



## Developing The Daun Villa Ubud as an Eco-Hotel Accommodation

Pande Komang Adi Hermawan<sup>1</sup>, Ni Made Ernawati<sup>2</sup>, NiGst Nym Suci Murni<sup>3</sup>  
<sup>1,2,3</sup>Tourism Business Planning, Applied Master Program, Politeknik Negeri Bali, Indonesia  
Email: [1pandead17@gmail.com](mailto:pandead17@gmail.com), [2madeernawati@pnb.ac.id](mailto:madeernawati@pnb.ac.id), [3gustinymsucimurni@pnb.ac.id](mailto:gustinymsucimurni@pnb.ac.id)

Received on 10 October 2024	Revised on 21 October 2024	Accepted on 6 November 2024
--------------------------------	-------------------------------	--------------------------------

### Abstract

**Purpose:** The Daun Villa Ubud in Ubud, Bali, Indonesia, is developed to create environmentally friendly accommodation with a green building concept that focuses on environmental sustainability and empowering local communities. This project is implemented in Payogan Village, Gianyar District, Bali, and is designed to minimize negative impacts on the environment while strengthening socio-economic relations with the local community.

**Research methods:** This research uses a mixed-methods approach that combines quantitative and qualitative analysis. Quantitative data was obtained through field observations and project performance analysis using the earned value method, while qualitative data was collected through semi-structured interviews and focus group discussions with key stakeholders.

**Findings:** The application of the green building concept at The Daun Villa has succeeded in reducing the carbon footprint through the use of local building materials such as wood and bamboo as well as energy-saving technology such as solar panels and LED lights. This project has also succeeded in increasing the involvement of local communities in the development process and resource management, which has had a positive impact on the local economy.

**Implications:** Evaluation of project performance shows that despite challenges in the availability of environmentally friendly materials, the project is still running within the specified budget and time.

**Keywords :** green building, sustainability, earned value, community involvement

### INTRODUCTION

Tourism is an important sector that plays a major role in Indonesia's economic development. In order to achieve sustainable tourism development goals, the Ministry of Tourism and Creative Economy has emphasized the



importance of maintaining cultural identity and improving the welfare of local residents as part of strategic development. One of the concepts that is the main focus is quality tourism, which not only prioritizes quantity such as the number of tourists and income, but also ensures environmental sustainability and socio-economic benefits for tourist destinations (dos Anjos & Kennell, 2019).

As part of efforts to realize sustainable tourism, the concept of ecotourism offers a unified value of tourism that is integrated between a balance in enjoying natural beauty and efforts to preserve it (Haryanto, 2014). Ecotourism is a form of tourism that is responsible for preserving the natural environment, as well as providing economic benefits and maintaining local culture. The main principle of ecotourism is conservation, which makes it an important tool in maintaining the integrity and authenticity of ecosystems in unspoiled areas (Budiarta et al., 2020). Ecotourism in Indonesia continues to experience significant development, especially in areas with high biodiversity such as Bali. This effort is supported by various policies that encourage environmental conservation while improving the welfare of local communities through active participation in tourism activities (Buckley, 2012). This is also reflected in the development of various environmentally friendly accommodation, including Bali which is known as one of the most popular tourist destinations in the world (Hendriyani, 2023). Bali, as an island of 5,870 km<sup>2</sup>, has great potential in developing ecotourism. Various types of tourism such as cultural tourism, marine tourism and culinary tourism are special attractions for tourists. One form of accommodation that is increasingly developing in Bali is villas, especially in the Gianyar area which has a strong tourist attraction.

The construction of villas in Gianyar Regency not only functions as accommodation, but also as part of an ecotourism development strategy which aims to preserve nature and local culture (Sari & Sri, 2018). The construction of environmentally friendly accommodation such as villas with the Eco Hotel concept is one of the innovations in the tourism industry which aims to reduce negative impacts on the environment while increasing tourist attraction. Studies on sustainable hotel management show that the implementation of environmentally friendly practices not only increases operational efficiency, but also strengthens the destination's image as a top choice for environmentally conscious tourists (Jones et al., 2014).

This research focuses on the development project "The Daun Villa Ubud" by PT So Bali Good Property Management, which is planned as a villa complex with an eco hotel concept. This project not only includes aspects of environmentally friendly planning and development, but also prioritizes environmental management, sustainable use of amenities, and improving staff skills in the hospitality sector. Thus, this research aims to examine the environmentally friendly planning, development and management model of The Daun Villa Ubud.

This research is a business project that uses qualitative methods. In this research, theories about sustainable tourism and ecotourism will be used as a basis for analyzing the development model applied. It is hoped that the results of this research can make a real contribution to the development of ecotourism in Bali, as well as support sustainable development goals in the tourism sector.

