© 2018 IJSRST | Volume 4 | Issue 5 | Print ISSN: 2395-6011 | Online ISSN: 2395-602X

Land Use analysis and Pollution Assessment Along the Ganga Valley from Rampurghat to Chunar

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Abstract; The study analyzes the land use and pollution along with assessment of the Ganga Valley from Rampurghat to Chunar, which lies on the right bank of the river Ganga (Ganges). Municipal and industrial effluents affect the sediment and water of the river.The river is a chief source of water supply, power generation, river sediment transport and growth of the urban industrial zone. Though, the river obtains huge amount of untreated wastewater which imbalances the nutrient focus at many points along the stretch.There are also more possibilities for the development resource in the river valley. Therefore, keeping in the view this, study of rivers and valleys in geography has become very necessary.

Keywords: Land use, Ganga Valley, Pollution, Rampurghat, Chunar.

1.Introduction

India's largest mythological sanctuary of the year - the holy river Ganges satisfies the ruin of millions of Crores of people, who have been given the title of '**Ganga-Maa**'. The Ganges rises in the Garhwal Himalayas under the name of Bhagirathi. The total length of Ganges river is about 2525 km. The main township of Uttarakhand and Uttar Pradesh falling at bank of Ganges river are Rishikesh, Hardwar, Garhmukteshwar, Narora, Kannoj, Kanpur, Dalmau Allahabad, Mirzapur, Ghazipur, Ballia and goes up to Bay of Bengal in the Indian ocean.

Geological setup of the region significantly controls the potential for the occurrences of mineral deposits thus, growing the prospects of the socio – economic development of a particular region. Socio – economic status of Mirzapur district eastern Uttar Pradesh has been taken into consideration in relation to their geological background natural and miner al resources of the region (Bajrangi 1995).

The Ganga River plays an important role in maintaining ecological balance in North India. The deposited grounds of the Ganga Basin are counted among the most fertile plains of the world. Almost all

kinds of crops are grown in the Ganga river basin fields. Special significance of the Ganga river in the socio-economic development of this region, due to the importance of the Ganga in present day and the large river of the country, the Government of India decided to declare "**The Ganga national river"** on November 4, 2008 and pollution to this ancient river to get rid of "*Ganga river valley authority*" has been formed, in view of the diverse pattern of national river Ganges, it is found in various branches of geography. It provides detailed information about various aspects.

In this short, direct study and survey of various sections related to the Ganga Valley from Rampurghat to Chunar has been conducted. Under which, practical and technical suggestions have been given to reduce the pollution including channel pattern, natural site form, human form, development of resources and suggestions on land use, social, religious activities and pollution reasons. This has increased the importance of the physical geography branch of the geography subject in practical life. This will enable a sustainable development of human society and nature.

1.2 The Study Area

The rivers are the life line of the living beings. Looking at the ecological, social, economic importance of the Ganges River and the small research for the analysis and solutions of many problems related to Ganga valley, this has been selected from a small area of Ganga valley. Extension of the study area according to the topo sheet Map – Latitude 25 ° 00 ° N - 25 ° 15 and International Detail - 82 ° 07' E - 83 ° 00 'E Source - Geo Map (R. F - 1: 50000). The length of Ganga Valley is about 60 Km.

There are also more possibilities for the development of resources in the river valley. Therefore, keeping in the view this, study of rivers and valleys in geography has become very necessary. India's national river Ganges is highly contaminated with pollution today.Various types of Geo- environmental problem are emerging from the river changing path. Apart from this, the study of this field has become every important due to problems ofagricultural land use. on the other hand, due to increasing sedimentation in the river valley.

The importance of this increase due to flooding problems the river valley.

