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Urbanization and Quality of Environment: A Case Study of Cooch Behar District, West Bengal

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A B S T R A C T

The term Environment comes from the French word "Environment," which meaning "surface." Our environment includes biotic elements like people, plants, animals, microorganisms etc and abiotic ones like light, air, water, soil etc. Environment is a complex composed of many factors, both man and biological creatures. The environment comprises water, air and land and the connections between and between water, air and land and people and others such as plants, animals and microbes and other living things (Kalavathy, 2004). She argued that the environment comprises, individually and collectively, of an indivisible whole system made up of physical, chemical, biological and social and cultural components. The nature environment includes the atmosphere, the hydrosphere, the lithosphere and the biosphere as four interconnected systems. These four systems are always changing and human actions influence them and vice versa.

Keywords: Environment, Urbanization, Quality Of Environment, Cooch Behar District, West Bengal.

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1. INTRODUCTION

Urbanization is a demographic phenomenon that moves from rural towns and towns and takes up the culture and job in the urban regions. The population of the nation is distributed across villages and even in its birthplace, where they are formally employed, mostly in agriculture or its affiliated people. The degree of urbanization will be revealed through a study of population distribution between rural and urban regions of the country. The deterioration in urban and suburban environment quality is mostly caused by unfavorable land use and threatens the whole socio-economic system. Planned cities are thus as needed as planned fields. The study of organisms and the environment is simply ecology. Most townspeople are not aware of the link between life, quality of life and their reliance on natural world processes and cycles. Many mechanisms that explain the links between plants, animals and their natural environments seem unknown in a town for people living in urban settings. Urban ecology demonstrates how these processes impact the people of urban areas.

The arguments made by Kelly and William (1984) that the recent past does not correctly support the sluggish expansion of agricultural land stocks and the rapid population growth of workers in emerging nations. Low production performance (as opposed to agricultural performance) is mainly attributable to observed slower urban development in emerging nations and may decelerate urban growth as a result of what was otherwise greater by limiting the rural net to urban migration in the 1980s and 1990s. Although production performs well, it is doubtful that the production would speed to rural migration but not lead to sufficient jobs, which are capital demanding. The probable slowdown of rural to urban migration in the developing world may recently be the main cause for a deceleration of urbanization. The urbanization studies discuss the driving forces such as population increase and unemployment, etc., and the driving forces such as opportunities inside the urban regions. They were called demographic and economic variables by the National Commission on Urbanization (1988).

City occupies 4% of the world's land area, yet over half of the world's populations live in cities, almost three-quarters of the world's natural resources and three quarter of their pollution and trash is generated according to current estimates. In addition, it is estimated from the UN that nearly all of the world's net population and economic growth will be in cities during the next 30 years, tripling

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present populations. This development will demand enormous investment in new infrastructures and generate unthinkable political and social problems for the institutions. Nothing is more promising than the rapidly urbanizing areas of the globe or the problems of sustainability. These changing cities are the development motors for the developing globe and will remain the focus of innovation, culture and the arts in all areas. However, these same cities are attracted by growing poverty, pollution, diseases, political instability and social inequity. The conversion of the surrounding area by urban and urban inhabitants has caused ever-increasing demand for energy, nourishment, commodities and other resources and is endangering fundamental services to ecosystems and biodiversity globally.

1.1 PROBLEM STATEMENT

The present concern over the quality of the urban environment mostly converges with two public fermentation sources. The first is a matter of protecting the quality of the natural environment, which is endangered by human activities in metropolitan areas in their size and density. The city's air pollution is both a health danger and an esthetic insult. Contaminated streams lead to the loss of amenities by decreasing recreational usage and putting human health and other kinds of life at risk. Additional urban environmental burdens include solid wastes, manufacturing and consumption discards on the streets, the field and stream. Secondly, the quality of products and services, for example housing, traffic and public service, which flow from the urban environment created by man or constructed. The way we arrange services, occupy urban spaces and design public amenities significantly impacts the comfort of the urban living environment. Frequent complaints about the long commute to work, inaccessibility to the open space and aesthetic features of the cityscape indicate that urban areas fail to attain either functional efficiency or aesthetic attraction. These urban deficiencies may be among the most irritating effects on the enjoyment of urban living in a rich, highly consuming culture.

