



Journal of Economics, Management and Trade

19(1): 1-17, 2017; Article no.JEMT.35989

ISSN: 2456-9216

(Past name: British Journal of Economics, Management & Trade, Past ISSN: 2278-098X)

Model of Sustainable Tourism Development Strategy of the Thousand Islands Tourism Area – Jakarta

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Authors' contributions

This work was carried out in collaboration between all authors. Author YS designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Authors FE and BH managed the analyses of the study. Author FE managed the literature searches. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JEMT/2017/35989

Editor(s):

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Complete Peer review History: <http://www.sciencedomain.org/review-history/20810>

Original Research Article

Received 7th August 2017
Accepted 25th August 2017
Published 4th September 2017

ABSTRACT

Aims/objective: To design a model of sustainable tourism development strategy in small islands tourism areas in developing countries so that the development of tourism can eliminate environmental problems that endanger the sustainability of tourism resources and threats to the economic welfare of local communities

Design: This paper utilizes strategic management concepts through an analytical framework formulation approach which consists of SWOT analysis, alternative strategy, quantitative strategic planning matrix and choice of sustainable tourism development strategy and ends with the modeling of strategy development of sustainable tourism

Methodology: According to the data and analysis, this approach is a qualitative approach, utilizing the Miles and Huberman model analytics. The technique of taking the number of participants is a snowball sampling

Results: This paper introduces the concept of a strategic model of sustainable tourism development

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that is easier to apply to small islands surveys so that it will be useful for all stakeholders in different areas of small islands conservation.

Keywords: Sustainable tourism; DMO; community based tourism.

1. INTRODUCTION

1.1 Background

Thousand Islands is the naming of the group of islands located in the north of Jakarta, Indonesia [1]. Although the name is Thousand Islands, that does not mean the number of islands is one thousand. The number of islands is around 342, including sand islands and vegetated coral reef or not, scattered in in the Java Sea and Jakarta Bay [2]. From the islands that exist, not entirely inhabited by man [1], only several islands that has been used as a tourist destination island among others Bidadari Island, Ayer Island, Sepa Island, Macan Island, Putri Island, Pelangi Island, AlamKotok Island, Pantara Island, Tidung Island, Pramuka Island, Pari Island, Harapan Island, Bintang Island, Genteng Island, Bira Island, Untung Jawa Island [2].

Thousand Islands Tourism Area also save a lot of natural resources, such as the tiny green islands, waves, white island, golden sunlight at dusk, the chirping of birds, flora and fauna such as coral reefs, large mangroves become home to a lizard tame, golden ring snakes and pythons, and others. Furthermore, marine tourism potential in this area is huge ranging from diving, snorkeling, jet ski, banana boat, surf bike, fishing, glass bottom boat, under the sea aquarium, sunset cruise and others [3].

The location of Thousand Islands Tourism Area is very strategic, because its located about 45 km in the north of Jakarta (capital city of Indonesia) and reachable using sea transportation and it takes around 1 to 3 hours from Marina Jaya Ancol Dock to reach the farthest island [2]. Because of its strategic location and great tourism potential, the appeal against tourists is also very large. This has resulted in a lot of tourist who visit the Thousand Islands Tourism Area.

Natural environment is the core of the overall attractiveness of tourism in Indonesia including Thousand Island Tourism Area. However, because currently the management of Thousand Island Tourism Area overemphasized economic benefit, it has created the pressure on natural

resources and exploitation on tourism ecosystem in the region, such as disturbance on biodiversity, species on the land and in small islands. Other than that it is concerned that water and energy consumption, waste production from tourists are twice than local resident in general. Tourist consume water and energy more than consumption in local community house that resulting in the overload of the carrying capacity in the region. Besides, tourist behavior often brings negative impact on the physical environment and local culture. Even more local government and community in the Thousand Island Area have not received the maximum contribution from tourism activities, instead exert pressure on the environment [4].

