



UDC 332

## **SUSTAINABLE BEACH TOURISM ASSESSMENT BASED ON INDONESIAN SUSTAINABLE TOURISM DESTINATION GUIDELINES IN THE OECINA BEACH TOURISM AREA**

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### **ABSTRACT**

The Indonesian government's approach to tourism development is based on a growth strategy that aims to promote economic equality and enhance the population's welfare. This approach is also oriented towards regional development, which relies on the community and empowers local communities across various sectors. The principles of sustainable tourism are further elucidated by the Minister of Tourism and Creative Economy Regulation Number 9 of 2021, which sets forth guidelines for sustainable tourism destinations. Sustainable tourism assessments must adhere to the guidelines for sustainable tourism destinations, given the pressing need for tourism development in Indonesia. The issue that arises in the management of beach tourism is how to guarantee the sustainability of beach tourism by the sustainable tourism destination guidelines. The objective of the preliminary assessment of tourist areas is to provide managers with initial guidance for enhancing Oecina beach management. The assessment of the sustainability status employed the sustainable tourism self-assessment platform Desti.id, comprising 175 questions distributed across four domains: governance, social and economic aspects, cultural aspects, and environmental aspects. The data analysis commenced with the administration of in-depth interviews, accompanied by questionnaires, to key informants and area managers. The study's findings are presented in the form of leverage factors, which can be employed to inform a strategy of gradual improvement. The results demonstrated that the status was unsustainable, with an average existing condition value of 20.45. It was thus necessary to implement improvements to 15 sensitive factors in the existing condition, which were to be achieved gradually through three sustainability scenarios.

### **KEY WORDS**

Sustainable beach tourism assessment, tourism destination, guidelines, Oecina beach.

The tourism sector plays an integral role in the economy, offering a multitude of benefits that extend beyond mere revenue generation. It provides invaluable employment



opportunities for the local community, which in turn leads to an increase in community income. This is achieved through the sale of goods and services provided by various establishments, including restaurants, hotels, travel agencies, and souvenir shops. An increase in the number of tourists will result in greater revenue from foreign exchange, which will in turn facilitate the development of additional tourist facilities and infrastructure (Fitridamayanti, Benu & Gene, 2017). The development of a tourist area has the potential to enhance visitor interest, stimulate employment opportunities, and augment the income of the surrounding community. The development of tourism can also result in changes that may have an adverse impact on the quality of life of the community and the environment (Dendo et al., 2021).

In order to provide a reference point for local governments and other stakeholders in the implementation of sustainable tourism destination development, Minister of Tourism and Creative Economy Regulation Number 9 of 2021 is stipulated, hereinafter referred to as the Sustainable Tourism Destination Guidelines. This guideline serves as a comprehensive reference point for the sustainable management of tourism destinations, to ensure the protection, utilization, and development of the area sustainably, in line with the principles set out in the Sustainable Tourism Destination Guidelines. The issue of ensuring the sustainability of beach tourism by the Sustainable Tourism Destination Guidelines represents a significant challenge in the management of beach tourism. The objective of the pilot assessment of tourist areas is to provide managers with initial guidance for improving the management of Oecina beach. The assessment of the ecotourism sustainability status of Oecina beach employs the sustainable tourism self-assessment platform Desti.id, comprising 175 questions distributed across four domains of sustainability: governance, social and economic aspects, cultural aspects, and environmental aspects. In light of the aforementioned background, research was conducted on a sustainable beach tourism assessment based on the sustainable tourism destination guidelines using the Desti.id platform in Kupang Regency (case study: Oecina beach) to address the challenges of sustainable tourism management in NTT Province, particularly for the Kupang Regency government.

## METHODS OF RESEARCH

*Research sites.* This research was conducted in April – August 2024, which is located in Oecina beach, Lifuleo village, Kupang Regency, East Nusa Tenggara Province.

*Data source.* The data employed in this study is primary data obtained from the completion of a questionnaire provided by Desti.id platform, comprising a total of 175 questions from four aspects of sustainability: governance aspects, social and economic aspects, cultural aspects, and environmental aspects. In-depth interviews were conducted with key stakeholders, including agency leaders and managers of marine protected areas. Secondary data were obtained through literature searches and reports of various related agencies on the management of the Oecina beach tourism area in Lifuleo village, West Kupang District, Kupang Regency.

