
CONSEQUENCES FOR THE SUSTAINABLE DEVELOPMENT GOALS

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Abstract

The Sustainable Development Goals (SDGs), the New Urban Agenda (NUA), and the Paris Agreement are the current key global environmental policies for a more prosperous world. The built environment has been identified as a major contributor to the loss of biodiversity and will thus play a major role in a sustainable world where environmental values are reinforced. As humanity and nature are the main victims of the loss of biodiversity, there should be a seamless relationship between both the built environment and the natural environment. This review paper aims to investigate the connection between the Built Environment, Biodiversity and the Sustainable Development Goals. The paper discusses the role of a sustainable built environment in conserving biodiversity, which is essential to achieving the SDGs in general and SDG 15 in particular. The paper adopts a technique of qualitative analysis using a workshop of information generation involving 16 experts from both government and industry.

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

I. INTRODUCTION

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. It is also important to note that greenhouse gases contribute to biodiversity losses in the built environment that affect the capacity of the ecosystem to support living organisms. The natural and constructed ecosystems are interdependent, and the relationship affects the earth significantly. The word Biodiversity encompasses all living things, including such plants, animals, fungi, including micro-organisms and the differences within or between species and ecosystems.

The Sustainable Development Goals (SDGs) for 2030 are expected to solve issues such as human well-being and the environment globally. The SDGs are related, and to achieve them, consideration must be given to the ecosystems and resources of the planet - land, water, and fresh air. The ecosystem services (ES) approach has tremendous potential for enhanced planning, strategy and determination. Knowing how different habitats (e.g. forests, rivers, wetlands, etc.) relate to the social and economic benefits of grasslands is crucial to ensuring the long-term conservation of biodiversity and sustainable use of ecosystems. Earth and Water ecosystems are interconnected as human activities on the ground generate pressure that impacts the water ecosystem conditions and thus the production of ES by rivers and lakes.

The dependencies between the goals in terms of potential interactions are needed in order for to make policy to happen to be measured, both at and within the SDGs. This challenge is not new and similar concerns have been identified when trying to align adaptation to climate change response to mitigation, alleviation of poverty, meeting the Millennium Development Goals and balancing economic development, environmental sustainability and social inclusion for human well-being. The holistic design of the SDG framework means that there are several possible connections around the SDG system 169 Policymakers have to consider goals. Though a framework has been proposed to characterize SDG interactions, which currently lack a systematic, data-driven analysis of interactions between all SDG indicators. In its most general sense form, such interactions might be classified as synergies or trade-offs, and vice versa. This was bound together in this symbolic formulate synergies and trade-offs on the results of a correlation analysis throughout the official SDG indicators, country accounting and the entire timeframe for which data is available [1].The Sustainable Development Goals are:

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reducing Inequality
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life On Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals

The purpose of our study is therefore to provide for the first full quantification of synergies and

Trade-offs, as they have happened in the past, inside and around the SDGs, at home and internationally scaling [4]. In doing so, we highlight the most frequently found trade-offs which are targeted and transformative action is needed to surmount past trends and deliver the greatest possible global benefits. The study also comparatively describes potential synergies that are essential for strengthening and cross-leveraging in the looking ahead. The methodological framework presented here for evaluating SDG interactions is a fundamental one contribution to making it work in order to execute the SDG agenda effectively [2].

The Built Environment rarely acknowledges the relation between biodiversity and human well-being when implementing infrastructure and housing projects; the incorporation of relevant biodiversity strategies for sustainable urban growth is given little consideration. Despite the detrimental effect of the built environment on biodiversity, the implementation of new construction projects or the rehabilitation of existing built assets has the potential to increase the ecological value of most building sites (Green Building Council). Due to the large quantity of resources used by the construction industry, the built environment is defined as a major contributor to the biodiversity loss as well as climate change. Therefore, it is suggested that the built environment will contribute significantly to the approaches that solve the biodiversity loss issue.

II. ROLE OF SUSTAINABLE DEVELOPMENT

➤ **The Sustainable Development Goals And Biodiversity:**

The framework for global biodiversity conservation was decided at the Biodiversity Conference, the Earth Summit in Rio de Janeiro (the 'Rio Convention'), in June 1992. The 2030 Sustainable Development plan, however, offers the basis for common goals and priorities aimed at resolving the challenges that society faces today. Biodiversity supports ecosystem services that are important for human well-being and economic activities in support of achieving the Sustainable Development Objectives. However, knowing that biodiversity protection is highly embedded across most SDGs is important.

The incorporation of biodiversity into the development of the built environment is key to achieving the Sustainable Development Goals; SDG 15 has high impacts on SDG 3 (Good Health and Well-being), SDG 6 (Clean Water and Sanitation), SDG 11 (Sustainable Cities and Communities), SDG 12 (Sustainable Consumption and Production), SDG 13 (Climate Action) and SDG 15 (Biodiversity-Life on Land). The Sustainable Development Target 15 focuses primarily on sustaining and making good use of the planet's habitats and animals. Humanity relies heavily on the biodiversity towards survival and better quality of life. However, due to continued urbanization, human activities such as over-consumption of natural resources are putting growing pressure on biodiversity [2].

The UN Global SDG 15 goal which should be met by 2030 (UN, 2015). For example, the interlinked but interwoven nature of the SDG 15 and the other SDGs is seen in SDG 15 aim 15.9, which is applicable to SDG 1 (End poverty everywhere in all its forms) (UNDP, 2016). The SDGs strive to create a sustainable world that gives people freedom and dignity while protecting the earth over the next 15 years.

The SDG 15 goals can be given as below:

15.1 Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystem, forests, wetlands, mountains and dry lands by 2020.

15.2 Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally by 2020.

15.3 Combat desertification, restore land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation- neutral world by 2030

15.4 Ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity benefit that are essential for sustainable development by 2030

15.5 Take urgent and significant action to reduce the degradation of natural habitat, halt the loss of biodiversity

15.6 Promote fair and equitable of the benefit arising from the utilization of genetic resource and promote appropriate access to such resources, as internationally agreed

15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna both demand and supply of illegal wildlife products

15.8 Introduce measure to prevent and significant reduce the impact of invasive alien species on land and water ecosystem and control or eradicate the priority species by 2020

15.9 Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts by 2020.

➤ **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. The ecosystem and biodiversity are important components of the urban environment that contribute to a better quality of life by contributing to environmental resilience against disasters. An interconnected approach to sustainable building environment is argued to contribute to a general quality of life. Biodiversity provides social, cultural, and environmental benefits that go beyond habitat and species conservation. Conservation of biodiversity should aim to restore and enhance the species and habitats population, now and in the future [3].

➤ **Urban development and biodiversity:**

In general, the built environment and, in particular, the construction industry has 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 [20]. As a consequence of the depletion of building ground cover, the impact of the built environment on biodiversity is causing climate change. Biodiversity can also be integrated into the built environment by creating green urban spaces including solar farms that can lead to the protection of urban biodiversity. Biodiversity incorporation into new construction project will form a core part of the planning application process. Biodiversity lies along rivers, parks, street plantings, gardens and vacant lots in a developed environment [4], [5].

III. 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.

IV. REFERENCES

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