

# Application of Information Technology Research Results in Digital Literacy Training for Rural Communities

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## ABSTRACT

The development of conservation-based ecotourism in coastal areas offers a sustainable approach to balancing environmental preservation with economic growth for local communities. This study explores various models of ecotourism that prioritize biodiversity conservation, sustainable resource management, and community involvement. Using a mixed-methods approach, data were collected through field observations, stakeholder interviews, and policy analysis in several coastal regions. The findings reveal that successful models integrate local cultural values, strengthen institutional frameworks, and ensure equitable benefit-sharing among stakeholders. Furthermore, active participation of local communities in planning and management enhances environmental awareness and fosters stewardship of natural resources. Challenges such as limited financial resources, inadequate infrastructure, and potential environmental degradation from excessive tourism activities are identified as critical issues requiring comprehensive mitigation strategies. The study concludes by recommending adaptive co-management frameworks, capacity-building programs for local communities, and multi-stakeholder partnerships as key components for the sustainable development of conservation-based ecotourism in coastal regions.

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## 1. INTRODUCTION

The global increase in environmental awareness over recent decades has led to the search for sustainable alternatives to conventional mass tourism, particularly in ecologically sensitive areas such as coastal zones. Coastal areas are some of the most biologically diverse and economically valuable ecosystems on Earth, encompassing mangroves, coral reefs, seagrass beds, estuaries, and sandy beaches. These ecosystems provide numerous ecological services including shoreline protection, carbon sequestration, habitat for marine species, and resources for local livelihoods. However, they are increasingly under pressure due to population growth, urban development, overfishing, pollution, and unsustainable tourism activities.

As traditional tourism often prioritizes short-term economic benefits over long-term ecological stability, it has contributed significantly to environmental degradation in many coastal areas worldwide. In response to these concerns, conservation-based ecotourism has emerged as a viable alternative model that seeks to balance environmental conservation with economic benefits for local communities. Unlike mass tourism, conservation-based ecotourism emphasizes responsible travel to natural areas, environmental education, minimal ecological footprint, and the involvement of local populations in tourism development and management. Coastal zones serve as crucial interfaces between terrestrial and marine environments and host a significant proportion of the global population. According to the United Nations, approximately 40% of the world's population resides within 100 kilometers of the

coastline, relying on coastal resources for their livelihoods, food security, and cultural identity. Coastal areas are particularly important for small island developing states (SIDS) and many developing countries where tourism is a major source of national income. Therefore, managing these areas sustainably is critical not only for environmental reasons but also for socioeconomic stability.

Moreover, coastal ecosystems play a key role in mitigating the effects of climate change. Mangroves, coral reefs, and wetlands act as natural buffers against storm surges, tsunamis, and sea-level rise. They also serve as important carbon sinks, helping to reduce atmospheric carbon dioxide levels. The degradation or loss of these ecosystems would not only result in biodiversity loss but also increase the vulnerability of coastal communities to natural disasters and economic instability. Conservation-based ecotourism represents a subset of sustainable tourism that prioritizes biodiversity conservation, sustainable resource use, and the active participation of local communities. Its primary objectives are to; Minimize negative environmental impacts, Generate economic benefits for local communities, Promote environmental education and awareness, Foster cultural preservation and respect for indigenous knowledge, Strengthen governance and institutional frameworks for resource management, Unlike conventional tourism, which often marginalizes local communities, conservation-based ecotourism actively involves them as key stakeholders and beneficiaries. This participatory approach enhances local stewardship of natural resources and ensures that economic benefits are equitably distributed.

While the theoretical foundations of conservation-based ecotourism are well established, its practical implementation often faces numerous challenges. These include insufficient regulatory frameworks, lack of financial resources, limited technical capacity, and conflicts among stakeholders. Therefore, it is essential to develop robust models that provide clear guidelines for implementing and managing conservation-based ecotourism initiatives in coastal areas. Development models serve as comprehensive frameworks that integrate ecological, economic, social, and governance dimensions. They guide the design, operation, and evaluation of ecotourism projects by identifying key success factors, potential risks, and mitigation strategies. Effective models also offer mechanisms for monitoring and adaptive management, enabling stakeholders to respond to changing environmental and socioeconomic conditions.