The main objective of this research is to examine and formulate an environmentally friendly development model for The Daun Villa Ubud, as well as provide recommendations that can be implemented by PT So Bali Good Property Management in sustainable villa management.

## RESEARCH METHODS

This research uses an applied research design which aims to develop The Daun Villa project as environmentally friendly accommodation based on the green building concept. This project is located in Payogan Village, Gianyar District, Bali, and aims to minimize environmental impacts while empowering local communities. This research uses a mixed-methods approach, combining quantitative and qualitative data to provide a comprehensive view of project outcomes and effectiveness. Quantitative data was obtained through direct observations in the field regarding development progress and resource use, while qualitative data was collected through semi-structured interviews with key stakeholders, including contractors, local communities and project management (Moleong, 2018).

Data collection techniques consist of several methods, namely observation to monitor construction implementation, use of environmentally friendly materials, and implementation of energy-saving technology; semi-structured interviews with stakeholders to gain views on project impacts;

documentation which includes project reports, planning documents, and construction photographs; as well as focus group discussions (FGD) with local communities, village governments and project managers to understand the social and economic impacts of the project. Quantitative data was analyzed using the earned value method which combines aspects of time, cost and physical results to measure project performance, while qualitative data was analyzed manually using content analysis techniques to identify key themes from interviews and FGDs.

Software used in managing quantitative data includes Microsoft Excel, which is used to calculate project performance and budgets. This research condition is located in a hilly area with natural vegetation that is still maintained, so the planning and development process takes into account the topography of the land. The main assumption in this research is the active involvement of local communities in supporting project success through their participation in development. Each step of this research is based on the POAC (planning, organizing, actuating, controlling) management theory, which ensures that projects run in accordance with sustainability goals and comply with the ISO 14001:2015 environmental standard, as well as encouraging environmentally friendly and sustainable development.

## FINDINGS

### **Project Implementation**

In this section, findings from The Daun Villa development project as environmentally friendly accommodation are presented which refer to the research questions and objectives. This project uses a green building concept and a sustainability approach in various aspects, including building design, material selection and environmental management. The following is a summary of the results of this project obtained from field data collection, architectural design, and topographic analysis.

The following table shows the results of land surveys carried out at the project site taking into account significant environmental aspects.

Table 1. Results of project land topography survey

No.	Description	Survey data
1	Land area	510 m <sup>2</sup>
2	Land contour	Hilly
3	Height to Sea Level	200 mdpl
4	Environmental conditions	Lots of natural vegetation
5	Number of Large Trees Existing	7 trees
6	Regional zoning	Yellow zone (commercial)

(Source: PT So Bali Good Property Management Survey Data, 2024)

The Daun Villa Eco Project, which is designed as environmentally friendly accommodation, is based on the results of a topographic survey covering a land area of 510 m<sup>2</sup>, hilly land contours, and a height of 200 meters above sea level, which supports an environmentally friendly concept by utilizing the naturally cool climate to reduce energy needs. . The land, surrounded by lots of natural vegetation and seven large trees, will be maintained as part of the landscape design to maintain the balance of the ecosystem and provide a calm atmosphere. Commercial area zoning (yellow zone) ensures that the project is legal and complies with local spatial planning, supporting sustainable development.

Table 2. Use of environmentally friendly materials in the construction of The Daun Villa

Material	Origin	Use
Local wood	Bali	The main structure of the building
Bamboo	Bali	Roof and decoration
Red brick	Local	Exterior wall
Low VOC paint	National	Interior painting
Energy saving LED lights	National	Lighting

(Source: the Daun Villa project design planning document, 2024)

The use of environmentally friendly materials in the construction of Eco the Daun Villa shows a commitment to the principles of sustainability. Local wood from Bali was used for the main structure of the building, supporting efforts to minimize the carbon footprint by reducing transportation of materials from outside the region. Bamboo, which also comes from Bali, is used for the roof and decoration, adding a natural element that blends with the surrounding environment. Local red bricks were chosen for the exterior walls because this material is known to be durable and has good natural insulation. For the interior,

low VOC (Volatile Organic Compounds) paint is used to maintain indoor air quality and reduce emissions of hazardous chemicals. In addition, energy-saving LED lamps are installed as lighting to reduce energy consumption, in line with the green building concept implemented in this project.

The Daun Villa Ubud development project was designed with sustainability and environmentally friendly principles in mind. At the planning stage, this project applies the green building concept by considering ecological, comfort and safety factors. The development plan includes the use of local materials, such as wood, bamboo and brick, to reduce the carbon footprint while supporting the local community economy. In addition, the villa design utilizes environmentally friendly technology, such as solar panels, to reduce dependence on fossil energy. Each planning step is structured to align with long-term sustainability goals. This is in line with the definition of green building put forward by Yas & Jaafer (2020), which states that green building is a building concept designed to reduce negative impacts on the environment through efficient use of energy, water and materials, as well as optimizing the quality of life of residents. The green building concept also emphasizes a balance between economic, social and environmental aspects in achieving long-term sustainability goals, in accordance with the development philosophy of The Daun Villa Ubud.



