

SUSTAINING A TOURIST PARADISE IN MALDIVES AMID THE CHANGING CLIMATE

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Source: APAC OUTLOOK

Executive Summary

Evidence of an increase in average global temperature compared to the preindustrial evolution shows that the world's climate is changing at an alarming rate due to the greenhouse effect, mainly due to human activities such as pollution (NASA, 2019). The increased global temperature has impacted the planet affecting rainfall patterns, increasing coastal erosion, extreme weather events, and melting ice caps and glaciers (IPCC, 2014). The ecosystem and tourism industry are threatened by

some of these negative changes, such as changing weather patterns and rising sea levels. A more pressing concern of climate change for Small Island Countries is the rising sea level; the higher the sea level, the more likely the islands will be affected by storm surges. The Maldives is one of the highly susceptible countries exposed to these adverse effects, which can worsen with rising sea levels, flooding, and coastal erosion. This severely affects the country's tourism sector, which the Maldives rely on for economic growth (NAPA, 2007). Therefore, it is essential to adapt islandably to climate change for the country's survival and tourism sector.

Introduction

Tourism is an essential branch of the economy, but it is also crucial for human entertainment, relaxation, and recreation. Tourism activities are strongly associated with nature and the environment in attracting visitors to the destinations due to their symbiotic relationship with climate (UNWTO and UNEP, 2008). Nevertheless, risks arising from climate change have been of concern to the tourism sector globally. With tourism as one of its key economic drivers and exposure to the adverse effects of climate change, Small Island Countries are the most vulnerable to climate change which hampers the development of the tourism sector (Burns, 2000). However, tourism has also been contributing to the climate change problem accounting for 8% of the global carbon emissions, which is due mainly to Transport (89%), Accommodation (8%), and Leisure Activities (3%) (UNWTO, 2019). Climate change has

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adverse impacts on tourism assets ranging from coral bleaching to loss of biodiversity, glaciers, beaches, and cultural heritage due to extreme weather events (Semenza and Ebi, 2019). These damages affect the destination's attractiveness, translating to a decrease in tourism demand. Small Island Countries heavily depend on international tourism as a source of revenue and income (Wolf . F et al., 2017). Therefore, this policy brief examines tourism in the Maldives and its challenges in sustaining the sector amid the changing climate.

Furthermore, the policy brief analyses the key issues which expose the tourism sector in the Maldives to more vulnerability against climate.



Source: Revelinks Travels

Behind The Beautiful Scenery

Island countries such as the Maldives, one of the countries threatened by the adverse effects of climate change, have been fighting climate change for their survival and that of its key sectors such as tourism. Like many islands, Maldives is a developing

country dependent on tourism. Since 1972, when the country had its first resort, tourism has grown in the Maldives, increasing from 3 to over 132 resorts across atolls (Suresh, 2012). This is because of the continuously increasing number of tourists over the decades in the Maldives (World Bank, 2022).

The tourism sector is the primary economic industry in the Maldives, contributing immensely to GDP, earning foreign exchange earnings, and job creation (Galang, 2017). With its unique concept of "One Island One Resort," where one resort occupies a whole island, enabling resorts to provide more privacy and more luxury for tourists, the country can be typically divided into two parts. One consists of hotels, their own islands comprising tourists and the workforce with no locales. The other part consists of the 2 islands with the local population. The archipelago of the Maldives, with beautiful nature, beaches, biodiversity, and coral reefs, is the primary attraction source for many international tourists.



Source: Sun Photo

However, as one of the island nations under threat by climate change, the tourism sector is very susceptible to climate change due to its dependency. On average,

these islands are 1 meter above sea level (NASA, 2020), so the rising seas are an existential threat as the saltwater creeps up and contaminated fresh water disappears. According to IPCC (2019), the rising sea levels at 3.2mm for the last decades are forecasted to increase to 15mm by 2100 if the trend continues. In such a scenario, the whole country of Maldives could be submerged. Nevertheless, Sea level rise and subsequent increased extreme weather events, flooding, beach erosion, and coral bleaching are damaging the natural and marine attractions, coupled with the country's waste management problems. The loss of coral reefs by the effects of climate change and the poorly handled waste disposal methods magnifies Maldives' vulnerability to climate change hazards.

Challenges that Worsen the Vulnerability of Tourism in the Maldives

Given the tourism industry's reliance on dependent communities, climate-related hazards such as beach erosion, drought, rainfall-induced flooding, storm surges, less fresh water, and climate-induced infrastructure damage affect the supply side of tourism. The unpredictability of weather patterns is one of the major concerns of the tourism industry as the country does not have the financial and human capacity to conduct scientific research and assessment on the projections of future climate patterns (Ben, 2022). This makes it difficult for tourism actors and government to make long-term

plans and measures to mitigate the effects of climate change.

