

## IMPROVING TOURISM POLICY FOR SUSTAINABLE PRACTICES AND WASTE REDUCTION: EVIDENCE FROM ISHIGAKI ISLAND, OKINAWA, JAPAN

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**Abstract** *Japan is widely recognized for its environmental consciousness and high standards of cleanliness; however, rapid tourism growth has created new sustainability challenges, particularly in peripheral island destinations. This study examines how tourism policies can be improved to encourage sustainable tourism practices and address garbage-related problems, using Ishigaki City in Okinawa Prefecture as a case study. Drawing on field observations, interviews, policy documents, and local initiatives, the paper analyses current tourism and waste-management policies, identifies institutional and practical gaps, and highlights promising practices implemented by hotels, local government, and civil society. The findings demonstrate that while Ishigaki has adopted elements of sustainable tourism aligned with the Sustainable Development Goals (SDGs), increasing tourist numbers—primarily through cruise tourism—have intensified waste pressures. The balance between preserving Ishigaki's unique natural beauty and cultural identity and achieving economic growth through increased hotel numbers has been reflected in efforts to develop sustainable tourism. Local authorities and stakeholders are increasingly recognizing the importance of implementing policies that encourage responsible tourism practices to address the pressing waste issues arising from the increasing number of visitors. The paper argues that integrated waste-management strategies, more substantial incentives for tourism businesses, and enhanced visitor education are essential to balancing environmental protection with economic development. The Japanese experience offers transferable policy lessons for other tourism-dependent regions, including Uzbekistan.*

**Keywords:** *sustainable tourism, waste management, SDGs, Okinawa Island, Ishigaki City, tourism policy*

### Introduction

Island destinations are particularly vulnerable to the environmental impacts of mass tourism due to limited land, fragile ecosystems, and constrained waste-treatment capacity. Ishigaki Island, located in the Yaeyama archipelago of Okinawa Prefecture, exemplifies these challenges. As a gateway to surrounding islands and a hub connecting Japan with East and Southeast Asia, Ishigaki City has experienced rapid growth in visitor numbers following the COVID-19 pandemic. While tourism has become a critical driver of the local economy, it has also intensified environmental pressures—most notably solid waste generation and marine litter.

The number of tourist arrivals in the country in December was estimated at 80,500 by air and 40,627 by sea, an increase of 146.1% or 38,193 people compared to the previous year. There were 11 international cruises: one with fewer than 1,000 passengers, one with more than 1,000 passengers, two with more than 2,000 passengers, five with more than



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4,000 passengers, and two with more than 5,000 passengers. This year, for the first time since the COVID-19 pandemic, cruise ships called at ports throughout the year. The total number of tourists this year is estimated at 1,418,881, the second-highest after 2019, when 1,471,691 visited—many large ships, busy city streets, and tourist spots, but also many vehicles and people.

### Cumulative total of tourists to Ishigaki city for 2023 and 2024

For 2024-year			For 2023-year			Change from last year		
Number of tourists	Air route	Water route	Number of tourists	Air route	Water route	Total	Air route	Water route
1,410,881	1,116,428	294,453	1,180,124	1,098,092	82,032	20.25%	1.8%	260%

As shown in the table above, the growth of tourism after the pandemic has had a significant impact on the local economy, leading to a sharp increase in hotels, restaurants, and resorts that serve as tourism attractions.

This paper addresses the following research question: How can tourism policies be improved to encourage sustainable tourism practices and effectively address garbage-related problems in island destinations? By focusing on Ishigaki City, the study contributes to the literature on sustainable tourism governance by linking policy design, local initiatives, and stakeholder practices within a single analytical framework.

## 2. Theoretical Framework

### 2.1 Sustainable Tourism and the SDGs

The concept of sustainable tourism is closely aligned with the United Nations Sustainable Development Goals (SDGs), particularly SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 14 (Life Below Water). Sustainable tourism emphasizes balancing economic growth, environmental protection, and social inclusion, ensuring that tourism development meets current needs without compromising future generations' ability to meet theirs. Waste reduction, recycling, and responsible consumption are central policy instruments under SDG 12, while marine litter control is essential for achieving SDG 14 in island and coastal destinations.