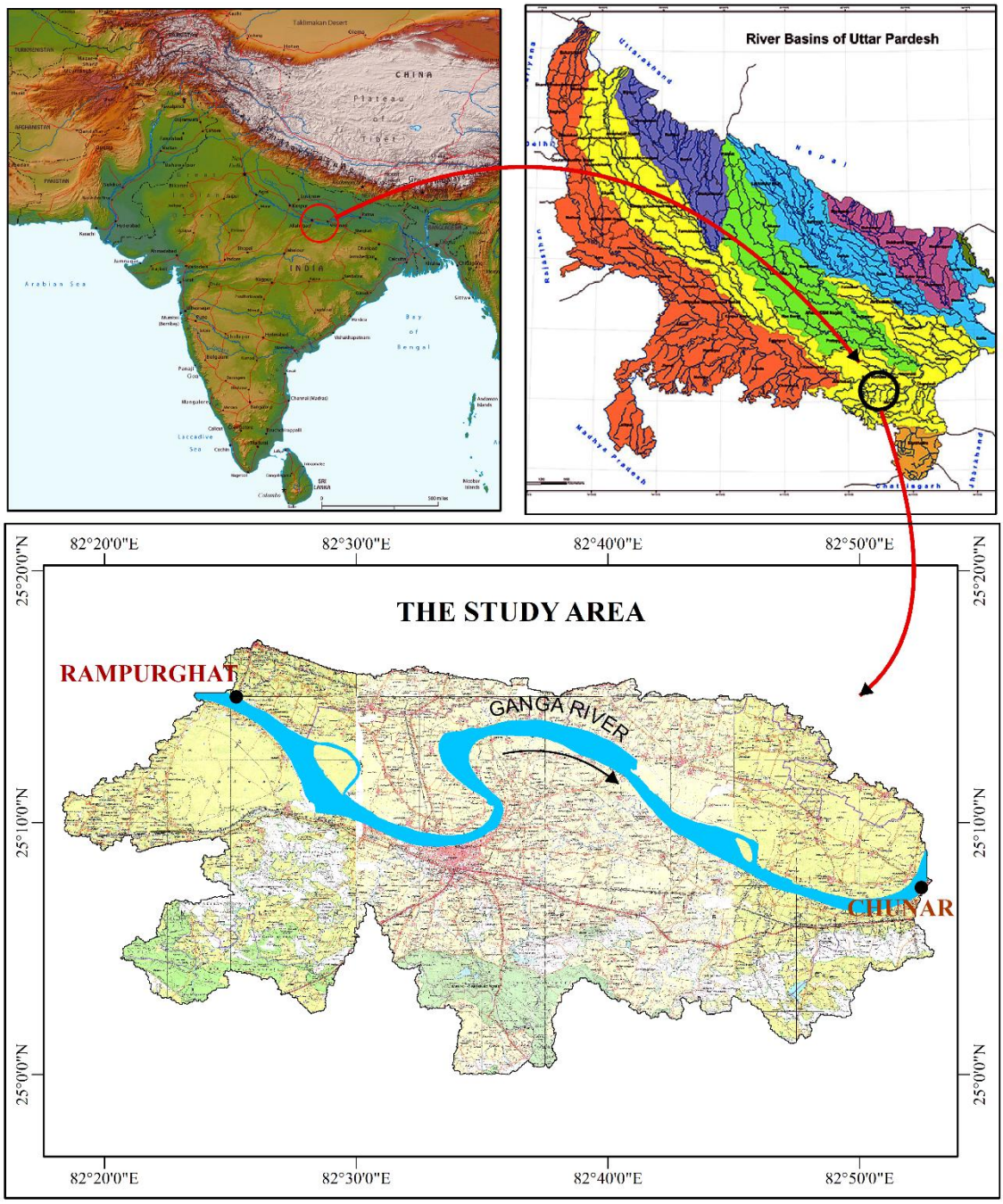

Fig. 1. Location Map

In the present time, various physical Landscape or physical patterns developed on the ground surface are rapidly transforming at a rapid pace, whose main reasons are the various economic and cultural processes of the developing and developing human. The development of any economy is based on water. Today, on one side river water is decreasing; on the other hand, water pollution is also a major problem.

2. Methodology

Research methodology is a process that helps the researchers achieves their objectives. In this part we firsts collect and analyses data from the area. The figure is such information that can be both qualitative and quantitative forms.Hence the study would be based on both primary and secondary source of data. This research can be described as given below. The methodology adopted for the present research workincludes filed work, laboratory work and cartography. The present research work is dividedinto two parts :(1) The collection of essential data (2) Analysis and interpretation of the data.The first hand data are obtained by field observations, collection of samples, laboratory investigations. The secondary data are obtained from various Government Departments. Through interviews of the concerned officials and from various reports, research papers,books and periodicals.

