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Women and the Green Economy in Supporting Sustainable Tourism in Penglipuran Village: A Multi-MOORA Approach

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ABSTRACT

Background and research gap - Women's contributions to green economy-oriented tourism remain insufficiently examined through integrated sustainability assessments, particularly within community-based tourism in emerging economies.

Purpose - This study evaluates women's roles in advancing the green economy and sustainable tourism development in Penglipuran Tourism Village, Bali, whilst identifying the contributions of key stakeholders.

Design/methodology/approach - A mixed-methods approach employing Multi-Objective Optimisation by Ratio Analysis plus Full Multiplicative Form (MULTIMOORA) was applied to assess economic, social and environmental sustainability indicators. Data were collected through field observations, structured interviews and focus group discussions involving women entrepreneurs, tourism managers and community leaders, supported by expert assessments.

Key Findings - The Tourism Awareness Group (*Pokdarwis*) achieved the highest aggregate ranking, followed by women entrepreneurs and traditional leaders. Environmental considerations emerged as the primary sustainability priority, whilst women's entrepreneurial activities strengthened local economic resilience through environmentally responsible practices. Traditional leaders reinforced sustainability through cultural values and community regulations.

Research limitations/implications - The single-village setting and reliance on expert assessments constrain generalisability. The findings highlight the importance of strengthening women's economic participation, environmental governance and multi-stakeholder collaboration.

Originality/value - This study applies MULTIMOORA to distinguish stakeholder contributions across sustainability dimensions, demonstrating how women's economic participation, institutional coordination and traditional governance collectively support green economy-oriented rural tourism.

Keywords: green economy, women, penglipuran village, MULTIMOORA method.

INTRODUCTION

Tourism is recognized as a significant source of revenue and employment in numerous nations, substantially contributing to Gross Domestic Product (GDP) and foreign exchange earnings. It is regarded as a multifaceted activity that incorporates diverse elements of the development process[1]. The income generated by the tourism sector can play a vital role in alleviating poverty within the region. In this regard, the roles and responsibilities of women, as members of society influenced by cultural norms inherited from preceding generations, must not be disregarded when examining their position within the workforce. Furthermore, industries that can secure the environment's future are frequently led by women who, in reality, face considerable structural and cultural obstacles to full economic participation.[2]

This is demonstrated by the Labor Force Participation Rate (TPAK) in Bangli Regency over the past three years (2021-2023), which averaged 79.38%, ranking second in Bali after Karangasem Regency. The average TPAK for Bali was 73.68%. Penglipuran Village is a rural area distinguished by its unique traditional village structure, enabling it to showcase a beautiful, environmentally friendly, and socially inclusive rural landscape. The Penglipuran community has embraced the concept of a "green economy," which has emerged in recent decades in

[1] World Tourism Organization. International Tourism Highlights, 2019 Edition. Madrid: UNWTO, 2019.
[2] Nugroho, M. R. P., M. Z. R. Tamherwarin, and Supriyono. "Penguatan Pembangunan Ekonomi Berkelanjutan dengan Ekonomi Hijau." Jurnal Ekonomika dan Manajemen 13, no. 1 (2024): 62-67.

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response to global environmental challenges and is institutionalized within the Sustainable Development Goals (SDGs). Globally, the "green economy" often originates from grassroots initiatives, primarily driven by women.

Penglipuran Traditional Village is a distinguished cultural tourism destination, recognized as the world's cleanest village for its exceptional orderliness and hygiene. It was honored with the Indonesia Sustainable Tourism Award (ISTA) in 2017 and has been listed among the Sustainable Destinations Top 100 by the Green Destinations Foundation. Penglipuran Village is among the villages in Bali that actively promote gender equality, with both men and women collaborating to support the local economy. During the visit of the G20 delegation, Penglipuran Village exemplified its dedication to safeguarding women's rights through local regulations that explicitly oppose and reject polygamy[3].