### 2.2 Sustainable Tourism Governance

Sustainable tourism governance refers to the coordination among public authorities, private-sector actors, and civil society to manage tourism development. Rather than relying solely on top-down regulation, contemporary governance models stress participatory decision-making, stakeholder collaboration, and incentive-based policy instruments. In the context of waste management, governance effectiveness depends on institutional capacity, enforcement mechanisms, and the willingness of tourism businesses and visitors to comply with sustainability norms. This

framework allows analysis of how local governments, hotels, and NGOs in Ishigaki collectively shape sustainability outcomes.

### **2.3 Island Studies and Environmental Vulnerability**

Island studies highlight the structural vulnerabilities of island economies, including dependence on external markets, limited waste-processing capacity, and ecological sensitivity. Tourism-dependent islands often face a paradox: economic reliance on visitor inflows simultaneously accelerates environmental degradation. From this perspective, waste management is not merely a technical issue but a governance challenge, shaped by scale, remoteness, and resource constraints. Applying island studies theory helps explain why garbage problems in Ishigaki require tailored policy solutions rather than uniform national approaches.

### **3. Tourism Development and Policy Context in Ishigaki City**

Today, many cities and towns in Japan are implementing policies aimed at sustainable development. These practices are particularly relevant for tourist destinations and facilities. It is precisely from these facilities (hotels, restaurants, beaches) that the bulk of waste is generated. In Ishigaki, sustainable practices are also becoming increasingly important as tourism grows, affecting the environment, the local economy, and the well-being of society.

For example, initiatives to protect coral reefs include regulations on fishing and tourism activities. At the same time, the city is implementing recycling programs and waste reduction initiatives for residents and tourists. To this end, partnerships with local businesses and organizations focus on sustainable practices, support conservation efforts, and provide authentic experiences for tourists.

Programs aimed at educating visitors to Ishigaki about sustainable practices instill a sense of responsibility towards the environment. Promoting local farmers' products in hotels and establishing mini markets for local vegetables and fruits, as part of the SDG practices, also serve to increase the city's economic potential.

In conclusion, Ishigaki City is actively pursuing sustainable practices that protect its natural resources and environment, support the local economy, and attract tourists, ensuring that tourism development is both responsible and beneficial for future generations.

### **3. Garbage Issues as a Challenge to Sustainable Tourism**

#### **3.1 Waste Management Practices in the Hotel Sector: The Sunshine Hotel Case**

Hotels are among the largest generators of tourism-related waste. The Ishigakijima Beach Hotel Sunshine provides a notable example of how private-sector initiatives can support sustainable tourism. The hotel has adopted policies focused on reducing plastic consumption, conserving

water and electricity, and encouraging guest participation in environmental activities.

Key measures include a “my bottle” policy that eliminates plastic water bottles in guest rooms, selective provision of non-recyclable amenities, and incentives for guests who participate in towel reuse and beach-cleaning activities. By prioritizing local food sourcing, the hotel not only reduces transport-related emissions but also enhances the authenticity of the tourist experience and supports local farmers. These practices demonstrate how hotel-level policies can complement municipal sustainability goals.

### **3.2 Civil Society Initiatives: The Nice Clean Project**

Marine litter poses a particularly severe threat to Ishigaki’s beaches and coastal ecosystems. A significant proportion of this waste originates from overseas, carried by ocean currents from neighbouring countries. In response, the “Nice Clean Project,” founded by Mr. Hidenori Tanaka, represents a community-driven approach to environmental management.

Launched in 2020, the project provides accessible cleanup kits at public locations, enabling residents and tourists to participate easily in beach-cleaning activities. Collected waste is recycled into consumer products such as benches, bags, and clothing, linking environmental protection with local economic activity. The project illustrates how grassroots initiatives can enhance environmental awareness, strengthen community engagement, and contribute to sustainable tourism branding. Mr. Tanaka's efforts are reaching beyond the island, encouraging the global community to adopt similar initiatives in their regions. The "Nice Clean Project" demonstrates how community-led efforts can effectively address environmental issues. By engaging residents and tourists in clean-up activities, promoting recycling, and fostering a culture of sustainability, Ishigaki is becoming more beautiful and attracting more tourists.

