

River Piracy by Anthropogenic Factor (Shreemati River)

Biswajit Majumdar

Assistant Teacher

Fatepur High School, Uttar Dinajpur, West Bengal, India

Abstract— India is a river centric country; many rivers are flowing through this country. Shreemati River is one of them. This river was life-line of Uttar Dinajpur district; navigation and business activities had performed by this river. It was an effluent perennial river, but now a days it has come to moribund state. Though this river brings various morphometric features as broad course and channels, sinuosity indices, thick alluvium but now days it also has lost its life. The causes of dryness of this river are natural as well as anthropogenic factors. Global warming and river piracy brings a natural factors but land pollution and agrarian activities has accelerates the dryness of bed channel in this river. Local people have captured the bed channel of this river with building construction. If we cannot protect this river it will created some catastrophic local issue as- water crisis, frequently flood and it will destroy water ecosystem. So immediately, we should pay full attention to save this river, otherwise it would enlist its name on the disappeared river list like Saraswati.

Key words: Anthropogenic Factor (Shreemati River)

I. INTRODUCTION

If we notice in our early civilization, a common factors that very easily under our eyes that all those civilizations were river centric. As an instances, Indus civilisation, Mesopotamiya civilization, Sumer civilization. India is also a river centric country; many rivers are flowing through this country. Shreemati River is one of them. This river is flowing into three districts of West Bengal as Uttar Dinajpur, Dakshin Dinajpur and Malda. In the past, this river had glorious significance. It was the life-line of Uttar Dinajpur district; navigation and business activities had performed by this river. But now a days this river has become in moribund situation. When I have observed this river morphology, I have found some important features and problems of this river.

II. ABOUT SHREEMATI RIVER

The life line of Uttar Dinajpur (Shreemati river) has originates from a perennial lake 'Kalasona'; which is locally called 'Bhur'. This Bhur is situated in Bangladesh; cardinal location of this Bhur is 25°52'31"N Latitude and 88°24'53'E Longitude. Tangan River is also flowing besides this Bhur, in Bangladesh. After that Shreemati River enters Uttar Dinajpur. Its lower catchment areas are occupied in three district as Uttar Dinajpur, Dakshin Dinajpur and Malda. In Malda district this river is joined with Mahananda River. It was a perennial river but now a days it also has lost its life; only in humid weather some water flowed into the channel of this river. But in the past it was a main navigable business route of this geographical area.



Fig. 1:

III. IMPORTANT FEATURES OF SHREEMATI RIVER

A. Broad Course & Channel

According to Google Earth the course of this river is very wide, approximately more than 300 meters and less than 120 meters. Channel size is obviously related to river discharge; but it is common for rivers to over flow their channels at flood stage (A.Bloom). It is an effluent river because it receives contributions of ground water. The Thalweg points are found only at Kaliyaganj and Fatepur; it is locally called 'Daha'. In dry situation this points are important for various uses.

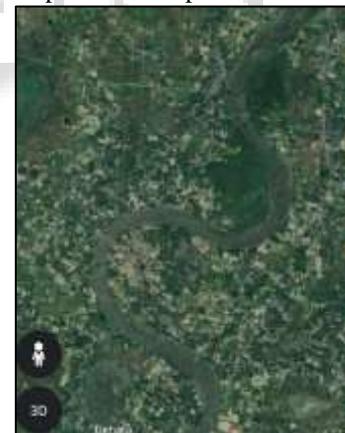


Fig. 2:

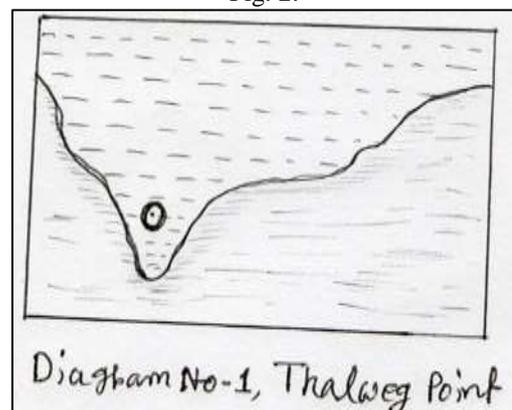


Diagram 1: Thalweg Point

B. River Terrace

River terraces are topographic surfaces which mark former valley floor levels. In the main they are vestiges of former flood plains, although some may have little or no alluvium on them and may thus be classed as bed rock terraces in contrast with alluvium terraces, which consist of gravel, sand, and finer alluvium. (W.D. Thornbury). In my survey I have observed three paired terraces. The height of the 1st one is 3 ft, 2nd one is 2ft and last one is 1.5ft. It is a Cyclic Terraces because valley deepening had largely stopped and lateral erosion had become dominant. Now a days it has become a dry river; so the terraces are formed only by mud.



Fig. 3:

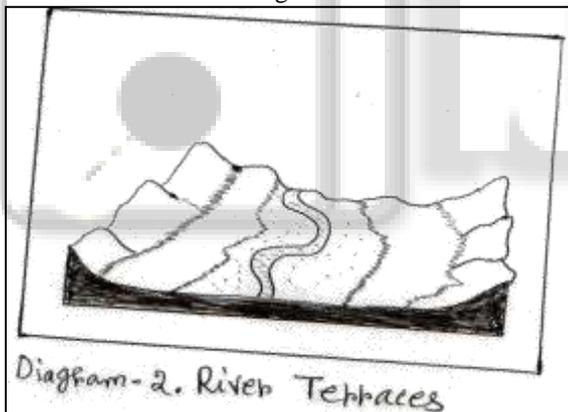


Diagram 2: River Terraces

C. Meandering Channels

The growth of alluvial meanders leaves distinctive marks on the flood plains. (Strahler and Strahler). Shreemati River has produced the meander and point-bar deposits behind its channel, pool and riffle sharply found during its course. It becomes a dry river, so Oxbow lake cannot find out its course. According to J.E. Muller models of Sinuosity indices of Shreemati River has scored 1.34. So this river in sinuous shape; because the sinuosity index of Muller method is 1.0 and 1.5 put the river in sinuous shape and the value more than 1.5 represents a meandering course.