*Data analysis.* The analysis technique employed is qualitative data analysis. The process of data analysis commences with the administration of comprehensive questionnaires to key informants, who are individuals with a profound understanding of and expertise in the subject matter under investigation. Following the completion of interviews, the data analysis phase commences with the input of the questionnaire results on the Desti.id platform. The resulting analysis is then made available for review. Subsequent discussions will be held upon the acquisition of the results of the sustainability analysis and the sustainability scenarios.

Desti.id, or Desti, is a platform designed to assess the sustainability status of tourist destinations, both in their current state and in projected future conditions. It does so by employing the National Standard outlined in Minister of Tourism and Creative Economy Regulation Number 9 of 2021. Desti provides a comprehensive representation of future evaluation, taking into account a multitude of variables that serve as pivotal elements in the



tourism management process. The website is utilized by a diverse range of stakeholders, including students, institutions, academics, consultants, and observers of tourist destinations. These groups employ the platform for a variety of purposes, including policy formulation, studies/research, and other related endeavors (Desti.id, 2024). The assessment of sustainable tourism destinations employs a rapid assessment system to provide an overview of the value/index of the tourism status. This is done to facilitate the evaluation and selection of program priorities in good management planning, with the most sensitive factors being selected to significantly improve the status. Furthermore, an assessment with scenarios can be conducted to ascertain the distinction between the pre-and post-intervention states. It is anticipated that this assessment will facilitate the development of Indonesian tourism destinations that align with Indonesian National Standards and are more sustainable. The research stages are illustrated in the research flowchart of the Sustainable Beach Tourism Assessment, which is based on the Sustainable Tourism Destination Guidelines and utilizes the Desti Platform at Oecina beach. This is presented in Figure 1.

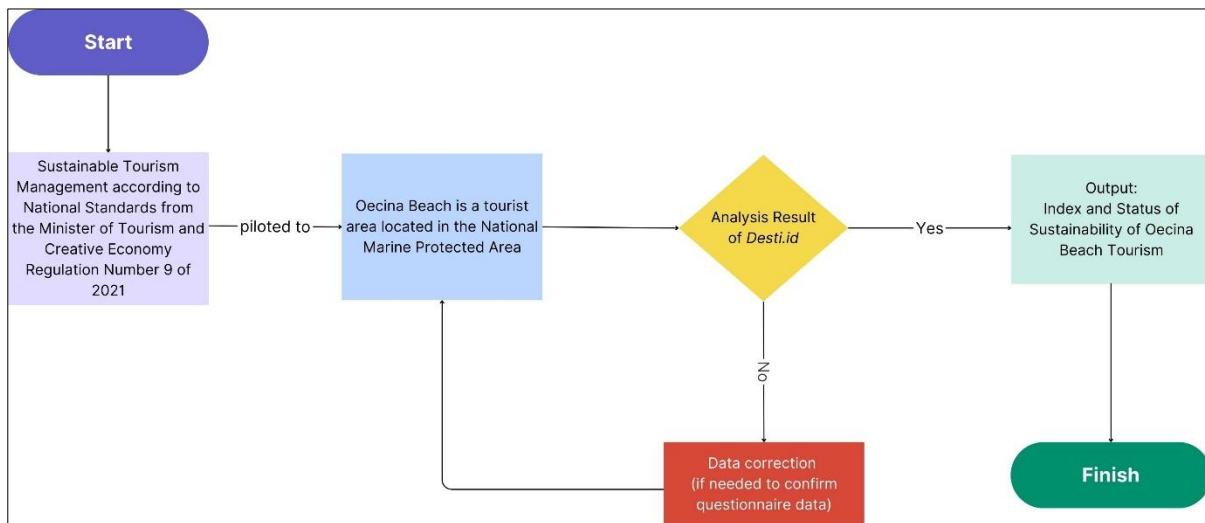


Figure 1 Research Flowchart using the Desti Platform for Sustainable Tourism Assessment in Indonesia

Desti adopted a sustainability assessment method known as Multi-Aspect Sustainability Analysis (MSA). The fundamental premise of this methodology is a streamlined assessment procedure, wherein respondents are not a randomly selected sample but rather key stakeholders who can be engaged in comprehensive interviews (Paulus et al., 2023). The application of this sustainability analysis encompasses several stages, including the analysis stage, the determination of the aspects/dimensions, factors, and indicators that comprise sustainability. Subsequently, a questionnaire was constructed and completed by expert respondents. Subsequently, the mode value is determined to ascertain the leverage factor and its sustainability status. Furthermore, the formulation and application of MSA will yield aggregate status values, aspect status values, future condition values, status value ordination, uncertainty errors, validation with random iteration, and determination of sustainability improvement scenarios (Firmansyah, 2022). The implementation of MSA adoption through Desti will facilitate the formulation of sustainable improvement strategies (Pratama et al., 2024).

