

BUSINESS MODEL INNOVATION BASED ON GREEN PRACTICES IN BANDUNG TOURISM DESTINATION MANAGEMENT

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Abstract

Bandung City is one of the main tourist destinations in Indonesia that offers natural beauty, cultural richness, and culinary uniqueness. However, the increasing number of tourist visits also has an impact on increasing pressure on the environment. Data from the Bandung City Environmental Service shows that waste production in this city reached 1,594 tons per day in 2022, with 44.52% of it being food waste. In addition, air quality in Bandung City is in the moderate category, with the Air Pollutant Standard Index (ISPU) ranging from 51-99, which is mostly caused by vehicle emissions and waste burning. This condition emphasizes the need for an innovative approach in tourism management to remain sustainable. This study aims to examine the application of innovative business models based on Green Practices in managing tourist destinations in Bandung City, as well as to formulate business strategies that can increase economic value without sacrificing environmental aspects. The research method used is a qualitative approach with case studies on several tourist destinations in Bandung City that have implemented the concept of environmentally friendly tourism, such as nature tourism areas, agrotourism, and tourist villages. Data collection techniques include in-depth interviews with tourism managers and related parties, field observations, and analysis of supporting documentation. The results of the studies show that the integration of Green Practices in the business model is carried out through 3R (Reduce, Reuse, Recycle)-based waste management, use of alternative energy, limiting the number of visitors, environmental education, and active involvement of local communities in management.

Keywords: Business Model, Green Practices, Sustainable Tourism, Tourist Destination

Introduction

One of the strategic sectors in regional economic development is the tourism sector. The city of Bandung is known as one of the favorite tourist destinations in Indonesia because of its diverse natural resources, unique culture, and very diverse cuisine. However, the rapidly growing tourism sector has environmental consequences. The increase in the number of tourists coming to the city of Bandung has an impact on the high consumption of resources and the production of waste produced, if this is not managed properly it will certainly pollute the environment and reduce the attractiveness of tourism itself. The city of Bandung continues to experience a significant increase in the number of visits. Based on data obtained from BPS and the Bandung City Environmental Service, the increase in tourist visits increased by 15% after the pandemic, as well as an increase in energy use and an increase in the amount of domestic waste from this sector.

With this incident, a transformation of the business model in managing tourist destinations must be carried out by considering environmental aspects. The concept of *green practices* that includes energy efficiency, waste management, environmental education, and local community involvement, is a relevant approach to support sustainable tourism in the city of Bandung.

From previous studies (Genc, 2020; Wiryawan & Arief, 2023; Arifin & Dewi, 2025) it has been raised the need to innovate sustainable business models by combining economic, social, and environmental aspects (*triple bottom line*) in the tourism sector. The current business model is still oriented towards short-term profits only, while the green practices-based approach offers a more adaptive and inclusive long-term solution that is very relevant for the future. The objectives of this study are: (1) To identify how green practices-based business model innovations in tourist destinations in Bandung City, (2) To analyze the impact of implementing these practices on environmental sustainability and the local economy, and (3) To formulate business model strategies that can be used by tourism industry players elsewhere.

Methods

This study uses a qualitative approach method with an exploratory case study design and the subjects of the study are several tourist destinations in the city of Bandung that have implemented the principles of sustainable tourism, three tourist destinations were selected as the main cases:

1. Dago Nature Tourism Area
2. Educational Agrotourism Lembang
3. Cibiru Wetan Tourism Village

The data collection technique used is as follows:

1. In-depth interviews with 12 key informants (tourism managers and community leaders)
2. Participatory observation and field documentation
3. Literature study and analysis of regional environmental policies

Data were analyzed using the interactive model from Miles and Huberman (1994), which consists of data reduction, data presentation, and drawing conclusions/verification.

Results and Discussions

Green Practices Integration

Based on the results of observations and interviews that have been conducted, the tourist destinations studied have generally implemented various environmental conservation efforts, such as 3R-based waste management (Reduce, Reuse, Recycle) by carrying out comprehensive management in sustainable waste management, processing waste into products that are useful and have economic value. For organic waste, such as leftover food and leaves, it is processed into compost which is used for agricultural needs, greening, or parks around the tourist area and inorganic waste such as plastic, paper, and metal is managed through a waste bank, where the community and tourism managers can sort, collect, and exchange the inorganic waste to be recycled or resold. In addition, some of the inorganic waste is also used as a basic material for making handicraft products that have aesthetic value and economic potential. With the existence of a waste bank, it is not only a solution in reducing inorganic waste, but also a means of education and empowerment of local communities in adopting a reuse and recycle-based approach. These steps show a strong commitment to managing environmentally friendly, productive, and sustainable tourist destinations.