Fig. 4:

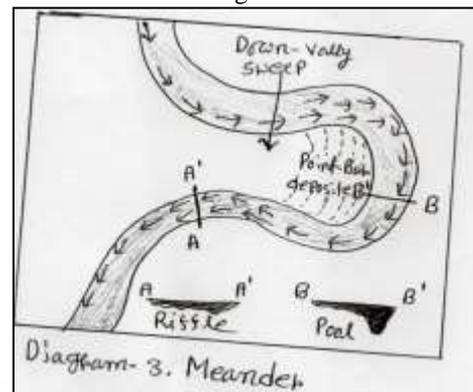


Diagram 3: Meander

D. Alluvium & Colluvium

I have found out a thin layer of in this river channel; which is called colluviums and beneath this layer I have found a thick layer of alluvium. Now it has become in mud. Though I have dig 3 feet but I cannot find-out the second layer. It has originates some geomorphologic questions.



Fig. 5:



Fig. 6:

E. Organism

Today Shreemati river has become a dry river but some insects; reptiles and mesophytes have find out in this river.



Fig. 7:

IV. PROBLEMS OF SHREEMATI RIVER

A. Dry Course

Except in rainy season, this river is completely dry in whole year. The causes of dryness of this river in three factors as

- 1) Global Warming
- 2) River Piracy
- 3) Land pollution.

1) Global Warming

Due to global warming the 'Bhur' behaves non perennial in nature. Water level becomes gradually low, so this river has become a 'misfit river'.

2) River Piracy

At the source of this river, beside Tangan river is flowing and it is an active perennial river. Tangan behaves master consequent stream and it captured the head of Shreemati River by lateral erosion. So in this area I have found out elbow capture, water gap and misfit channel.



Fig. 8:

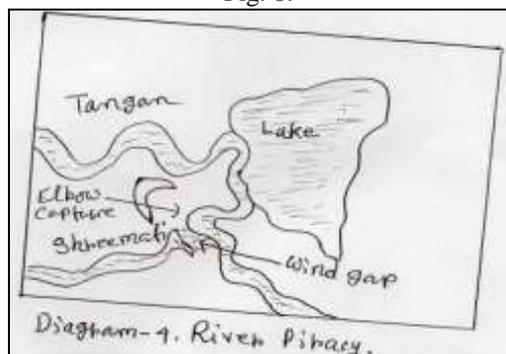


Diagram 4: River Piracy

3) Land Pollution

Local people throw various types of wastages into the river beds. So due to the mount of wastage river channel has gradually become a narrow shape channel. It has interrupted the flow of river.

B. Agrarian Activities

It is the most harmful work over the bank of this river channel. Over the whole course of this river these activities are going on. Farmers have totally captured the bed channel of this river bank. This activity has created not only the dryness of this river but also it creates water and land pollution due to the usage of pesticides and insecticides.

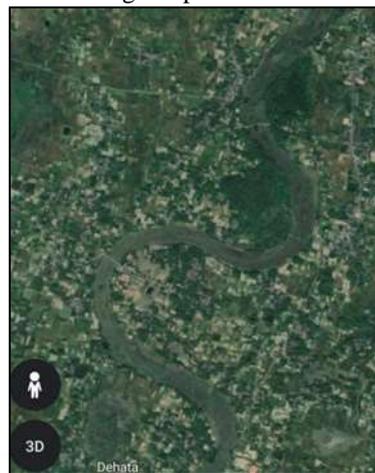


Fig. 9:

C. River Capture for Construction

Local people have slowly captured the bed channel of this river for construction purpose. In these days we are failing to find out the actual bed channel of this river. I have astonished why people are doing these work. They should understand that river is a life line of our life.

D. Absence of BED Channel Features

It is an effluent river, so it is active in humid season. During flood stage rive discharge is much more. So bed channel features cannot be found out in this river channel.

V. CONCLUSION

Former Minister Priya Ranjan Dasmunsi had taken some projects for reviving the Shreemati River. They had decided that this river will be connected with Teesta River. But unfortunately, because of sudden death of Mr. Dasmunsi, this project has been postponed. If we are unable to revive this river, some problems will be confronted by local peoples as: water level will be gradually lowered and it will create water crisis, water ecosystem completely destroy, frequent flood will occur. If we cannot protect this Shreemati river will be on the verge of extinction as Saraswati River also.

REFERENCE

- [1] Bloom, A.L., 1998: Geomorphology, -Rawat Publication. New Delhi.
- [2] Strahler, A. N. and Strahler, A. H., 2006: Modern Physical Geography, John Wiley and Sons.

- [3] Thornbury, W. D., 1969: Principle of Geomorphology, New Age International Publishers. New Delhi.
 - [4] Singh, Savindra., 2003: Geomorphology, Prayag Pustak Bhavan. Allahabad.
 - [5] Google Earth, Google Inc.
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