## RESULTS AND DISCUSSION

Tourism development can be defined as a series of efforts to achieve integration in the utilization of diverse tourism resources, to integrate all forms of aspects that are either directly or indirectly related to the continuity of tourism development (Swarbrooke, 1996). In the context of tourism development, the presence of supportive factors is essential. The



aforementioned supporting factors will be elucidated concerning the findings of the assessment of the extant conditions in the field. The following section presents the findings of the assessment of the existing conditions about the sustainability of Oecina beach tourism, as illustrated in Figure 2. The management of Oecina beach tourism based on existing conditions is unsustainable in four aspects of sustainability, according to the tourism guidelines, with a value range of 15.38 to 28.46.

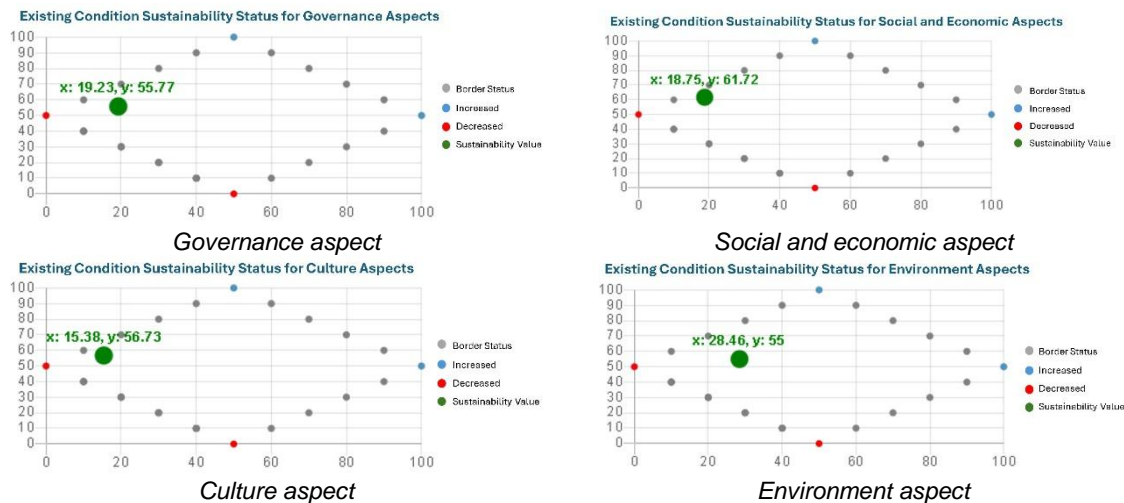


Figure 2 – The sustainability status of the existing conditions of each aspect of the Oecina beach tourism sustainability

Figure 2 provides a comprehensive overview of the sustainability value of each aspect of Oecina beach tourism. The sustainability value of each flyover diagram is represented on an x-axis (15.38 - 28.46) and a y-axis (55.00 - 61.72), indicating its location in Quadrant III. This indicates that, despite the current unsustainable status, each aspect has the potential to improve and increase its sustainability management (Firmansyah, 2022). Furthermore, each indicator has distinct implications for management in terms of further enhancing sustainability (Juhandi, 2024). Furthermore, this capacity represents an endeavor by each aspect to enhance its status in the future (Bancin et al., 2024).

