GREEN ARCHITECTURE AND HOSPITALITY IN INDIA'S LANDSCAPE OF SUSTAINABLE TOURISM

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ABSTRACT

The Covid-19 pandemic has adversely affected the tourism industry in India to a large degree. However, in economic recovery, lies the opportunity to conceptualize the re-development of the industry with principles of sustainability. Green architecture is already being implemented in several industries including the hospitality and transportation industry. The central and state governments have also prioritized sustainable tourism and initiated policy frameworks for the same. However, there remain areas for improvement in the spaces of investment and implementation of these policy frameworks. This paper examines the existing examples and measures pertaining to sustainable tourism and green infrastructure and undertakes a qualitative analysis of prominent sustainable and energy efficient architectural designs. The paper critically examines the shortcomings of the existing policy framework and suggests measures to improve implementation. The paper proposes the adoption of a more holistic approach to sustainable tourism to better incorporate sustainable practices across the supply chain, support small business and local communities, improve knowledge sharing and experiences for the tourists.

Introduction

With increasing awareness of the adverse effects of climate change and environmental destruction, the architecture and construction industry are increasingly adopting more sustainable methods and promoting the concept of sustainable tourism in India. The Ministry of Tourism in India is attempting to incorporate sustainable tourism as a part of its targeted 12th Five Year Plan growth in foreign and domestic tourists (Ministry of Tourism, 2020). The Ministry has proposed Sustainable Tourism criteria for India (STCI) and indicators for hotels, tour operators have been finalized. Similarly, the criteria and indicators for rural tourism and homestays are being evolved. Action will be initiated for Tourism industry constituents, not yet covered (Ministry of Tourism, 2020). The Ministry has also reported that the ratification of these criteria by

hospitality industry associations has progressed well (Ministry of Tourism, 2020). As the tourism industry is likely to see a sharp increase as Covid-19 related lockdowns are lifted globally, India is poised to ensure that the post pandemic recovery of the tourism industry prioritizes sustainable practices.

A notable positive development is that India's hospitality private sector is also making strides in this regard with respect to sustainable tourism. For example, ITC Hotels became the world's first hotel chain to achieve LEED Zero Carbon Certification (Sanand, 2021). In addition, airports such as the Rajiv Gandhi International Airport in Hyderabad, have also begun to be designed in such a way as to consume less water and electricity as well as incorporate more greenery in the airport landscape. The said airport has been successful in saving energy for nearly 3.97 million kWh and have reduced the carbon footprint by 3331 tons (Lokaa, 2016). Therefore, there is a clear upward trend and opportunity for hospitality and allied architectural ventures to increase sustainability by design and reimagine travel and tourism in India through the lens of sustainability.

This is also imperative given how the tourism industry has suffered due to the pandemic. In India, the travel and tourism sector represents about 8.1 per cent of the country's workforce, translating into around 42.7 million jobs (Agarwal, 2020). If sustainability is incorporated in the industry, this also poses an opportunity for increased employment and economic recovery. There have been reports of pollution-free rivers for the first time in decades, sightings of birds and animals, clear blue skies and improved air quality. This has opened up opportunities for the sector to adopt green practices and reduce its burden on the natural habitat (Agarwal, 2020). Although effective steps such as the STCI as mentioned above are being ratified, implementation and strategic investment will be crucial for the effective growth of the sustainable tourism industry in India (Jain, 2021). This paper will trace and examine the development of sustainable tourism in India and undertake a qualitative analysis of existing examples and initiatives pertaining to green architecture in the tourism, hospitality and transport industries. The paper will then pose policy recommendations for improved implementation drawing from national and international best practices.