This initiative is designed to safeguard and empower women as central agents in the development of tourism within Penglipuran Village. The growth of tourism in the area is intricately connected to the active engagement of the local community and the efforts to improve their welfare while conserving arts and culture. Despite substantial progress in involving women in sustainable tourism endeavors, challenges persist for female tourism stakeholders. Various stakeholders possess divergent interests; however, they share a unified objective: to ensure the long-term viability of Penglipuran Tourism Village. Furthermore, issues such as language barriers, technological adoption, and economic instability must be collaboratively addressed to sustain development over time. The results of this study are anticipated to aid policymakers in devising strategies for sustainable tourism, grounded in potential scenario hypotheses that emphasize local culture and environmental conservation.

The Green Economy, as a component of sustainable development, represents an inclusive paradigm aimed at enhancing the effectiveness of efforts to achieve sustainability objectives. Research pertaining to the green economy is intrinsically linked to sustainable development. Sustainable development is pursued through the SDGs, which are designed to satisfy present needs without impairing the capacity of future generations to meet their own needs. According to the United Nations Environment Programme (UNEP), the concept of a green economy pertains to an economy that fosters human well-being and social equity while markedly reducing environmental risks and ecological scarcity. Consequently, the implementation of a green economy underscores the importance of promoting economic growth in alignment with environmental sustainability.

The notion of a green economy synthesizes economic growth with environmental sustainability, aiming to mitigate ecological risks while fostering social equity. This paradigm has garnered worldwide attention as a strategic response to climate change and natural resource depletion[4]. Over the past decade, the concept of a green economy has garnered substantial support among policymakers. Green economic growth and sustainable development are mutually reinforcing objectives. Policies advocating for a green economy must account for

[3] Zhang, Z. "Women's Leadership and Sustainable Village Tourism Governance." Sustainability 16, no. 4 (2024): 1821.

[4] Li, L., Y. Zeng, Y. He, Q. Qin, J. Wang, and C. Fu. "Developing Village-Based Green Economy in an Endogenous Way: A Case Study from China." International Journal of Environmental Research and Public Health 19, no. 13 (2022): 7854.

spatial and temporal dynamics, as well as the factors that influence them.[5] A green economy is regarded as a long-term solution for environmentally sustainable economic growth, underpinned by fiscal policies and climate change financing mechanisms that promote economic recovery.[6]

The sustainable development of Penglipuran Village as a tourist destination has positively impacted the local economy by fostering micro-enterprise growth, increasing employment opportunities in the tourism sector, and supporting religious activities within the village community.[7] This study aims to explore the concept of a green economy and the key factors influencing women's participation. It also analyzes the interactions among these variables to develop policy recommendations that promote women's involvement in sustainable tourism in Penglipuran Village.

Literature Review

Sustainable development is closely linked to economic growth and emphasizes fostering long-term economic advancement while enhancing the welfare of the current generation. This approach ensures that the capabilities of nature, society, and the economy to support the well-being of future generations remain uncompromised. In this context, the concept of sustainable tourism is frequently illustrated through a diagram featuring three partially overlapping circles representing economic, environmental, and social sustainability, with sustainability situated at the intersection of all three domains.[8] Sustainable development constitutes a growth process that includes land, urban areas, enterprises, and communities. It is founded on the principle of satisfying present needs without imperiling the capacity of future generations to meet their own needs, as delineated in the United Nations Brundtland Report.[9]

The green economy, as proposed by experts, encompasses several key concepts.[10] It is an economic system that supports environmental policies. According to David Pierce, Edward Barbier, and Enil Markandya, and as defined by the UNEP, the green economy includes economic activities related to the production, distribution, and consumption of goods and services that enhance people's well-being over the long term without imposing significant environmental risks on future generations. UNEP defines the green economy as a low-carbon, resource-efficient, and socially inclusive economy.[11] The United Nations Conference on Trade and Development (UNCTAD) defines a green economy as a sustainable economic system that enhances the quality of life for all people while respecting environmental limits. A green economy emphasizes leveraging opportunities to promote both economic growth and environmental sustainability simultaneously. This concept is also endorsed by the United

[5] Hu, X., C. Liu, and X. Zheng. "The Dynamic Relationship between Green Economy and Sustainable Development." Journal of Cleaner Production 235 (2019): 156-165.