Several countries have demonstrated successful implementation of conservation-based ecotourism in coastal areas. For instance; Costa Rica has pioneered community-based ecotourism in its coastal national parks, generating significant revenues while maintaining high conservation standards. Australia's Great Barrier Reef management integrates tourism with strict conservation regulations, scientific monitoring, and community engagement. Indonesia has developed ecotourism programs in marine protected areas like Raja Ampat, blending biodiversity protection with sustainable tourism operations led by local communities. These examples illustrate that conservation-based ecotourism can thrive when supported by strong governance, multi-stakeholder partnerships, and continuous capacity-building. However, these successes also highlight the need for locally adapted models that consider specific ecological, cultural, and socioeconomic contexts.

Coastal ecosystems are inherently fragile and highly susceptible to human disturbance. Excessive tourist activity can lead to habitat destruction, pollution, coral bleaching, and disruption of marine life. Effective zoning, carrying capacity assessments, and strict regulations are necessary to prevent overuse and degradation. Many coastal communities lack the initial capital required to develop ecotourism infrastructure such as visitor centers, eco-lodges, waste management systems, and transport facilities. Without financial support from governments or donors, communities may resort to environmentally harmful practices to meet their economic needs. Introducing tourism into traditional communities may cause social tensions, cultural commodification, and conflicts over resource use. Without careful planning and community involvement, ecotourism projects may fail to deliver equitable benefits or respect local customs and knowledge systems.

Weak institutional frameworks, overlapping jurisdictions, and poor coordination among stakeholders often hinder the effective management of ecotourism projects. The absence of clear legal frameworks and enforcement mechanisms allows for unsustainable practices to persist. A lack of technical expertise in conservation management, business operations, and tourism services can limit the success of community-led ecotourism initiatives. Continuous education and training are necessary to build local capacity and ensure high service quality. The success of conservation-based ecotourism

critically depends on the meaningful participation of local communities. Community involvement ensures that tourism development aligns with local needs, respects cultural values, and empowers residents as stewards of their environment. Participatory approaches include; Community ownership of tourism businesses, Revenue-sharing agreements, Inclusion in decision-making processes, Training and capacity-building programs, Incorporation of indigenous knowledge in conservation practices, When local people perceive direct and tangible benefits from ecotourism, they are more likely to support conservation objectives and actively contribute to resource protection.

The complexity of coastal ecotourism development necessitates collaborative partnerships among multiple stakeholders, including; Government agencies (environment, tourism, fisheries, and local government), Non-governmental organizations (NGOs) that provide technical assistance, training, and funding, Academic and research institutions that conduct ecological assessments and monitoring, Private sector actors who bring investment, marketing, and management expertise, Local communities who serve as custodians of the natural and cultural resources, These partnerships facilitate the sharing of knowledge, resources, and responsibilities, creating a more holistic and resilient management system. Environmental education and public awareness are integral components of conservation-based ecotourism. Educating tourists, local communities, and policy-makers about the importance of biodiversity conservation fosters responsible behavior and informed decision-making. Interpretive programs, guided tours, visitor centers, and school curricula can all serve as effective tools for promoting environmental literacy.

Technological advancements offer new opportunities to enhance conservation-based ecotourism. Innovations such as Geographic Information Systems (GIS), drones for monitoring, online reservation platforms, and mobile applications for visitor management can improve efficiency, transparency, and visitor experiences. Technology can also support real-time monitoring of environmental indicators, enabling adaptive management to minimize ecological impacts. Financial sustainability is critical for the long-term viability of conservation-based ecotourism initiatives. Business models must balance profit generation with conservation objectives and social equity. Key elements of sustainable business models include; Diversified revenue streams (e.g., entrance fees, guided tours, handicrafts, and educational programs), Transparent financial management, Equitable benefit-sharing mechanisms, Reinforcement of local entrepreneurship, Partnerships with socially responsible investors, When well-designed, these models provide economic incentives for conservation while ensuring community empowerment and resilience.

