

Developing a Zero Organic Waste to Landfill-Based Organic Waste Management Model to Support Sustainable Tourism: A Case Study of COMO Uma Canggu, Bali

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ABSTRACT

Objective: This study aims to analyze the implementation of the Zero Organic Waste to Landfill program at COMO Uma Canggu through the management functions of Planning, Organizing, Actuating, and Controlling (POAC), and to examine its contribution to sustainable tourism based on the Triple Bottom Line (People, Planet, Profit) and the Environmental Management System (EMS) framework. **Method:** A qualitative single-case study approach was employed. Data were collected through in-depth interviews with 21 informants, field observations, and document analysis, and analyzed using the interactive model of Miles, Huberman, and Saldaña. **Results:** The findings indicate that the hotel has successfully integrated POAC into an EMS-based organic waste management system through source segregation, composting, Black Soldier Fly (BSF) larvae processing, Eco Enzyme production, and continuous monitoring supported by the Green Team. The Waste Diversion Rate increased from 42.5% in 2023 to 63% in 2025, demonstrating a substantial reduction in landfill disposal while generating environmental, social, and economic benefits. **Novelty:** This study contributes a practical model of organic waste management that can be adopted by hotels and tourism destinations seeking to strengthen sustainable tourism through circular resource management and environmentally responsible operations.

INTRODUCTION

The rapid growth of the global tourism industry has contributed substantially to economic development, employment generation, and community well-being, but it has also intensified environmental pressures through increasing waste generation. The United Nations Environment Programme projects that global municipal solid waste generation could rise from about 2.1 billion tonnes in 2023 to 3.8 billion tonnes by 2050 without stronger waste-management interventions [1]. In response, zero-waste and circular-economy strategies increasingly emphasize waste prevention, resource recovery, and the continued circulation of materials rather than disposal in landfills [2].

Within tourism and hospitality, waste management has become a central sustainability issue because hotels generate food waste, kitchen waste, landscape waste, and other service-related residues on a daily basis. Recent hospitality research shows that sustainable waste management increasingly combines source separation, recovery, recycling, and organizational coordination [3], while studies of tourism destinations identify integrated waste-management systems as a prerequisite for long-term destination sustainability [4]. Strategic waste-management research likewise stresses that

effective programs require coordinated technical and managerial action rather than end-of-pipe disposal alone [5].

Food waste is particularly important in hospitality operations because of its high volume, rapid decomposition, and potential environmental impacts. Research on the hospitality and food-service sector emphasizes prevention, redistribution, biological treatment, and resource recovery as complementary pathways for reducing food waste [6]. Critical reviews further show that circular approaches can reduce landfill dependence while creating value from organic residues [7], and broader circular-economy reviews in hospitality highlight the importance of linking waste recovery with organizational commitment and stakeholder participation [8].

These practices are consistent with Circular Economy Theory. Kirchherr, Reike, and Hekkert define the circular economy as an economic system that replaces the end-of-life concept through reducing, reusing, recycling, and recovering materials across multiple levels [9]. Geissdoerfer et al. similarly position the circular economy as a sustainability-oriented paradigm based on closed material loops and the simultaneous pursuit of environmental quality, economic prosperity, and social well-being [10]. In the hotel context, this perspective supports the conversion of organic waste into compost, biofertilizer, animal feed, Eco Enzyme, or other useful outputs rather than treating waste as an unavoidable final residue.

Stakeholder Theory provides a complementary perspective because sustainable waste management depends on coordinated action among internal and external actors. Freeman argues that organizational performance depends on creating value for stakeholders who affect or are affected by organizational activities [11]. In hospitality, this means that management, employees, guests, local communities, governments, waste-management companies, and environmental partners all influence the effectiveness of sustainability programs; research on green hotel management similarly highlights the importance of organizational support and cross-functional involvement [12].