[6] Mohsin, M., N. Iqbal, and R. Iram. "The Nexus between Green Finance and Sustainable Green Economic Growth." Energy Research Letters 5 (2023): 78117. https://doi.org/10.46557/001c.78117.

[7] Prayogi, P. A. "Dampak Pengembangan Desa Wisata terhadap Perekonomian Masyarakat Lokal di Desa Penglipuran." Jurnal Pariwisata Indonesia 18, no. 2 (2022): 120-34.

[8] Farooq, M., A. Khan, Z. Rahman, and S. Ali. "Sustainable Tourism Development: Economic, Environmental and Social Sustainability Nexus." Sustainability 16, no. 3 (2024): 1452. https://doi.org/10.3390/su16031452.

[9] World Commission on Environment and Development. Our Common Future. Oxford University Press, 1987.

[10] Ospanova, D., et al. "Green Economy as a Driver of Sustainable Development." E3S Web of Conferences 258 (2022): 07065.

[11] Pan, S. Y., M. Gao, H. Kim, K. J. Shah, S. L. Pei, and P. C. Chiang. "Advances and Challenges in Sustainable Tourism toward a Green Economy." Science of the Total Environment 635 (2019): 452-469.

Nations Commission on Sustainable Development.[12] The green economy is the sustainable growth of the global economy.[13] The green economy aims to accelerate innovation and investment in sustainable development.[14] Several components of the green economy are integral to sustainable development, namely: sustainable transportation, ecosystem conservation and management, water resource management, waste management, sustainable construction and energy conservation, sustainable land and urban resource management, and renewable energy.[15]

Green growth theory offers policymakers the opportunity to delineate boundaries between economic development and pollution. Moreover, green growth is inherently linked to sustainable development. The determinants of green growth include population size, level of economic development, technological innovation, industrial structure, urbanization, environmental regulations, and foreign direct investment (FDI). Developed economies are increasingly compelled to take measures to mitigate climate change and diminish the environmental impacts of human activities. The primary strategy endorsed by the Organisation for Economic Co-operation and Development (OECD) and other international bodies is green growth. The fundamental principle of green growth posits that scientific and technological advancements enable economic expansion without compromising environmental integrity. A significant discourse within green growth development concerns the calculation of green Gross Domestic Product (GDP), as evidenced by references 24 and 25. Extensive research has been conducted on various aspects of the green economy, including: Banking credit and finance (references 26 and 27), social dimensions (reference 28), tourism (reference 29), economic growth (reference 30), rural labor (reference 31), sustainability (reference 32), food security (reference 33), and investment (reference 34).

Apart from green growth, an integral component of the green economy is green employment. Analyzing green jobs will inherently focus on employment prospects that are environmentally sustainable and the skills required for such roles. Green jobs serve as a classification to distinguish among various occupational types, including white-collar, blue-collar, red-collar, gold-collar, and green-collar positions. The concept of green jobs connects sustainability with development. Green collar workers engaged in these roles are characterized as follows: "as professions created by incorporating sustainable development principles into the modernization process. The jobs in question are primarily related to the public transportation sector, renewable energy sources, construction, and waste management."

Green jobs in the context of Industry 4.0 encompass the development of Smart Cities that incorporate green infrastructure. Examples of such employment include positions within the circular economy, such as industrial waste processing. The education system and personnel structure are pivotal for fostering green jobs. In this regard, universities play a crucial role, not only in conducting research on green jobs and the green economy more broadly but

[12] Organisation for Economic Co-operation and Development (OECD). Putting Green Growth at the Heart of Development. OECD Publishing, 2013.

[13] Unay-Gailhard, İ., and Š. Bojnec. "The Impact of Green Economy on Rural Employment." Journal of Cleaner Production 208 (2019): 541-549.

