human activities along river like construction of dams, diversion of channel, removal of vegetation, domestic and religious activities, sand mining and brick making pose a concerned impacts on river as well as socio-economic disturbance of the region.

Main aim of the present paper isto assess that socio-economic impacts along Sangamner city due to human interventions in River Pravara.

KEYWORDS: *Human interventions, Pravara River, Socio-economic impacts.*

INTRODUCTION:

River water is most essential basic natural resource for human beings and his activities like agriculture, industrial, and tourism. The area along the banks of rivers have witnessed great economic and cultural progress. According to the report of WHO (Macro-economics and health), 2001, annual economic growth rate is 3.7 % among poor country with better access to improved water and sanitation services while similarly poor countries without access had annual growth of just 0.1 % .Rivers are also important carriers of water and nutrients through that it provides its valuable deposits like sand and gravels to the respected area. For centuries human have been enjoying the natural benefits provided by the rivers. (Naiman, 1992). Human activities along with the river for multipurpose which can bliss for human life but increasing population implies repetitive activities along river results as a interventions. According to the report of WHO (2015), 34 % of population in the world was lived in urban areas which today 54% and projected to increased upto 60% till 2030. In India conducive scenario about cities in which villages are turning into cities, there are 4,000 cities and towns. Maharashtra is the second largest state in India according to population and having large numbers of cities which results pressure on water resource. Cities and towns in Maharashtra are concentration of urban sprawl, production, transportation and immigrants that implies an



increasing demand of water resource for drinking, irrigation, construction, domestic and industrial activities. Taking this view in account Pravara River in Sangamner city has been selected. River Pravara is a vital base for many human activities like industrial, tourism, cultural and rituals, from few years with increasing population all activities cumulatively affects on river water and alter the channel that why is become one of the interrupt channel due to human interventions that concern socio-economic impacts

STUDY AREA-

River Pravara in Sangamner city has been selected for further study. Pravara River is an important drainage pattern of Ahmednagar district. The northern part of district is drained by Pravara. The river Pravara rises at an elevation of 1080 meters near Ratanvadi village in Akole Tehsil. The total length of river is near about 230 Km. Sangamner is the one of the developed cities 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. River Pravara is a major irrigation source for the agriculture.

OBJECTIVES

1. To study Morphological characteristics of river Pravara.
2. To identify types of human interventions along Pravara river at Sangamner city.
3. To assess the socio-economic impacts along Pravara river at Sangamner city.
4. To suggest the appropriate remedies to control sustainable interventions along river Pravara.

METHODOLOGY-

Sangamner city is situated on the northern bank of Pravara River and small town situated on the south bank is known as Sangamner khurd. Pravara River was selected which covers 2.5 km. distance and approximately 58 km. from downstream from the origin of the river. Pre-field observations has been done through topo sheets of the respected area (No.47 I/2) and Satellite image of the respected area. During field visit detail observation of the area & interaction with local people has been conducted. According to intensity of human interventions along the river buffer zones has been prepared, Study area has been converted into buffer having 5 zones, each of it 500 meter radius and named I, II, III, IV, and V (Fig.No.1)). All information summarized & analyse with the help of observations.

Sr.No.	Zone	Distance (In meter)	Distance from origin (In Km.)
1	Zone I	0-500	60
2	Zone II	500-1000	59.5
3	Zone III	1000-1500	59
4	Zone IV	1500-2000	58.5
5	Zone V	2000-2500	58

Table No.1.

RESULTS AND DISCUSSIONS -

Pravara River is an important drainage pattern in Sangamner city. City lies rain shadow zone so river Pravara prove as a boon for drinking, irrigation, industrial and tourism purpose. After construction of Bhandardara dam area has been brought under economic change that area change agricultural productivity, cropping pattern and intensity. Farmers have diversified agriculture from traditional to commercial.