From a managerial perspective, the Planning, Organizing, Actuating, and Controlling (POAC) framework provides a structured way to analyze how sustainability policies are formulated, responsibilities are allocated, operational practices are implemented, and performance is evaluated [13]. Sustainability outcomes can then be assessed through the Triple Bottom Line concept, which balances People, Planet, and Profit [14]. Environmental Management Systems provide the organizational mechanism for identifying, controlling, monitoring, and continually improving environmental performance [15], while ISO 14001 formalizes continuous improvement through a Plan-Do-Check-Act cycle and documented environmental controls [16].

At the destination level, sustainable tourism requires tourism development to consider current and future economic, social, and environmental impacts [17]. The literature further emphasizes the low-carbon imperative for destinations [18], the importance of resilience in sustainable tourism systems [19], the need for integrated

destination-management strategies [20], and the growing relevance of credible sustainability strategies to tourism businesses and their customers [21]. Together, these perspectives indicate that hotel waste management should be evaluated not only as a technical activity but also as a managerial, environmental, social, and competitive capability.

Bali faces particularly acute waste-management pressures because of the scale and concentration of tourism activity. Official provincial information reported approximately 3.4 thousand tonnes of waste generated per day in Bali in 2025, reinforcing the urgency of source-based management and reduced reliance on final disposal facilities [22]. At the local level, the source-based waste-management requirements adopted in Canggu further increase the responsibility of hotels to separate and process organic waste. COMO Uma Canggu has responded through source segregation, composting, Black Soldier Fly (BSF) processing, Eco Enzyme production, and collaboration with Magi Farm, Jiwa Garden, ecoBali, and BUMDes Canggu. Although circular hotel practices and sustainable hotel management have been widely discussed [23], [24], the literature still gives comparatively limited attention to how management functions, environmental management systems, and operational partnerships are integrated into a replicable Zero Organic Waste to Landfill model [25].

Accordingly, this study aims to analyze the implementation of the Zero Organic Waste to Landfill program at COMO Uma Canggu based on the Planning, Organizing, Actuating, and Controlling (POAC) management functions and to develop an organic waste-management model that supports sustainable tourism through the integration of the Triple Bottom Line and Environmental Management System frameworks. The study is expected to contribute theoretically to sustainable hospitality-management literature and practically by offering a measurable and replicable model for hotels seeking to reduce landfill dependence while supporting the broader people-and-planet orientation of sustainable tourism [26].

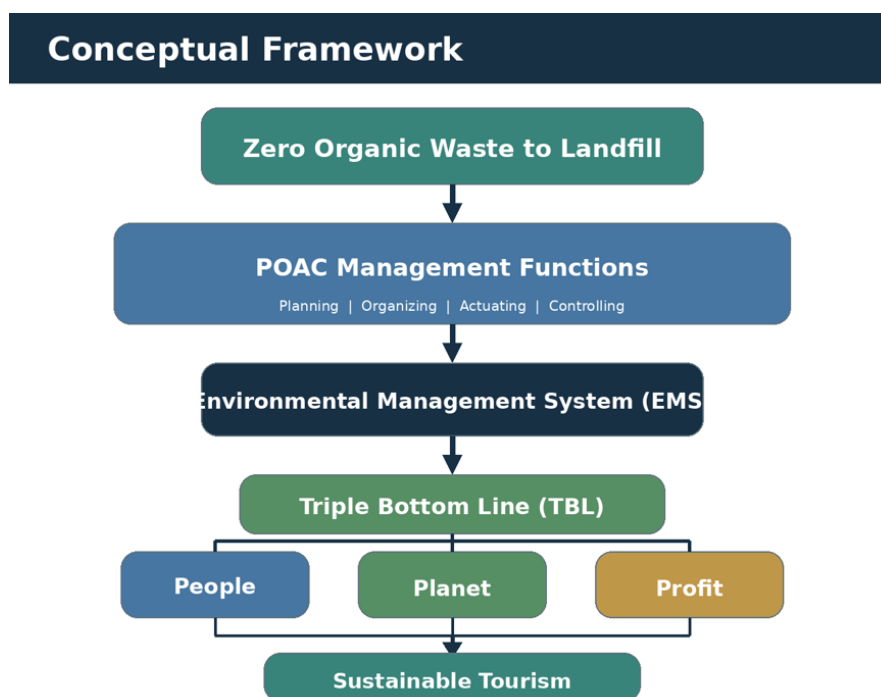


Figure 1. Conceptual Framework of Zero Organic Waste to Landfill for Sustainable Tourism

Source: Developed by the authors (2026).