[14] Kasztelan, A. "Green Growth, Green Economy and Sustainable Development: Terminological and Relational Discourse." Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu 466 (2017): 140-150.

[15] Ospanova, D., et al. "Green Economy as a Driver of Sustainable Development." E3S Web of Conferences 258 (2022): 07065.

also in developing relevant curricula. The conceptual framework in this study is shown in Figure 1.

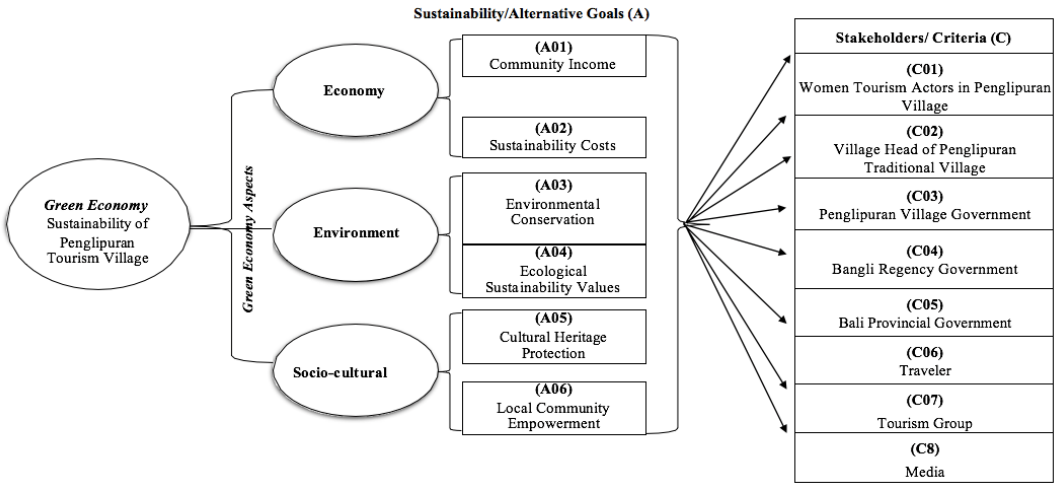


Figure 1. Conceptual Framework

METHODS

This study employs a quantitative, correlational methodology. The research was conducted in Penglipuran Village, Bangli Regency, Bali Province, in 2025, owing to its reputation as one of the cleanest villages globally and its recognition as a symbol of the successful preservation of Balinese culture in a contemporary setting.

This study identifies the sustainability objective variable (Alternative) as the key aspect considered in the sustainability assessment of Penglipuran Tourism Village. It examines the three perspectives of the green economy: Economic, Environmental, and Social. Based on these perspectives, the following alternatives are proposed: (1) Community Income (A01), (2) Sustainability Costs (A02), (3) Environmental Conservation (A03), (4) Ecological Sustainability Value (A04), (5) Cultural Heritage Protection (A05), and (6) Local Community Empowerment (A06). The stakeholders (Criteria/C) involved in this study encompass all parties engaged in the sustainability of Penglipuran Tourism Village, including: (1) Women Tourism Actors in Penglipuran Village (C01), (2) Traditional Leaders of Penglipuran Village (C02), (3) Penglipuran Village Government (C03), (4) Bangli Regency Government (C04), (5) Bali Provincial Government (C05), (6) Tourists (C06), (7) Tourism Awareness Group (Pokdarwis) (C07), and (8) Media (C08).

The population in this study consisted of the entire residents of Penglipuran Tourism Village, totaling 150 individuals. The sample comprised the entire population of Penglipuran Tourism Village, totaling 150 residents, selected through a non-probability sampling technique known as saturation sampling. Additionally, the sample was selected using purposive sampling to identify informants for in-depth interviews and Focus Group Discussions (FGDs). This study employed both quantitative and qualitative data collected from primary and secondary sources. Data collection methods included observation, questionnaires, and in-depth interviews. The data analysis was conducted using the MULTIMOORA technique, which stands for Multi-Objective Optimization based on Ratio Analysis plus the full MULTIPlicative form. This decision-making method is particularly useful in multi-criteria decision contexts.