The Ministry of Tourism and Creative Economy has identified four key areas of focus for sustainable tourism, namely sustainable tourism business, socio-economic sustainability, cultural sustainability, and environmental aspects. The practice of sustainable tourism is likely to become a significant factor influencing the decision-making of prospective tourists. It is not only during periods of leisure that tourists demonstrate an awareness of the protocols associated with travel and tourism, including those related to health, safety, comfort, and the preservation of natural resources. The assessment of the sustainability of ecotourism at Oecina beach employs a sustainable tourism self-assessment platform comprising 175 questions based on the Ministry of Tourism and Creative Economy's 2021 regulations on sustainable tourism destination guidelines and the Global Sustainable Tourism Council's Destination Criteria. The value/index of the ecotourism status obtained will assist in the evaluation and selection of program priorities in good management planning by identifying the most sensitive factors that can significantly improve status. Furthermore, a scenario assessment can be conducted to ascertain the extent of change before and after the intervention.

The results of the analysis indicate that the status is unsustainable, with an average existing condition value of 20.45. The distribution of factor assessment results on the aspects of sustainability assessed is as follows: governance (19.23), social and economic aspects (18.75), cultural aspects (15.38), and environmental aspects (28.46). The four assessed aspects collectively account for a minimal proportion of the total score. The enhancement of the sustainability status of Oecina beach ecotourism will be conducted in phases, employing



three improvement scenarios for each factor within the four assessed aspects of sustainability. In the three improvement scenarios, improvements will be made to five factors that have been prioritized based on the sensitivity value obtained from the analysis results (total improvement of 45 factors). An overview of the sustainability status, together with the uncertainty error value, is presented in the form of a scatter diagram and tabulation, as illustrated in Figure 3.

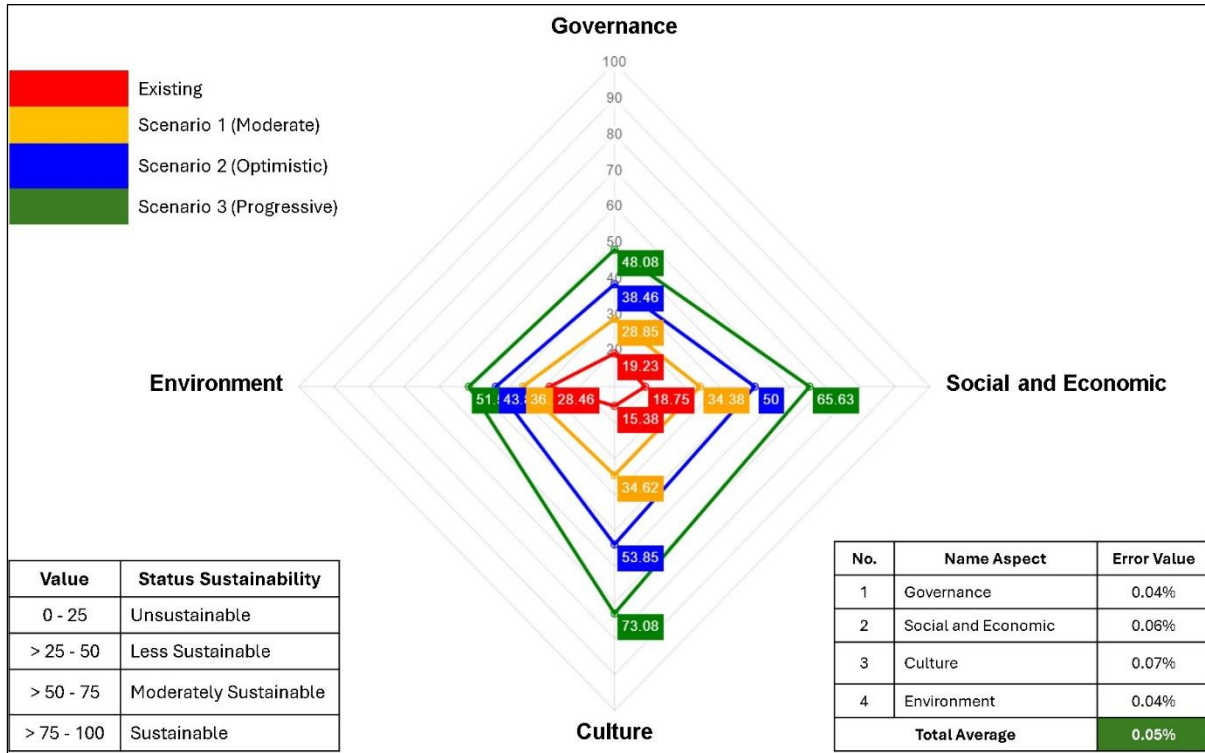


Figure 3 – The kite diagram of index and sustainability status of Oecina beach ecotourism