Since this study employs a qualitative approach with a single-case study design, formal statistical hypotheses are not required. The conceptual proposition underlying this study is that the integration of Zero Organic Waste to Landfill, the POAC management functions, the Environmental Management System (EMS), and the Triple Bottom Line (TBL) can strengthen sustainable environmental performance through coordinated resource management, material recovery, and stakeholder collaboration.

RESEARCH METHOD

This study employed a qualitative approach with a single-case study design to obtain an in-depth understanding of the implementation of the Zero Organic Waste to Landfill program as an organic waste management model supporting sustainable tourism. A qualitative approach was selected because it enables the exploration of managerial processes, stakeholder interactions, and operational practices within their context, as emphasized in qualitative research design [27]. The case study design was used because the research focused on one organization that has implemented an integrated organic waste management system and received recognition through environmental certification; this design refers to the case study concept of examining a phenomenon in depth within its real-life context [28].

The research was conducted at COMO Uma Canggu, Badung Regency, Bali Province. The site was selected purposively because the hotel is one of the star-rated hotels in Bali that has implemented the Zero Organic Waste to Landfill program through organic waste treatment based on composting, Black Soldier Fly (BSF), Eco Enzyme

production, and an Environmental Management System (EMS), as evidenced by EarthCheck Silver Certification. In addition, the hotel has established partnerships with several organizations, including Magi Farm, Jiwa Garden, ecoBali, and BUMDes Canggu, to support sustainable waste management.

Research informants were selected using purposive sampling, namely an informant-selection technique based on knowledge, experience, and direct involvement in the implementation of the Zero Organic Waste to Landfill program. This technique enabled the researcher to obtain information-rich cases in accordance with the research objectives [29]. A total of 21 informants participated in the study, consisting of hotel management, the Green Team, operational staff from several departments, and external partners involved in organic waste management. The informants included the General Manager, Sustainability Manager, Executive Chef, Engineering Manager, Housekeeping Manager, Human Resources Manager, Purchasing Manager, Green Team members, operational staff, and representatives of Magi Farm, Jiwa Garden, ecoBali, and BUMDes Canggu. The characteristics of the key informants are summarized in Table 1.

Table 1. Characteristics of Informants

No.	Informant Code	Position	Department	Role in Organic Waste Management
1	I-01	General Manager	Management	Sustainability policy maker
2	I-02	Executive Chef	Food and Beverage	Food waste management
3	I-03	Housekeeping Manager	Housekeeping	Waste segregation implementation
4	I-04	Engineering Manager	Engineering	Environmental infrastructure
5	I-05	Sustainability Coordinator	Green Team	Program coordination
6	I-06	Representative	Magi Farm	BSF processing partner
7	I-07	Representative	Jiwa Garden	Composting partner
8	I-08	Representative	ecoBali	Waste collection partner

Source: Processed by the authors (2026).

Data were collected using three main techniques: in-depth interviews, participatory observation, and document analysis. Semi-structured interviews were conducted using an interview guide developed based on the Planning, Organizing, Actuating, and Controlling (POAC) management functions, the implementation of the Environmental Management System (EMS), and the Triple Bottom Line dimensions (People, Planet, and Profit). Observations covered the entire organic waste management process, from source segregation, collection, and composting to treatment using Black Soldier Fly (BSF) larvae, Eco Enzyme production, monitoring, and evaluation. Document analysis complemented the primary data through a review of hotel sustainability reports, standard operating procedures (SOPs), Waste Diversion Rate (WDR) reports, EarthCheck documents, activity photographs, and other supporting documents.