RESULTS

Among the 150 respondents in this study, residents of Penglipuran Village engaged in local economic activities rooted in village tourism and sustainable principles of the green

economy. The following characteristics were observed based on gender, age, marital status, education level, type of business, occupation, and income level. According to the research findings, the majority of respondents were female, totaling 141 individuals (91%). The respondents were predominantly in the 30-39 age group, with 43 individuals (33%) and 121 respondents (81%) married. Most respondents had completed high school education, accounting for 44 individuals (34%), and had incomes ranging from Rp4,000,000 to Rp6,000,000, with 48 respondents (38%). In terms of business and occupation, the majority—130 respondents—considered village tourism-based economic activities as their primary occupation.

Table 1: Instrument Validity Test Results for the Green Economy Aspect Variable (X5)

Variable	Indicator	Pearson Correlation	Information
Green Economy Aspects (X5)	X5_1	0.346	Valid
	X5_2	0.426	Valid
	X5_3	0.431	Valid
	X5_4	0.501	Valid
	X5_5	0.528	Valid

Source: Primary data processed using SPSS, 2026

Based on Table 1, all indicators of the Green Economy Aspect variable (X5) have Pearson correlation coefficients greater than 0.30 and are significant at the 0.01 level, indicating that all questions in the research instrument are valid.

Table 2: Instrument Validity Test Results for the Stakeholder Role Variable (X6)

Variable	Indicator	Pearson Correlation	Information
The Role of Stakeholders (X6)	X6_1	0.342	Valid
	X6_2	0.392	Valid
	X6_3	0.278	Valid
	X6_4	0.483	Valid
	X6_5	0.455	Valid
	X6_6	0.354	Valid

Source: Primary data processed using SPSS, 2026

Based on Table 2, all indicators of the Stakeholder Role variable have Pearson correlation coefficients greater than 0.30 and are therefore declared valid.

Table 3. Results of the Instrument Reliability Test for the Green Economy Aspect Variable

Variable	Cronbach's Alpha	Information
Green Economy Aspects (X5)	0.980	Reliable

Source: Primary data processed using SPSS, 2026

The reliability test results show that the Green Economy Aspect variable (X5) has a Cronbach's Alpha value of 0.980, indicating that the instrument has a very high level of reliability and is consistent as a research measurement tool.

Table 4. Instrument Reliability Test Results: Stakeholder Role Variable (X6)

Variable	Cronbach's Alpha	Information
The Role of Stakeholders (X6)	0.830	Reliable

Source: Primary data processed using SPSS, 2026

Based on Table 4, the Stakeholder Role variable (X6) has a Cronbach's alpha of 0.830, indicating good reliability and suitability for research.

Table 5. Decision Matrix

Criteria / Alternative	A01	A02	A03	A04	A05	A06
C01	5	5	3	3	5	3
C02	9	5	9	7	9	5
C03	5	7	6	5	5	6
C04	9	3	7	5	7	7
C05	7	3	3	3	5	5
C06	3	3	3	3	5	3
C07	7	7	9	9	9	7
C08	9	5	9	7	9	3

Source: Processed primary data, 2026

According to Table 5, Community Income (A01), Environmental Conservation (A03), and Cultural Heritage Protection (A05) are the options with the highest priority among stakeholders. This is evidenced by the comparatively high evaluation scores across multiple criteria. As shown in Table 6, the subsequent decision matrix is derived:

$$X = \begin{bmatrix} 553353 \\ 959795 \\ 576556 \\ 937577 \\ 733355 \\ 333353 \\ 779997 \\ 959793 \end{bmatrix}$$

The results of the MULTIMOORA calculation from the normalization matrix stage are presented in Table 6.

