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# Sustainable Urban Development in Bihar: A Comprehensive Exploration

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SAKSHAM RAJ<sup>1</sup>

## ABSTRACT

*This paper delves into the challenges and goals of sustainable urban development in Bihar, India. Sustainable development, rooted in meeting present needs without compromising the ability of future generations to meet their own, necessitates a balanced approach considering environmental, social, and economic dimensions. The study identifies key challenges such as inadequate urban planning, limited access to public transportation, urban poverty, and slum proliferation. Drawing from empirical data, the goals of sustainable urban development are delineated, including ensuring decent, safe, and affordable housing for all, enhancing access to basic services, mitigating the impacts of natural disasters, preserving cultural heritage, and promoting inclusive urbanization. While the research methodology relies on secondary sources, the findings underscore the imperative for comprehensive strategies to address the multifaceted challenges and achieve sustainable urban development in Bihar. The paper concludes with a call for concerted efforts to realize the outlined goals and overcome the identified limitations, thereby fostering sustainable and inclusive urban development in Bihar.*

**Keywords:** Sustainable, development, Bihar.

## I. INTRODUCTION

Sustainable development is development that meets the needs of the present without making it harder for future generations to meet their own needs. Sustainable development can be understood in many different ways, but at its core, it is an approach to development that tries to balance different, and often competing, needs with an awareness of the environmental, social, and economic limits we face as a society.

Too frequently, one specific need serves as the impetus for development, but this does not take into account the wider or more far-reaching repercussions. We are already seeing the damage that can be caused by this kind of approach, from large-scale financial crises created by irresponsible banking to changes in the global environment that are produced by our dependence on energy sources based on fossil fuels. Because the likelihood of its repercussions becoming

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<sup>1</sup> Author is a student at Kirit P. Mehta School of Law, NMIMS, Mumbai, India.

more frequent and severe increases with the length of time that we continue to seek development that is not sustainable, we need to take action right away.

One of the most important parts of sustainable development is to live within the limits of the environment. Climate change is one thing that could happen if they don't.

But sustainable development isn't just about the environment. It's about a lot more than that. It's also about making sure the world is strong, healthy, and fair. This means meeting the different needs of everyone in communities now and in the future, promoting personal well-being, social cohesion and inclusion, and making sure everyone has the same chances.

No, not always. The goal of sustainable development is to find better ways to do things now and in the future. We might have to change how we work and live now, but that doesn't mean our quality of life will go down. A short- to medium-term view of sustainable development can bring many benefits, such as:

**Savings:** Because of SDC's review, the government has saved more than £60 million by making all of its properties more efficient.

**Health and Transportation:** Instead of driving for short trips, you can save money, get healthier, and sometimes be just as quick and convenient if you walk or ride a bike instead.

#### **(A) Research Questions**

- What are the challenges faced in sustainable urban development of Bihar?
- What are the goals of sustainable urban development?

#### **(B) Research Objectives**

- A study on urbanization of Bihar
- Analyzing the challenges faced in sustainable urban development of Bihar
- Goals of sustainable urban development

#### **(C) Review of literature**

- **Rayees, A.** ROLE OF NGO TOWARDS SUSTAINABLE DEVELOPMENT IN BIHAR. Rural development is an old idea, but its substance and concerns for rural development have evolved. The importance of rural areas in developing countries' economies makes rural development a priority. Rural development aims to reduce poverty, inequality, and exploitation, like economic development. In most nations, there is also a worry for 'urban biases' in development, since most socioeconomic metrics in rural areas, such as income, nutrition, life expectancy, physical infrastructure, literacy,

and social services, compare unfavourably to those in urban areas. Rural development is qualitative and quantitative improvement in rural areas. Rural development reduces hunger, poverty, unemployment, and inequality, improving the rural masses' quality of life.

- **Kumar, D. (2020).** For the first time in human history, most of the world's population lives in cities. The urbanisation process is also accompanied by a number of challenges due to uncontrollable population increase in metropolitan areas, such as water supply, sanitation, housing, and transit. Urbanization in India grows through natural urban population growth and migration from rural to urban areas and small towns/cities to big metros.
- **Tripathi, S. (2021).** India's lack of a sustainable urban system is a cause of the differences between different parts of the country. This paper talks about how India's urbanisation is centred on big cities. In 2011, 70% of India's urban population lived in cities with a population of 0.1 million or more, which are called "class I" cities. Reviews of both past and present urban development policies show that they favour big cities over small ones. In this situation, this paper suggests a new way to choose 125 small towns for future urban development in India. This method is based on the rate of population growth.
- **Ikemoto, H. (2008)** The ADB included a loan for the Bihar Urban Development Project in its 2008-2010 country operations business plan. During the March 2008 Fact-Finding Mission, Bihar officials and other stakeholders discussed the planned PPTA and project. The planned project will improve urban living conditions in Bihar. The PPTA will result in a feasible investment project in the state's urban sector, supported by ADB, and shorter project preparation time. The PPTA will produce:(i) a feasible urban infrastructure development project to be financed by ADB;(ii) better preparedness for project implementation;(iii) capacity-building packages to make project management and implementation timelier and more effective; and(iv) a public-private partnership (PPP) component with a feasibility assessment.