Data were analyzed using the interactive analysis model of Miles, Huberman, and Saldaña, which comprises four stages: data collection, data condensation, data display, and drawing and verifying conclusions [30]. Interview, observation, and documentation data were first transcribed and then coded according to the research themes. The data were subsequently grouped according to the POAC functions, the implementation of the Environmental Management System (EMS), and their contribution to the People, Planet, and Profit dimensions within the Triple Bottom Line framework. The results were then interpreted to formulate a Zero Organic Waste to Landfill-based organic waste management model that supports sustainable tourism.

Data trustworthiness was ensured through source triangulation, technique triangulation, and time triangulation. Source triangulation was conducted by comparing information obtained from hotel management, operational staff, the Green Team, and external partners. Technique triangulation was carried out by comparing interview, observation, and documentation findings, while time triangulation involved collecting data at different times to verify the consistency of the information. In addition, member checking was conducted with key informants. The entire research process followed the principles of credibility, transferability, dependability, and confirmability [31].

RESULTS AND DISCUSSION

Results

COMO Uma Canggu is one of the star-rated hotels in Canggu, Badung Regency, that has implemented the Zero Organic Waste to Landfill program as part of its corporate sustainability strategy. The program was developed in response to the increasing generation of organic waste from hotel operations and the Bali Provincial Government policy on source-based waste management. Unlike conventional systems that rely on landfill disposal, the hotel implements an integrated management system that prioritizes the recovery and reuse of organic waste based on circular economy principles. This approach is consistent with the circular economy concept, which regards waste as a resource that can be reused through material recovery and recirculation [1], [2]. In the

hospitality industry, circular economy practices can reduce dependence on landfills while improving resource-use efficiency and supporting sustainable tourism [7].

Unlike conventional waste management approaches oriented toward final disposal in landfills, COMO Uma Canggu applies a management system based on Circular Economy principles, which view waste as a resource with economic value that can be reused through resource recovery. Under this approach, organic waste is not treated as a final residue but as a raw material that can be converted into new products such as compost, biofertilizer, bioenergy, and Eco Enzyme. This approach is consistent with recommendations for transitioning toward a circular economy to improve resource efficiency and reduce environmental impacts [1], [2].

Organic waste management begins with source segregation. Organic waste is generated from the kitchen (food waste), restaurant, garden (landscape waste), employee canteen, and guest-room areas. All waste is separated from inorganic waste before being processed using three main methods: composting, treatment with Black Soldier Fly (BSF) larvae through a partnership with Magi Farm, and fermentation into Eco Enzyme. The resulting compost is reused for hotel landscaping and distributed to local farmers, while Eco Enzyme is used as an environmentally friendly cleaning agent and distributed to the community. The organic waste sources and processing methods are summarized in Tables 2 and 3.

Table 2. Organic Waste Sources at COMO Uma Canggu

Organic Waste Source	Type of Waste	Processing Method
Kitchen	Food waste	BSF
Restaurant	Leftover food	BSF
Garden	Landscape waste	Composting
Employee Canteen	Food waste	BSF
Guest Rooms	Organic waste	Segregation and composting

Source: Processed from COMO Uma Canggu operational data (2026).

Table 3. Organic Waste Processing System

Processing Method	Output	Utilization
Composting	Compost	Landscape and local farmers
Black Soldier Fly (BSF)	Larvae	Animal feed
Eco Enzyme	Liquid enzyme	Eco-friendly cleaning products
Waste Segregation	Separated waste	Recycling process

Source: Processed by the authors based on field observation (2026).

