



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 8.4
IJAR 2020; 6(11): 339-341
www.allresearchjournal.com
Received: 05-09-2020
Accepted: 07-10-2020

Megha
Research Scholar, Geography
Department, LNM University,
Darbhanga, Bihar, India

Challenges and potentials of sustainable city patterns of Darbhanga

Megha

Abstract

The problem statement this journal targets is “How Darbhanga can be transformed into a Sustainable City in the near future”. The paper shows the challenges involved in this process and how these issues or risks can be mitigated. As author is a native of Darbhanga and has vastly travelled most of the parts of India, proposes that a sustainable city is very much in radar for Darbhanga if certain steps are followed.

Keywords: Sustainable city, conservation, economic condition, social, environmental

Introduction

A Sustainable or Eco-City is a city that is designed to keep a balance between social, economic and environmental impact, keeping future generations in mind. The people of these cities are dedicated towards minimizing the inputs of energy, water & food and also minimizing the output of heat, water, sound and air pollution (CO₂, Methane).

The concept of sustainable city does not advocate to stop or delay the development or growth of any society but it focuses on how it can be done by maintaining a balance with mother nature and yet uplifting the economic condition of the public.

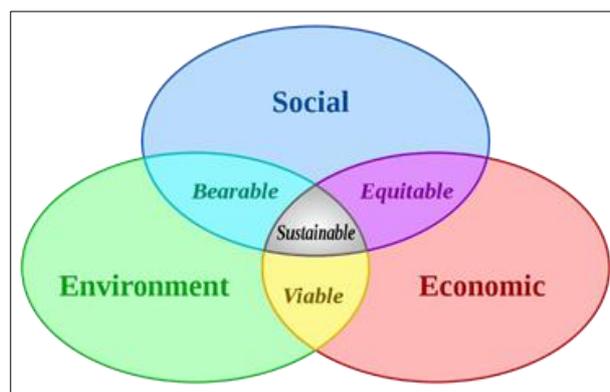


Fig 1: Three pillars of sustainability ^[1]

Significance of sustainable city in current scenario

Nature has gifted planet earth with two types of resources- renewable and non-renewable. A naturally occurring resource that can be replenished in a short period of time is called renewable resource, e.g. solar, air, water, wood and geothermal. On the other hand, non-renewable resources are those naturally occurring resources that cannot be replaced in short period of time, such as oil, natural gas, soil, coal, minerals and rocks. The most challenging part of any civilization growth has been to establish an equilibrium between the social and economical needs and making sure that the natural resources are exploited the least.

With the rapid growth of human population and fast reduction of natural resources because of uncontrolled usage and pollution, it is high time that we understand the need of a sustainable city. Making cities sustainable means creating career and business opportunities, safe and affordable housing, and building resilient societies and economies.

Corresponding Author:
Megha
Research Scholar, Geography
Department, LNM University,
Darbhanga, Bihar, India

It involves investment in public transport, creating green public spaces, and improving urban planning and management in participatory and inclusive ways.

Sustainable urban development is the way forward for cities to mitigate climate change. Integrated urban places designed to bring people, activities, buildings, and public spaces together, with easy walking and cycling connection between them and near-excellent transit service to the rest of the city. It means inclusive access for all to local and citywide opportunities and resources by the most efficient and healthful combination of mobility modes, at the lowest financial and environmental cost, and with the highest resilience to disruptive events. Inclusive development is an essential foundation for long-term sustainability, equity, shared prosperity, and civil society in cities.

Challenges of Darbhanga to transform into a sustainable city

Darbhanga is the 6th largest cities of Bihar on the basis of urban population. It boasts being the medical city for the people of north Bihar and Nepal.

Having such a wide population and also covered by the medical, religious, historical, cultural and rural tourists, Darbhanga is choking because of its traffic, pollution and current un-planned city growth.

Air pollution

An estimated 4.2 million premature deaths globally are linked to ambient air pollution, mainly from heart disease, stroke, chronic obstructive pulmonary disease, lung cancer, and acute respiratory infections in children. Worldwide ambient air pollution accounts for 29% of all deaths and disease from lung cancer. On the scale of Air Quality Index (AQI), the air quality of Darbhanga has been rated as 178, unhealthy. It is indeed an alarming situation for the residents of Darbhanga.

Let us first understand why Darbhanga is infected with high level of air pollution.