3. Result and Discussion

3.1 The Ganga valley; - The Ganges River provides livelihood to many people, and especially to many people living near the valley. The major resources found in the Ganga Valley are -

- Fertile Soil (Agricultural Work).
- Water
- Religious Activities / Tourism
- Fish production

3.1.1 Fertile Soil; -The Ganga valley is very fertile brought by river gates every year, especially on which the problems of Zaid crops are successfully grown. During the survey, after interviewing the local farmers, it was found that agricultural work was done by the people of nearby villages in Ganga valley. No farmer has parental authority on the land here. Only the villages in front of the village cultivate fields distributed by the border chief every year. For this, they do not have to pay any land tax. Here the farmers mainly grow crops of Zaid, which the watermelon, melon, cucumber, gourd, pumpkin etc. are the main ones. Fertilizers are not often used because the land is fertile. Here the main livelihood of local people here is agricultural work. In the time of flood or in monsoon, when the fields are submerged during the time of flood or monsoon, the farmers here run their livelihood by compulsion.

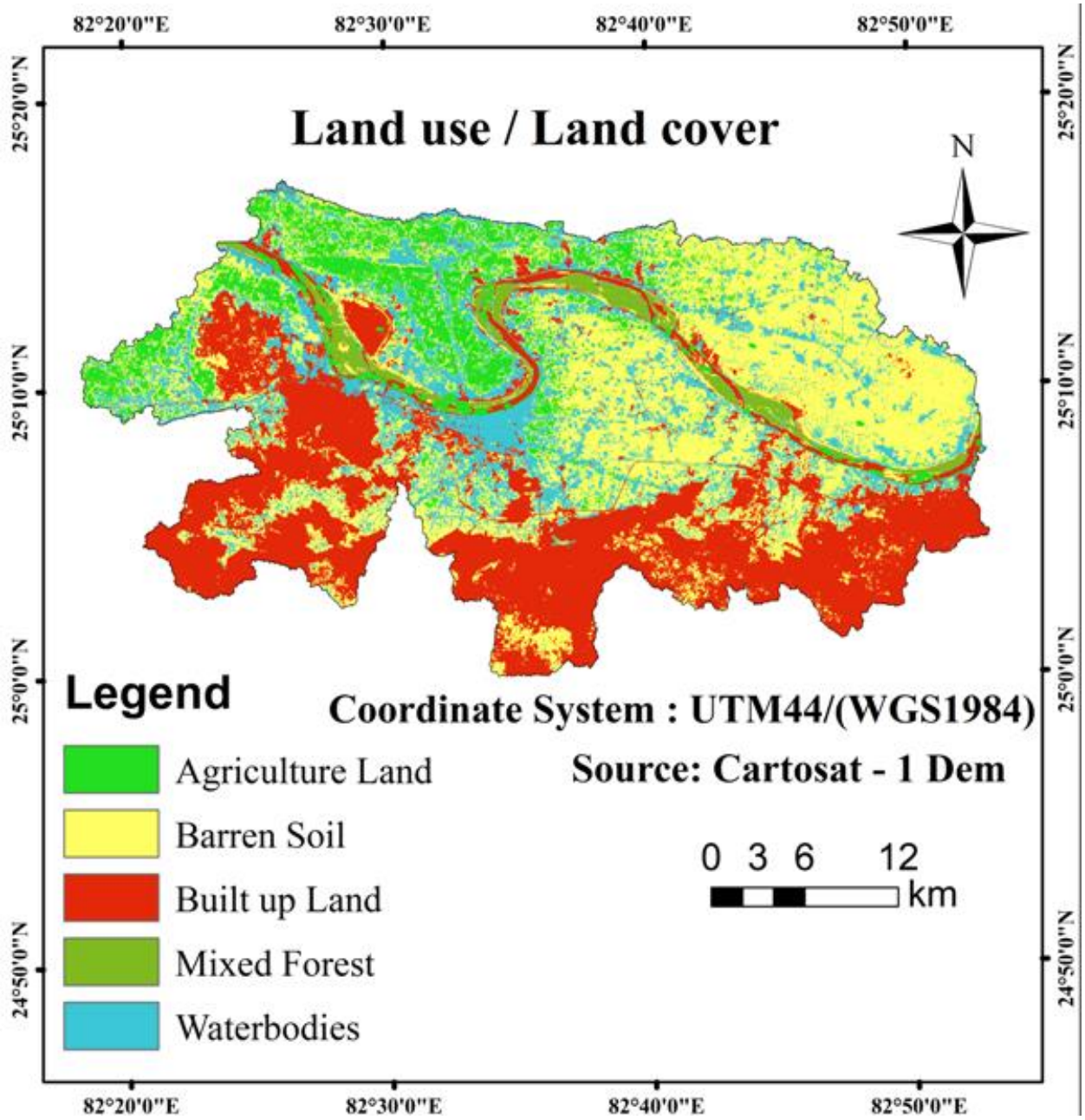

Fig.2. The classified image resulting from use of the Maximum Likelihood Classification method with the training samples collected produces a land cover map.

The camel is mainly used to carry the crop product over the bridge or to the market.

3.1.2 Water; -Water is life. Without which the existence of organisms and vegetation is not possible. While water plays an important role in making ecological balance, water has a special contribution in human activities. The water is used in the Ganga valley in the following forms:

3.1.3 Irrigation; -For irrigation of crops, people here make 6-7 feet deep pond in the fields. This is extracted from mat and used for irrigated irrigation. Water holding capacity is low due to thawed irrigation

ground moisture. Therefore, irrigation cannot be irrigated. But for the irrigation of the fields located in the upper part of the valley, the water is drawn from the tube well and pumping sets.

- Drinking Water for Birds and Animals: In the number of villages and towns like Vindhyachal, Mirzapur, Chunar etc. located near the water of river Ganges, thousands of cow-buffalo and other animals graze in the Ganga valley and use water in drinking and bathing etc.

- Yachting: Here the sailors and local farmers also use the river of river Ganges for sailing. In the Koteshwarnath temple area, the use of boat is also widely used for tourism.

