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Research Article

Rivers and Human Life in Dakshin Dinajpur District, West Bengal, India

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Abstract

Rivers play a vital role in the geographical, economic, social, and cultural life of the Dakshin Dinajpur district of West Bengal. Major rivers such as the Atreyee, Phunababa, Tangan, Yamuna, shrimati and Ich Hamati influence the field of agriculture, fisheries, settlement patterns, communication, and local culture. Most people of the district depend directly or indirectly on river-based resources for their livelihood. But the problems like riverbank erosion, pollution, and seasonal water scarcity have created serious challenges for local people. This paper attempts to analyse the relationship between rivers and human life in Dakshin Dinajpur and also highlights the major river-related problems and possible conservation methods.

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KEYWORDS: Dakshin Dinajpur, Atreyee River, Phunababa River, Human Life, Agriculture, River Erosion.

1. INTRODUCTION

In India, many settlements, agricultural systems, and cultural traditions developed around rivers. Dakshin Dinajpur district, located in the northern part of West Bengal, is also highly influenced by its river system. After the partition of India in 1947, the Dinajpur district was divided. One part went to East Pakistan (present-day Bangladesh), while the western part remained in West Bengal, India. At that time, this western part became known as "West Dinajpur." For administrative convenience, West Dinajpur district was later divided. On 1st April 1992, the district was split into two separate districts — Dakshin Dinajpur (South Dinajpur) and Uttar Dinajpur (North Dinajpur). The headquarters of the Dakshin Dinajpur district was established at Baluga. Today, it is recognised as an independent cultural and administrative region. The major rivers flowing through this district are Atreyee, Phunababa, Tangan, Brahmani, and Ich Hamati. These rivers contribute significantly to agriculture, fisheries, transportation, and socio-cultural development. Most of the people in Dakshin Dinajpur are dependent on agriculture, and rivers provide essential irrigation water for cultivation. Rivers also influence the environmental and economic conditions of the district.

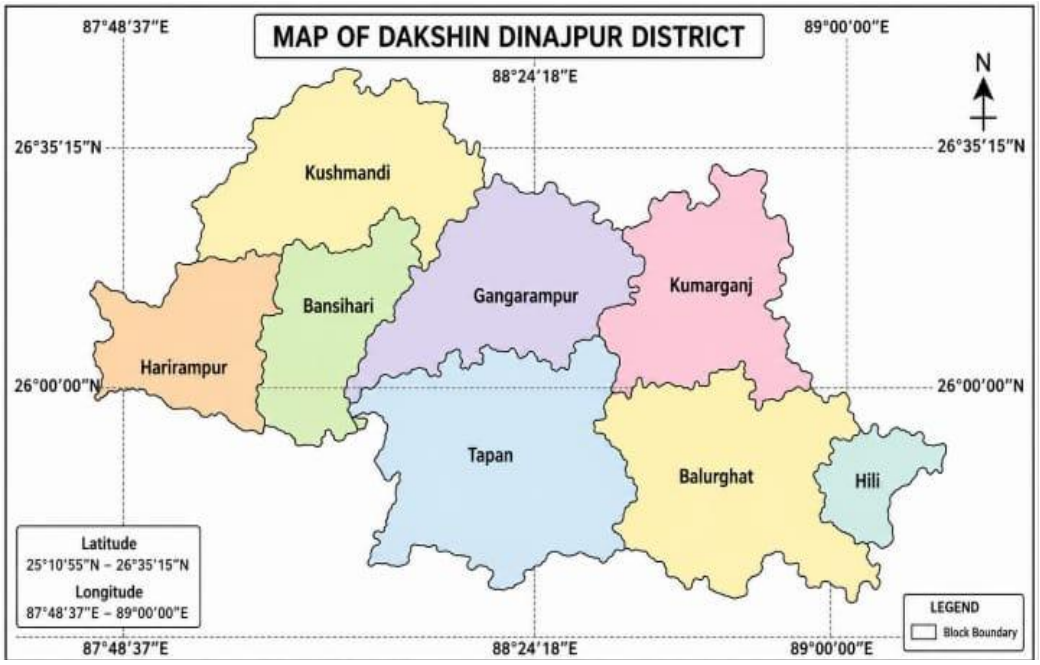
The geography of Dakshin Dinajpur is mainly characterised by flat plains, rivers and streams, fertile soil, and a monsoon climate. These geographical features have a deep influence on agriculture, human settlement, and the lifestyle of the people.

Dakshin Dinajpur district is located in the northern part of the Indian state of West Bengal. It is bordered by Bangladesh to the east, Malda District to the west and south, and Uttar Dinajpur District to the north. The total area of the Dakshin Dinajpur district is about 2,219 square kilometres. The latitude and longitude of the district are:

Latitude: 25°10′55″ N to 26°35′15″ N

Longitude: 87°48′37″ E to 89°00′30″ E

The average elevation of the district is approximately 25–26 meters above sea level. Due to its border location, the district plays an important role in trade and cultural exchange between neighbouring regions and countries.