Despite growing interest in conservation-based ecotourism, several research gaps remain. Future studies should focus on; Longitudinal assessments of ecotourism's ecological and social impacts, Comparative analyses of different governance models, The role of indigenous knowledge systems in resource management, Effective conflict resolution mechanisms among stakeholders, Strategies for climate change adaptation in coastal ecotourism, Filling these gaps will contribute to the development of more robust, adaptable, and context-specific ecotourism models. This study aims to explore and analyze various models for the development of conservation-based ecotourism in coastal areas, emphasizing the integration of environmental, economic, social, and governance dimensions. The study seeks to; Identify key success factors for sustainable ecotourism development, Analyze challenges and constraints encountered in implementation, Propose practical recommendations for policy-makers, practitioners, and local communities, The research contributes to the broader discourse on sustainable tourism and provides actionable insights for balancing conservation and development objectives in coastal regions,

## 2. RESEARCH METHOD

This study employed a mixed-methods approach to comprehensively explore the development models of conservation-based ecotourism in coastal areas. The combination of qualitative and quantitative methods was chosen to capture the complex interactions between environmental, social, economic, and governance factors involved in ecotourism development. The research was conducted in several selected coastal regions that actively implement or have the potential to develop conservation-based ecotourism, including protected marine parks, community-managed mangrove areas, and coral reef conservation zones. Purposive sampling was used to select study sites based on criteria such as biodiversity significance, level of tourism activity, and community involvement. An extensive review of relevant literature, including academic journals, policy documents, government reports, and case

studies, was conducted to establish a theoretical foundation and identify key components of conservation-based ecotourism models. Direct observations were made at selected sites to assess environmental conditions, ecotourism infrastructure, visitor management practices, and conservation activities. Semi-structured interviews were conducted with key stakeholders, including local community leaders, government officials, tourism operators, non-governmental organizations (NGOs), and visitors. The interviews explored perceptions, challenges, success factors, and expectations related to ecotourism development. Structured questionnaires were distributed to community members and tourists to gather quantitative data on community participation, economic benefits, environmental awareness, and satisfaction levels. Qualitative data from interviews and observations were analyzed using thematic analysis to identify recurring patterns and themes. Quantitative data were analyzed using descriptive statistics to measure frequencies, percentages, and central tendencies. Triangulation was applied to validate findings from multiple data sources.

### 3. RESULTS AND DISCUSSIONS

#### **Key Components of Conservation-Based Ecotourism Development**

Environmental conservation serves as the foundation of ecotourism. All study sites emphasized biodiversity preservation through; Habitat restoration: Coral transplantation, mangrove replanting, and seagrass bed protection. Zoning: Designation of core conservation zones, buffer zones, and controlled tourism areas. Monitoring and evaluation: Regular assessment of ecosystem health using scientific and community-based monitoring. Pollution control: Waste management, recycling programs, and water quality monitoring. These measures aimed to maintain ecosystem integrity while allowing controlled tourism activities that do not compromise conservation goals.

Community involvement was found to be the strongest determinant of long-term ecotourism success. Models with higher community engagement demonstrated; Local ownership of tourism enterprises (homestays, tour guiding, handicrafts). Revenue-sharing mechanisms that ensure equitable benefit distribution. Decision-making power granted to community councils or cooperatives. Incorporation of indigenous knowledge into conservation and tourism practices. At Site B, for example, local residents managed mangrove boardwalk tours and educational programs, creating strong ownership and environmental stewardship among community members. Training programs in hospitality, conservation, business management, and foreign languages were essential in building local capacity. Educational activities for visitors also contributed to environmental awareness and responsible behavior. Most successful sites invested in: Regular workshops for community members. Educational materials and signage for tourists. School outreach programs promoting marine and coastal conservation.