(Source: PT So Bali Good Property Management architecture)  
Figure 1. Spatial plan of The Daun Villa.

The spatial plan shows optimal use of open space for air circulation, natural lighting, as well as strategic placement of bedrooms and bathrooms. Apart from that, there is a green area designed to maintain the authenticity of the environment around the project.

### **Project Output**

This discussion analyzes the results of The Daun Villa development project based on the management theory POAC (planning, organizing, actuating, controlling), which focuses on implementing environmental sustainability in the development process. This project answers the research question of how green building concepts can be implemented through the POAC management approach.

The planning stage in The Daun Villa project includes developing an environmentally friendly building design by utilizing local materials, such as wood and bamboo, as well as the use of green technology such as solar panels and LED lights. Selecting a strategic location and considering the conservation of natural vegetation is also carried out at this stage. In line with green building principles, planning is focused on reducing the carbon footprint and energy consumption. This is in line with the literature which states that good planning is the key to integrating energy efficiency and sustainable materials in development.

At the organizing stage, The Daun Villa involved various parties, including local workers and building material suppliers from the local community. The project team structure is managed efficiently with a clear division of tasks between architects, engineers and project management. In this case, the involvement of local communities makes a positive contribution to the local economy and strengthens social relations with the community. This organizing also reflects local empowerment practices and collaboration with external parties, which supports social and economic sustainability goals.

Project implementation is proceeding according to the plans that have been made, with an emphasis on efficient resource management. Environmentally friendly building materials such as wood and bamboo are used without damaging the native vegetation on the site. Energy-efficient lighting systems and effective wastewater management were also implemented during

the construction phase. The implementation of this project reflects the application of technology that supports sustainability and resource efficiency, which is in line with the ISO 14001:2015 standard. Challenges faced, such as zoning regulations and limited local material supplies, were successfully overcome through collaboration with local suppliers and design adjustments.

Project control is carried out periodically through routine monitoring and evaluation to ensure that the project runs according to schedule and budget. In this case, the value engineering method is used to identify and reduce waste costs without sacrificing construction quality. Quality control is carried out by monitoring each stage of construction to ensure compliance with environmental and construction standards. An environmental management system implemented in accordance with ISO 14001 helps this project minimize negative impacts on the environment and optimize operational efficiency.

### **Discussion of Research Results**

This discussion uses the management theory POAC (planning, organizing, actuating, controlling) to evaluate the results and achievements of The Daun Villa project. This theory helps identify the extent to which green building and sustainability principles are implemented effectively during the development phase.

At the planning stage, The Daun Villa project emphasized the importance of choosing environmentally friendly materials and technology. In line with green building principles, the main focus of the planning is reducing environmental impact through the use of local materials such as wood, bamboo, as well as the installation of energy-saving technology such as LED lights and solar panels. In addition, the project location was chosen by considering environmental aspects, such as minimizing tree felling and maintaining the diversity of vegetation around the villa. This planning is in accordance with POAC theory which emphasizes the importance of a mature strategic plan to achieve sustainability-oriented project goals.

The project organization phase is progressing well, especially through collaboration with local suppliers to support the local economy. The team structure consisting of architects, engineers and local workers is well organized, where the division of responsibilities is carried out clearly and efficiently. This



project also succeeded in empowering local communities by involving them in material procurement and construction implementation. The organization not only supports the socio-economic aspects of sustainability but also shows how human resource management can be an important part of achieving a project's sustainability goals, in line with POAC principles.

At the implementation stage, the project succeeded in implementing well-planned principles, such as the use of sustainable materials and efficient energy management. Implementation also includes the use of environmentally friendly technology such as waste water treatment systems and the application of natural lighting to reduce energy consumption. Although there were challenges in procuring environmentally friendly materials, the project was able to overcome them by establishing strong relationships with local suppliers. This implementation reflects the application of the Actuating principle in POAC, where project implementation is carried out efficiently and on target, in accordance with established sustainability standards.

The control stage focuses on monitoring the project periodically to ensure implementation is in accordance with the established plan and budget. The value engineering method is used to reduce wasted costs without sacrificing construction quality. Controls are also carried out to ensure that environmental standards, such as ISO 14001, are met throughout the construction process. Regular evaluation of project progress and control of construction quality help the project remain in line with sustainability principles. In accordance with POAC theory, this control ensures that the project runs on the right track and in accordance with the goals that have been set from the start.