As illustrated in Figure 3, efforts to enhance its management sustainably entail improvements to each aspect in each form of scenario. It is established that there are four key aspects: governance, social and economic, cultural, and environmental. In light of the aforementioned information, it can be ascertained that the cultural aspect plays a pivotal role in enhancing the sustainability status of the entity in question. This is because, in each instance of improvement to the scenario mechanism, the cultural aspect demonstrates the most substantial change of the four aspects, from the lowest sustainability value in the existing scenario to the highest value in the third scenario (Firmansyah, 2022).

The aggregate sustainability value is 20.45, indicating that the current conditions are unsustainable. The environmental aspect is the most critical issue, with a status value of 28.46. Improvements to the sustainability value will be implemented in stages through three sustainability scenarios in each aspect. This will be achieved by taking five lever factors that are identified as priority improvements in the development of Oecina as a sustainable tourism destination by the relevant Indonesian tourism guidelines. In each lever factor, scenario simulations will be carried out, taking as many as five lever factors in each aspect. This will result in an increase in the sustainability status value in scenario 1 (moderate) and scenario 2 (optimistic) to 33.50 and 46.50, respectively, which falls within the less sustainable category. The subsequent phase of enhancement entails the simulation of leverage factors with scenario 3 (progressive) through the incorporation of 5 factors in each aspect, thereby elevating the aggregate value of sustainability to 59.58, which falls within the moderately sustainable category. Table 1 provides a detailed overview of the changes in status values between the various scenarios.



Table 1 – Status and sustainability value of existing conditions and scenarios

| No | Aspect                | Existing      | Scenario 1<br>(Moderate) | Scenario 2<br>(Optimistic) | Scenario 3<br>(Progressive) |
|----|-----------------------|---------------|--------------------------|----------------------------|-----------------------------|
| 1  | Governance            | 19.23         | 28.85                    | 38.46                      | 48.08                       |
| 2  | Social and Economic   | 18.75         | 34.38                    | 50.00                      | 65.63                       |
| 3  | Culture               | 15.38         | 34.62                    | 53.38                      | 73.08                       |
| 4  | Environment           | 28.46         | 36.15                    | 43.85                      | 51.54                       |
|    | Average               | 20.45         | 33.50                    | 46.54                      | 59.58                       |
|    | Status Sustainability | Unsustainable | Less Sustainable         | Less Sustainable           | Moderately Sustainable      |

In order to develop sustainable tourism, Kemenparekraf has identified four key areas of focus, namely: sustainable management (tourism business), long-term sustainable economy (socio-economy), cultural sustainability (sustainable culture), and environmental aspects (environmental sustainability). The overarching policy recommendation is to implement incremental enhancements to the aforementioned sensitive factors, encompassing cultural, social, governance, and environmental aspects, commencing with scenario 1 and culminating in scenario 3. In light of the pressing need for improvement, it is imperative to adopt a comprehensive approach, encompassing strategies such as regenerative tourism, blue ocean strategy, green and clean, green certification, sustainable marketing, sustainable innovation, and education based on local wisdom. These are operationalized through the implementation of environmental management practices, the protection of intellectual property rights, the empowerment of local communities and cultures, and the assumption of responsibility for the preservation of the environment and cultural diversity.

In consideration of the three scenarios pertaining to the sustainability status of Oecina beach tourism, a total of 45 leveraging factors have been identified as potential avenues for improvement in the management of Oecina beach tourism. Each scenario contains one to five leverage factors, which are grouped according to their influence on changes in sustainability. Information related to lever factors is necessary for their sustainable utilization (Riziek et al., 2023). The implementation of improvements to each leverage factor will increase the sustainability of each management (Lindawati et al., 2024). The stages of implementing improvements to the sustainability status of Oecina beach Tourism management through improving the leverage factors are as follows.