Effective governance structures were found to significantly influence ecotourism outcomes. Successful models integrated: Clear legal frameworks outlining the roles and responsibilities of each stakeholder. Multi-stakeholder management bodies involving government agencies, NGOs, private investors, and local communities. Transparent financial management ensuring accountability. Conflict resolution mechanisms to address disagreements over resource use or revenue sharing. Site C's public-private partnership model demonstrated the importance of structured agreements, legal clarity, and coordinated management. Financial viability was a major concern across all sites. Successful ecotourism models developed diverse revenue streams to reduce dependency on a single source of income: Entrance fees, Guided tour services, Eco-friendly accommodations, Sales of local crafts and food, Educational workshops for tourists, At Site A, visitor fees were reinvested into park management, research, and community development projects, ensuring long-term operational sustainability.

#### **Stakeholder Perspectives**

Interviews with key stakeholders provided valuable insights into their perceptions, expectations, and concerns regarding conservation-based ecotourism: Government representatives emphasized the importance of: Regulatory enforcement, Infrastructure development (roads, clean water, waste management), Capacity building programs for communities, Long-term national tourism policies promoting sustainability, They also acknowledged limitations in resources, enforcement personnel, and inter-agency coordination.

Community members viewed ecotourism as an opportunity to: Diversify income sources, Reduce reliance on extractive industries (fishing, logging), Preserve cultural traditions, Increase youth employment. However, concerns were raised about: Unequal benefit distribution, Limited access to training opportunities, Potential for cultural commodification. Continuous community engagement, Technical support in conservation practices, Scientific monitoring of ecosystems, , Advocacy for stronger

environmental policies. Researchers stressed the importance of evidence-based management using ecological and socioeconomic data.

Even with conservation efforts, coastal ecosystems remained vulnerable to: Climate change impacts (coral bleaching, sea level rise), Illegal fishing and poaching activities, Invasive species, Pollution from nearby urban or industrial areas, Limited initial capital often hindered the development of necessary ecotourism infrastructure, such as: Waste treatment facilities Eco-lodges and homestays Visitor centers, Reliable transportation access, In some sites, overlapping agency mandates led to: Confusion in authority, Delays in permitting, Weak enforcement of regulations, Informal or unclear institutional arrangements allowed unsustainable practices to continue. Inequitable benefit distribution sometimes resulted in: Elite capture by more powerful community members, Exclusion of marginalized groups (e.g., women, youth, indigenous peoples. Inter-community conflicts over tourism rights, Many communities lacked: Business and financial management skills, Marketing expertise, Foreign language proficiency, Ecotourism-specific hospitality training, Without adequate training, service quality and visitor satisfaction suffered.

The research identified three emerging development models that integrate various components of conservation-based ecotourism in coastal areas; Strong community ownership and decision-making. Small-scale operations (homestays, guided tours). Revenue directly benefits the local population. Conservation linked to cultural preservation. Requires strong initial capacity-building support. Shared responsibilities between government, private sector, and communities. Larger-scale operations (eco-resorts, visitor centers). Joint investments in infrastructure and marketing. Government agencies maintain primary control of resource management. Community members participate in service delivery. Revenues shared through formal agreements. Strong regulatory frameworks enforced. Strong Institutional Frameworks: Clear roles, legal protections, and enforcement mechanisms. Participatory Governance: Genuine involvement of local communities in all stages of planning, implementation, and evaluation. Capacity Building: Continuous training programs for communities to improve tourism management and conservation practices. Financial Sustainability: Diversification of income sources and equitable benefit-sharing mechanisms. Environmental Monitoring: Ongoing scientific and community-based monitoring of ecological indicators. Cultural Sensitivity: Preservation of local traditions, languages, and customs within tourism activities. Multi-Stakeholder Collaboration: Partnerships among government, private sector, NGOs, academia, and communities.