Background

In 1988, the United Nations World Tourism organization (UNWTO) defined sustainable tourism as "leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems". Later in 1992, the 'Earth Summit' in Rio established the triple principles of "environmental, economic and social sustainability" (Ministry of Tourism, 2020). Since this time, India and countries across the world have sought to

incorporate sustainable tourism as an essential mandate. India had recognized that global criteria adopted for the industry were based on Western contexts such as hotel operators and allied industry. However, the Indian context required a particular definition of sustainable or ecotourism that incorporated the needs of local communities, artisans, fisher communities, beaches and backwaters, ayurveda and wellness, and religious tourism which are particular to Indian culture (Ministry of Tourism, 2020).

Therefore, the STCII were developed in India over the last decade and include the pillars of organisations demonstrating effective sustainable management, design and construction of tourism infrastructure, maximising social and economic benefit to local communities, maximising benefits to cultural and historical heritage sites, conserving resources, reducing pollution, and conserving biodiversity (Ministry of Tourism, 2020). The pillars include ambitious ventures such as stakeholder involvement and training, support for MSMEs, capacity building, incentives and certifications, and evolving governance coefficients, using contemporary technology among others (Ministry of Tourism, 2020).

Over the past decade, one can notice several examples of the sustainable tourism industry developing rapidly. Most State governments are also taking commendable initiatives to foster sustainable and responsible tourism, including rural, agro, adventure, ecotourism, and homestays. The sector has additionally been taking voluntary actions to grow more sustainable, mainly utilizing energy, sourcing material, and embracing eco-friendly standards (Jain, 2021). For example, the Kerala government has concentrated on sustainability for backwaters, Ayurveda and ecotourism. The Assam Government has launched initiatives for "Responsible Tourism" to protect environmental ecosystems, including incentives and subsidies for home stays which reduce the carbon footprint of building hotels, and provide opportunities for sustainable employment in semi rural and urban areas (Jain, 2021).

The Andhra Pradesh Government seeks to promote private investments and entrepreneurship in the sustainable tourism industry by incentivizing private investments and public-private partnerships plans and promoting EoDB (Ease of Doing Business). Gujarat has also implemented schemes to promotes sustainable tourism by helping qualified tourism units up to 75% of the value of conducting out Energy Audit (Jain, 2021). Other states have harnessed their naturally available forests and implemented tourist spots which do not intervene with the forest. One example is the Malabar Hill Forest trail in Mumbai, which has been constructed without damaging a single tree on site. It is designed a raised wooden walkway that would have a central spine of steel structural supports, keeping the impact on the forest floor to a minimum (Dhawan, 2021). The design will also address important ecological and hydrological concerns, such as avoiding blocking the flow of natural water, minimize interference with existing root systems in

the soil, and prevent disturbance to the movement and habitat of wildlife. Such example set the scenario of sustainable tourism in India as promising (Dhawan, 2021).

Discussion

The above sections of this paper demonstrate the positive trend for sustainable tourism. However, issues with implementation do remain, creating room for improvement. Sustainable tourism is still largely observed with respect to larger hospitality conglomerates such as the ITC Group or CGH Earth, where ultra luxury resorts are built on tens of acres of land (Christine, 2015). However, examples pertaining to the MSME industry are not particularly covered or paid attention to in the sustainable tourism landscape. Better implementation of schemes to support smaller businesses will ensure more holistic development along the supply chain, such as smaller vendors, materials suppliers, etc. State governments and the central government must support smaller business by providing subsidies and tax breaks, providing support in publicity and marketing, government to business opportunities and improve information dissemination of sustainable practices through workshops and training (Agarwal, 2020).

