Implementation of Sustainable Tourism Model in Taman Wisata Alam Pantai Carita Pandeglang Banten, Indonesia

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Abstract—The strategic location of Taman Wisata Alam Pantai Carita is not far from the capital city of Jakarta and easy to access by public transportation. It takes two hours from Jakarta. Strategic location is supported by its natural tourism potential to be an attraction for tourists. The high level of domestic tourist visit is dominated by DKI Jakarta, West Java, and parts of Central Java. Tourism development in this region is focused on economic aspects. It has an impact on the exploitation of natural resources, human resources and local culture. Empirical facts show that the dimensions of sustainable tourism are in a weaknesses position. Fundamental weaknesses in this region are (1) Destination Management Organization (DMO) has not been established; (2) the absence of concepts and efforts to conserve nature and culture carried out by stakeholders; (3) there isn’t carrying capacity; (4) there aren’t educational efforts and training in the principles of sustainable tourism; (5) there isn’t promotion and campaign for sustainable tourism and; (6) there isn’t monitoring and evaluation program. This research used of descriptive qualitative method. This research aims to design a governance system to develop sustainable tourism principles at the Taman Wisata Alam Pantai Carita. The condition of tourism provides of benefits to local society in the economic sector, environmental and cultural conservation and provides positive social values for stakeholders.

Keywords—model of sustainable tourism, carrying capacity, destination management organization (DMO).

I. INTRODUCTION

Carita Beach is a beach on the West coast of Banten Province, Indonesia. Carita Beach was established by the Government as a Nature Tourism Park (Taman Wisata Alam) through the Minister of Agriculture Decree No.440/kpts/UM/1978 on July 15, 1978. This beach has a beautiful natural panorama with a sloping beach, the sound of the waves showing a water game covered by white sand and combined with a panoramic view of the Krakatau mountain. Along the coast, many tourist attractions often take place such as jetsky, banana boat, diving, snorkeling or looking closely at the beauty of Mount Krakatau [1].

The strategic location of Taman Wisata Alam Pantai Carita near the capital city of Jakarta, easy to access to land transportation modes within two hours. Besides that it has natural tourism potential which is an attraction for tourists. Both of these correlated with the high number of tourists visiting the archipelago to Carita Beach Natural Park [1].

So far, the development and development of tourism in this region has focused on economic aspects, which have an impact on the exploitation of natural resources, human resources and local culture. The empirical facts prove from the results of previous studies the dimensions of sustainable tourism in a weakness position. Basic weaknesses are in the following factors. (1) Destination Management Organization (DMO) has not been established; (2) the lack of efforts to conserve nature and culture carried out by stakeholders; (3) there isn’t calculation of carrying capacity; (4) there aren’t educational and training efforts; (5) tourism promotions and campaigns have not been carried out; (6) there isn’t monitoring and evaluation program for sustainable tourism.

But this is not the case with external environmental factors. All factors supporting this sustainable tourism have a great opportunity to be implemented. These supporting factors are (1) the existence of political and legal support to implement the principles of sustainable tourism; (2) easily communicate information dissemination related to the promotion of sustainable tourism due to the phenomenon of the internet, social media, to android-based programs; (3) there is a new (market) demand for sustainable tourism because it has the power to create change on a global scale. It places the need for increased awareness and sustainable tourism practices by stakeholders as an urgent problem. The results of this research are expected to be an effort to ensure the implementation of sustainable tourism in the Taman Wisata Alam Pantai Carita is applied. In the implementation process, a model is needed, which means representation or description or condition of sustainable tourism which is a real or rational condition for sustainable tourism.

II. LITERATURE REVIEW

A. Model

Various definitions of models proposed by experts, among others, Murty et al [2]stated that the model is an adequate representation of a system, and said to be adequate if it is in accordance with the objectives set by the researcher. Corresponding to usability, the model in a broad sense is a...
B. Destination Management Organization (DMO)

The term DMO according to Undang-undang (law) No. 50 of 2011 is a destination development organization which is a tourism destination governance structure that includes planning, coordination, implementation, and control of destination organizations in an innovative and systemic manner through the use of networks, information and technology, which are guided in an integrated manner with community participation, associations, industry, academics and the Government in order to improve the quality of management, volume of tourist visits, length of stay and amount of tourist expenditure as well as benefits for people in tourism destinations.