#### **(D) Research Methodology**

This research is conducted on the premises of research done by previous academics as mentioned in the bibliography. The data is collected through various sources of article newspaper and the plans by the government for sustainable urban development. Research is based on understanding the elements of organization and classifying the factors that they place.

It is a contributory work towards the pre-existing statistics.

## **II. DISCUSSION**

### **(A) A study on urbanization in Bihar**

Urbanization is an old process that has been going on for hundreds of years, but it has become a more complicated social and economic process in the last few decades. It's not just people moving from rural areas to cities; it also changes jobs, lifestyles, cultures, and behaviors, as well as the social structure and the number of people living there. The level or degree of urbanization is usually measured by the percentage of the population that lives in urban areas. This is based on the criteria that national governments use to tell the difference between urban and rural areas, and it varies from country to country. More than half of the world's people now live in cities, and almost all countries are becoming more and more urbanized. This is a worldwide trend, but it looks very different in different places and at different levels of development.

#### **a. Urbanization in Bihar:**

In India, an urban area is any place that has a municipality, corporation, cantonment board, or notified town area committee, among other things. All other places that meet these requirements: i) a population of at least 5,000 people; ii) at least 75% of the main working male population doing something other than farming; and iii) a population density of at least 400 people per square kilometer (Census of India, 2011)

The rate of urban population growth in Bihar sped up a lot from 2001 to 2011. During that time, 72 new towns were added to the state's urban areas. Its level of urbanization is still low, at 11.29 percent, compared to 31.16 percent for India and 48.40 percent for Tamil Nadu and 45.22 percent for Maharashtra, which are both more urbanized states. The number of people living in cities in Bihar has only gone up from 9.59% in 1981 to 11.29 % in 2011. This is compared to 22.89% in 1981 and 31.16% in 2011. It's interesting to see that Bihar's annual exponential growth rate (AEGR) was 3.06 from 2001 to 2011, while the average for all of India was 2.76. On the other hand, it is expected that 34% of people in Bihar will live in cities by 2031, while 40% of people in India will live in cities. But the amount of people living in cities in Bihar hasn't changed much over the years. Rural Bihar continues to take in most of the new people, even though rural-to-urban migration is usually a key part of urbanization, it isn't that big of a deal here. Bihar's urban system is made up of only 199 cities and towns. These cities and towns have two important traits: i) they are the most important, and (ii) the weight of towns with populations between 100,000 and 1 million and 50,000 and 100,000 is growing. Primacy is

common among states that are just starting to develop. However, the fact that the population of the second largest city is just a little more than one-fifth of the population of the capital city of Patna, which was 1.68 million as of the 2011 census, shows that there is a big difference between the populations of cities of different sizes. It is hard to make sure that the process of urbanization in the state is uniform and sustainable.

Most of what drives urbanization in Bihar is fertility. Migration from the country to the city isn't a big part of how Bihar is becoming more urban. There are connections between urbanization and economic growth in Bihar's urban system. A lot of people get stuck in a trap of low urbanization and low income.

### **(B) Analyzing the challenges faced in sustainable urban development of Bihar**

#### **a. Urban planning in Bihar:**

It is in its early stages. It's strange that only Patna, the capital city, has a master plan for the city, and that plan isn't very good. Even so, the city grew without a plan. This shows that the state doesn't have good urban planning, which is a must for a well-balanced process of urbanization. Without it, cities grew in a way that wasn't planned or organized, and this is still happening in the state, which is not a good sign for a planned process of urbanization in the state. But recently, the State has started to pay attention and is making master plans for other cities in the State.

#### **b. Urban infrastructure and civic services:**

Bihar has a lot of infrastructure problems in many different areas. Access to basic infrastructure services in urban Bihar is abysmally low, whether it's water, sewer pipes that connect to toilets, solid waste collection, or public transportation. The cost to Bihar's economy of not having enough infrastructure services in cities is very high. At the price of 2014-15, it is estimated that urban local bodies in Bihar will need USD 4.12 billion over the next 5 years (State Bihar, 2016). Given how much money the State and local governments have, this is likely to be a hard proportion. The only way to pay for such a huge investment would be to borrow money or work with the private sector. However, urban local governments can't borrow money and public-private partnerships aren't likely either. At the moment, the only option is to get help from the Union Government (Federal Government). Bihar will have to spend between USD 16.23 billion and USD 18.49 billion between 2016 and 2031 to meet the standards for the eight services in the existing cities and towns and in the new cities that will be built. Based on how the investment is being made, it will cost between USD 1.13 billion and USD 1.33 billion each year, which is about 1.7% of the state's GDP at 2013-14 prices. Estimates say that upgrading and improving slums will cost between USD 1.50 billion and USD 1.66 billion.