The implementation of organic waste management begins with source segregation, in which waste is separated directly at the point of generation. All hotel operational units are required to separate organic waste from inorganic waste before it

enters the treatment stage. This system reduces the risk of material contamination, thereby maintaining the quality of organic waste and allowing it to be optimally utilized. After segregation, organic waste is processed using three main methods: composting, Black Soldier Fly (BSF) treatment through a partnership with Magi Farm, and Eco Enzyme fermentation. The compost produced is reused as fertilizer for hotel landscaping and distributed to local farmers, while Eco Enzyme is used as an environmentally friendly cleaning liquid and shared with surrounding communities as part of the hotel's corporate social responsibility program.

Program implementation demonstrated a significant improvement in environmental performance. Operational data show that the Waste Diversion Rate (WDR) increased from 42.5% in 2023 to 51.2% in 2024 and reached 63.0% in 2025. The increase in the Waste Diversion Rate indicates the growing effectiveness of the hotel's organic waste management system. Waste diversion from landfills is an important indicator of sustainable waste management because it reflects increased resource recovery and reduced dependence on final disposal [1]. During this period, all organic waste was successfully diverted from landfills, while the remaining residues sent to landfill consisted of mixed non-organic waste. In addition, the hotel processed 12,590.7 kg of food waste and 28,430.9 kg of landscape waste and produced more than 16,940 liters of Eco Enzyme, resulting in a cumulative diversion of more than 261 tons of organic waste from landfills. The WDR achievements are summarized in Table 4.

Table 4. Waste Diversion Rate Achievement

Year	Waste Diversion Rate (%)	Performance Category
2023	42.5	Moderate
2024	51.2	Good
2025	63.0	Very Good

Source: COMO Uma Canggu Sustainability Report (2025), processed by the authors (2026).

The implementation results show a significant improvement in environmental performance during the study period. Operational data indicate that the Waste Diversion Rate (WDR) increased from 42.5% in 2023 to 51.2% in 2024 and reached 63.0% in 2025. The increase of 20.5 percentage points over the three-year period demonstrates the growing effectiveness of the hotel's organic waste management system in diverting waste from landfills toward reuse and recovery processes. The use of waste-diversion indicators is consistent with sustainable waste management approaches that emphasize material recovery and landfill reduction [1].

In addition to the increase in the Waste Diversion Rate, during the study period the hotel processed 12,590.7 kg of food waste and 28,430.9 kg of landscape waste and produced more than 16,940 liters of Eco Enzyme. Cumulatively, more than 261 tons of organic waste were diverted from landfills. These findings demonstrate that the Zero

Organic Waste to Landfill approach can transform organic waste into productive resources that provide both ecological and economic benefits.

The findings indicate that the successful implementation of Zero Organic Waste to Landfill is influenced not only by waste-treatment technologies but also by the effectiveness of the organizational management system. From the perspective of Planning, Organizing, Actuating, and Controlling (POAC) [13], planning is reflected in the formulation of sustainability policies, the establishment of Waste Diversion Rate targets, and the provision of waste-management infrastructure. Organizing is implemented through the establishment of the Green Team, the allocation of responsibilities across departments, and the development of partnerships with external parties. Actuating is reflected in waste segregation, composting, BSF processing, Eco Enzyme production, and continuous employee education, while controlling is carried out through waste-volume recording, Waste Diversion Rate monitoring, internal audits, and periodic evaluations based on EarthCheck indicators. A summary of POAC implementation is presented in Table 5.

Table 5. Implementation of POAC

Management Function	Implementation	Expected Outcome
Planning	Sustainability policy, SOP, WDR targets	Clear environmental objectives
Organizing	Green Team and external partnerships	Coordinated implementation
Actuating	Segregation, BSF, composting, Eco Enzyme	Organic waste reduction
Controlling	WDR monitoring, EarthCheck audit	Continuous improvement

Source: Processed by the authors based on interview and observation data (2026).

The application of the POAC functions demonstrates that successful organic waste management depends not only on technical aspects but also on the organization's capacity to manage change. This is consistent with the principle that planning, organizing, actuating, and controlling functions must be systematically integrated to achieve organizational objectives [13].

