

The Environment Dependency on the Built Environment and Natural Environment

Rashmi Mehrotra

Faculty of Education, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

ABSTRACT: *The United Nation has taken several steps, along with growth, to protect the environment. The Paris Agreement, the Sustainable Development Target and the new urban agenda are the steps taken by the United Nations to protect the environment and to build society in a sustainable way. The developed ecosystem has been known to be the main threat to biodiversity loss. Therefore, in order to minimize the effects on the human ecosystem and thus prevent the loss of biodiversity, it is important to create a relationship between the built environment and the natural environment in order to preserve nature and humans as well. The focus of this review paper is to establish and analysis the connection between the built environment and real environment in view of the biodiversity loss and the sustainable development goals. This paper has adopt the way to investigate the various already published research papers as well as the review paper apart from the governmental reports on the environment related issues.*

KEYWORDS: *Biodiversity, Built environment, Construction industry, Sustainable development goals, SDG 15.*

INTRODUCTION

Technology has evolved at a very rapid rate, so it is important for the expert to come up with a strategy that helps people protect the environment along with sustainable growth. Construction is described as the least sustainable sector that consumes almost half of the world's non-renewable resources. Because of the amount of energy and money needed to sustain the business, the built environment has also been argued to have a direct effect on the natural environment[1]. It is also important to remember that greenhouse gases in the built environment lead to biodiversity loss that affect the ecosystem's ability to sustain living organisms. The natural and constructed ecosystems are interdependent, and the relationship affects the earth significantly.

In order to sustain the life on the planet earth, the important factor is to control the biodiversity as the biodiversity have the crucial role to maintain the natural environment. There is a need for a good working environment to support life on the earth and biodiversity is an integral part of this cycle. Biodiversity (Biological Diversity) is defined by the United Nations Convention on Biological Diversity as the variation among living organisms from all sources including and terrestrial, marine as well as other aquatic ecosystems, as well as the ecological frameworks of which they form part; this includes diversity within species, between species and ecosystems. The word Biodiversity encompasses all living things, including such plants, animals, fungi, including micro-organisms and the differences within or between species and ecosystems.

Protection and preserving of the biodiversity is the critical issue of the sustainable development goal (Fig. 1). The establishment of cooperation between the built and real environment is therefore a subject for the environmentalists' debate. Biodiversity restoration and improvement by sustainable urban environment design as well as management requires awareness and use of

both ecological and human conditions. The built environment is described as a major contributor to the loss of biodiversity as well as climate change due to the large number of resources used by the construction industry. Therefore, it is suggested that the built environment will contribute significantly to the approaches that solve the biodiversity loss issue.

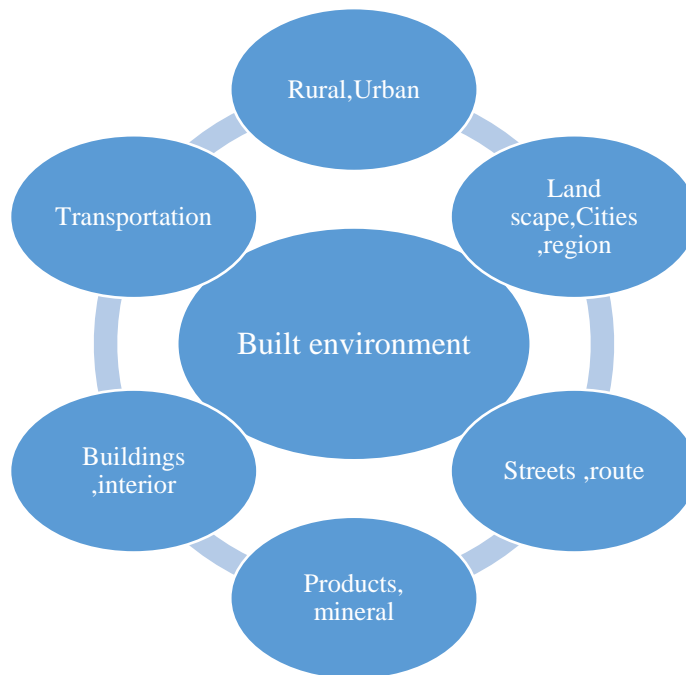


Fig.1: Different Elements of the Built Environment

A built environment that encourages good health and wellness is underpinned by better biodiversity. Considering nature conservation and enhancement plans, the built environment gives biodiversity significance[2]. If immediate action is not taken for a more sustainable urban environment around the globe, the built environment poses a major challenge to biodiversity conservation. Universal adoption of the 2030 Sustainable Development agenda, which set 17 Sustainable Development Goals and 169 targets, underpinned by 232 metrics, is one of the main initiatives aimed at saving the world for current and future generations.