Table 6. Results of Decision Matrix Normalization

Alternative	A01	A02	A03	A04	A05	A06
C1	0.495	0.495	0.297	0.297	0.495	0.297
C2	0.486	0.270	0.486	0.378	0.486	0.270
C3	0.357	0.500	0.428	0.357	0.357	0.428
C4	0.556	0.185	0.432	0.308	0.432	0.432
C5	0.623	0.267	0.267	0.267	0.445	0.445
C6	0.358	0.358	0.358	0.358	0.597	0.358
C7	0.354	0.354	0.455	0.455	0.455	0.354
C8	0.498	0.276	0.498	0.387	0.498	0.166

Source: Processed primary data, 2026

According to Table 6, all decision matrix values have been successfully standardized to a common scale. This normalization matrix illustrates the relative contributions of each stakeholder to each criterion of the green economy in Penglipuran Tourism Village.

The normalization results are subsequently utilized as the foundation for calculating the Reference Point Approach to assess each stakeholder's proximity to the optimal conditions for developing a sustainable economy in Penglipuran Tourism Village. In the computation of the Reference Point Approach, the highest value for each criterion is initially identified as follows:

C1: Penglipuran Village Women Entrepreneurs = 5
C2: Penglipuran Village Traditional Leaders = 9
C3: Penglipuran Village Government = 7

C4: Bangli Regency Government = 9
C5: Bali Provincial Government = 7
C6: Penglipuran Village Tourists = 5
C7: Penglipuran Village Tourism Awareness Group (Pokdarwis) = 9
C8: Media = 9

Table 7. Reference Point Approach

Criteria/ Alternative	A01	A02	A03	A04	A05	A06	Total Reference Points
C01	1.00	1.00	0.66	0.66	1.00	0.66	4.98
C02	1.00	0.55	1.00	0.77	1.00	0.55	4.87
C03	0.71	1.00	0.85	0.71	0.71	0.85	4.83
C04	1.00	0.33	0.77	0.55	0.77	0.77	4.19
C05	1.00	0.42	0.42	0.42	0.71	0.42	3.39
C06	0.60	0.60	0.60	0.60	1.00	0.60	4.00
C07	0.77	0.77	1.00	1.00	1.00	0.77	5.31
C08	1.00	0.55	1.00	0.77	1.00	0.33	4.65

Source: Data processed 2026

Table 7 presents the comprehensive assessment of reference points for eight alternatives that contribute to the sustainability of Penglipuran Tourism Village. The criterion with the highest aggregate score was Pokdarwis (C07), registering a value of 5.31. Penglipuran Village Women Tourism Actors (C01) ranked second, with a score of 4.98. Penglipuran Village Traditional Leaders (C02) achieved a total score of 4.87, securing third place.

The author established the criteria weights based on direct evaluations from each stakeholder involved in the development of the green economy within Penglipuran Tourism Village, leading to the following criteria weights:

Criteria weight for Penglipuran Village Women Entrepreneurs (C1) = 0.1
Criteria weight for Penglipuran Village Traditional Leaders (C2) = 0.2
Criteria weight for Penglipuran Village Government (C3) = 0.1
Criteria weight for Bangli Regency Government (C4) = 0.1
Criteria weight for Bali Provincial Government (C5) = 0.2
Criteria weight for Penglipuran Village Tourists (C6) = 0.1
Criteria weight for Penglipuran Village Tourism Awareness Groups (Pokdarwis) (C7) = 0.1
Criteria weight for Media (C8) = 0.1

Table 8. Results of the Full Multiplicative Form Aggregate Value Calculation

Alternative	Aggregate Value (Ui)	Ranking
C7	0.92	1
C1	0.88	2
C3	0.87	3
C8	0.82	4
C4	0.77	5
C6	0.77	6
C2	0.74	7
C5	0.46	8

Source: Processed Primary Data, 2026

Based on the Full Multiplicative Form calculation, stakeholder C2 obtained the highest aggregate score, indicating that Pokdarwis's role makes the optimal contribution to supporting the development of the Penglipuran Tourism Village's green economy, when viewed across all criteria. Conversely, the stakeholder with the lowest aggregate score, the Bangli Regency Government, demonstrated the need to strengthen its role in supporting the sustainability of tourism villages.