C. Sustainable Tourism

According to [4] the basic goal of sustainable development is the achievement of a balance between the tourism environment, local society needs and tourist needs. Sustainable tourism defined by The World Tourism Organization (UNWTO) is tourism that takes full account of the present and future economic, social and environmental impacts, answering the needs of visitors, industry (tourism), the environment and the host community [5]. The goal of sustainable tourism is to reduce poverty, by respecting the socio-cultural authenticity, and using environmental resources responsibly, and not only encouraging but also facilitating and empowering the community so that they are able to participate in the production process and get direct benefits from tourism activities. The principles of sustainability refer to the balance of environmental, economic and socio-cultural aspects [5]. These principles are, Community Based Tourism, Conservation Oriented, Carrying Capacity, Education and Training, Promotion, and Monitoring and Evaluation.

III. METHOD

The method for formulating a sustainable tourism governance policy model to be adopted in this research is the development of a strategic management concept developed by Fred. R. David [7]. As a first step, before formulating a series of model formulation stages, the tool that must be used first is the vision and mission statement. The vision and mission statement is set to provide direction in formulating, implementing and evaluating strategies.

### TABLE I. METHODOLOGY OF RESEARCH

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<th>Implementation of Research</th>
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The procedures carried out to formulate a sustainable tourism development strategy are, (1) the Input Phase, at this stage developing an External Factor Evaluation (EFE) and Internal Factor Evaluation (IFE) matrix (2) Matching Phase, this stage is developing a SWOT analyst and the last is (3) the Decision Stage, at this stage developing the QSPM matrix. From the results of the QSPM analysis, a series of sequential and concurrent strategies were found which were later developed into the Sustainable Tourism Development Model.

A. Vision And Mission

The Vision and Mission set for the Taman Wisata Alam Pantai Carita are:

**Vision**

Realizing as a sustainable tourism area that provides welfare for local society.

The Vision is:

1) As a tourist destination that is unique and superior in terms of geographical, demographic needs to be managed properly to provide comfort and prosperity for the society and realize the development of sustainable natural tourism.

2) Being able to be realized as a natural tourism park that is sustainable by involving the participation of the society.

3) It is necessary to support the paradigm of tourism development that is not only developing mass tourism but also oriented towards sustainable tourism.

**Mission:**

1) Realizing Taman Wisata Alam Pantai Carita as a leading marine tourism area in Indonesia.

2) Increase the professionalism of tourism authorities.

3) Realizing quality tourism services.

4) Realizing an increase in community welfare through empowerment of local communities.

5) Realizing the physical and spatial environment that supports the development of sustainable natural tourism.
B. Input Phase
The procedure developed at the input stage is developing EFE and IFE Matrik. Information from these two methods forms the basis of the matching stage and decision stage.

1) Matrix External Factor Evaluation (EFE)
EFE Matrix is the result of summary and evaluation of information related to economy, socio-culture, demographic and environment, politics, government, technology law, and globalization. The EFE matrix is developed in five steps:
a) Make a list of external factors as stated in the complete profile of tourism potential. External factors inputted consist of opportunity and threat factors.
b) Gives weight to each factor that ranges from 0.0 (not important) to 1.0 (very important). This weight indicates the relative significance of a factor in the success of sustainable tourism areas.
c) Ranking between 1 to 4 for each major factor to show how effective the strategy has been done so far in responding to the factor, where 4: very good response, 3: above-average response, 2: average response flat, and 1: response below average.
d) Multiplying the weight of each factor by its ranking to determine the weight score.
e) Add the average score for each variable to determine the weight score for the region.

