

Chapter 18

Transformational Innovation Technologies for Regenerative Bioeconomy: Case Study on Green Initiatives for Tourism Logistics Service Providers

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ABSTRACT

The tourism industry has negative environmental consequences, overshadowing the regenerative bioeconomy. Climate change, land degradation, and resource depletion are significant challenges. Excessive use of non-biodegradable resources threatens the planet, requiring bio-based resources. It is critical to transition to and reuse bio-based resources. In this chapter, the regenerative bioeconomy has a wide-reaching impact on accomplishing SDG 6, 8, 11, and 12, with a focus on the circular economy's involvement in tourism logistics. Investments in talent development, digital technologies, and partnerships are needed to realise bioeconomy potential. Engaging local communities and implementing sustainable business practices can reduce energy use and environmental impact. Digital transformation requires technological advancements, foreign investment, and active participation from all stakeholders. This chapter tries to explain the complicated interplay between the regenerative bioeconomy, tourism logistics, and sustainable practises intertwining.

INTRODUCTION

Transformational innovation and technology have gained the attention of all industries. Innovative

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technologies are mainly implemented for creating new business models and strengthening the quality of business operations. Technological advancement is playing a prime role in augmenting interference in industries and at societal levels. Industries are considering digital transformation as central to remaining competitive in the marketplace (Vial, 2019). The excess usage of non-biodegradable resources and exhaustion of natural resources have put the world under serious threat. Thus, the world is moving towards the practice of bio-origin resources and their re-use in future generations. The industries are re-focusing on the concept of a regenerative bioeconomy, and the recent development of technologies is intended to support sustainability principles (Laibach et al., 2019). Bioeconomy is the conception of adopting biological resources and materials used for production, conservation, and regeneration for future generations, which results in sustainable development. As there is a bioeconomic transformation taking place by focusing on the use and reuse concept of bio-origin resources and materials, policymakers are designing a regulatory framework with the support of technology that assists in assessing the effectiveness and possible risks of sustainable principles (Marcone et al., 2022).

The tourism logistics service providers have initiated green practises to meet sustainable development goals. Tourism logistics in the destination refers to the movement of information, finance, tourists, and materials in a explicit geological area providing tourism products and services (Cheunkamon et al., 2021; Buczek, 2017; Oriade and Cameron, 2016). The tourism logistics service providers include tour operators, travel agencies, hotels, and public and private transport operators. They provide tourists with access to the destination. However, the use of conventional transportation has a negative effect on the tourism aspect as a whole (Gardossi et al., 2021). It is observed that to overcome the environmental damage, the transportation sectors have adopted alternative fuels that are of bio-origin and the usage of green vehicles with the support of advanced technologies that support the environment positively, resulting in a transformational bioeconomy (Fava et al., 2021).

OBJECTIVE AND PURPOSE OF THE STUDY

The globe is facing climate change as a major threat, which occurred due to extensive consumption of non-biodegradable resources and excess production of carbon emissions. Hence, the concept of bio-economy is introduced and practised to enhance sustainable development and completely shift towards the consumption of biodegradable resources. The tourism logistics service providers have also initiated green initiatives along with technological advancements that meet sustainable development goals and create a path for circular concept of business operations. The introduction of green practices that include eco-friendly vehicles, the usage of bio-fuels, and the amalgamation of advanced automation enhance sustainable development through a regenerative bioeconomy.

LITERATURE ROAD MAP

Regenerative Bioeconomy

The growing population and the increased demand for human needs and wants have challenged the ecosystem. The rising concern about the environmental imbalance is due to the excess utilisation of natural resources, land degradation, industrialization, and urbanisation. In this growing population, to

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