In the sustainability of the Green Economy, reviewed from the perspective of women and the green economy, several stakeholders play a crucial role, namely the Tourism Group (Pokdarwis), Women Entrepreneurs, and the Traditional Leaders of Penglipuran Village. In maintaining a sustainable green economy, Pokdarwis plays a key role as a driver of environmentally based tourism by ensuring that tourism activities align with sustainability principles. Pokdarwis regulates tourist visitation, maintains the cleanliness of the village area, and educates visitors on the importance of preserving bamboo forests and traditional spatial planning. By monitoring plastic use, implementing integrated waste management, and adopting eco-friendly tourism village standards, Pokdarwis helps reduce the negative environmental impacts of tourism while maintaining the village's ecological appeal. Women entrepreneurs ranked second with an aggregate score of 0.88. They achieved perfect scores on the criteria of Community Income (1.00), Sustainability Costs (1.00), and Cultural Heritage Protection (1.00). This demonstrates that women entrepreneurs play a direct role in creating a positive economic impact for the local community.[16] By producing high-quality products in demand, women entrepreneurs can increase community income, particularly through direct sales to tourists. Beyond their economic impact, they also support environmental conservation by consistently using environmentally friendly raw materials such as natural dyes.[17]

Traditional leaders ranked third with an aggregate score of 0.87. Traditional leaders play a role as guardians of traditional values that have become part of a village's identity.[18] This role is realized through strengthening customary rules (awig-awig) that govern spatial planning, traditional architecture, environmental cleanliness, and the preservation of bamboo forests as an ecological buffer zone for the village. With strong customary authority, leaders ensure that all development and economic activities remain in line with local wisdom and sustainability principles.

The sustainability ranking of Penglipuran Village aims to evaluate the extent to which production and management practices uphold the principles of the green economy, social responsibility, and environmental stewardship, while also empowering women within Penglipuran Tourism Village. The initial focus is on environmental sustainability, encompassing the use of natural raw materials, environmentally conscious dyeing procedures, and waste management strategies. Field investigations reveal that female entrepreneurs in Penglipuran consistently endeavor to minimize their environmental footprint. Dyeing waste is managed using traditional methods and is regulated to prevent pollution of local watercourses. Based on these criteria, the environmental component is ranked highly, as the practices adopted not only conserve natural resources but also promote ecological awareness within the community.

[16] Singh Alag, S. "Women Entrepreneurship and Local Economic Development: Evidence from Tourism-Based Communities." Journal of Development Studies 60, no. 2 (2024): 145-160.

[17] Nyawo, J., and B. C. Mubangizi. "Sustainable Livelihoods and Environmental Conservation in Rural Communities." Journal of Human Ecology 50, no. 3 (2015): 207-215.

[18] Aowat, M., and J. Ayang-ang. "The Role of Traditional Leaders in Preserving Local Wisdom and Sustainable Development." Journal of Cultural Sustainability 8, no. 1 (2024): 55-68.

The second component focuses on socio-economic sustainability, emphasizing women's empowerment, employment creation, and household income growth. Female entrepreneurs benefit directly from sales and production activities, as well as from training and marketing networks facilitated by community groups and supporting non-governmental organizations. The income generated enables reinvestment in household pursuits and children's education. The rankings indicate that socio-economic factors also rank highly due to their substantial contributions to women's welfare and to bolstering the local economy, while fostering active participation in decision-making related to production. The third component pertains to cultural sustainability, which evaluates the extent to which traditional values, techniques, and symbolism are preserved. The ranking process reveals that the preservation of double ikat weaving techniques and indigenous motifs remains a primary focus, despite some modifications to meet modern market demands. The cultural aspect ranks prominently because it sustains village identity and enhances tourist attractiveness and product differentiation, thereby allowing cultural sustainability to synergistically interact with economic and environmental objectives.