From an Environmental Management System (EMS) perspective, the implementation of Zero Organic Waste to Landfill demonstrates consistent application of the Plan-Do-Check-Act (PDCA) cycle. All waste-management activities are planned, implemented, monitored, evaluated, and continuously improved as part of a continuous improvement process [15]. This finding indicates that the increase in the Waste Diversion Rate did not occur incidentally but resulted from a structured environmental management system consistent with ISO 14001 principles [16].

When analyzed using the Triple Bottom Line (TBL) approach [14], the program provides tangible benefits across the three sustainability dimensions. From the Planet perspective, the amount of organic waste sent to landfills was reduced, potential methane emissions from decomposition were minimized, and organic resources were increasingly reused as compost, Eco Enzyme, and biomass through BSF processing. From the People perspective, the program enhanced employees' environmental awareness and strengthened collaboration with local communities. From the Profit perspective, reduced disposal requirements, the reuse of compost, and an improved corporate reputation generated economic value and strengthened competitiveness. A summary of the TBL analysis is presented in Table 6 and Table 7.

Table 6. Triple Bottom Line Analysis

Dimension	Research Findings	Sustainability Contribution
People	Employee participation and community partnership	Increased environmental awareness
Planet	Zero Organic Waste to Landfill	Reduced landfill disposal and GHG emissions
Profit	Improved environmental reputation and certification	Enhanced competitiveness

Source: Processed by the authors (2026).

Table 7. Comparison with Previous Studies

Previous Study	Main Findings	Similarities	Differences	Research Contribution
Filimonau & De Coteau (2023)	Food waste reduction in hotels	Focus on food waste management	Limited management perspective	Integrates POAC with EMS and TBL
Pirani & Arafat (2022)	Circular economy implementation	Waste recovery	Focus on circular economy	Introduces Zero Organic Waste to Landfill model
Rasoolimanesh et al. (2023)	Community participation	Stakeholder collaboration	Tourism destination context	Hotel-based sustainability model
This Study	Integrated organic waste management	Sustainable waste practices	Combines POAC, EMS, TBL, and EarthCheck	Develops an integrated management model applicable to the hotel industry

Source: Literature review and research findings (2026).

The findings are consistent with studies of food waste management in the hospitality industry showing that circular economy principles can improve resource-use

efficiency while reducing environmental impacts [7]. The findings also support circular economy studies in hospitality that emphasize the importance of organizational commitment, employee involvement, and relationships with external stakeholders [8]. However, this study provides a new contribution by demonstrating that the integration of Circular Economy, POAC, Environmental Management System, and Triple Bottom Line frameworks can form a more comprehensive organic waste management model than approaches focused solely on waste-treatment technology.

Theoretically, this study extends research on Circular Economy implementation in the hospitality industry by positioning management functions as a determinant of the success of the Zero Organic Waste to Landfill program. Unlike studies that emphasize technical aspects of waste treatment, this study shows that program success is influenced by the integration of organizational governance, environmental management systems, and sustainability evaluation. These findings are consistent with the circular economy framework, which emphasizes resource reduction, reuse, recycling, and recovery [9], as well as the relationship between the circular economy and broader sustainability objectives [10].

From a practical perspective, the findings imply that hotels do not need to wait for complex waste-treatment technologies before initiating a Zero Organic Waste to Landfill program. Success depends more strongly on management commitment, clear operational systems, the involvement of all departments, and collaboration with waste-management partners. Therefore, the model implemented at COMO Uma Canggu has the potential to be replicated by other hotels to strengthen sustainable hotel-management practices [23], [25].