*Moderate Scenario.* In terms of governance, the management must implement improvements in five key leverage factors. The five leverage factors in the moderate scenario pertaining to the implementation of research on the impact of tourism activities and evidence of communication with the general public and local communities on tourism management. The initial leverage factor is the necessity for management to demonstrate public involvement in the formulation of policies, regulations, and guidelines about environmental, economic, social, and cultural impact assessment planning. Such measures contribute to the establishment of trust among the general public, local communities, and tourists in the management of tourism areas. Secondly, it is incumbent upon those responsible for the management of tourism activities to identify the impacts of their operations and visitor volumes through the utilization of observations and feedback from the communities and stakeholders with whom they interact. This modest research endeavor will assist in the compilation of an inventory of opportunities and threats to the maintenance and development of tourism activities. Thirdly, the manager must take action to manage visitor flows and their associated impacts. Fourthly, the necessity for environmental, economic, social, and cultural impact assessments at a scale sufficient to address long-term issues for the destination has been established. Furthermore, there is evidence of consultation with, and consent from, indigenous peoples or ethnic minority groups when tourism development is being proposed or will occur within the area.

To enhance the socio-economic aspects of the organization, the management must implement improvements in five key leverage factors. In the moderate scenario, the five leverage factors relate to the utilization of regulations and documentation about ownership in the dissemination of information to the community, the prioritization of local business



products, and the establishment of a liaison between local businesses, communities, and visitors in the domain of sustainability. With regard to the stages of improvement of the levers, the initial stage is for the destination to utilize the established laws about ownership and acquisition rights, users and access rights to these significant resources, as well as laws concerning communal and indigenous rights, public consultation, and resettlement. Secondly, the destination has agreed with the local tourism enterprise, whereby the enterprise has committed to providing decent employment or career opportunities for the people of the destination. Thirdly, the destination has agreed with the local tourism enterprise, whereby the latter has committed to giving priority to the utilization of locally sourced goods and services that meet the requisite quality standards. Fourthly, the destination has a mechanism in place to facilitate connections between local tourism enterprises and the community, to implement sustainability initiatives. A fifth criterion is the presence of a mechanism enabling visitors to engage with the local community, thereby facilitating the implementation of sustainability initiatives.

In order to enhance the cultural aspect, the management must implement improvements in five key leverage factors. The five leverage factors in the moderate scenario pertain to the maintenance of artifacts, cultural and historical heritage in the form of regulations, and the prioritization of local community access. To enhance the first leverage factor, the tourism manager must implement specific measures to safeguard and/or restore local community access. Secondly, it is incumbent upon the destination to determine which, if any, laws are relevant to the historical artifacts in question. Thirdly, the destination must establish a platform or medium through which feedback from visitors and local communities on the intangible heritage experiences delivered can be collected. Fourthly, the destination establishes or decides to utilize intellectual property rights legislation within the destination (title, date). Moreover, the fifth leverage factor is for the tourism manager to ensure the protection of intellectual property rights in the development of cultural experiences for visitors.

*Environment Aspect.* In order to enhance the environmental aspect, it is imperative that the management implement improvements to the five identified leverage factors. The five levers in the moderate scenario pertain to the reduction of energy consumption and the implementation of codes of practice, both in the context of visitor management and interactions with wildlife. In terms of the specifics, the initial stage of improvement for the lever factors is for the tourism management to implement a program for the efficient use of energy, which should include the promotion and support of space insulation. Secondly, it is incumbent upon destinations to guarantee investment opportunities for renewable energy, as well as the percentage of total energy procurement or consumption. The third lever factor is the provision of incentives for business entities that monitor and reduce energy consumption. In addition, the fourth leverage factor concerns the necessity for destinations to implement a code of practice for travel operators and tour guides, thereby demonstrating their commitment to visitor management at natural sites. Moreover, the dissemination of codes of practice for interacting with wildlife, including observation, is a fifth leverage factor for tour operators. These codes must reflect national and international standards.

*Optimistic Scenario.* In terms of governance, it is the responsibility of the management team to implement improvements to the five identified leverage factors. In the optimistic scenario, the five leverage factors pertain to evidence of communication with the community and its impact on climate change adaptation, as well as action in a crisis or emergency. The initial leverage factor that requires the input of the management team is the illustration of effective communication and the implementation of pertinent policies, regulations, and guidelines at the planning, development, and implementation stages. Secondly, there is evidence that local ecosystems are being considered in terms of their impacts and contributions to climate change adaptation. Thirdly, it falls upon the management team to identify the communication procedures that are to be employed during and after an emergency. Fourthly, a program of providing information and training on local risk and crisis management for relevant parties within the destination is to be implemented. Moreover, the



fifth leverage factor for tourism managers is the availability of exemplars of visitor information that incorporates sustainability issues and the recommended responses to them.