2) Matrix Internal Factor Evaluation (IFE)
The IFE matrix is a strategy formulation tool for summarizing and evaluating key strengths and weaknesses in functional areas of business, and also becomes the basis for identifying and evaluating the relationships between these areas. The EFE matrix is developed in five steps:
a) Make a list of the main factors as stated in the complete profile of the potential for sustainable tourism. Internal factors that input in this matrix are strengths and threats.
b) Giving weight to each factor that ranges from 0.0 (not important) to 1.0 (very important). The weight given to a particular factor signifies the relative significance of these factors for the success of the sustainable tourism industry.
c) Give a rating of 1 to 4 on each factor to indicate whether these factors are very weak (rank = 1), weak (rank = 2), strong (rank = 3), or very strong (rank = 4).  
d) Multiplying the weight of each factor by its ranking to determine the weight score for each variable.
e) Summing the weight scores for each variable to obtain the total weight score of the organization.

3) Matching Phase
This stage is a match between resources and opportunities and risks created by external factors. The technique used in this matching stage is to use SWOT Matrix (Strengths-Weaknesses-Opportunities-Threats). The SWOT matrix is an important matching tool for developing four types of strategies is:
1) SO Strategy, which utilizes the region’s internal strengths to attract profits from external opportunities.
2) WO Strategy, which aims to improve internal weaknesses by taking advantage of external opportunities.
3) ST strategy, which uses the strength of a company to avoid or reduce the impact of external threats.
4) WT strategy, which is defensive tactics that are directed to reduce internal weaknesses and avoid external threats.

The steps in forming a SWOT matrix are:
1) List the main external opportunities, the main external threats of the destination, the main internal strengths of the region, and the main internal weaknesses of the area that have been outlined in the complete tourism profile.
2) Match internal strength with external opportunities, and record the results in the SO strategy cell.
3) Match internal weaknesses with external opportunities, and record the results in WO strategy cells.
4) Match internal strength with external threats, and record the results in ST strategy cells.
5) Match internal weaknesses with external threats, and record the results in the WT strategy cell.

IV. FINDINGS
The results of this study explain that Taman Wisata Alam Pantai Carita have some strength, opportunities weaknesses based on SWOT, there are:

- **Strength**
The local society getting benefit of tourism activities as tour guides. There is also a culture of culinary heritage.
- **Opportunities**
The location is close to the capital city of the country, it is easily accessed for domestic and international tourists. It has the highest GRDP growth generated by the provision of accommodation and food and beverages (9.81%). It make more easy to develop tourism sector. Strong political and legal ambience support to implement sustainable tourism principles. Related to the marketing due to the phenomenon of the internet, social media, and Android programs make it easier to communicate and disseminate information. There is a new (market) demand for sustainable tourism because it has the power to create change on a global scale. The attention of the younger generation in the next five years and beyond to the global aspects will be strengthened so as to provide opportunities to market sustainable tourism.
- **Strategy**

**Community Oriented Based Tourism**

1) Development of zoning by considering the system of trade and business ownership that involves local communities
2) Develop business opportunities in environmentally friendly and quality tourism
3) Creating business networks through tourist expenditure for various goods and services consumed, such as tour guides, restaurants, inns, souvenir shops, local transportation and other service goods in both the formal and informal economic sectors.
4) Legalization of businesses that fulfill fiscal and legal obligations so that they become a source of income for the Government, which in turn will use these funds for
the construction of environmental programs that are relevant to the tourism industry

Conservation Oriented
1) Creating a system for regulating the time of visit by utilizing zoning so as to improve quality tourism services
2) Maximizing culinary conservation activities into a tour package with the concept of ‘culinary diversity in Taman Wisata Alam Pantai Carita.’
3) Maximizing culinary-related conservation activities into high-quality attractions that have an impact on improving the local economy.
4) Ensure that cultural conservation is one of the sustainable livelihood links for local society.
5) Involving the active role of all stakeholders in conservation activities

- Weaknesses

Community Based Tourism
1. Not yet established DMO
2. There is no DMO program that promotes social and cultural values
3. Local communities have not received fair income from tourism activities
4. Local society have not been given access to formal business (only as traveling sellers)
5. Local communities have not been integrated in an integrated manner (only as workers)
6. Tourism activities have not been focused on the development of local communities (not yet trained as formal entrepreneurs)

