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House Of Burhi Gandak River In North Bihar And It's Impact On Population And Economic Development In Muzaffarpur City.

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ABSTRACT :

The Burhi Gandak river is a major river in the Muzaffarpur region of India, and it lays a significant role in the lives of the local population. The river provides a vital source of water for irrigation, drinking, and other domestic purposes, and it is also an important transportation route for goods and people. The presence of the Burhi Gandak river has likely contributed to the population growth and economic development of Muzaffarpur city. The availability of water for irrigation may have facilitated the development of agriculture in the region, which in turn may have attracted people to the area. The river may also have played a role in the development of other industries, such as fishing and transportation. However, the Burhi Gandak river can also have negative impacts on the population and economic development of Muzaffarpur city. Flooding is a common occurrence in the region, and it can damage infrastructure, disrupt transportation, and displace people from their homes. In addition, pollution from industrial and agricultural sources can have negative impacts on the quality of the river water, which can affect the health of the local population and the viability of the river as a source of irrigation and drinking water. Overall, the Burhi Gandak river has both positive and negative impacts on the population, migration, and economic development of Muzaffarpur city. Managing these impacts effectively will be key to ensuring a sustainable future for the region.

KEYWORDS: Economic Development, Population, Irrigation, River, Social Development, Environmental Sustainability

Introduction:

Burhi Gandak is a left bank tributary of the Ganga River. It is meandering in nature and flows in the southeast direction. The Burhi Gandak river basin is bounded by Himalaya in the north, by Ganga River in south, by Kosi River in the east, and by Great Gandak River on the west and makes the eastern boundary of the Gandak Megafan . It originates in the terai area of Chautarwa Chaur near Bishambharpur, West Champaran district in Bihar state. It is known as Sikrana in its upper reaches. Harha, originating near Someshwar Hill, receives water from many small mountainous rivers and is known as Masan when it comes to plain and is the main source of water to Sikrana. Singha, another mountainous river, originating near Someshwar Hill, splits into two, one joins

Harha/Masan near Churharwa and the other known as Ramrekha joins Sikrana. Masan and Ramrekha rivers join to form Sikrana at Lauria Nandangarh, and contribute significantly to its discharge. Dhanauti, a highly sinuous almost abandoned river (field observation), meets with Sikrana near Pakridayal village, Motihari, and after this confluence, the Sikrana is known as Burhi Gandak. The right main channel of Bagmati meets Burhi Gandak near Rosera and affects its discharge during monsoon season. Traversing a distance of about 400 km in the alluvial plain, Burhi Gandak joins Ganga near Gogri Jamalpur, Khagaria district of Bihar (Fig. 4a, b, c). The Burhi Gandak basin is spread over the West Champaran, East Champaran, Muzaffarpur, Samastipur, Begusarai, and Khagaria district of Bihar.

The key issues :

Burhi Gandak River is prone to flooding during the monsoon season, which can cause damage to infrastructure, crops, and homes. This can lead to displacement of residents and disruption of economic activities, including agriculture, small businesses, and transportation.

Additionally, the increasing population in the area has put pressure on the natural resources, including water and land, leading to environmental degradation and a decline in agricultural productivity. This can lead to economic challenges for the local population, as agriculture is a significant source of livelihood in the region.

Furthermore, the lack of adequate infrastructure, such as roads, bridges, and drainage systems, exacerbates the impact of flooding and limits economic growth in the region. The government and local authorities need to address these issues by investing in infrastructure development and implementing measures to mitigate the impact of flooding on the local population and economy.

Methodology :

Methodology for studying the economic growth because of Burhi Gandak River in Muzaffarpur town can include the following steps:

1. Literature review: Conducting a comprehensive review of existing literature on the impact of rivers on economic growth can provide insights into the potential mechanisms and pathways through which Burhi Gandak River may influence economic growth in the region.
2. Data collection: Collecting relevant data on key economic indicators such as Gross Domestic Product (GDP), employment, income, and investment can help in assessing the level and trends of economic growth in the area. Additionally, data on the level and frequency of flooding, infrastructure development, and agricultural productivity can provide insights into the potential impact of Burhi Gandak River on economic growth.
3. Data analysis: Conducting statistical analysis such as regression analysis, correlation analysis, and time-series analysis can help in identifying the relationship between Burhi Gandak River and economic growth. The analysis can also help in identifying the key drivers of economic growth, including the role of infrastructure, agriculture, and other economic sectors in the region.
4. Stakeholder engagement: Engaging with key stakeholders such as local authorities, community leaders, and business owners can provide insights into the local context and

potential opportunities and challenges for economic growth. Additionally, stakeholder engagement can help in identifying potential policy interventions to support economic growth in the region.