In terms of the social and economic aspects, the management must implement improvements to the five leverage factors in the optimistic scenario. These five leverage factors pertain to the commitment to comply with and utilize relevant legislation and regulations, evidence of socialization with the local community, the availability of security and health services, and visitor accessibility to the site. In particular, the initial leverage factor pertains to the necessity for the destination and its stakeholders to demonstrate a commitment to comply with the established rules and to safeguard against any potential human rights violations, including those related to human trafficking, modern slavery, and child labor. Secondly, the destination must establish or otherwise decide to utilize specific legislation about property rights and acquisition, as well as user and access rights to essential resources. Thirdly, the destination has demonstrated evidence of community consultation, consent, and compensation activities. The fourth leverage factor is the provision of health and safety services that meet the requisite health standards and are actively operated and easily accessible at the destination. Furthermore, the destination must implement regulations and standards about visitor accessibility to sites, facilities, and services.

In terms of the cultural aspect, the management team must implement improvements in five leverage factors in the optimistic scenario. These five leverage factors pertain to the involvement of local communities, monitoring systems for accessibility to natural and cultural sites, codes of practice for cultural sites, and the provision of informative materials about sites in the tourist area. With regard to the specifics, the initial leverage factor must be addressed by the tourism manager, who should engage with and collaborate with indigenous and local communities in the development and provision of visitor experiences based on intangible cultural heritage. Secondly, destinations must implement a system to monitor accessibility to natural and cultural sites for local communities. Thirdly, the destination has a code of practice for travel operators and tour guides, as well as their involvement in the management of visitors at cultural sites. Moreover, the fourth leverage factor pertains to the provision of informative interpretation materials about the sites in accessible formats before arrival. Furthermore, the destination must demonstrate that the interpretation materials have been meticulously researched and are accurate.

In the environmental aspect, the management needs to make improvements to the five leverage factors in the optimistic scenario. These five leverage factors are related to informing regulations and guidelines to managers, and water service providers, efforts to improve water quality, monitoring solid waste, and waste management programs. Specifically, the first lever needs to be done by the destination informing tourism businesses and tour guides about the law, standards, and guidelines. Second, the destination publishes and enforces water stewardship objectives when the study results show high water risks. Third, the destination shows efforts or actions to improve water quality. Furthermore, the fourth lever is in the form of the destination having a solid waste monitoring program with published results and targets. In addition, the fifth lever is for the destination to have a waste management program for tourism businesses (both home and office scale) and public facilities.

*Progressive Scenario.* In terms of Governance, the management needs to improve the five leverage factors in a progressive scenario. The five leverage factors are related to the transparency of strategies/plans, having specific indicators from various perspectives, seasonal challenges and visitor distribution, crisis management and emergency response plans, and planning adjustments with the presence of tourist locations. The first leverage factor that needs to be implemented by the management is to provide clear and readily available strategies/plans online. Second, the destination has specific indicators and targets related to socio-economic, cultural, and environmental aspects that can be measured quantitatively and whose results can be identified. Third, the destination has a management strategy and action plan that addresses seasonal and visitor distribution. Next, the fourth leverage factor, crisis management risk reduction and emergency response plans for tourism





activities at the destination, has been made available and documented. Additionally, the fifth leverage factor in the form of planning that has been made can identify various risks, including natural disasters, terrorism, health threats, resource depletion, and other matters according to the location.

In the social and economic aspects, the management needs to improve the five leverage factors in the progressive scenario. These five leverage factors are related to support for MSMEs (Micro, Small, and Medium Enterprises), providing space for local community participation in the tourism value chain, the establishment, and use of relevant regulations, providing access according to the needs of different people, and providing accessibility information. The first leverage factor that needs to be implemented is for the destination to fully support the existence of MSMEs through mentoring, financial assistance, or providing opportunities for business development. Second, the destination actively helps local farmers, artisans, and food producers to engage in the tourism value chain by making local products a part of local tourism activities. Third, the destination establishes or decides to use certain laws related to human rights, exploitation, discrimination, and harassment that will serve as references and be implemented at that destination. Fourth, the destination has programs to improve access for people with different access needs. Additionally, the fifth leverage factor is in the form of information regarding accessibility details included on the main sites for visitors.