THE SUSTAINABLE DEVELOPMENT GOALS AND BIODIVERSITY

At the Biodiversity Meeting, the Earth Summit in Rio de Janeiro ('the Rio Convention'), in June 1992, the structure for global biodiversity conservation was determined. However, the Sustainable Development Plan for 2030 provides the framework for shared strategies and goals aimed at addressing the problems facing society today. In support of achieving the Sustainable Development Goals, biodiversity supports ecosystem services that are vital for human well-being and economic activities[3]. However, knowing that biodiversity protection is highly embedded across most sustainable goals is important. Almost every government of the world has tried their level best to couple with the sustainable development goal.

➤ *Understanding Biodiversity And The Built Environment:*

Biodiversity, resulting in habitat loss and destruction, is influenced by the built environment. In supporting biodiversity, the built environment will play a critical role; it is important to have green urban spaces in the built environment to conserve biodiversity and also to have opportunities for people to connect with nature. Biodiversity offers social, cultural, and environmental benefits that go beyond the protection of ecosystems and animals. Conservation of biodiversity should aim to restore and enhance the species and habitats population, now and in the future[4].

DEPENDENT FACTOR FOR THE ASSOCIATION BETWEEN THE BUILT ENVIRONMENT AND REAL ENVIRONMENT

➤ Urban development and biodiversity:

In general, the built environment and, in particular, the construction industry have a vital role to play in protecting biodiversity, but this is not normally the priority of the construction sector. The building industry would also lead the way towards the incorporation of biodiversity at the centre of sustainable development. As a consequence of the depletion of building ground cover, the impact of the built environment on biodiversity is causing climate change.

➤ The value of biodiversity integrated built environment:

Building practises that preserve more natural vegetation during development will be promoted by the built environment sector; this can be done through urban planning projects that enhance the protection of biodiversity[5]. By providing nest boxes, living roofs and ecosystems in the built environment, new planning initiatives will integrate conservation schemes such as constructing habitats for wildlife. These biodiversity schemes do not add an undue burden to the total construction expenditure of the project.

➤ Preserving biodiversity through sustainable built environment:

The built environment as a predominant habitat for human beings causes the loss of biodiversity but also has the potential to reduce the causes of such depletion. Sustainable developed environment offers opportunities to conserve and enhance the natural environment; all sustainable planning projects should have a biodiversity policy aimed at improving the relationship between the natural and built environment. A built environment filled with trees facilitates environmental awareness and, more significantly, provides wildlife with habitat and minimizes air pollution [6].

➤ Construction Industry Activities On Biodiversity:

The construction industry plays an important role in reducing biodiversity losses, as all kinds of building projects from infrastructure projects to small housing projects have the potential to contribute to destruction of natural habitats[7]. The built environment has a detrimental effect on biodiversity and ecological networks at both the development and in-use phases of the lifecycle project. The global issue of loss of biodiversity is important for the international community, considering how biodiversity has appeared in all the major international environmental initiatives.

CONCLUSION

The study aimed to explore the connection between the Sustainable Built Environment and the protection of Biodiversity which is at the core of the Sustainable Development Goals. This explores the implementation of sustainable construction approaches which enhance biodiversity conservation and promotion as an integral part of the built environment. A built environment with integrated biodiversity strengthens the capacity of the earth to respond to climate change; increases air quality, flood prevention and people's overall health and wellbeing in community. It will take political leadership at international and national level as regards policy direction including new legislation on biodiversity conservation. Biodiversity should be integrated not only into new construction and building programs but also in the management of existing built properties.

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