CONCLUSION

Based on the research findings, it can be concluded that: The research findings indicate that the success in fostering a sustainable green economy within Panglipuran Village is highly contingent upon the contributions of various stakeholders: 1) the Tourism Group (Pokdarwis), 2) Women Entrepreneurs, and 3) the Traditional Leaders of Panglipuran Village. The stakeholders with the highest cumulative scores exhibit a robust commitment to endorsing the economic, environmental, and cultural dimensions that fundamentally underpin the sustainability of Panglipuran Village's green economy. The hierarchy of sustainability priorities within Penglipuran Tourism Village underscores the effective integration of three fundamental dimensions: 1) Cultural Heritage Preservation, 2) Environmental Conservation, and 3) Community Income Generation. This research illustrates that a women-driven green economy within tourism villages can serve as a paradigm for sustainable development, integrating social welfare, cultural preservation, and environmental sustainability. The stakeholder and sustainability aspect rankings offer an analytical foundation for enhanced program planning, communication strategies, and policy interventions. Additionally, the findings underscore that a participatory, collaborative, and adaptive approach is essential for ensuring the longevity of women's empowerment initiatives at the community level.

Based on the research findings, several recommendations can be provided to various parties, including academics, practitioners, and policymakers, to ensure optimal and sustainable women's empowerment in the green economy in Penglipuran Tourism Village. The village government and associated institutions are advised to continue providing comprehensive regulatory, technical, and financial support to women's groups. This encompasses offering skills training, business mentoring, access to capital, and facilitating the marketing of local products. Moreover, the village government must incorporate green economy principles into village development planning, underscoring environmental conservation, women's economic empowerment, and the safeguarding of cultural values. Such an approach ensures that women's empowerment initiatives are executed systematically and sustainably. Women's groups and local communities are

encouraged to enhance their organizational capacity and foster internal collaboration to facilitate more professional management of production, marketing, and product innovation. Establishing networks with non-governmental organizations and local and international market entities, and leveraging digital technologies, can enhance the competitiveness of various local craft products. Additionally, it is imperative for women to persist in adopting environmentally sustainable practices and preserving cultural heritage to guarantee the long-term viability of green economy initiatives. Non-governmental organizations, non-profit entities, and scholars are encouraged to provide ongoing support, conduct monitoring and evaluation, and document exemplary practices related to women's empowerment within the green economy framework. Research and innovation that emphasize the integration of economic, social, and cultural dimensions will enhance strategies for developing sustainable tourism villages. Additionally, scholars are invited to undertake further research to examine the long-term effects of women's empowerment on community well-being, cultural sustainability, and environmental health. Tourists and consumers are encouraged to endorse environmentally sustainable and culturally significant local products, as well as to recognize the green economy initiatives undertaken by women's communities. Favoring sustainable markets will create economic incentives for women entrepreneurs and enhance the longevity of green-economy enterprises. The management of the women-based green economy in Penglipuran Tourism Village is conducted through a comprehensive and adaptable approach. This methodology encompasses multi-stakeholder collaboration, continuous training and capacity enhancement, safeguarding cultural values, and adopting environmentally sustainable practices. By applying an integrated strategy, women's empowerment initiatives can optimize economic, social, and environmental outcomes while serving as a benchmark for other tourism villages across Indonesia to adopt community-centered green economy principles and promote women's empowerment.

Author Contributions

Ni Putu Ayu Sintiawati: Contributed to formulating the research idea, developing the research concept, collecting data, processing data, and interpreting the research findings.

Ida Ayu Nyoman Saskara: Contributed to developing the writing structure, formulating the research methods, and analyzing the interpreted results, grammar checking, manuscript editing.

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Declaration of Competing Interest

The author declares that there is no conflict of interest.

Ethical Approval

Ethical approval No patient-identifying parts in this paper were used or known to the authors. Therefore, no ethical approval was requested.

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