### **3.3 The Role of Local Government**

Ishigaki City is the main executive body responsible for developing and implementing waste management policies in accordance with national legislation, and its practical operation is essential. City officials and responsible persons promote policies aimed at reducing waste generation, protecting the island's natural environment, and ensuring proper waste disposal to promote recycling. Illegal waste dumping in Ishigaki is a serious concern, as it threatens both the ecosystem and the quality of life of residents. Therefore, Japanese law stipulates strict measures for such violations. The city emphasizes the seriousness of the problem, noting that under the Waste Management and Public Cleansing Act, penalties for illegal dumping can include up to five years in prison and fines of up to 10 million yen for individuals and 300 million yen for corporations. This strict enforcement underscores the city's commitment to maintaining a clean and healthy environment.

However, interviews with tourism stakeholders suggest gaps between policy objectives and on-the-ground support. Some businesses report limited institutional incentives, such as tax reductions or energy-saving subsidies, to encourage stronger engagement with SDG-oriented practices. This highlights the need for closer coordination between local government and tourism operators.

#### **4. Comparative Good Practices: Lessons from Kamikatsu Town**

To contextualize Ishigaki's challenges, the paper draws on Kamikatsu Town in Tokushima Prefecture as a comparative case. Kamikatsu is internationally recognized for its "zero waste" strategy, which prioritizes waste prevention, extensive separation into 45 categories, and community participation. Over two decades, the town has achieved a recycling rate exceeding 80 percent. A local government representative visited Kamikatsu neighborhoods to promote the "zero waste" initiative. Organic waste, making up 40% of household waste, was a significant issue. To address this, the government encouraged households to install composting machines that turn organic waste into fertilizer. With a subsidy offering an 80% discount on electric composters priced at 50,000 yen, four out of five households adopted them.

Innovations include promoting composting, subsidizing household composting machines, and providing tourism facilities such as the "Why Hotel," where guests actively participate in waste separation. These practices have generated positive spillover effects, including increased tourism and local economic revitalization. Kamikatsu demonstrates that ambitious waste policies, when supported by community engagement and clear incentives, can become assets rather than constraints for tourism development. Research shows that the two-decade-old zero-waste movement has generated side benefits, including tourism, migration, and business. What started as a lofty goal has become a means to create a sustainable city.

#### **5. Enhancing Visitor Education and Engagement**

Visitor behavior plays a critical role in waste generation. Educational programs—such as guided tours linked to initiatives like the Nice Clean Project—can raise awareness of environmental challenges and foster responsible tourism practices. Information materials at ports, airports, hotels, and major attractions should highlight local sustainability efforts and clearly communicate expected behaviors aligned with the SDGs.

#### **6. Conclusion: Implications Beyond Japan**

Ishigaki City illustrates both the opportunities and challenges of sustainable tourism in island contexts. While tourism growth has revitalized the local economy, it has also intensified garbage problems that threaten environmental quality and destination attractiveness. The Japanese experience shows that effective tourism policy requires integration across

government, business, and civil society, supported by education and incentives.

For countries such as Uzbekistan, which are expanding their tourism sectors, Ishigaki offers valuable lessons. Community-based initiatives, hotel-level sustainability practices, and vigorous policy enforcement can together support environmentally responsible tourism development. Adapting these practices to local conditions can help ensure that tourism growth contributes to long-term sustainability rather than environmental degradation.

This study provided several valuable insights and practical lessons. One notable example concerns coral fragments, often regarded as marine waste, which are washed ashore and diminish the appeal of beaches to tourists. In response, local communities reuse these materials as construction blocks for walls. A comparable approach could be applied in Uzbekistan, where waste stones from mountainous regions may similarly be repurposed as building materials.

Additionally, Mr. Tanaka's "Nice Clean" project was particularly compelling. Although Uzbekistan is a landlocked country, waste accumulation in rivers and irrigation canals remains a significant environmental challenge. Given that approximately 60% of the population is young, implementing similar NGO-led initiatives in schools and universities could yield highly effective, sustainable outcomes.