Human migration patterns

World populations are increasingly moving from rural to urban centres, making for larger cities with greater population density than ever before. This is a global phenomenon across the spectrum of developed and developing economies. We are increasingly becoming an urban world. The United Nations in 2009 and the International Organization for Migration in 2015 both estimated that around 3 million people are moving to cities every week. Approximately 54% of people worldwide live in cities, up from 30% in 1950. Sources estimate this will grow to 2/3 of world population in the next 15-30 years. More than half of urban dwellers live in the 1,022 cities with greater than 500,000 inhabitants.

Darbhanga is not an exception either. With an ever growing population, it is a residence to close to 40 lakhs people. This itself contributes to the increased air pollution of Darbhanga.

Traffic chaos

Traffic chaos because of almost no roads to drive on and bad traffic control pushes the air quality index of Darbhanga to north. The vehicle registrations increased by 6.5 times since to 2006-07 to 2017-18 in Bihar and Darbhanga also participated in this growth. Almost no public transport

system forces the residents to use their own vehicles to commute. During the peak hours of traffic, the roads of Darbhanga are choked and vehicles remain stuck for so long in traffic emitting dangerous gases to the environment.

Irregular electricity supply

Another contributor to the air pollution of Darbhanga is the irregular electricity supply which pushes the residents of Darbhanga to depend on generator sets. The emission from these generator sets impacts the air quality of Darbhanga significantly.

Water pollution

A growing population is not just causing air pollution but also the water pollution. The ignorant residents of Darbhanga pollute its beautiful lakes and ponds by throwing garbage, washing clothes, bathing cattle and defecating near these water bodies. This pollution eventually results into water borne diseases.

Noise pollution

Noise pollution is another aspect that we must not ignore. The sound of running engines and continuous honking is a usual scenario of Darbhanga especially because of chaotic traffic. The generator sets and loudspeakers are also the culprits when it comes to noise pollution of Darbhanga.

Suggestions to develop Darbhanga as a sustainable city

So far, we learned about the challenges Darbhanga is facing pertaining to become a sustainable city. But it has the potential to counter these challenges and transform itself.

Promote co-housing concept (Apartment culture)

With a rapid population growth and a fixed area of Darbhanga, it is desirable that the government opts for a co-housing concept or the apartment culture for a better utilization of scarce resources. Providing all needed facilities to the residents in the nearby area, resulting in to less travel, air pollution can be reduced drastically.

Enhance public transport

Currently, the public transport system in Darbhanga is almost non-existent, forcing the local residents to depend on their own vehicles. Government and the local bodies can pay attention to this need and provide a better public transportation system to the public. By widening the roads and removing the encroachments from the roads of Darbhanga, traffic can be streamlined.

Darbhanga used to have more than 100 lakes which has been reduced to 67 now can also be used as a public transport service. If government connects these lakes and clean them, motor boat and ferries can be introduced as public transport vehicles.

These changes will not only make the air quality better but also the water and noise quality.

Better usage of renewable energy

Darbhanga struggles to have uninterrupted electricity supply. By encouraging the residents of Darbhanga to use the solar energy for electricity, air and noise pollution issues can be reduced. Even biogas can be promoted to use as a replacement of LPG which is a non-renewable energy.

All these changes will contribute towards creation of more jobs and helping the locals to get better opportunities to earn, that too by helping the Mother Nature to heal and replenish.

Summary

Darbhanga is considered the gateway of north Bihar hence increasing its population and contributing towards the air, water and noise pollution. Without overcoming these challenges, Darbhanga cannot be transformed into a sustainable city. Government can overcome these challenges by promoting the concept of co-housing (apartment culture), enhance the current shape of public transport and depend more on the renewable energy source. These steps will not only lead to the betterment of air, water and noise pollution but also creating more job opportunities for the local. As a result, the social and economical aspects of Darbhanga will be improved so is the environmental- the three pillars of sustainable city.

References

1. Marchettini N, Brebbia CA, Pulselli R, Bastianoni S. The Sustainable City 2014.
2. Jenks Mike, Jones Colin A. Dimensions of the Sustainable City 2010.
3. Cohen Steven. Sustainability Management 2014.
4. Chappel Karen. Planning sustainable cities and regions: Towards more equitable development 2015.
5. Rosan Christina D, Pearsall, Hamil. Growing a Sustainable City? A question of Urban Architecture 2016.
6. https://en.wikipedia.org/wiki/Natural_resource_economics
7. <https://teacherspayteachers.com/Product/Renewable-or-Nonrenewable-Resources-Sort-Review-Assess-Center-Application-2541157>
8. <https://www.itdp.org/our-work/sustainable-urban-development/>
9. <https://www.who.int/airpollution/ambient/health-impacts/en/>
10. <https://graylinegroup.com/urbanization-catalyst-overview/>