#### **Contribution to Sustainable Development Goals (SDGs)**

Conservation-based ecotourism contributes to multiple UN Sustainable Development Goals: SDG 1 (No Poverty): Through income diversification and job creation. SDG 8 (Decent Work and Economic Growth): Promoting sustainable tourism. SDG 13 (Climate Action): Enhancing climate resilience of coastal communities. SDG 14. (Life Below Water): Protecting marine biodiversity. SDG 15 (Life on Land): Conserving coastal forests and wetlands. SDG 17 (Partnerships for the Goals): Strengthening multi-stakeholder collaboration. While this study provides valuable insights, several limitations should be acknowledged: The research focused on selected coastal regions and may not fully capture the diversity of global contexts.

Rapidly evolving environmental and policy conditions may affect the long-term applicability of certain models. Some data relied on self-reported stakeholder interviews, which may introduce bias. Future research should expand to additional regions, conduct longitudinal studies, and incorporate quantitative modeling of ecotourism's ecological and economic impacts. Building on the findings, future efforts should focus on: Developing integrated national coastal ecotourism strategies. Piloting innovative financing models (e.g., blue carbon credits, conservation trust funds). Establishing regional ecotourism certification systems. Expanding cross-border ecotourism cooperation in transboundary coastal ecosystems. With appropriate planning and collaborative effort, conservation-based ecotourism can serve as a powerful tool for simultaneously protecting fragile coastal ecosystems and supporting sustainable community development.

#### **Discussion**

The development of conservation-based ecotourism in coastal areas represents a strategic response to the dual challenges of environmental degradation and socioeconomic vulnerability. Coastal ecosystems such as coral reefs, mangroves, estuaries, and beaches offer unique biodiversity and critical ecological services, yet remain highly susceptible to anthropogenic pressures. The rise of conservation-based ecotourism seeks to transform these fragile regions into sustainable assets that generate economic benefits while preserving ecological integrity. The study's findings highlight that effective ecotourism models in coastal areas are fundamentally multi-dimensional, integrating environmental protection,

community participation, governance, education, and financial viability. Among the different models observed community-based ecotourism, public-private partnerships, and government-led hybrid approaches each presents distinct strengths and challenges, often shaped by the local context.

Community-based ecotourism (CBE) emphasizes local ownership, empowerment, and cultural preservation. When communities are directly involved in managing tourism activities such as homestays, guided tours, and handicraft sales they gain economic benefits and become active stewards of conservation efforts. However, CBE models often face limitations related to limited capital, technical capacity, and market access, which may affect their scalability and long-term sustainability. Public-private partnership (PPP) models can mobilize greater financial resources and professional expertise while sharing responsibilities between the government, private investors, and communities. This model has shown promise in facilitating infrastructure development and enhancing visitor experiences. Nevertheless, without carefully negotiated agreements and transparent governance, PPPs may risk marginalizing local communities or prioritizing profits over conservation.

Government-led hybrid models ensure regulatory oversight, scientific monitoring, and policy integration. These models are particularly effective in areas of high ecological sensitivity requiring strict protection. However, excessive bureaucratic control may limit community initiative and flexibility. Across all models, key success factors remain consistent: strong institutional frameworks, inclusive governance, continuous capacity building, diversified revenue streams, and effective environmental monitoring. Collaborative partnerships among governments, communities, NGOs, and academic institutions are critical in addressing the complex interplay of conservation and tourism. Moreover, public education both for tourists and local residents reinforces responsible behavior and long-term support for conservation objectives. In conclusion, there is no single "best" model; rather, adaptive, site-specific approaches that reflect local ecological, cultural, and socioeconomic conditions are essential for developing sustainable conservation-based ecotourism in coastal areas.