Conservation Oriented
1. Conservation of natural ecosystems does not involve local communities
2. Conservation of wildlife conservation does not involve local communities
3. Development of amenities has not led to pro-conservation
4. Law enforcement efforts against waste management have not involved local communities and interest groups
5. Management of clean water sources and conservation of water supply does not involve local communities and interest groups.
6. Working conditions that are not yet appropriate for women (there are still practices of prostitution in the Taman Wisata Alam Pantai Carita)
7. There are child labor groups.
8. Conservation of cultural values has not been done (there are no festivals or special celebrations especially during peak season)
9. There has been no development of tour packages that promote local culture and traditions

Carrying Capacity
1. Do not have the carrying capacity of human resources because local orders and local society do not understand sustainable tourism.
2. The carrying capacity of amenities resources tends not to be standardized.
3. The carrying capacity of the safety program has not been carried out.
4. The carrying capacity of accessibility resources is sufficient through the construction of the road to the location.
5. Management of waste management has not been carried out.
6. The number of tourists that can be accommodated is available, only the conditions do not meet hospitality standards.
7. The level of sea water erosion has never been measured, but physically a lot of garbage floats in the sea.
8. Measurement of the level of damage to coral reefs has never been done.
9. The condition of waste disposal has no rules so that the waste is not measured by its downstream source and its upstream destination.
10. The number of tourists that can be accommodated has not been measured.
11. The condition of destination infrastructure is not sufficient because there is no zoning

Education and Training
1. No competency-based training has been carried out for tour guides and other tourism actors.
2. Women and the workforce of young age have not been given competency-based skills.
3. Education for tourists related to tourist behavior that is pro-sustainability has not been carried out

Promotion
1. No sustainable tourism campaign has been carried out yet.
2. There has been no campaign related to behavior that can degrade the behavior of local communities.
3. A campaign has not been conducted on the common interest in the sustainability of resources.

Monitoring and Evaluation
1. Measurement of the level of pressure on the tourism system has not been carried out.
2. Measurement of the impact of tourism activities has not been carried out.
3. Measurement of efforts that have been carried out by managerial has not been carried out.
4. No measurement has been made of the effects of management policies.
5. Control of strategic tourism areas has not been carried out.
6. There are no health, safety and safety standards for tourists.
7. Control of environmental damage prevention has not been carried out.
8. There has been no control of violations or exploitation by tourists.
9. Evaluation of the provision of financial support or the provision of business opportunities has not been carried out.
10. Not yet monitored the development of guidelines and ethical behavior.
11. Monitoring of the audit reporting system has not been carried out.
12. Monitoring of basic transportation systems has not been carried out.
13. Monitoring of alternative transportation systems has not been carried out.
14. Monitoring of minimizing emissions and discharges has not been carried out.