2. OBJECTIVES OF THE STUDY

1. To identify the major rivers of Dakshin Dinajpur.
2. To analyse the relationship between rivers and human life.
3. To study the role of rivers in agriculture and the economy.
4. To identify river-related problems.
5. To suggest river conservation measures.

3. METHODOLOGY

To make the research more relevant and authentic, this study is mainly based on descriptive and analytical methods. Data have been collected from Books and research papers as well as journals, Government reports, Field surveys, Interviews with local people in both towns and villages, newspapers, and online sources, etc. A considerable library work is also involved in the study.

Major Rivers of Dakshin Dinajpur

The major rivers of this district are the Atria, Phunababa, Tangan, Ich Amati, and Shrimati rivers. These rivers flow mainly from north to south and serve as the main foundation of the district's agriculture and water resources. The Atria River is the most important river of the district and flows beside Baluga town. The Phunababa River flows through the Ganga Rampur and Tapan blocks. The Tangan River plays an important role in the agricultural activities of the Kumaran and Ganga Rampur blocks. These rivers remain full of water mainly during the monsoon season and contribute significantly to agriculture. Besides these, several canals and streams are also found in the district, among which Dakar Khari, Kashiya Khari, and Kalakala Khari are notable. A brief description of the rivers of the district is given below:

Atria River
The Atria is one of the major rivers of the Dakshin Dinajpur district. According to legend, the river was named after the sage Atri of the Mahabharata era. The Atria is mainly a river of North Bengal and is considered a distributary of the Teesta River. It originates from the Teesta and flows through North Bengal before first entering Bangladesh. After flowing through Bangladesh, it moves southward and enters the Dakshin Dinajpur district at Kumaran. The river then flows through the district headquarters town of Baluga and again enters Bangladesh, passing through Rajdhani district before finally joining the Padma River in Pabna district. Thus, the river flows through Bangladesh twice during its course. The river has many tributaries and distributaries, among which the Ich Amati River is an important tributary. The Ichamati also flows through the Dakshin Dinajpur district. The rivers play an important role in irrigation, fishing and domestic activities.

Ich Amati River
The Ich Amati River flows southward through the Hamirpur region of Kumaran in the Dakshin Dinajpur district and finally joins the Atrai River at a place called Radha Nagar near Patiram.

Phunababa River
The Phunababa River is another significant river of the district. The Phunababa River is a distributary of the Teesta River in North Bengal. It flows through the town of Ganga Rampur and later joins the Mahananda River near Malda district. Eventually, the combined waters of the Phunababa and Mahananda rivers meet the Padma River. During monsoon season, it often causes floods, but it also deposits fertile alluvial soil, which increases agricultural productivity.

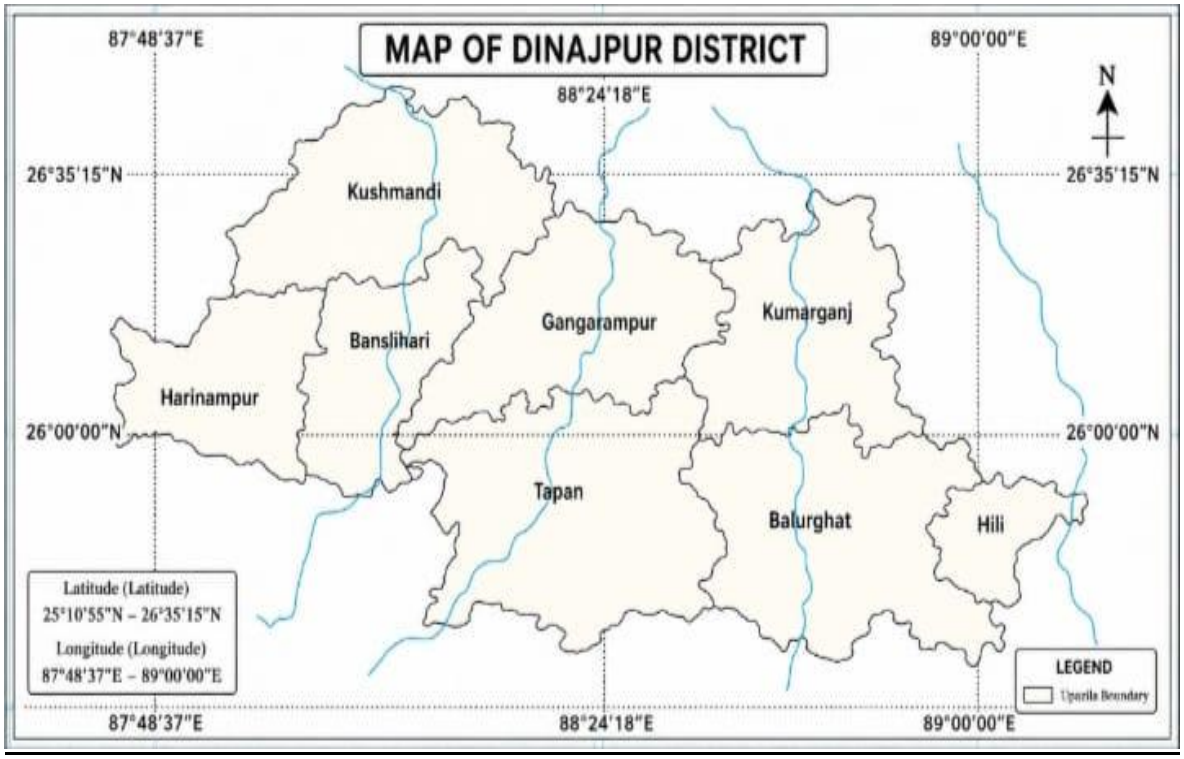
Tangan River
The Tangan River enters South Dinajpur district from the northern region of Bangladesh and flows southward. It first passes through Kalia Ganj, then Kush mandi, and later through Banshidhar Block before finally joining the Mahananda River in Malda district. The river supports agriculture and local water supply, especially during the rainy season.