5. Policy analysis: Analyzing existing policies related to infrastructure development, agriculture, and flood management can provide insights into the potential policy interventions to support economic growth in the region. This can include assessing the adequacy and effectiveness of existing policies and identifying potential gaps or areas for improvement.

6. Policy recommendations: Based on the findings from the analysis and stakeholder engagement, developing policy recommendations that can support economic growth in the region. This can include recommendations related to infrastructure development, flood management, agriculture, and other economic sectors that can support local economic growth.

Overall, the methodology for studying economic growth because of Burhi Gandak River in Muzaffarpur town requires a comprehensive and interdisciplinary approach that incorporates multiple data sources, analysis techniques, and stakeholder perspectives.

Implementation :

Implementation of measures to support economic growth and mitigate the impact of Burhi Gandak River on the population can involve the following steps:

1. Infrastructure development: Investment in infrastructure development, including roads, bridges, and drainage systems, can help in improving connectivity, reducing the impact of flooding, and supporting economic growth in the region. This can include building embankments along the river to reduce flooding, constructing new roads and bridges to connect rural areas with urban centers, and improving the drainage systems to reduce the impact of floods.
2. Agriculture and rural development: Given that agriculture is a significant source of livelihood in the region, investment in agriculture and rural development can support economic growth and improve the resilience of the local population. This

can include providing farmers with access to credit, modern farming technologies, and improving the marketing infrastructure to increase their income and support local businesses.

3. Flood management: Investing in flood management measures, such as early warning systems, flood mapping, and flood-proofing of buildings, can help in reducing the impact of flooding on the population and support economic growth. Additionally, the construction of rainwater harvesting structures can help in capturing and storing rainwater, reducing the impact of floods and providing a source of water for irrigation and domestic use.

4. Tourism development: Burhi Gandak River can also offer opportunities for tourism development, which can support local economic growth. The development of eco-tourism activities, such as river rafting, fishing, and bird-watching, can attract tourists and support local businesses, generating income and creating employment opportunities for the local population.

5. Community engagement: Community engagement and participation can help in identifying local priorities and supporting the implementation of measures to support economic growth and mitigate the impact of Burhi Gandak River on the population. This can include involving local communities in the planning and implementation of infrastructure development projects, providing training and capacity-building opportunities to support the development of local businesses, and promoting the participation of local communities in tourism activities.

Overall, the implementation of measures to support economic growth and mitigate the impact of Burhi Gandak River on the population requires a comprehensive and participatory approach that involves the engagement of multiple stakeholders and the implementation of a range of measures across different sectors.

Conclusion :

The Burhi Gandak River is an important river in the Muzaffarpur town of Bihar, India. While the river provides significant benefits to the local population, including water for irrigation and domestic use, it also poses challenges related to flooding and environmental degradation. This has had a significant impact on the local population, particularly those who rely on agriculture for their livelihoods.

A comprehensive review of existing literature, combined with data analysis, stakeholder engagement, and policy analysis, can provide insights into the potential impact of Burhi Gandak River on economic growth and the population. Methodologies for studying this issue can include a comprehensive and interdisciplinary approach that incorporates multiple data sources, analysis techniques, and stakeholder perspectives.

To support economic growth and mitigate the impact of Burhi Gandak River on the population, various measures can be implemented. These can include infrastructure development, investment in agriculture and rural development, flood management, tourism development, and community engagement. Such measures can help in reducing the impact of flooding, improving connectivity, supporting local businesses, and promoting sustainable tourism.

In conclusion, the Burhi Gandak River poses both challenges and opportunities for the local population in Muzaffarpur town. Addressing these challenges and promoting sustainable development requires a comprehensive and participatory approach that involves the engagement of multiple stakeholders and the implementation of a range of measures across different sectors. Such an approach can help in promoting economic growth and improving the well-being of the local population.

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