An empirical study conducted in 2020 auditing the sustainable tourism industry in India shows some areas of concern. Famous tourism destinations and especially temples are areas where huge amounts of solid waste are generated. For example, at the Arasavalli Sun Temple, solid waste consists of 50 percent of bottles, plastic covers, 10 percent paper, 10 percent hair, and 30 percent food left out (Wani and Nagaraj, 2020). India still ranks low on the Environment Performance Index. Policy failures have also led to poor protection of socio-cultural assets and up- gradation of environmental quality at cultural sites. In addition, the emphasis on skill development of local and host communities is low in India's sustainable tourism policies (Wani and Nagaraj, 2020). Therefore, while policies are initiated, lack of effective mechanisms for implementing them badly affect skill formation. Consequently, this leads to stakeholders at bottom levels to have no incentives or motivations to implement sustainable practices (Wani and Nagaraj, 2020). Therefore, sustainable practices need strong policy instruments and regulatory measures which the India lacks. Apart from policy mismanagement, terrorism and crime against women negatively affect tourist inflow particularly in India. Incidents of crime at popular tourism destinations scale back the foreign tourist influx. It affects the India's rank in safety and security on a global level (Wani and Nagaraj, 2020). A holistic approach which takes into account allied areas of the environment, indigenous communities, conservation and crime are required to bridge the existing gap between policy formation and implementation in sustainable tourism.

There is also potential for partnerships between the government and civil society organisations to improve the industry. For example, the World Wildlife Foundation collaborated with the

government of Jammu and Kashmir to conduct workshops for tour operators, hoteliers and other service providers, environmentalists, government officials from the departments of tourism and environment, students and various NGOs (WWF, India, 2011). The workshops were aimed at helping them understand the importance of safeguarding this fragile ecosystem and raising awareness amongst them on sustainable tourism practices in the high altitude Himalayan region. WWF-India is working on the conservation of Himalayan high altitude wetlands (above 3,000 m asl), especially through its Green Hiker campaign, under which the workshop was organized (WWF India, 2011). This awareness-raising campaign encourages tourists and tour operators to adopt responsible practices towards minimising their carbon footprint while traveling through the Himalayas (WWF India, 2011). Similar knowledge sharing mechanisms in other states throughout India are the need of the hour to ensure development of sustainable practices throughout the tourism supply chain.

Strategic investment is also required. The creation of a sustainable tourism fund is required for recovery of the industry post the pandemic, to provide capital incentives, loans and grants to the various stakeholders in the sector. Multiple energy, water, linen and waste solutions are available today that enable ecologically sustainable and high-quality service for the sector (Agarwal, 2020). A capital incentive, including low interest rate funding, through banks may help propel the sector to adopt these ecological measures quicker (Agarwal, 2020). In addition, the government should consider establishing strategic partnerships and technology transfer initiatives with developed countries to incorporate international best practices and standards for sustainable infrastructure.

Conclusion

The hospitality industry is among the most demanding in terms of resources use and energy consumption, especially in relation to urban areas which are already congested. For sustainable tourism in India to be improved, tourism cannot be the only focus area. Rather, a prerequisite to sustainable tourism is the implementation of general sustainable architecture, urban planning and robust environmental regulations (Stahan, 2018). Policies around land use, waste management, air quality, crimes, engagement with local communities and skill development are all required to function in tandem for the sustainable tourism industry to be improved. Drawing from existing examples of green infrastructure in India mentioned in this paper, policies need to focus on scaling the implementation of these practices among the most basic levels of the supply chain. Sustainable transport as well as resilience against climate change is also a key area of development (Stahan, 2018).

Application of sustainable development strategies and sustainable design principles should enable the fulfilment of maximum human requirements with minimum environmental loads

Stahan, 2018). Adoption of renewable energy on a large scale will be crucial for all industries and will in turn benefit the tourism industry. Cross country studies have also showed that India's people are ranked as the most overall invested when it comes to sustainability decisions and behavior (Christine, 2015). These attitudes should be harnessed to ensure that the recovery of the tourism industry which has been hit by the pandemic places sustainability at the highest priority, through effective investment, focus on skills and awareness, development of green building certification programs and encouragement of technology adoption, and placing local communities at the heart of the recovery. Creating a culture of responsible tourism by involving residents, guests and users will also create demand by making sustainable practice and connection with nature an essential part of the tourist experience.

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