The use of alternative energy through the installation of solar panels for lighting in several natural tourism areas has a strategic role in supporting the principles of sustainable tourism. The installation of solar panels can reduce the burden of operational costs, especially in tourist areas with limited electricity infrastructure. Adequate lighting through the installation of solar panels not only improves the comfort and safety of visitors, but can also improve the reputation of the destination as a tourist location that is committed to environmental conservation. This innovation shows a real effort in realizing ecological, innovative, and long-term sustainability-oriented destination management.

At certain times, tourist destination managers in Bandung City implement a policy of limiting the number of visitors as a strategic effort to maintain the environmental carrying capacity in the tourist area. This policy is based on considerations of the ecological and social capacity of the tourist area so that it does not experience damage due to the surge in tourist activity. By regulating the number of visitor capacity, managers can minimize negative impacts on the ecosystem, such as vegetation damage, environmental pollution, and disturbances to local flora and fauna. This visitor restriction aims to maintain the quality of the tourist experience, so that visits can take place more comfortably, safely, and impressively. The policy of limiting the number of visitors reflects the application of the carrying capacity principle which emphasizes the balance between environmental conservation and optimal use of destinations.

Environmental education is consistently provided to visitors as a strategy for sustainable tourism management. This education is delivered to visitors through various media such as installing information boards in strategic locations, holding workshops and exhibitions with environmental themes, and educational programs specifically aimed at visitors from school and university students. The goal is none other than to increase visitors' awareness and understanding of the importance of preserving nature and encouraging responsible tourism behavior. The involvement of local communities is one of the important things in supporting the sustainability of tourist destinations. Communities living around tourist areas are empowered through their roles as local tour guides, craft product artisans, and environmentally friendly homestay managers. This involvement not only provides a direct economic impact on the community, but also strengthens social ties and a sense of ownership of the preservation of tourist areas. The synergy between visitor education and local community empowerment is an important foundation in creating inclusive, sustainable, and environmentally friendly tourist destinations.

In the Dago nature tourism area, various innovations in environmental management have been implemented that show positive results in supporting sustainable tourism. Waste management is carried out through a sorting

system between organic and inorganic waste so that they are not mixed, where organic waste is then processed into compost that can be used for park needs and greening the area without buying from outside. This step significantly reduces the volume of organic waste disposed of in landfills and encourages the formation of a 3R-based waste processing mechanism (Reuse, Reduce, and Recycle). In addition, the application of electric vehicles for internal operations of the tourist area has been proven to be able to reduce carbon emissions by up to 30% compared to the use of vehicles that use gasoline or diesel. This finding is in line with the global trend that electric vehicles can reduce CO₂ emissions in the operational stage by around 30-40%. The use of these environmentally friendly vehicles not only reduces air pollution, but also increases visitor comfort because they are free of pollution and are not noisy and strengthen the image of the tourist area as a destination that consistently implements green practices.

In the Lembang Agrotourism area, organic-based farming methods have been consistently implemented as part of a commitment to sustainable environmental management. The use of compost and cultivation methods without synthetic chemicals not only maintains soil and water quality, but also produces healthy and environmentally friendly agricultural products. The Lembang Agrotourism area also utilizes the installation of solar panels as an alternative energy source for operational needs such as water pumps, lighting, and other supporting facilities. The installation of solar panels can reduce conventional energy consumption, thereby reducing dependence on energy that produces carbon emissions. The combination of the implementation of organic farming methods and the use of renewable energy in Lembang Agrotourism shows the success of the ecotourism principle, while providing a real example of the integration between the agricultural and tourism sectors within the framework of sustainable development in the city of Bandung.

The implementation of various community-based recycling and ecotourism training programs in Cibiru Wetan Village has had a significant impact on social and economic improvements around the tourist area. Based on data from tourism activities, it shows that visitors, including school students, are directly involved in activities such as waste processing using maggots (Black Soldier Fly larvae), making handicrafts from inorganic waste, and the experience of staying in an environmentally friendly homestay and interacting with local culture. In terms of economy, in 2022, Cibiru Wetan Tourism Village managed to attract around 6,000 tourists with a turnover of IDR 1.5 billion, which was managed through BUMDes. This fantastic amount of income reflects the success of the program in creating alternative sources of income that directly support the local economy. From a social perspective, activities carried out jointly between villagers as tour guides, ecotourism managers, and craftsmen can strengthen social ties in the community. Educational tourism experiences, namely 'anti-corruption' and 'culture trip' tours, build solidarity through joint activities and interactions with visitors, while increasing local empowerment. Through a participatory ecotourism approach and innovative waste management, Cibiru Wetan Village has succeeded in bringing about positive economic and social impacts, making this village an example of the success of community-based ecotourism in the city of Bandung.