1.2 RATIONALE OF THE STUDY

Therefore, the broad concern for environmental quality comes from the changing nature and connections between the natural and constructed ecosystems. The cleanliness of streets in a town relies, for example, on the pace of disposal and the rigor and frequency of disposal of solid materials.

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Solid trash discards are damages to others in the city and they are an external problem imposed by a person's consumption. The collection and disposal of waste is a question of the provision of public services - the quantity and efficiency of the planned sanitation funding. Therefore, both sides may jeopardize sanitary services and environmental quality: firstly, the growing harm from activities that impose external expenses; and secondly, the decrease of the efficiency of public sector activities that enhance urban environmental quality. These two factors must be taken into consideration in order to understand the quality of sanitation and its trends in a city. The quality of urban areas relies on national urban elements.

1.3 GEOGRAPHICAL LOCATION OF RESEARCH

North-Eastern part of West Bengal; bounded by the districts of Alipurduar in the north and Jalpaiguri in the north-west, state of Assam in the east (bounded by the districts of Kokrajhar & Dhubri in Assam) and the International Border in the form of Indo-Bangladesh boundary in the south-west, south and south-east. Beside this bounded area there are enclaves (called Chhits) which are outlying and detached tracts of land situated inside Bangladesh. There are 110 such Chhits.

Cooch Behar district lies between 25°57'47" & 26°36'20" North Latitude ; between 88°47'44" & 89°54'35" East Longitude. The District Headquarter lies between 26°19'86"N Latitude and 89°23'53"E Longitude. The Area of the district is 3387 sq. KMs, which contributes 3.82% of the land mass of the State of West Bengal.

Cooch Behar is essentially a flat country with a slight south-eastern slope along which the main rivers of the district flow. Most of the high lands appertain to Sitalkuchi area and most of the low lands lie in Dinhata area. The soil is alluvial of very recent formation. It is mostly sandy and loose. The surface soil is loam and hardly any good clay is found.

1.4 LIMITATION

(i) A lack of development adversely affects the health of many people

(ii) Environmental pollution is one of the serious problems faced by the people in the country

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(iii)Rapid population growth, industrialization and urbanization accompanied by growing number of vehicles in country are adversely affecting the environment

(iv)The relationship is complex, population size and growth tend to expand and accelerate these human impacts on the environment.

1.5 HYPOTHESIS

(i) The growth of rural-urban migration will increase the growth rate of urbanization in Cooch Behar, West Bengal

(ii) The higher rate of water pollution leads to the higher rate of health cost in the sampled areas in Cooch Behar, West Bengal

(iii)The increase in number of vehicular populations will lead to increase air pollution in Cooch Behar, West Bengal

(iv)Urban growth causes for increasing waste generation in sample areas in Cooch Behar, West Bengal

2. LITERATURE REVIEW

S Uttara (2012) Urbanization refers to general population growth and settlement industrialisation. The number and scope of cities is increased. It represents people's migration between rural and urban regions. The growth in the size and density of the urban areas leads to urbanization. Uncontrolled urbanization in India has led to extremely fast degradation of the environment and to a great many issues, such as land insecurity, deterioration of water quality, excessive pollution, noise and waste disposal concerns. The present study highlights the impact of urbanization on climate, biosphere, land and water resources, in particular. A case study has been conducted on urbanisation in India and in metropolitan towns that leads to the conclusion of existing sources of environmental harm resulting from urban development and preventative control methods. Although urbanization cannot be limited, it must be guaranteed that urbanization goes the correct way, with minimal environmental effect.

