

Towards Sustainability of Bardoli Urban Area: Challenges and Opportunities

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Abstract - As urbanization takes place towards the world but there is always need of city should be sustainable for citizens as well as environmentally. To survive in future years if city sustainable then there progress easily uplift as economically also. In this research paper describing Bardoli urban area which is situated at the Bank of Mindhola River and near Surat city in Gujarat state in India. To make Bardoli sustainable is also need to decrease impact of the Surat city which will goes to expand in 2035 as its Surat Urban Development Authority (SUDA) Development plan 2035 described. Bardoli is a small town which already sustainable in its own way but challenge is that which has more agriculture land surrounded by its small villages and also opportunities are from which we can take advantage of the environmentally sustainable so that impact of the air pollution can decrease and also many more. Challenge to make Bardoli sustainable is also less urban land but from proper planning it can be covert in sustainable city.

Key Words: Sustanaibility, Sustainable development, Urban sustainability, Sustainable cities, sustainable urban development

1. INTRODUCTION

Sustainability is word which describe anything which survive presently as well as in the future also. To make city sustainable leads to new form of the urbanisation. It will positive impact of the city as well as nation also. There so many benefits to livelihood as well as environmentally. It will leads to fulfil basic needs of the cities which are main pillar of the sustainability are: social sustainability, environmentally sustainability and economically sustainability. In the urbanising big challenge to make city sustainable is the land. Land is the essential thing to make any infrastructure this same challenge facing Bardoli urban area as gap identify to fulfil its needs there challenge is land. To improve it methodology made as we can survive basic sustainability needs and our requirement also. (lee, 2018) (Verma & Raghubanshi, 2018) (Huang, Wu, & Yan, 2015)

2. LITERATURE REVIEW

This approach allows for a global view of urban sustainability: environmental and socio-economic. Community viability depends not only on ecological impact but also on infrastructure, public health and education, and policy viability. All these aspects are incorporated into the model based on indicators which we will define in the sequel. Outcome of the dimensions of development are health, education, protection, involvement, economic status and relationship. Such development include nutrition, child mortality, school achievement, and completion of basic education progress, violence and crime, involvement in community activities, food shortage and family relationships. Urban sustainability has been described in a variety of ways, with different criteria and focus. Most of the concepts are derivations from sustainability ones, focusing on improving long-term human well-being by balancing the three dimensions of sustainability, mitigating resource consumption and damage to the environment, optimizing resource efficiency, and maintaining fairness and democracy. (Phillis, Kouikoglou, & Verdugo, 2017) (Filzani Illia Ibrahim, 2015)

3. CHALLENGES

- a. According to Surat Urban Development Authority (SUDA) Development plan 2035 it will increase its boundary and Bardoli will closer to it. So need for to sustain it as well to decrease impact of SUDA.
- b. Nearby area of the Bardoli there are sugar factories which degrade water of mindhola river as well as air pollution.
- c. Population increase day by day through surrounded villages. Hence it create population load in economic opportunities for the people.
- a. Vadodara-Mumbai Expressway passing nearer to the Bardoli which cross to National Highway-53 which cause negative impact on Bardoli city which will degrade environment and forest area.

- In Vadodara-Mumbai Expressway the total land acquisition of the Surat is 688.561 Ha.
 - Total length of expressway 378.722km.
 - In Gujarat total length 260.40km
 - In Surat total length 57.3km
- e. It comes under area of village in Bardoli as follows with their forest area
- Naugama: 0.354 Ha
 - Ninat: 0.481 Ha

4. OPPORTUNITIES

Opportunities to make Bardoli sustainable because of its great growth. To maintain this and also to take it up it always be required to make it sustainable through it can survive. Opportunities for these are as follows:

- a. It has small Mindhola river on its bank city is situated. From advantage taken by city as developing river front but opportunities is that river water through purification it can develop boating also through which income can generate. Otherwise on both side of the river planting trees and make it manmade forest by planting plants and trees which can generate revenue in future years and also environmentally positive impact.
- b. As in city there is population up to 60,000 it has less air pollution and less noise pollution hence there is opportunity is that it should be sustain as now in future if even there will be increase in the population. So that it is require to construct infrastructure in that manner it increase its sustainability value. (Yigitcanlar, Dur, & Dizdaroglu, 2014)
- c. It has clean roads and also it is “dust free city” so in future also it should sustain in this way if population or development take place in that way opportunity it is create. So opportunity is that in that way from green waste it can generate humus for the farmers which can be environmentally free and also low cost in this way it can be environmentally sustain as well as economically also. (Litman, 2017)
- d. In socially sustain it needs some extra efforts because it has nearby villages which are dependent on the Bardoli for the education and health in this parameter it is lack. So opportunity to make infrastructure in that way through which it can sustain city dwellers plus villagers in low cost. (Niloofar Hashemi, 2017)

5. METHODOLOGY

As referring Town Planning Schemes of the Bardoli city there reservation for the various purposes such as vegetable market, parking, primary school, high school, open spaces, playground, garden EWS housing and other residential zones.

In methodology uses gap identification with references to URDPFI guidelines through which facing in the school primary as well as nursery, parks, open spaces and hospitals. From the gap identification way guidelines says actual area and what is presently and what will need in future is carried out. To combat this gap at some level reservation plot are good but with changes our essential needs it can modify as some small garden area with nursery school because as know garden surrounded by the nursery it will fulfil both requirement unsustainability with lesser land area. As land is restricted in city some the big garden area we can modify with the hospital with vertical development so remaining land in which it can use as the garden also for the patients as well other residents. So method is that in less land with modification it can serve both purposes in this urbanisation towards the sustainability.

6. CONCLUSIONS

The aim of this paper to make Bardoli sustainable with proper sustaining measures as the opportunities and with dealing challenges also. Towards the sustainability some of lacking in the gap always be there so in future development it will help if city will expand its area to accommodate infrastructure in that way which sustain. Although take care of natural resources as farms, river and environment with less noise.

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