Green Practices Based Business Model

The business model that can be implemented in sustainability-based tourist destinations in the Bandung area, including Dago, Lembang, and Cibiru Wetan, shows a structure that is consistent with the principles of ecotourism and green economy, where there are three main components in this business model.

The first component is in terms of value proposition, tourist destinations must be able to offer experiences that integrate aspects of education, environmental conservation, and community empowerment. For example, in Cibiru Wetan, tourists not only enjoy nature, but also participate in organic and inorganic waste recycling training and conservation-based activities, while in Agrowisata Lembang visitors gain insight into organic farming practices and the use of renewable energy. This certainly provides an interesting experience for tourists both from within and outside the city of Bandung.

The second component is in terms of business infrastructure, namely that the tourism area is able to utilize existing physical assets and technologies that support the principle of circularity, such as the implementation of waste sorting and composting systems, the use of solar panels, and the use of electric vehicles which collectively reduce the consumption of non-renewable energy and carbon emissions.

The third component, in terms of strategic partnerships, shows a collaborative pattern between local communities who are able to work together, local governments, and the private sector. This partnership not only strengthens the sustainability of the program, but also opens up opportunities for long-term social and economic investment through local capacity development, BUMDes management, and community involvement as key actors in the tourism value chain. This finding shows that the business model implemented has succeeded in integrating environmental, social, and economic dimensions harmoniously, in line with the principles of sustainable development.

Challenges and Supporting Factors

The results of the implementation of green practices-based business models show positive results in several natural tourism areas in Bandung City, but in the process of implementation it is not free from a number of structural and social challenges. One of the main challenges is the initial investment costs which are not small and tend to require large funds, especially in the procurement of environmentally friendly technologies such as the installation of solar panels, procurement of electric vehicles, and procurement of integrated waste management infrastructure.

In addition to the initial investment costs, there is resistance in the form of behavioral actions from some visitors who are not yet familiar with the principles of ecotourism, such as carrying out the obligation to sort organic and inorganic waste, not using single-use plastic, or following the rules on limiting the number of tourists in order to maintain environmental carrying capacity. This is an obstacle to realizing a fully sustainable and environmentally friendly tourism experience.

However, supporting factors such as policy support from local governments, both in the form of facilitating training related to the environment, drafting environmental regulations, and developing BUMDes—as well as high awareness and participation of local communities, have been proven to play an important role in accelerating the implementation of sustainable business models in the tourism sector. Active community participation as local managers, educators, and innovators strengthens the social foundation in the implementation of inclusive and sustainable ecotourism in the city of Bandung.

Conclusion

From several sustainability-based tourism areas in Bandung City such as Dago, Lembang, and Cibiru Wetan which are the objects of research, it shows that the implementation of a business model that integrates educational, conservation, and community empowerment values is able to encourage sustainable ecotourism activities. Value propositions that emphasize educational and environmental-based tourism experiences have increased visitor awareness, while good infrastructure and technology such as the installation of solar panels and waste management systems can support the principles of a circular economy.

With the involvement of local communities and strategic partnerships with government and the private sector and local communities strengthen operational sustainability and socio-economic impacts. The case study of Cibiru Wetan Tourism Village, for example, shows how a participatory approach to ecotourism can generate significant alternative income and strengthen social solidarity through the involvement of residents in various tourism roles.

On the other hand, the results of this study also highlight various challenges, namely the high initial investment costs for green infrastructure, the rejection of visitor behavior towards environmentally friendly policies, and minimal fiscal support from the government. This indicates the need for complementary strategies, such as green incentive schemes, community behavior change training, and socialization of environmental regulations at the regional and national levels. Thus, the success of the green business model in the context of tourism is largely determined by the cooperation and synergy between technological, social, and institutional aspects, as well as the adaptability of the community and area managers in responding to environmental and economic dynamics.

This study also shows that the implementation of a green practices-based business model in managing tourist destinations in Bandung City can also provide real contributions to environmental sustainability and socio-economic empowerment of communities around the tourist area. An approach that combines educational value propositions, circular infrastructure, and strategic partnerships has proven to be able to create a resilient and inclusive tourism system.

From the innovation of business models based on green practices, it can provide a positive contribution to the sustainability of the tourism sector in Bandung City. The strategies implemented such as the 3R system, the use of renewable energy, visitor capacity control, and community involvement have proven effective in increasing resource efficiency and welfare around the tourist area. Although there are still challenges in its implementation such as high investment costs, behavioral changes, and limited policy support, several supporting factors such as community participation and the active role of local governments are the main factors in strengthening the effectiveness and sustainability of the program. It is hoped that in the future, strengthening green fiscal policies, expanding cross-sector partnerships, and increasing the capacity of local communities will be strategic steps to replicate and scale this success to tourist areas, especially in Bandung City.

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