**c. Urban Transport:**

Almost no public transportation is available in cities in the state. This is true even in Patna, the capital city, which is the largest city in the state. Auto-rickshaws and minibuses are the main ways to get around cities, and the public transportation system doesn't help much or at all. Only 22% of all the traffic in the country was carried by buses in cities. The survey looked at 30 cities, and Patna had the worst public transportation accessibility index and other indices out of all of them (MoUD, 2008). It's strange that Patna, the only city in the state with more than a million people, is planning to build a metro rail system, which will require a lot of money, even though the city lacks even the most basic systems for getting around. In 2011, Bihar had a network of 9,975 km of urban roads. About 43% of these roads were paved, while the average for all of India was 73%. Urban Bihar has only 325 km of paved roads for every million people, while urban India has 889 km (State Bihar, 2016). As soon as possible, the State needs to have its own urban transportation policy that fits with state urban policy.

**d. Urban poverty and slums in Bihar:**

Poverty in cities has many different parts and is caused by many different kinds of lack. It has been seen that as Bihar becomes more urbanized, poverty is moving from the countryside to the cities. From 2004-05 to 2011-12, rural poverty went down by 3.39 percent, while urban poverty went up by 0.95 percent during the same time frame. People are worried that Bihar's poverty is moving into the cities because of this rise in poverty in cities (State Bihar, 2016). A program called the National Urban Livelihood Mission, which is run by the federal government, was started a few years ago to help solve the problem of urban poverty. However, its effects have not yet been seen. Urbanization in Bihar can't be in balance until the problem of urban poverty is fixed. About 11% of the urban population in Bihar lives in slums. There are 259 identified slums, and there are many more that haven't been named. This makes it hard to plan cities in a systematic way.

**e. Urban Housing:**

As UN-Habitat emphasizes in the New Urban Agenda 2016 its promise to fully realize the right to adequate and affordable housing, Bihar has only 2.70 million urban housing units out of a total of 110.14 million in India, of which 73.1% are residential, 20.2% are non-residential, and 6.2% are empty (UN-Habitat, 2016). Bihar needs 1.19 million more urban homes (MoHUA, 2012). Between 2011 and 2031, the number of people living in cities in Bihar will double, and housing is a big part of that. But the State has also just started a national housing project, the results of which are still unknown.

**(C) Goals of sustainable urban development****a. Urban population living in slums**

Indicator 11.1.1 is the percentage of the urban population that lives in slums, informal settlements, or housing that isn't up to par. This is a way to figure out how many people in cities live in slums. A slum household is a group of people living under the same roof who don't have access to improved water, improved sanitation, enough space to live, or housing that will last.

3.1.1 Goal: By 2030, everyone should be able to get decent, safe, and affordable housing and basic services, and slums should be improved.

**b. Access to public transportation**

This is the percentage of the population that has easy access to public transportation, broken down by gender, age, and people with disabilities.

**c. Rates of sustainable urbanization**

Indicator 11.3.1 is the ratio of the rate of land use to the rate of population growth.

3.3.1 Goal: Improve inclusive and sustainable urbanization and the ability for people to live in places that are participatory, integrated, and sustainable by 2030.

**d. Urban planning and management**

This is the number of cities that have a regular and democratic structure for civil society to take part in urban planning and management through direct participation.

3.4.1 Goal: By 2030, all countries should be able to plan and manage human settlements in a way that is participatory, integrated, and sustainable, and urbanization should be more inclusive and sustainable.

**e. Protecting cultural heritage**

Indicator 11.4.1 is the sum of all public and private spending per person on preserving, protecting, and conserving cultural and natural heritage.

3.5.1 Goal: Make it easier to protect and preserve the cultural and natural heritage of the world by 2030.

**f. Natural disasters kill and hurt people.**

Indicator 11.5.1 is the number of deaths, people who are missing, and people who are directly affected by disasters per 100,000 people. Death rates, the number of people who have moved within their own country, and the total number of people affected by natural disasters are all measured here.



3.6.1 Goal: By 2030, cut in half the number of people who die in natural disasters and the number of people who are directly affected by them.

### **III. LIMITATION OF THE STUDY**

This paper is completely based on secondary sources like newspapers, research papers, articles, websites etc. Primary data and data of other companies had not been included; this could act as a limitation of the study.

### **IV. CONCLUSION**

In this paper we conclude the challenges faced in sustainable development and the goals so the challenges are- urban planning in Bihar, accesses to public transport, urban poverty and slums in Bihar and many more. So, there are few goals of sustainable urban development also, they are- By 2030, everyone should be able to get decent, safe, and affordable housing and basic services, and slums should be improved, by 2030, everyone should be able to get decent, safe, and affordable housing and basic services, and slums should be improved, By 2030, cut in half the number of people who die in natural disasters and the number of people who are directly affected by them, Make it easier to protect and preserve the cultural and natural heritage of the world by 2030, By 2030, all countries should be able to plan and manage human settlements in a way that is participatory, integrated, and sustainable, and urbanization should be more inclusive and sustainable.

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