On the basis of observation during field visit has exhibits that according to distance from city intensity of human interventions along river become irrevocable. It implies acute problems related to channel and socio-economic status. Some problems has been observed during field visit

• **Degradation of water resource-**

Water has the unique property of dissolving and carrying in suspension a huge variety of chemicals, has the undesirable consequence that water can easily become contaminated (Ghorade, Ishwar B., 2014).On the basis of observations from sites during field visit has exhibits that urban morphology influence on the river channel . Rapid economic development rising repetitive human interventions in and along river that results changes in the water quality. Domestic activities and vehicle washing in the **zone II** are biggest polluter of Pravara River. Highway Bridge it is on the confluence of Pravara and Mahlungi (**Zone IV**) it affected by Domestic activities, Dump of urban waste, Vehicle and cattle washing, Rituals, Encroachment, are also affects on water quantity and quality

• **Bifuraction of channel-**

With expansion of city is increasing demand of building material like sand and gravels as well as brick. Sand and Brick are essential material for construction.River is a major source of sand and gravel. At the **Zone IV** Brick making activities develop along river from few years it effects on river channel. Unscientific in-channel and near channel sand mining affects on river ,all material dumped in the channel that responsible to bifurcate the channel.

• **Health Impacts**

City garbage and solid wastes dumps at the **zone IV & V** that leads health problems like Cardiovascular. The workers of brick making industries and nearby residents suffering from respiratory problems. At the **zone V** channel encroached by urban slums it causing unhygienic atmosphere and creating health problem like malaria, Diarrhoea.

• **Degradation of Social status of area**

The entire sewage of city has been let into Pardeshpura and Akole road as well as industrial effluent is partly or fully treated or untreated which is directly discharged into the streams at Zone V. Increasing use of chemical fertilizers in agriculture for raising production has also resulted in degradation soil and water. Unscientific and illegal Sand mining activities along river emerges many social issue in respected area. It all disturbs social status of the city.Analysis of human interventions has been given in TableNo.2.

Sr.No.	Zone	Distance (In meter)	Distance from origin (In Km.)	Human interventions
1	Zone I	0-500	60	Bathing, Rituals
2	Zone II	500-1000	59.5	Water withdrawal
3	Zone III	1000-1500	59	Vehicle washing, mass bathing, Domestic activities, Instream construction
4	Zone IV	1500-2000	58.5	Brick making
5	Zone V	2000-2500	58	Encroachment, Dump of urban waste

Table No.2-Analysis of human interventions

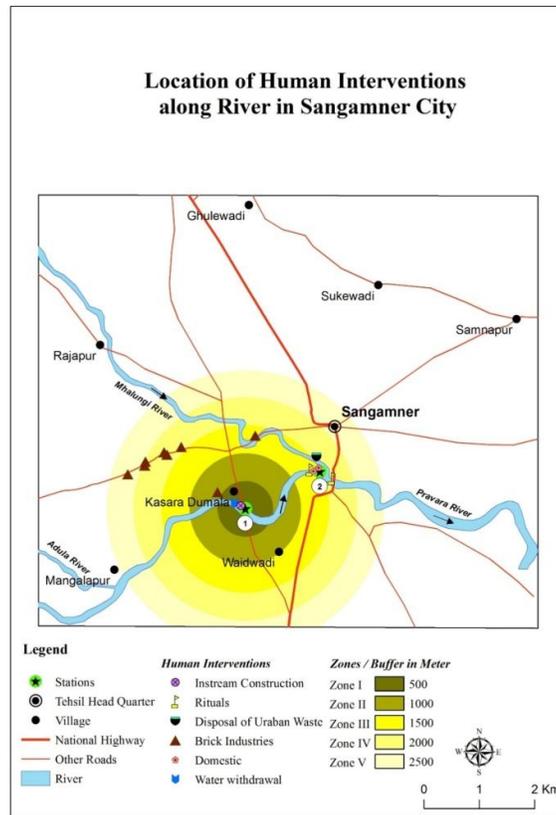


Figure No.1.Human Interventions according to zones

• CONCLUSION-

Field observations revealed Zone III is more affected due to domestic activities and in-stream construction. Zone IV is a concentration of brick making activities that it worsen the environmental condition and degrade the social status. Many other human activities along river like construction of dams, diversion of channel, removal of vegetation, Instream agriculture , religious activities, sand mining pose a concerned impacts on river and socio-economic condition of the region, so study would be useful for creating awareness among local peoples, farmers and miners that may prevents further degradation of water resource. All interventions depicted through following images.



Zone I Instream Construction Zone III Domestic & Rituals activities



Zone III Vehicle washing Zone IV Excessive water withdrawal

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