3.1.4 Religious Use:There are three mythological Ghats on the river Ganga in Vindhywasni Ghats, Pakka Ghats, Kachehari Ghats. Wherever there are almost allergies and baths in the year. These are Praying Maa Ganga Ghats. However, god blessings always same for everyone. Maa Vindhywasni temple is really beautiful. Just their management should maintain its beauty.

With the arrival of such a large number of devotees, there is economic benefit of local cottage industries, farmers, Mahatmas, fair administration and city administration.

Even in Mirzapur – cum Vindhyachal and main Mirzapur, every full moon and new moon is celebrated and there is a large number of tributaries, so that the lives of the 'mahatmas' and shopkeepers are there. This also gives the sailors an economic advantage. There are many magnets in the ropes of the children of the sailors here. And they keep dragging it in the river by taking it on the bathing Ghats, so that the coins put in the river sticks in the magnets in the river After asking these children, it came to know that they earn about Rs. 50 per day. Lord Rama had crossed the Ganges river with the help of Nishadraj from Pakka Ghats.

3.1.5 Fishery production; -Fishing in river Ganges is also the main source of income for the travelers. They catch fish from their boats or across the river.

Suggestions for development of resources or increase of land use. The land use or resources can be developed under the following points in the Ganga valley.

- Development of advanced technology of irrigation

- Creating floods

- Promote tourism

As there is no proper irrigation system in the valley, about 30 percent of the land is lying vacant. So if there is a proper system of modern irrigation system like drip and sprinkling method here, then more production can be obtained by deepening the crops. As a result, most of the city and village needs can be fulfilled, and by increasing the income of the concerned farmers, their living standards can be increased.

To ensure availability of water throughout the year, the ecologically appropriate water harvesting method should also be used. For this, by constructing the floodwater harvesting during the rainy season, the water will be blocked throughout the year.The promotion of tourism in Mirzapur District. There is immense potential for further development of tourism on the affected Ghats. This will facilitate devotees and tourists. And this will reduce the difficulties of the city's traffic system to a large extent at the time of the Kombi Meal. Ghats should be beautified, where Ghats can make sure where possible.