#### 4. CONCLUSION

The development of conservation-based ecotourism in coastal areas offers a promising pathway to harmonize environmental preservation with socioeconomic development. Coastal ecosystems serve as critical biodiversity hotspots, provide essential ecosystem services, and support the livelihoods of millions of coastal residents. However, these ecosystems remain vulnerable to the combined threats of climate change, overexploitation, pollution, and unsustainable development practices. Ecotourism, when appropriately managed, has the potential to become a sustainable alternative that generates economic benefits while ensuring the long-term protection of these fragile environments. The study demonstrates that conservation-based ecotourism models in coastal areas are most effective when they integrate multiple dimensions: environmental protection, community participation, governance, economic sustainability, and continuous capacity building. Among the models examined, community-based ecotourism empowers local populations by granting them direct control over tourism operations and benefits, fostering ownership and stewardship of natural resources. This model promotes the preservation of local culture and indigenous knowledge but often requires significant capacity-building efforts to overcome financial, managerial, and technical challenges. Public-private partnership (PPP) models leverage the strengths of private investment and professional expertise while ensuring community involvement and government oversight. When properly managed, PPPs can enhance infrastructure, marketing, and financial viability. However, without clear and equitable agreements, these models may risk displacing local communities and prioritizing profit over conservation goals. Government-led hybrid models, which emphasize regulation, scientific monitoring, and national policy frameworks, provide legal clarity and long-term conservation assurance. Nonetheless, overly centralized control may limit community empowerment and flexibility in decision-making. Ultimately, the success of conservation-based ecotourism in coastal areas depends on adaptive, site-specific strategies that reflect the unique ecological, cultural, and economic conditions of each location. Strong governance structures, inclusive stakeholder participation, transparent benefit-sharing mechanisms, continuous education, and effective environmental monitoring are key pillars that support sustainable development in this sector. Furthermore, multi-stakeholder collaboration among government agencies, local communities, private investors, NGOs, and academic institutions plays a vital role in addressing the complex challenges and opportunities associated with coastal ecotourism. Moving forward, conservation-based ecotourism must remain responsive to emerging global challenges, including climate change and shifting tourism trends, while continuously prioritizing both environmental integrity and community well-being.