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Jude Ikumapayi (2020) Urbanization refers to general population growth and settlement industrialisation. The number and scope of cities is increased. It represents people's migration between rural and urban regions. The growth in the size and density of the urban areas leads to urbanization. Uncontrolled urbanisation in the globe has led to extremely fast environmental deterioration and numerous issues such as land insecurity, deteriorating water quality, air pollution, noise and waste disposal difficulties. This study highlights the impact of urbanization primarily on the temperature, biosphere, land, and water resources of environmental components. Although urbanization cannot be restricted, it must be guaranteed that urbanization continues along the correct track, with the least environmental effect, while urbanization trends are taking place globally, in emerging nations it is speeding This expansion has led to worries about their sustainability. World population growth and urban migration are a legitimate cause for worry about the quality of life in major metropolitan centers and the environmentally and socially sustainable capacity of the planet. In the social and economic framework, therefore, priority must be given to environmental issues, beginning with the requirements of the population. Urbanization has accelerated in developing nations at an exponential level, and now the trend towards the contemporary globalized world today, with the help of daily new technology, is making extremely fast development. For ages, people have been utilizing their land and resources to pursue a better life. The way people have utilized and utilised their land throughout time is significant because the land cover has changed and the functioning of the ecosystem has been affected. With the introduction of agriculture, state-of-the-art technology and the growth of the capitalist economy, land and its resources have drastically expanded. Land use practices in recent decades have been so intensive and dominant (agriculture, mining, logging, housing, leisure etc.), that they have uncontrolled development (urbanization and sprawl) impacts, environmental deterioration quality, the loss of prime agricultural lands, the destruction of wetlands and the deterioration of fish and wild animal life across the world. These effects have decreased the local land capabilities to promote both the global environment and human business. The impact of changes in land use is thus no longer a local but a global issue.

Michael J. WHITE (2009) This study explores the connections between dynamics of population, environment and economic growth. Our emphasis is on urbanization, which often has a very detrimental effect. Initially, we explore the broad conceptual problems of population, urbanization

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and the environment, giving demographic insight into the role of urban development and development in emerging nations today (juxtaposed with the historical experience of industrialized countries). Then we provide findings from various components of our multidisciplinary population-environmental study based on the results from the primary information gathered in Ghana from 2002 to 2004. These include the impact of urbanization on the nutrient content of the shorelines of the lagoon; the function of urbanization in the fertility change. Finally, we address the implications of our results both for a more nuanced understanding of population-environmental linkages as well as changes to public policy and programs, including migration, urban development and urbanization policy.

Shushu Li (2014) This article uses the PSR model to generate environmental indicators in 30 Chinese administrative areas from 2003 to 2011 and uses panel data analysis to investigate connections between urbanization, economic growth and environmental change. The findings indicate that the urbanization rate and regional environmental quality changes are remarkably reversed in a U-shapes way; the "turn point" usually seems to be close to 60 percent. In addition, there are substantial yet anisotropic impacts on the geographical environment on degree and methods of economic growth. Overall, the environment will tend to improve with a greater level of economic development, but there is a definite detrimental effect on the environment in a large economic growth programme, which seeks solely to raise GDP. In all, the findings of this study not only validate but extend the "environmental Kuznets curve theory." This article analyzes the generally applicable inverted-U-shaped connection between environmental quality and economic development (urbanisation).

Mohit Singh Rai (2017) Urbanization refers to general population growth and settlement industrialisation. It represents people's migration between rural and urban regions. The growth in the size and density of the urban areas leads to urbanization. Uncontrolled urbanization in India has led to extremely fast degradation of the environment and to a great many issues, such as land insecurity, deterioration of water quality, excessive pollution, noise and waste disposal concerns. This article highlights the impact urbanization primarily on public health, habitat, climate, biosphere, land and water resources and on environmental elements. A case study of urbanization in India concluded on the current environmental harm caused by urbanization. Although urbanization cannot be limited, it must be guaranteed that urbanization goes the correct way, with minimal environmental effect.

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Xuemei Bai (2017) Urbanization is one of the largest societal changes in contemporary times that drive and are driven by many social, economic and environmental factors. The environmental effects of urbanization are deep, diverse and evident locally, regionally and globally. This article discusses the progress made recently in conceptual and empirical knowledge relating to urbanization and the environment and focuses on six key aspects: air pollution, ecosystems, land use, biogeochemical cycles and water pollution, waste management and climate protection. Solid waste management. We identify many new trends and questions in urban environmental research, including: (a) increasing evidence of the amplified or accelerated environmental impacts in urban development; (b) varying patterns of distribution of effects along geographical and other socio-economic gradients; and the emphasis is on public participations and the coproduction of knowledge with stakeholders as regards the governance of the urban environment. Cities regularly experiment with sustainability under a variety of guiding principles with different degrees of execution and efficiency, which demonstrate their aspirations.

Mădălina DOCIU (2012) As a consequence of migration of people from rural to urban regions, the urbanisation process reflects the growth of the percentage of people living in cities. Urbanization is generally recognized in developing nations as a procedure that has many effects, such as social, economic or environmental. This complicated process has a strong global dimension which transcends geographical boundaries and is a genuine development hub with a major effect on natural resources and quality of life.