In the cultural aspect, the management needs to improve the 5 leverage factors in the progressive scenario. These five leverage factors are related to the socialization of tourism intellectual property rights, the socialization and monitoring of cultural site behavior guidelines, information about the sites and their vulnerabilities, community involvement in the preparation of that information, and monitoring visitor flows and their impact on cultural sites. The first leverage factor is in the form of tourism managers conducting socialization about intellectual property rights to tourism stakeholders at the destination. Both tourist destinations have and socialize behavioral guidelines for visitors to sensitive cultural sites and events, and periodically monitor compliance with their implementation. Third, the existing interpretive materials include discussions related to the identification of the site's importance and its sensitivity or fragility. Continued with the available interpretive materials prepared jointly by the host community and destination managers, resulting in appropriate interpretive materials, as the fourth leverage factor. In addition, the fifth leverage factor in the form of a destination has mechanisms to monitor visitor flows and impacts on cultural sites, with the results disseminated throughout the destination.

In the Cultural aspect, the management needs to improve the five leverage factors in the Progressive scenario. These five leverage factors are related to the publication of tourism energy consumption targets, water risk assessment programs, waste management guidelines, regular reporting accompanied by monitoring and mitigation actions, and the promotion of bicycle use and walking in tourist areas. Specifically, the first stage of improving the leverage factor in the form of a destination targets energy consumption from tourism activities that are published and promoted. Continuing with the second leverage factor, the destination has programs or collaborations to regularly assess water risks. Third, the destination has written guidelines and regulations on waste management. Furthermore, the destination has a form of regular reporting (annual or on a cycle according to the destination's needs) on climate, including monitoring and mitigation actions, as the fourth leverage factor. In addition, the fifth leverage factor in the form of destinations shows improvement and makes promotional efforts for cycling and walking opportunities.

The sensitivity leverage values of the variables in Table 2 show the difference between the real status (based on the mode value) and the status value from the random iteration (based on the average opinion), where the difference between the two should not exceed 5%. This sensitivity value directly reflects the state of the aspect, while the random iteration is an effort by the manager to see the bias of a factor's activities in the future. The respondent error estimation value illustrates the confidence range between factors, where the closer the real status value and the status value based on random iteration, the smaller or better the error level, while the larger the gap between these two values (or more than



0.5), the higher the error level. Therefore, it is necessary to review the respondents' opinions to verify the gap between the respondents' opinions (Firmansyah, 2022).

Table 2 – Sensitivity of leverage variable, random iteration validation status, validation status and estimation respondent error

| No | Aspect              | Real Status | Random Iteration Status | Validation Status | Estimation Respondent Error |
|----|---------------------|-------------|-------------------------|-------------------|-----------------------------|
| 1  | Governance          | 19.25       | 20.00                   | 0.77              | 0.80                        |
| 2  | Social and Economic | 18.75       | 19.00                   | 0.25              | 0.27                        |
| 3  | Culture             | 15.38       | 15.00                   | 0.38              | 0.49                        |
| 4  | Environment         | 28.46       | 29.00                   | 0.54              | 0.38                        |

Based on the sensitivity leverage variable values, the four aspects of the sustainability of Oecina Beach tourism have a good status value because the range between the real status and random iteration is between 15.38 - 28.46 and 15.00 - 29.00, respectively, and the respondent error estimation value is in the range of 0.27 - 0.80, indicating a very small error rate. This also demonstrates that the level of consistency in the respondents' answers is very high, as it remains below 5%.

## CONCLUSION

In order to manage sustainable tourism in Indonesia, the Minister of Tourism and Creative Economy Regulation Number 9 of 2021 concerning Guidelines for Sustainable Tourism Destinations must be followed. Sustainable tourism destination criteria cover several areas, including sustainable management, social and economic sustainability, cultural sustainability, and environmental sustainability. A trial application of the sustainable tourism evaluation at Oecina Beach is required so that management may identify early strategies for sustainable beach tourism development. The research findings reveal an unsustainable situation, with an average existing condition score of 20.45. Improvement efforts must be done on 45 leverage elements in the current condition, which must be addressed gradually through three sustainability scenarios.

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