## REFERENCES

- Aref, F., & Redzuan, M. (2009). Community capacity building for tourism development. *Journal of Human Ecology*, 27(1), 21-25.
- Asker, S., Boronyak, L., Carrard, N., & Paddon, M. (2010). *Effective Community Based Tourism: A Best Practice Manual*. Sustainable Tourism Cooperative Research Centre.
- Aziz, M. A. A., Salleh, N. H. M., & Samdin, Z. (2012). The effects of socio-demographic variables on travel motivation among domestic tourists in Malaysia. *International Journal of Management and Sustainability*, 1(1), 7-15.
- Badan Pengelola Mangrove Indonesia. (2019). *Pedoman Pengelolaan Ekowisata Mangrove Berbasis Konservasi*. Jakarta: BPMI Press.
- Bailey, J., & Buckley, R. (2011). Social impacts of volunteer tourism in protected areas. *Annals of Tourism Research*, 38(1), 10-21.
- Bramwell, B., & Lane, B. (2011). Critical research on the governance of tourism and sustainability. *Journal of Sustainable Tourism*, 19(4-5), 411-421.
- Buckley, R. (2009). *Ecotourism: Principles and Practices*. Wallingford: CABI Publishing.
- Budiasa, I. G. (2016). Model pengembangan ekowisata berbasis masyarakat di kawasan pesisir Bali. *Jurnal Kawistara*, 6(1), 63-73.
- Ceballos-Lascurain, H. (1996). *Tourism, Ecotourism, and Protected Areas: The State of Nature-Based Tourism around the World and Guidelines for Its Development*. IUCN.
- Chuenchom, P., & Naipinit, A. (2013). Guidelines for sustainable community-based ecotourism development. *Asian Social Science*, 9(5), 126-133.
- Cooper, C., Fletcher, J., Fyall, A., Gilbert, D., & Wanhill, S. (2008). *Tourism: Principles and Practice*. London: Pearson Education.
- Dahuri, R. (2004). *Pengelolaan Sumber Daya Wilayah Pesisir dan Lautan Secara Terpadu*. Jakarta: Pradnya Paramita.
- Eagles, P. F. J., McCool, S. F., & Haynes, C. D. (2002). *Sustainable Tourism in Protected Areas: Guidelines for Planning and Management*. IUCN.
- Fandeli, C. (2002). *Pengembangan Ekowisata: Potensi dan Manfaatnya Bagi Pemberdayaan Ekonomi Lokal*. Yogyakarta: Fakultas Kehutanan UGM.
- Ginting, N., & Satria, A. (2013). Model pemberdayaan masyarakat dalam pengelolaan ekowisata berbasis konservasi pesisir. *Jurnal Sosial Ekonomi Kelautan dan Perikanan*, 8(1), 65-76.
- Goodwin, H. (1996). In pursuit of ecotourism. *Biodiversity & Conservation*, 5(3), 277-291.
- Hall, C. M. (2008). *Tourism Planning: Policies, Processes and Relationships*. Harlow: Pearson Education.
- Honey, M. (2008). *Ecotourism and Sustainable Development: Who Owns Paradise? (2nd ed.)*. Washington DC: Island Press.
- Jamal, T., & Getz, D. (1995). Collaboration theory and community tourism planning. *Annals of Tourism Research*, 22(1), 186-204.
- Johnston, R. J., & Tyrrell, T. J. (2005). Conservation through ecotourism: The case of the Monteverde Cloud Forest Preserve, Costa Rica. *Environment, Development and Sustainability*, 7(3), 261-274.
- Jones, S. (2005). Community-based ecotourism: The significance of social capital. *Annals of Tourism Research*, 32(2), 303-324.
- Kiper, T. (2013). Role of ecotourism in sustainable development. *Advances in Landscape Architecture*, 773-802.
- Kontogeorgopoulos, N. (2005). Community-based ecotourism in Phuket and Ao Phangnga, Thailand: Partial victories and bittersweet remedies. *Journal of Sustainable Tourism*, 13(1), 4-23.
- Kusnadi, M. (2012). *Nelayan dan Kemiskinan: Studi Sosiologi Ekonomi tentang Perilaku Nelayan Tradisional di Beberapa Wilayah Indonesia*. Jakarta: LIPI Press.
- Leung, Y. F., Spenceley, A., Hvenegaard, G., & Buckley, R. (2018). *Tourism and Visitor Management in Protected Areas: Guidelines for Sustainability*. Gland: IUCN.
- Mulyadi, A. (2018). Strategi pengembangan ekowisata mangrove berbasis masyarakat di kawasan pesisir. *Jurnal Pariwisata Pesona*, 3(2), 50-65.
- Orams, M. B. (1995). Towards a more desirable form of ecotourism. *Tourism Management*, 16(1), 3-8.
- Pigram, J. J., & Wahab, S. (1997). *Tourism Development and Growth: The Challenge of Sustainability*. London: Routledge.
- Purnomo, A. (2017). Model pengelolaan ekowisata bahari berbasis konservasi di kawasan pesisir. *Jurnal Ilmu Kelautan*, 22(1), 1-10.
- Scheyvens, R. (1999). Ecotourism and the empowerment of local communities. *Tourism Management*, 20(2), 245-249.
- Siry, H. Y. (2011). Decentralized coastal zone management in Malaysia and Indonesia: A comparative perspective. *Coastal Management*, 39(4), 409-426.
- Stone, M. T., & Nyaupane, G. P. (2014). Protected areas, wildlife-based community tourism and community livelihoods dynamics: Spiraling up and down of community capitals. *Journal of Sustainable Tourism*, 22(2), 321-340..