So that it could be concluded various efforts to develop tourism in the past has led to an imbalance of benefits, such as environmental problems which endanger resource sustainability and tourism a threat to the welfare of host communities, which created pressure on the informal economy, which is the inability to reduce poverty and the inability in fulfilling employment in the Thousand Islands Tourism Area. This puts the need for increased awareness and sustainable tourism practices by stakeholders in the tourism area, the Thousand Islands as a matter of urgency. Thus, we need a research that aims to design a model of sustainable tourism development strategy for the stakeholders are: government, community, and the private sector/business to achieve the purpose of sustainable Thousand Islands Tourism Area [5,6,7,8,9,10,11].

1.2 Theoretical Review

1.2.1 Sustainable tourism

Sustainable tourism defines by The World Tourism Organization (UNWTO) is tourism that takes into account the full impact of the economic, social and environmental present and future, address the needs of visitors, industry (tourism), environment and host communities [12]. According to [13], the aim of sustainable development is striking a balance between tourism environment, the local community needs and the needs of travelers. In other words, the

achievement of sustainable development objectives are (1) The objective of development, focusing on economic growth through a grassroots approach for a development that focus on basic needs satisfaction of the community (2) The objective of sustainable environment, preserve and protect the environment, mainly preserving the unrenewable resources. According [12] the objective of sustainable tourism is to decrease poverty, by respecting socio-culture authenticity, and the use of environmental resources responsibly, by not only encouraging but also facilitating and empowering the community so they will be able to take part in the production process and gaining various direct benefits from the tourism activities.

1.2.2 Destination management organization (DMO)

DMO is an integrated tourism management system that has a completeness as a system. DMO has 5 functions that demonstrate the completeness of DMO as a system, that are (1) as economic driver in generating local revenue, jobs, and tax revenue that contributes to local economic growth (2) as community marketer in visualization of tourist destination, tourist activities thus becoming the choice of visitors (3) as industry coordinator that has the clarity to focus on gaining result from the industrial growth from tourism (4) as quasi-public representative is a representation of the opinion concerning the tourism industry that enjoyed by visitor or group of visitors (5) as builder of community pride with the increasing of quality of life [6]. DMO is responsible on the fabrication of tourist destination to achieve good return on investment, market growth, quality of product, variety of brands, and profit for all parties, however DMO does not have the real factory, whether hiring people who work on it, or even controlling the overall process is done [14]. There are three important components in DMO, namely (1) coordination tourism stakeholders, is the core of the DMO system. This component is the key of success because it focuses on the relationship network that set up the DMO system (2) destination crisis management, provide supervision from the system by implementation and management from design to program implementation and (3) destination marketing, become the spearhead in DMO component. The success of DMO is determined on how destination marketing can attract as many

visitors to come to the area that has been promoted [15].

1.2.3 Community based tourism

According to [16], community based tourism is related to the benefits obtained and the assistance planning efforts that protect local communities and other interested groups, which gives more control in the social process for creating prosperity. Meanwhile, according to [7] emphasizes strategies that are focused on the identification of the host community goals and desires as well as their ability to absorb the benefits of tourism. Every community should be encouraged to identify their own goals and directing tourism to improve local people's needs. Community based tourism creates a more sustainable tourism industry which focuses on local communities in planning and maintaining tourism development [8]. If the tourism strategies become sustainable then the community development and empowerment should be developed as the main goal of the partnership itself. Not only in conjunction with the public, or through public participation, but as a form of local community development [17] There are many potential benefits when people who lived or worked in a tourist destination involved in the planning of tourism as it will enhance the legitimacy of the political community member. This means that members of the public have a greater influence in the decisions that affect their lives [18].