- **Strategy**

**Community Oriented Based Tourism**

1. The synergy planning and development at Taman Wisata Alam Pantai Carita under a coordination unit at the local administration level to develop sustainable tourism planning.
2. Revising various regional development plans (provincial, district/city) available to be transformed into a sustainable planning.
3. Develop various regions appropriately and consistently follow sustainable tourism development planning and avoid uncontrolled growth driven by economic reasons.
4. Establishment of Destination Organization Management (DMO) by involving all stakeholders in Taman Wisata Alam Pantai Carita.
5. DMO designs the division of tasks and authority (understanding and understanding "who does what") so that stakeholders need to understand their respective roles.
6. Find and select a number of performance indicators, including indicators of socio-cultural success, indicators related to the environment (natural and artificial environment), in addition to economic indicators.
7. Promote local social and cultural values.
8. The DMO builds a database that is always up-to-date and regularly checked, widely disseminated to all important stakeholders, and includes all communication tools/modes that can be contacted (telephone, e-mail, etc.). This database must contain a list of contacts from all stakeholders, both directly and indirectly, including hospitals, PMI, SAR, media, embassies, consulates, airlines, transportation companies, NGOs, and other parties that may appear not directly related to tourism.
9. Promote tourism business chains through credit and loan facilities for the poor with a view to equitable economic benefits in resources managed by local society.
10. Support formal employment through broader employment outreach programs that help educate and inform local communities about job prospects in tourism and related sectors, and also about the consequences and risks of informality.
11. Strengthening collaboration between the tourism industry and local communities to link local communities to distribution networks in tourism industries, helping communities to build their capacities on an ongoing basis to prepare tourism/hospitality services.
12. Encouraging the potential of young people as travel agents and human resources in the tourism sector and also as active participants in promoting and supporting sustainable practices.
13. Directing various policies to educational institutions to provide appropriate training that is needed as a regular program including continuous education which reopens opportunities for those who drop out of school synergy with apprenticeship policies for tourism training participants and work placements.
14. Develop policies in integrated and comprehensive training on entrepreneurship for potential young entrepreneurs and entrepreneurs in the production chain industry, young training supported by various policies.
15. Offering special incentives to young people to become sustainable tourism entrepreneurs.
16. Develop capacity and skills training schemes for women workers in tourism, while encouraging their children to continue their education.
17. Changes in mindset and awareness so that all stakeholders include promotion, encouraging changes in mindset of tourism stakeholders in aspects of sustainable tourism development.
18. Develop comprehensive and institutionalized sustainability guidelines/standards for various tourism products, services and processes.
19. The embodiment of these various standards in the tourism industry and educational material that is disseminated to all stakeholders.
20. Develop a certification system for tourism businesses based on tourism standards and codes of ethics and conduct monitoring and evaluation on an ongoing basis to ensure the fulfillment of a code of ethics and standards in the long term.
21. Creating a label for sustainable tourism certification so that it makes it easier for consumers to identify suitable products and services, promote labels by using popular media and with information directly to tourists through tourism information centers, tourism service providers, tour guides, etc.

**Conservation Oriented**

1. Seeking low information against:
   a. Maintenance of the environment by maintaining the authenticity of the landscape.
   b. Conservation of community culture.
   c. Conservation of historic buildings.
   d. Conservation of ecosystems or animal/plant habitats.
   e. Application of the principle of fair trade.
Carrying Capacity
1. Designing tourism activities supporting the reforestation program of mangroves and coral reefs.
2. Develop tour packages that promote local culture, art and traditions.
3. Daily activities, fishing and boating can be incorporated into local attractions to introduce tourists to people's way of life and invite them to appreciate local knowledge and wisdom.
4. Calculate the carrying capacity of transportation in normal conditions and during peak season.
5. Creating a tourist dock separation policy so that the carrying capacity program can be optimized and in order to improve the quality of tourism services.
6. Calculate carrying capacity to provide an indication of thresholds that can be tolerated by a region for several aspects:
   a. Management capacity; The number of tourists who can realistically be managed/controlled by the management of an area without causing administrative or economic problems.
   b. Physical capacity; the number of tourists who can be accommodated physically by an area.
   c. Environmental or ecological capacity: the number of tourists who can be accommodated before starting to cause damage to the environment and ecosystem.
   d. Economic capacity (management capacity); The number of tourists that can be brought in before the local society begins to feel the economic problems caused, for example is the increase in the price of land and houses.
   e. Social capacity; optimal population where more can cause cultural damage that is difficult to restore.
   f. Infrastructure capacity; The number of tourists that can be accommodated by the infrastructure of an area.
   g. Perceptual capacity; The number of people who can be served by an area before the quality of travel experience is reduced.
7. Conducting dock separation for tourist vessels and ships

Education and Training
1. Conduct awareness so that tourism activities encourage people to support and develop conservation efforts.
2. Awareness so that tourism activities are always in tandem with activities to increase public awareness and change people's behavior about the need to conserve living natural resources and their ecosystems.
3. Education about local culture and conservation for tourists is part of the ecotourism package.
4. Develop a scheme in which tourists voluntarily engage in conservation activities and management of ecotourism areas during their visit.