The hotel sector constitutes a core pillar of the tourism industry, and the sustainability practices implemented at the Sunshine Hotel offer valuable lessons in advancing the SDGs. Notable initiatives include sourcing locally grown agricultural products and organizing on-site fairs, both of which support local farmers and enhance tourist engagement.

In conclusion, Japan's experience in promoting sustainable tourism and cultural exchange provides a valuable model for the development of Uzbekistan's tourism sector. The application of these waste-reduction and sustainability measures would not only support economic growth but also help preserve cultural heritage and foster deeper mutual understanding between visitors and local communities.

## References

1. Bortoleto, H. C. (2003). Garbage, work and society. *Resources, Conservation and Recycling*, 39(3), 193–210. [https://doi.org/10.1016/S0921-3449\(03\)00027-2](https://doi.org/10.1016/S0921-3449(03)00027-2)
2. Ivy, C. M., et al. (2019). Developing the garbage problem in Iligan City STEM education lessons through team teaching. *Journal of Physics: Conference Series*, 1340(1), 012046. <https://doi.org/10.1088/1742-6596/1340/1/012046>
3. Sakurai, K. (2013). *Tokashiki-son no gomi shori ni tsuite kangaeru* [Thinking about waste disposal in Tokashiki Village]. Japan.
4. Tanaka, H. (2020). Nice Clean Project. <https://jomonkikaku.com/>
5. Ishigaki City. (2023). Ishigaki City Basic Environmental Plan. <https://www.city.ishigaki.okinawa.jp/>

6. Taketomi Island Tourism Association. (2023). Official tourism information. <https://taketomijima.jp/>
7. Ueda, K. (2011). Measures for general waste management in remote island tourist destinations: Case studies of Ishigaki City and Taketomi Town. Economic Environment Research Report, Japan.
8. United Nations World Tourism Organization. (2018). Tourism and the Sustainable Development Goals – Journey to 2030. UNWTO.
9. United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. United Nations.
10. Interviews:
11. Akagi, Y. (2025, February 6). Vice President and General Manager, Ishigakijima Beach Hotel Sunshine (Personal interview).
12. Tanaka, H. (2025). Founder, Nice Clean Project, Ishigaki City (Personal interview).
13. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated March 9, 2015 No. 51 "On measures to develop roadside and tourist infrastructure"; <https://www.lex.uz/uz/docs/2591258>
14. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated September 21, 2019 No. 793 "On measures for the further development of roadside and tourist infrastructure." <https://lex.uz/uz/docs/4525188>
15. Order of the Cabinet of Ministers of the Republic of Uzbekistan dated April 27, 2022 No. 203-F "On the organization of providing tourist infrastructure facilities with sanitary and hygienic conditions." <https://ichkiturizm.uz/ru/event/turizm-obyektlarida-sanitariya-inqilobi>
16. Karimov, M., Okmullaev, R., Marty, P., & Saidmamatov, O. (2025). Tourism sustainability in Uzbekistan: Challenges and opportunities along the Silk Road. *Economies*, 13(9), 250. <https://doi.org/10.3390/economies13090250>
17. Baldacchino, G. (2018). The solution is the problem: Innovation in island studies. *Journal of Marine and Island Cultures*, 7(1), 1–14. <https://doi.org/10.21463/jmic.2018.07.1.01>
18. Dolnicar, S., Cvelbar, L. K., & Grün, B. (2019). A sharing-based approach to engaging tourists in destination sustainability. *Journal of Travel Research*, 58(1), 87–102. <https://doi.org/10.1177/0047287517746013>
19. Hall, C. M. (2011). Policy learning and policy failure in sustainable tourism governance. *Journal of Sustainable Tourism*, 19(4–5), 649–671. <https://doi.org/10.1080/09669582.2011.555555>
20. United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. United Nations.
21. United Nations World Tourism Organization. (2018). Tourism and the Sustainable Development Goals – Journey to 2030. UNWTO.
22. Saito, O., & Sakamoto, T. (2018). Community-based resource management in Japan. *Sustainability Science*, 13(5), 1401–1412. <https://doi.org/10.1007/s11625-018-0564-3>