The planning stage was implemented by establishing the hotel's sustainability vision, organic waste management policy, a target to increase the Waste Diversion Rate by approximately 10% annually, standard operating procedures (SOPs), and the integration of sustainability targets into the EarthCheck Environmental Management System (EMS) standards. Planning also included identifying waste-generation sources, infrastructure requirements, waste-processing partners, and the program's operational budget. The findings show that successful planning depends not only on policy formulation but also on integrating sustainability targets into the organizational management system, in line with the importance of top-management commitment and long-term planning in sustainable hospitality management [25].

The organizing function was implemented through the establishment of a Green Team with a dual-coordinator structure involving all hotel operational departments. Each department has different responsibilities according to its source of waste generation. The Food and Beverage Department is responsible for food waste, Housekeeping segregates waste from guest rooms, Garden & Maintenance manages compost for landscaping, and People & Culture coordinates employee education and awareness. In addition to the internal organizational structure, the hotel has developed partnerships with Magi Farm, Jiwa Garden, ecoBali, and BUMDes Canggu. The

establishment of the Green Team demonstrates that organic waste management requires cross-departmental coordination and stakeholder support, as emphasized in research on green management in the hospitality industry [12].

Program implementation includes source segregation, collection according to waste type, processing using BSF larvae, composting of garden waste, Eco Enzyme production, and utilization of processed outputs in hotel operations. Employees receive regular education through briefings, internal training, and Green Team campaigns so that all staff understand organic waste management procedures. These activities show that program success depends not only on technology but also on organizational behavioral change. The recovery of food waste as a new resource is an important strategy in hospitality waste management [6].

Control activities are conducted through daily waste logs, Waste Diversion Rate monitoring, internal audits, photographic verification, and periodic evaluations based on EarthCheck standards. This system enables management to identify declines in performance quickly, as occurred during the evaluation of the Jiwa Garden partnership in mid-2024, which caused a temporary decline in the WDR. The finding was subsequently addressed through corrective actions, including strengthened partner coordination, SOP adjustments, and increased supervision, allowing performance to improve again in the following year. Continuous monitoring, evaluation, and corrective action are core principles of environmental performance improvement under ISO 14001 [16].

Program implementation has had a positive impact on employees' environmental awareness through regular training and active involvement in the Green Team. In addition, the hotel has developed partnerships with local communities through Magi Farm, Jiwa Garden, BUMDes Canggu, and the Eco Enzyme Nusantara community. The program also strengthens the hotel's image as a property that applies sustainability practices. The involvement of local communities and employees demonstrates that sustainability is not solely environmentally oriented but also supports social capacity building; community participation is an important factor in sustainable tourism development [32].

The environmental dimension represents the most visible impact of program implementation. All organic waste was successfully diverted from landfills through composting, BSF processing, and Eco Enzyme production. In addition to reducing the burden on landfills, the program contributes to the prevention of methane emissions, improved soil quality through the use of organic compost, protection of water quality, and preservation of coastal ecosystems through collaboration with environmental communities. Organic waste management and landfill reduction are important components of sustainable waste-management and environmental-impact mitigation strategies [1].

Contrary to the common assumption that organic waste management immediately reduces operating costs, this study found that implementation initially

increased costs because the hotel had to finance several waste-management partners. Nevertheless, indirect economic benefits were obtained through enhanced reputation, improved hotel competitiveness, a stronger image as a sustainable property, and the successful achievement of EarthCheck Silver Certification. From a long-term perspective, sustainable hospitality practices can generate benefits through operational efficiency and stronger competitive positioning [25], while the sustainable tourism agenda emphasizes the balance of economic, social, and environmental benefits as a primary objective [26].

Discussion

The findings reinforce previous studies showing that sustainable waste management is an important element in supporting more responsible tourism and hospitality practices [3], [4]. The similarities lie in source-level waste reduction, the reuse of organic waste, and support for circular economy principles. However, unlike those studies, the present research demonstrates more explicitly that program success is strongly influenced by structured management functions through Planning, Organizing, Actuating, and Controlling (POAC).