As the government of Maldives is pushing the promotion of the One Island One Resort concept, which increases international tourism for the small island destination, yet the dispersed geography is challenging for adequate solid waste management. The dumping of waste on the coast of isolated areas by households suffocates the watercourses of the Island and the beaches and pollutes the shallow groundwater (IUCN, 2018). While 21% of all waste produced in the Maldives is attributed to tourism, resorts take different approaches to solid waste management (Galang, 2017).

One of the government's policies in dealing with the waste problem is establishing waste management infrastructure such as Island Waste Management Centers and Regional Management Facilities (National Solid Waste Management Policy, 2008). These centers and facilities ensure that waste is better managed in close proximity to where it is generated. Yet, most of the Island Waste Management Centers and Regional Management Facilities are not operational due to maintenance and unorganized waste transportation. However, the tourism stakeholders generally practice sustainable waste management methods such as waste segregation and composting or having eco-centers built on the properties that recycle wood, furniture, and glasses and biodegradable waste into compost that feeds the vegetation of many of these properties.

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Non-biodegradable waste such as plastics is sent for recycling (IUCN, 2018). Many tourism resorts have also integrated these practices to help outline inhabited islands manage their solid waste but are challenged with the lack of waste management facilities on local islands and a good transport network. Transportation waste from tourism facilities and island communities is a challenge in developing a comprehensive, cost-effective treatment and disposal network for Maldives' waste management. Nevertheless, the Maldives lack technological adaptive capacity and adequate waste management and disposal facilities. Tourism facilities do not address the broader waste management issues throughout the Maldives, highlighting the need to create awareness through sensitization and training on minimizing waste and environmentally sound waste disposal practices.



Source: IUCN Photo

Though the archipelago faces threats of less freshwater (Phoebe Cohen, 2017) due to climate

change which affects both the tourism and community islands, there is a lack of national strategy and standards for water and wastewater management. This is heavily impacting how water is managed in tourism facilities. Wastewater disposal in some tourism facilities needs to be improved to protect the groundwater. Regular water quality monitoring is often limited to freshwater but not discharge wastewater or treated reused wastewater. While water management is insufficient in the tourism sector, public health issues are a rising concern to local communities due to groundwater contamination. As a result, desalination is often seen as the solution to freshwater scarcity.

Recommendation

Under the threats it faces due to climate change, sustaining the tourism sector in the Maldives requires a strong collaboration between the government, tourism actors, and the local communities. Subsequently, the following are recommended to help the government in its quest.

- I. Increase the level of awareness among tourism actors and local communities on the importance of mitigating climate change impacts through community focus group discussions, workshops, and seminars, as well as reaching out to schools in the form of awareness programs, dramas, and competitions, among schools. A better understanding of climate change would help actors avoid maladaptation and practices that

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render the Island more vulnerable such as mismanagement and dumping of waste. The comprehension of climate change and the exposure of Islands to it by tourism stakeholders would encourage them to invest more in building adaptive, adaptation, and mitigation measures.

- II. Implement an Ecosystem-Based Adaptation (EbA) such as replanting mangroves, seagrass and restoration of coral reefs, which compliments adaptation policies. This will help sustainably conserve and restore the ecosystem while reducing the impact of climate change in the archipelago, such as attenuating waves and erosion (IPCC, 2019). EbA also helps reduce the co2 emissions due to its mitigation co-benefits, such as seagrass replantation.
- III. Set up a waste, water, and coral reef management committee that includes the government, tourism stakeholders, and communities to communicate better, strengthen stakeholder collaboration, and enhance adaptive capacity building. Collaboration such as public-private partnership would facilitate and complement government efforts in properly handling waste across Islands and lighten its financial and technical burden.

- IV. Invest in increasing the capacity of rainwater harvesting tanks to sustainably reduce the shortage of water supply in the country, given that one-third of the population depends on rainwater for drinking. An increase in the capacity of rainwater harvesting tanks would help resolve the inadequacy of water during the dry season for both the tourism industry and the local communities to increase the water supply sustainably.
- V. Sensitize tourists on responsible disposal of waste though government collaboration with tourist operators. This could be done in the form of flyers, posters, and brochures accessible to tourists, for instance in tourist transportations (airplanes, cars, cruise ships), facilities, booking websites etc. With waste from tourists being mostly plastic bottles, sensitizing tourists on proper waste disposal would facilitate waste management, reduce cost of cleaning beaches and pollution.

Conclusion

The Maldives has been committed to its fight against climate change due to its extreme susceptibility, such as staying eco-friendly, using more solar energy rather than diesel, and using hard engineering (e.g., seawalls). However, due to the high cost involved in sustainably implementing some of these measures, it is difficult for the government to utilize them across the Islands. Therefore, there is a dire need for the

government to create climate change awareness across the board and collaborate with stakeholders in the tourism sector and local communities for the sustainable development of the tourism sector and the archipelago, which ensures ownership, participation, and engagement of actors. This helps minimize the Island's vulnerability, enables coping with the impact of climate change, and lessens the burden on the government.

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