3.2 The main causes of pollution are -

3.2.1 Dirty tubes: The Ganges River was found to be the worst polluted area in Pakka Ghats, Kachehari Ghats and Vindhywasni Ghats, under the study area. Between Rampurghat and Chunar. All kinds of polluted water will be filled with small dozen drains from the districts of Shivpur, Chaube Ghats, Baba Ghats, Gore Shaheed Ghats and Bisundupur etc., making sewage water, solid waste, polythene, perfumed substances, making thousands of tons of dirty water daily in the Ganges River toxic to clean water.

3.2.2 Religious Activities: -Vindhywasni Ghats, Pakka Ghats, Kachehari Ghats, Kathinal Ghats, and Ganga Ghats often have religious rituals and baths. Which thousands of tons of religious rituals (flowers, polyethylene, chunari, green leaves of trees, soil lamps, milk etc.) are cast in the river.

On the confluence of about 5000 people every year, they are permanently patronizing one month so that solid waste and stool-urine are contained in heavy but unhealthy in the river. During the Dushahara festival, hundreds of idols of the soil on the Durga Pooja, Ganesh Chaturthi etc. are finally inserted into the Ganga River, and the river water is also polluted by the chemical colors used in coloring it.

3.2.3 Throwing of dead bodies: - Many bodies are thrown in the river, especially Ganga Ghats, cattle and especially the body of the dead by the followers of Hindu religion, some people burn the dead bodies on the Ghats. It’s after burning of Chant and burnt in large number of burnt bodies, they are inserted in the Ganges River.

3.2.4 Land erosion: - Due to the destruction of due to forest destruction due to forest destruction in Ganga valley at Mirzapur, due to the increase in the amount of depression due to dust and erosion of the lane and angina erosion, the melting of the Ganga river water is increasing rapidly.

3.2.5 Chemical Fertilizers - In the Ganga valley, the river water is being polluted due to chemical fertilizers and fertilizers being manipulated. Chemical analysis of sewage water and waste materials by Ganga Pollution Control Unit, Allahabad.

3.3 Measures to prevent pollution.

- To prevent the erosion of Gully and Rill, make extensive arrangements in the Ganges river valley.
- The Polluted water released from the Molalla’s, town, city etc should be researched in the first researched water purification plant and then put in the river after it.

- Hi-Tech should be developed to clean the polluted water and to separate the solid waste should be planted on all the drains.
- This awareness should be spread among the people so that they do not put polythene and flowers in the river.
- A team should also be formed by the administration of some people who are present on the Ghats on the special bathing festival of Hindus and gathering polythene and flower mats.
- Body cremation should be built on river basins and people should be encouraged to burn dead bodies in it.
- People should be made aware of the impact of pollution and its effect on river Ganges, which makes pollution very less by itself. Providing the available water available for irrigation or re-planting it in the river.
- Mirzapur has a gross wastage of water from the cities of 110 million liters / day and the amount to be researched is approximately 60 million Liter / day.
- Farmers should use organic manure instead of chemical fertilizer in the fields of the valley.
- The waste which is going to the Ganga River, separating the wastes and installing the plants which produce electricity.
- In Allahabad, copper sheets can be set up from Prayag (Sangam) to Phaphmau, which is a pesticide and which can lead to greater control of water pollution.

Conclusions

Under the study area, we received much important and knowledgeable information by studying the channel pattern, the landscapes, resources and pollution in the Ganga valley, and by this we also understood the importance of geography. During the study, we also understood and examined the practical side of our theoretical knowledge. It also came to the knowledge that in reality the ecological development of Ganga River and the importance of human, social, economic development is importance. There has been direct knowledge of many landmarks such as bluff, kund, rifle, Sand Island etc. which often get worsened. Lots of Crores of devotees come to cremation today, especially due to special religious significance of the Ganges river especially among the Hindus. Even today many people like to do cremation on the banks of the river. It was also seen how the children of poor households, like the sailors, tied dozens of magnets in the rope, and dug the coins put by the devotees on the river by the devotees. There are also several reasons for the pollution in the River Ganga. One important things are to know that the owners of the fields here are changing, originally cultivated by local formers. And they work in their fields with great effort and courage. These often wear slippers in the farms irrigation is often done by pit

clay in the fields between fields. From this study of the field, there is also the knowledge of increasing interference in economic and technical human beings.

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