Promotion
1. Promoting to encourage changes in the mindset of tourism stakeholders in many aspects of sustainable tourism development.
2. Increase awareness of stakeholders regarding the sustainable tourism framework through sharing media and utilizing respected or popular figure as a spokesperson.
3. Prepare sustainable tourism guidelines/guidelines for stakeholders.
4. Empowering local and provincial governments in implementing various sustainable principles including in terms of the level of community satisfaction with tourism practices.

Monitoring and evaluation
1. Monitoring and evaluating (monev), by the government (in particular) and tourism stakeholders using instruments:
2. Measurement instrument, used to determine the level of tourism and its impact, and to analyze changes that occur and the potential that will occur.
3. Command and control instruments; used to assist the government to implement strict controls on aspects that are considered important and supported by regulations.
4. Economic instrument; used to influence behavior and its impact through financial mechanisms and giving 'signals' to the market.
5. Voluntary instrument; used as a framework or process that encourages voluntary compliance of stakeholders.
6. Supporting instruments; used as an instrument so that the Government can, directly or indirectly, influence and support the private sector and individual tourists who carry out business practices and behave according to the ethos and principles of sustainability.

Demography
1. Vulnerable to promote sustainable tourism because of its low educational structure.
2. Vulnerability increases community capacity in development issues because of the low educational structure.
3. The number of dependents is 50.42; that is, from every 100 people of productive age must bear the burden of 50 to 51 age population is not productive.

Socio-Cultural Development
The community, which is generally a fishing community, is indicated to threaten the sustainability of sustainable tourism programs. Vice versa, this condition will lead to social conflicts between fishing communities and sustainable tourism policies.

- Strategy
  
  Community Oriented Based Tourism
  1. Designing a DMO program in managing sustainable tourism activities in order to prioritize local social and cultural values and prioritize the improvement of education programs and skills for the community, especially regarding homestay management and restaurant management.
  
  2. Encouraging the POKDARWIS work program to support the sustainable tourism industry so that it contributes to increasing the value of competitiveness for the region.
  
  3. Providing incentives for livelihood communities as boat taxi (ojek kapal) to be given a full loan for the procurement of ships that have sea transportation standards and provide training related to sea transportation safety programs.

Conservation Oriented
Development of tour packages that promote culture, art, local traditions and the environment.

Carrying Capacity
Designing educational programs related to carrying capacity especially for local communities so that an understanding of the importance of maintaining carrying capacity for regional sustainability is formed.

Education and Training
1. Design a comprehensive education and training program for local people without considering the age and level of education.
2. The training program is designed as closely as possible to the problems in Taman Wisata Alam Pantai Carita such as hospitality management, restaurant management, sea transportation (ojek kapal) management, marine tourism management, excellent service souvenir management and the application of Sapta Pesona and the formulation of sustainable nature tourism packages.

V. CONCLUSION
Tourism development in the Taman Wisata Alam Pantai Carita is focused on economic aspects, which have an impact on the exploitation of natural, human and local culture. This places the need for increased awareness and sustainable tourism practices from interested parties as an urgent problem.

This research aims to design a governance system in order to develop sustainable tourism principles in the Taman Wisata Alam Pantai Carita. The condition of tourism provides benefits to local society in the economic sector, environmental and cultural conservation and provides positive social values for stakeholders. The urgency of this research is the urgent need for sustainable tourism development strategies at Taman Wisata Alam Pantai Carita. This research is carried out in three phases with a period of three years, Phase 1, is the secondary and primary data collection activities and the preparation of research results. This stage describes the profile of Taman Wisata Alam Pantai Carita, as community based development, conservation oriented, carrying capacity, education and training, and promotion. Phase 2, is the activity of determining vision and mission, evaluation of external and internal factors, SWOT analysis, alternative strategies, quantitative strategic planning matrix, and the establishment of a strategy model for sustainable tourism. Phase 3, conduct workout activities and analyze the strategy model for the development of sustainable tourism in Taman Wisata Alam Pantai Carita.

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