Yamuna River
The Jamuna River enters the South Dinajpur district from Bangladesh near the eastern side of the Hili Police Station area. The river flows for a short distance within the South Dinajpur district.

Gagra River
The Gagra River originates from a wetland near the Bangladesh border to the north of Hali Police Station. It flows southward through Changshu village and then enters Bangladesh, where it ultimately joins the Atria River.

Brahmani River
The Brahmani River is an important tributary of the Phunababa River. It originates from the Phunababa near Dispur in the Shedeur region and later rejoins it. Flowing southward through Belding, Rampur, and Chancre, it enters the Malda district and finally merges with the Mahananda River.

Shrimati River
The Srimati River originates from a wetland in the Heemraad area of Uttar Dinajpur district. It then enters Kalia Ganj and later flows into the South Dinajpur district near Belapur in Kush mandi Block. After covering a long course, the river enters Malda district and finally joins the Mahananda River.



Rivers & Agriculture
Scientific river management includes proper planning. Agriculture is the backbone of Dakshin Dinajpur's economy. Rivers help agriculture in Dakshin Dinajpur in many ways. The Rivers like Atrai, Punarbhaba, Tangon and Brahmani provide water for irrigation and help farmers to cultivate crops such as rice, jute, wheat, mustard, maize and vegetables, etc. During the monsoon season, rivers carry fertile silt that enhances soil fertility. Riverbank areas are especially suitable for vegetable cultivation. However, during summer as well as the dry season, water levels decrease significantly, creating irrigation problems and reducing crop production. The rivers also help by increasing soil fertility through slit deposits, providing water for tube-well irrigation, supporting fishing and rural livelihoods and helping multiple cropping in a year, etc.

Rivers & Economic Life
The rivers of Dakshin Dinajpur support various economic activities, including—

Agriculture:
Rivers provide water for irrigation, helping farmers grow rice, wheat, jute, vegetables and other crops.

Fishing:
Many people earn money by catching and selling fish from those rivers. The rivers provide livelihood to many fishing communities. Fish from rivers like Atreyee and Phunababa are sold in local markets and contribute to the rural economy.

Sand collection and fertile soil:
Rivers deposited fertile alluvial soil, which gives crop production and farmers' income.

Small-scale transportation: In some rural areas, rivers help in transporting goods and people. In earlier times, rivers were used as local transport routes for carrying agricultural products and goods between villages and nearby regions. Though modern transport has reduced this role, rivers still influence rural market settlements. Local trade and markets; agricultural production supports the local market and trade.

Livelihood:
Many fishermen depend on rivers for their livelihood and other daily economic activities. Rivers are very important for the economic development and daily life of the people of Dakshin Dinajpur.

Rivers and Socio-Cultural Life
Rivers have a deep influence on the culture and traditions of Dakshin Dinajpur. Many fairs, religious festivals, and social phenomena are organised near riverbanks. Local folk songs, stories, and literature frequently mention rivers. Rivers are not only natural resources but also emotional and cultural symbols for the local people. Many rural settlements developed along riverbanks due to easy access to water and fertile land.

Settlement Pattern
So many villages and towns developed near riverbanks because rivers provided water for drinking, irrigation, and domestic use. Human settlements in the district were strongly influenced by the drainage system as well as the river patterns.