Based on the discussion of The Daun Villa development project with the application of POAC (planning, organizing, actuating, controlling) management theory, it can be concluded that this project has succeeded in achieving its goal of creating sustainable, environmentally friendly accommodation. At the planning stage, the project focuses on using local environmentally friendly materials and energy-saving technology, which shows a commitment to reducing the carbon footprint. Organizing actively involves local communities, which strengthens positive socio-economic impacts and ensures the efficiency of team structures. At the implementation (actuating) stage, the project succeeded in implementing an environmentally friendly concept despite facing

challenges such as material limitations, which were overcome through local collaboration.

The controlling stage is carried out through routine supervision and the application of value engineering methods, which ensures the project runs according to schedule and budget without sacrificing quality. The implementation of international environmental standards, such as ISO 14001, shows that this project is not only operationally efficient but also has minimal negative impacts on the environment. Overall, The Daun Villa is a successful example of sustainable development that contributes positively to the environment and local community, as well as becoming a model for similar projects in the future.

## CONCLUSION

The Daun Villa Ubud development project shows that this villa was successfully designed and built by prioritizing the principles of sustainability and environmental friendliness. The project uses local materials such as wood, bamboo and brick, as well as recycled materials, which not only contributes to a reduced carbon footprint but also supports sustainable construction practices. By implementing the green building concept, The Daun Villa creates accommodation that is not only comfortable for visitors but also functions as a socially and environmentally responsible business model.

The villa also plays an important role in advancing sustainable tourism through collaboration with local suppliers and active involvement of the local community, providing positive impacts both economically and socially. A commitment to sustainability is reflected in every aspect of the project, from design to the use of environmentally friendly technology. This project not only meets efficient construction standards but also serves as an example of how tourism can be developed responsibly and sustainably, facing global environmental challenges with innovative solutions and oriented towards long-term sustainability.

## REFERENCES

- Buckley, R. (2012). Sustainable tourism: Research and reality. *Annals of Tourism Research*, 39(2), 528–546. <https://doi.org/10.1016/j.annals.2012.02.003>.
- Budiarta, P., Susanto, B., Nengah Wijaya, I., & Yudistira, P. G. C. (2020). Strategi Pemasaran Objek Wisata Alas Kedaton Untuk Meningkatkan Jumlah Kunjungan Wisatawan. *Seminar Nasional Terapan Riset Inovatif (SENTRINOV)*, 6(2).
- dos Anjos, F. A., & Kennell, J. (2019). Tourism, governance and sustainable development. *Sustainability (Switzerland)*, 11(16). <https://doi.org/10.3390/su11164257>.
- Haryanto, J. T. (2014). Model Pengembangan Ekowisata Dalam Mendukung Kemandirian Ekonomi Daerah Studi Kasus Provinsi DIY. *Kawistara*, 4(3), 255–330. <https://doi.org/https://doi.org/10.22146/kawistara.6383>.
- Hendriyani, D. A. G. I. (2023, January 24). Siaran Pers: Bali Masuk 10 Destinasi Terpopuler Dunia Versi TripAdvisor Ungguli London dan Paris. Kementerian Pariwisata Dan Ekonomi Kreatif/Badan Pariwisata Dan Ekonomi Kreatif. <https://kemenparekraf.go.id/kebijakan/siaran-pers-bali-masuk-10-destinasi-terpopuler-dunia-versi-tripadvisor-ungguli-london-dan-paris>.
- Jones, P., Hillier, D., & Comfort, D. (2014). Sustainability in the global hotel industry. *International Journal of Contemporary Hospitality Management*, 26(1), 5–17. <https://doi.org/10.1108/IJCHM-10-2012-0180>.
- Moleong. (2011). *Metodologi Penelitian Kualitatif*. Rosda.
- Moleong, L. J. (2018). *Metodologi Penelitian Kualitatif*. PT Remaja Rosdakarya Offset.
- Neuman, W. L. (2013). *Metodologi Penelitian Sosial: Pendekatan Kualitatif dan Kuantitatif*. PT Indeks.
- Neuman, W. L. (2016). *Social Research Methods: Qualitative and Quantitative Approach*. Allyn and Bacon.

- Sari, R. P. N., & Sri, P. A. A. (2018). Perkembangan Usaha Villa, Homestay Dan Kontribusinya Terhadap Ekonomi Masyarakat Lokal Di Desa Petulu Ubud Bali. *Jurnal Analisis Pariwisata*, 18(1).
- Stainback, S. S. W. (1988). *Understanding & Conducting Qualitative Research*. Kendall / Hunt Publishing Company.
- Yas, Z., & Jaafer, K. (2020). Factors influencing the spread of green building projects in the UAE. *Journal of Building Engineering*, 27. <https://doi.org/10.1016/j.jobbe.2019.100894>.