The findings also support previous evidence that hotel sustainability practices require employee involvement and consistent organizational support [12]. In a broader context, collaboration with communities and external stakeholders is also important for strengthening destination sustainability [32]. This study shows that individual behavioral change must be supported by a clear organizational structure, a documented monitoring system, and collaboration with external partners so that waste management becomes part of the organizational management system rather than merely an operational activity.

Compared with approaches that only assess recycling potential or food waste reduction, this study provides empirical evidence that such potential can be realized through consistent implementation of Zero Organic Waste to Landfill. COMO Uma Canggu successfully diverted all organic waste from landfills through a combination of source segregation, composting, BSF, and Eco Enzyme production. This finding strengthens the argument that circular practices in hotels must be translated into measurable and integrated operational systems [7], [23].

The main contribution of this study is the development of a Zero Organic Waste to Landfill-Based Organic Waste Management Model that integrates three main frameworks: the POAC management functions, an EarthCheck-based Environmental Management System (EMS), and the Triple Bottom Line (People, Planet, and Profit). The model demonstrates that successful organic waste management is determined not only by treatment technologies but also by management leadership, cross-departmental coordination, strategic partnerships, documented monitoring systems, and continuous evaluation. Thus, the study contributes theoretically by enriching the literature on sustainability management in the hospitality industry and practically by offering a model that can be replicated by other hotels in Bali and other tourism destinations to support sustainable tourism.

The theoretical contribution is the extension of hotel sustainability-management studies by integrating POAC theory, the Environmental Management System, the Triple Bottom Line, and the Zero Organic Waste to Landfill concept into a comprehensive conceptual model.

The empirical contribution is evidence that the implementation of organic waste management can increase the Waste Diversion Rate to 63% and divert all organic waste from landfills through composting, BSF technology, and Eco Enzyme production.

The practical contribution is the development of an organic waste management model that can be replicated by other hotels in Bali and other tourism destinations as part of sustainable tourism and circular economy implementation.

CONCLUSION

Fundamental Finding: The findings show that successful program implementation is determined not only by the use of organic waste-treatment technologies but also by the application of integrated management functions. Clear planning, organization through the Green Team, implementation involving all departments and external partners, and a control system based on Waste Diversion Rate (WDR) monitoring and EarthCheck standards have created an effective and sustainable organic waste management system. The program successfully diverted all organic waste from landfills through composting, the use of Black Soldier Fly (BSF) larvae, and Eco Enzyme production, thereby generating environmental, social, and economic benefits simultaneously. **Implication:** The integration of these four concepts broadens the perspective that successful waste management depends not only on technological innovation but also on organizational governance, stakeholder collaboration, and continuous evaluation mechanisms. The resulting conceptual model provides an analytical framework that can serve as a reference for future research on sustainability in the tourism and hospitality sectors. This study emphasizes that the transition toward Zero Organic Waste to Landfill requires a holistic approach that integrates managerial, environmental, social, and economic aspects within a single sustainable management system. Therefore, local governments, destination managers, hotel associations, and industry actors need to strengthen collaboration in policy formulation, human-resource capacity development, and the implementation of measurable environmental management standards so that organic waste-management practices can be replicated more widely as part of efforts to achieve sustainable tourism. **Limitation:** This study was conducted as a single-case study at COMO Uma Canggu, Bali, which limits the generalizability of the findings to other hotels, types of accommodation, and tourism destinations with different operational, organizational, and environmental conditions. In addition, the qualitative approach primarily emphasizes contextual understanding of the implementation process, meaning that the effectiveness of the proposed Zero Organic Waste to Landfill model has not yet been quantitatively tested across a broader sample of hospitality businesses. **Future Research:** Future research is recommended to test the

organic waste-management model developed in this study across different types of accommodation and tourism destinations using mixed-methods or quantitative approaches. Comparative studies across hotels and regions are also needed to evaluate the factors influencing the successful implementation of Zero Organic Waste to Landfill so that the model can achieve greater generalizability and support the development of broader waste-management policies in the tourism sector.

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