Festivals and Religious Beliefs
Rivers are closely connected with local religious practices. Ritual bathing, worship, and village fairs are often organised near riverbanks. Many people consider rivers sacred and associate them with purity and prosperity in their lives.

Flood and Human Suffering
During the monsoon, rivers frequently cause floods, damaging crops, houses, roads, and communication systems. Floods create temporary social and economic problems for rural life.

Folk Culture
River-centred rural life has influenced the folk culture of Dakshin Dinajpur. Folk songs, stories, and performances often reflect agricultural life, floods, fishing, and village traditions.

Folk Music and Folk Drama
Traditional cultural forms like Khan, pala Gan, Mokha Dance, and Baul songs are practised widely in the district. These cultural expressions represent the emotions, struggles, and lifestyle of rural communities living near the banks of rivers.

Rural Unity
Riverbanks often serve as gathering places for fairs, markets, and festivals, and maintain the social relationships and community cooperation among villagers.

Environmental Importance of the River
play an important role in maintaining ecological balance. They help preserve biodiversity and support aquatic life. River banks provide habitat for various plants and animals. Rivers also help recharge groundwater and influence local climate conditions. The drying up of rivers can negatively affect biodiversity and environmental sustainability.

Riverbank Erosion and Flood Problem
Riverbank erosion is one of the major problems in Dakshin Dinajpur. During the rainy season, strong river currents damage agricultural land, roads, and houses. Floods frequently affect low-lying areas of the district. Many families become homeless, and farmers suffer huge economic losses due to crop destruction. In addition, there are so many problems arising, like Siltation and reduction of water flow, Pollution from domestic waste, decline in fish resources, etc. These problems affect both the environment and the socio-economic life of the people.

Pollution and Water Scarcity
River pollution has increased due to the disposal of domestic waste and other pollutants into rivers. Pollution affects aquatic organisms and reduces water quality. During summer, many

rivers experience water scarcity, creating problems for irrigation, drinking water supply, and fisheries.

Rivers and Transportation

In earlier times, rivers were important transportation routes in rural areas. Boats were used for carrying people and goods from one place to another. Although road transport has now become more common, rivers remain important in some remote villages.

Rivers and Fisheries

The rivers of Dakshin Dinajpur are rich in fish resources. Various local fish species such as Rohu, Catla, Magur, and Singhi are found in these rivers. Fishing provides livelihood opportunities to many local communities. However, pollution, overfishing, and reduced water flow have negatively affected fish production.

Climate Change and Rivers

Climate change has significantly affected river systems in recent years. Irregular rainfall, excessive floods, and drought conditions disturb the natural flow of rivers. Extreme weather conditions create challenges for agriculture, fisheries, and human settlements.

River Conservation Measures

River Conservation Measures are similar in the Dakshin Dinajpur District

Regular Dredging of the River

Regular dredging helps remove excess silt, sand, and sediments from the river bed. It increases the water-carrying capacity of rivers and reduces the risk of floods. Dredging also improves navigation and maintains the natural flow of water.

Prevention of Water Pollution

Water pollution should be controlled by stopping the discharge of industrial waste, sewage, and plastic into rivers. Clean rivers are essential for human health, aquatic life, agriculture, and fisheries. Proper waste management and treatment plants can help reduce pollution.

Plantation Along Riverbanks

Planting trees and vegetation along riverbanks helps prevent soil erosion and protects riverbanks from collapsing. Trees also improve the environment, increase biodiversity, and help maintain ecological balance.

Control of Illegal Sand Mining

Illegal sand mining damages river ecosystems and weakens riverbanks. It changes the natural course of rivers and increases the chances of erosion and flooding. Strict laws and monitoring are necessary to control illegal sand extraction.

Scientific River Management

monitoring, and sustainable use of river resources. Modern technology, research, and environmental studies help in managing rivers effectively and reducing natural disasters.

Awareness and Community Participation

Local people should actively participate in river conservation programs. Educational campaigns can help create awareness about the importance of rivers.

Government and Administrative Support

The government should implement effective policies and development programs for river conservation, flood control, and sustainable use of water resources.

Further Research and Monitoring

Continuous geographical and environmental research should be conducted to monitor river changes and develop long-term conservation strategies.

Flood Management Planning

Early warning systems and proper flood management strategies should be implemented in flood-prone areas of the district.

Promotion of Sustainable Fisheries

Overfishing should be controlled, and scientific fish farming methods should be encouraged to protect aquatic biodiversity and support fishermen's livelihoods.

4. CONCLUSION

Rivers are the most essential part of the life and economy of the Dakshin Dinajpur district. They support agriculture, fisheries, culture, and environmental balance. At the same time, problems such as erosion, floods, pollution, and water scarcity have created serious challenges. Therefore, proper river management and conservation are essential for sustainable development and the well-being of upcoming generations and protecting both human life and the environment in the future.

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