Ivan Turok (2013) In particular in Africa and Asia, the connection between urbanization and development is a crucial political issue. This article examines the reasons and evidence that fast population increase in metropolitan areas may assist improve living standards. The primary conclusion is that the urbanization impacts and the size of agglomeration economies vary widely. The connection between urban development and economic growth or the size of cities and productivity is not straightforward. The potential of urbanization for development will probably rely on how infrastructure and institutional facilities are favorable. Economic development may be possible by removing obstacles to rural-urban migration, but the advantages with supporting policies, markets and infrastructure expenditures are considerably greater. Realistic population estimates

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should be used as the foundation for public infrastructure investment and for the implementation of land-supportive policies. Governments should explore methods to enable types of development that help growth, poverty reduction and sustainable the environment, instead than promoting (or deterring) urbanization per se.

Linfang Wang (2020) The links between forms of land use, water and sediment characteristics and community patterns of macrobenthos in upper and mid-scale areas of Fenhe and the degree of urbanisation were investigated. Twenty-three sample locations were gathered. Spearman ranks correlation analysis were carried out to evaluate the correlations of water and sediment, heavy metals and polycyclic aromatic hydrocarbon levels in water and sediment, and biological indicators of the communities of macrobiosis, between percentages of the percentage of the area or proportions of four land uses. Some water parameters (temperature, potential for oxidant-reduction, electric conductivity, total N concentration, total P concentration, ammonia-N and concentration of nitrate-N), some sedimentary parameters (total N concentration, total P concentration, organic matter content, diameter percent, polycyclic aromatic hydrocarbons (cd, chr, cu, non pb, zn co) <2 mm and some sedimentary parameters The water parameters (pH and dissolved concentration of oxygen), some sediment parameters (percentage of diameters of particles of > 2 mm) and some macrobenthos (total biomass, total amount of taxa, index of Shannon, indices of N diversity and percentages of Ephemeroptera, Plecoptera, trichoptera, filters, scrapers and delicate taxa) have been significantly negative with the percentage o The findings show that increased urbanization has had a significant impact on water, sediment and macrobenthos in the Fenhe River.

A. Rahman (2011) The resulting pressure of the current system manifests itself in environmental instability, due to the rapid population growth in almost all major cities and cities. The primary culprit is the phenomenon of rapid urbanization, which not only raises living standards but also has brought with it difficulties, such as development in congested and unplanned areas of residence, contamination of the environment, the lack of services and facilities available, solid waste etc. Satellite Remote Sensing Data is useful for mapping urban land use to get details and updated environmental management information. GIS helps to create an urban information database system that aids decision-making. The next key job in the future, in which remote sensing-based information will play a significant part, is the development of a computerized database on all elements of land use

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and urban development. Population increase and economic activity development in Delhi resulted in deterioration of the environment. In this regard, the quality of the urban landscape was studied in East Delhi, where urban development in 2001 was extremely strong, with 98.75 percent of the population in urban areas. For this research, the 2001 Landsat ASTER (MSS) data (15 m in ground resolution) was utilized as the 1982 guideline map and the population and environment data. The choice was made among eight factors affecting the quality of urban environmental conditions including the construction of buildings, open spaces, household density, occupancy ratio, population density, road accessibility, noise and smell in the region impacted. The research indicates that when comparing the 1982 and 2003 data the environmental quality has been deteriorated. Most of the East was better environmentally in 1982, but everything changed in 2003 and today 50% of the region is in a decent, equitable and desirable state. Planning and decision-making to enhance urban environmental quality should be promoted for public engagement and commitment.

2.1 RESEARCH GAPS

More population in urban areas is present, house shortages, congestion, more cars, more crimes, prostitution, juvenile delinquency, social tensions, disturbances, lack of parks, playgrounds and open spaces, cattle problem, air, noise and water pollution, traffic hazards and industrialisation. industrialisation. More pollutants, dust, more cloudiness, more fog during the winter season, higher temperatures, lower humidity, lower irradiation, lower wind speeds, more rural unemployment are also available. Urban India's ecosystem is about to crumble. In all areas of towns and cities, there may be haphazards and chaos, mismanagement, slums, jhuggis and jhonparies. Industries without regard to pollution are created on a political level. Most residential neighborhoods have disgusting industries that generate noise. High traffic flows through residential settlements. Energy, water and power, sanitary and sanitary facilities, etc., also have difficulties. The urban crisis is the result of the wrong orientation of science and technology, the lack of political and administrative powers and the abuse of corruption, the flagrant nepotism, and favouritism of most departments, abuse of funds, a lack of interest in welfare activities and the deterioration in people's morality.

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3. OBJECTIVES

(i) Complexity of urban process in the reference to Cooch Behar District, West Bengal

(ii) To study the demographic & socio-economic feature of Cooch Behar District, West Bengal

(iii)To identify the major issues related to infrastructural development of Cooch Behar District, West Bengal.

(iv)To scrutinize the physical environment of Meerut City and also check its feasibility to the Residents of Cooch Behar District, West Bengal.

(v) To attempt the evaluation of urbanisation using Modern Geographic Research methods such as Quantitative & Cartographic techniques and use of R.S. and GIS in urban studies

(vi)To suggest the possible measures to cope up and manage problems arising out of urbanisation in Cooch Behar based on field work.

4. RESEARCH METHODOLOGY

DATA COLLECTION

Primary Data: In order to investigate the nature, substance and potential outcomes of improving urban environment quality, a survey of about 500 families, talks with different organizations and government departments will also be conducted. The applicant performed a personal observation of the surrounding Municipalities of Cooch Behar, Dinhata, Tufanganj, Mathabhanga, & Makliganj such as road & transit observation, the government's public amenities, the structure of the building, street layout, sanitary facilities, drinking water etc.

Secondary Data: Candidates will be used various secondary data sources, including Cooch Behar Development Authority, Nagar Nigam Cooch Behar, Jal Nigam Cooch Behar, Bengal Awas Vikas Parishad and West Bengal State Industrial Development Corporation, Town & Country Planning Dept, Medical College, Janhit Foundation, and Local News Papers.

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SAMPLING DESIGN

This trial is based on a random sampling procedure for many phases. During the first stage, Howrah City and other Municipalities of Cooch Behar, Dinhata, Tufanganj, Mathabhanga, & Makliganj were selected deliberately, in order to investigate the effect of urbanization on the environment, since the prevailing environmental issues in Howrah, and other Major Municipalities of Cooch Behar, Dinhata, Tufanganj, Mathabhanga, & Makliganj in West Bengal are also covered.

CONTINGENT VALUATION METHOD

The test is based on a multiple phase random sampling method. During the first phase, the City of Howrah was intentionally chosen to study the environmental impact of urbanization since the most prevalent environmental problems in the city are metropolitan areas.

5. EXPECTED OUTCOME

Urbanization may be seen as a worse than the good accompanying phenomena. Due to the increasing urbanization of both developed and developing nations, the urban development process has had to deal with more or less identical issues and turbulence. A strong decline in the physical and quality of life in urban areas has eclipsed the beneficial function of urbanization, due to an increasing imbalance between demand and supply of vital service and infrastructure, which is referring to the Indians, "Industrialization led to a rapid increase in the urban population and therefore caused shortcomings in housing, the public and the communal amenities." A.K. Sen said. The rate of urban growth, the overflow of borders and the formation of extensive building agglomerations have caused problems and the responsibilities of municipal governments have grown daunting. The urbanisation has increased and municipal authorities have found it difficult to address the problems presented by urbanisation, because of the desire for urban life and for better living. People move in reality from rural to urban regions seeking a better economic condition; job possibilities, urban living amenities including education, health and a future of prosperity and glory. They think that urban life is simpler and more pleasant than rural life and that urban life is more progressive, autonomous and free from dogma constraints. The city is an area with many possibilities, pathways and a location for educated and alert individuals for most people. The town is a multi-layered unit of civilisation - a centerpiece

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of economic activity, a thrust to social upheaval and the driving force behind the political machine and the central strength of cultural ambitions. With regard to the issue of urbanization, rural people are not only immigrating to metropolitan regions in pursuit of chances for work or better economic conditions, but agriculture has also made an important contribution to urbanization, particularly in Punjab. The rich farmers now move from rural to semi-urban or metropolitan regions. The urbanization trend was further intensified in Punjab after the green revolution. In Punjab, for example, urban growth has been much higher than other countries. Also, one of the most significant elements that contribute to the issue of urban development may be identified, not only in India, but also in all the industrialized nations.

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