1.2.4 Conservation oriented

Conservation is defined as management by humans used to ensure the use of organism and ecosystems in unsustainable manner. In addition to sustainable use, conservation includes protection, maintenance, rehabilitation, restoration and enhancement of population and ecosystem [19]. Conservation region is an area of land or sea especially dedicated for protection and maintenance of biodiversity, and natural resources and its cultural resources in the long term managed through legal means and other effective ways. Sustainable tourism is committed in protecting and responsible to integrity of natural and cultural environment by planning and managing environment and socio-cultural [20]. Conservation orientation consist of (1) Conservation of natural resources, ecosystem and biodiversity (2) Conservation and reduce energy, waste and pollutants (3) Respecting and supporting local tradition, culture and society.

Protection of local culture emphasizing on protection efforts, thought and work of local communities on the tourism activity such as the threat on social degradation and kinship system, traditional life, ecosystem, also economy of local community [9].

1.2.5 Carrying capacity

Tourism carrying capacity is defined as total maximum people than could visit the tourist destination at the same time, without causing damage to the social environment, physical culture, economy and no decrease in accepted in the quality of visitor satisfaction [21]. Carrying capacity is a concept that measure the level of use of tourist to ensure the sustainability of a destination. Several concept of carrying capacity that useful in the tourism planning, namely: (1) management capacity, the ability of the number of tourists that can be managed by the destination management without affecting administrative issues, management, economical, also the services to tourists (2) physical capacity, is physical capacity including facilities and infrastructures that able to accommodate the number of tourists without cause problems in the terms of smoothness of tourist in enjoying the destination both in physical quality or the extent of facilities and infrastructures (3) environmental capacity, the number of tourists that can be accommodated that not to cause damage to the environment and ecosystem (4) economic capacity, the number of tourists that can be brought before the local people began to feel the economic problems posed (5) social capacity, the number of people maximum, where higher numbers could cause damage to the culture that is difficult recovered (6) infrastructure capacity, the number of tourists that can be accommodated by the infrastructure of a destination (7) perceptual capacity, the number of people who can be served by a destination prior to experience of having holiday reduced [10].

1.2.6 Education and training

The important distinction between the form of sustainable tourism and conventional tourism lies in the element of education or training activity. This does not mean that it takes a high academic level to be a sustainable tourist; but a more natural understanding of how humans and the environment work and carry out activities to achieve the goal [22]. From the perspective of tourism management education and training is

needed not only for the players linked with the development of tourism, but also tourists who make a visit to the tourist area. Training for the actors aim to implement the tourism organizing professionally done, while for the travelers intended to raise awareness, awareness and appreciation of the importance of preserving the natural environment and culture of the areas he visited [11].

1.2.7 Promotion

In marketing sustainable tourism, in addition to introducing, socialize, and to promote sustainable tourism sector in the tourist area specified promotional purposes is to increase stakeholder awareness of the principles of sustainable tourism. Including promoting tourist behavior in accordance with the behavior of the local community, to prevent behavior that could lead to non-material losses to the lives of future generations. The promotion was also minimizing conflicts of interest among stakeholders in the use of natural and cultural resources, as well as the development of tourism infrastructure [12].

1.2.8 Monitoring and evaluation

Monitoring conducted by the stakeholders in a container which is formed together to stage plan that includes goals and schedules as well as monitoring the implementation phase. In this monitoring process is directed to supervise the principles of sustainability of tourism in order to be implemented consistently and consistently. Therefore, we need an information system. The information system is a process that performs the function of collecting, processing, storing, analyzing, disseminating information for a particular purpose. The information system should not be computerized, although most are computerized [23].

1.2.9 Demographic developments

Demography is the study of human populations that include population size, age structure, geographical distribution, and the distribution of income and other statistics [24], with a description like the following (1) Size of population (2) The age structure (3) Level of education (4) Distribution of income [25,26].

1.2.10 Economic development

The economic health of a nation affects the performance of individual companies and the

industry. Therefore, it is very necessary to study the economic environment to identify changes and trends and their strategic implications [25].

1.2.11 Political and legal developments

Politics/law is an arena in which organizations and groups with an interest in competing for the desired resource, and there is supervision of legal entities and laws [16].

1.2.12 Social and cultural development

Socio-cultural segment related to attitudes and cultural values of a society. Because attitudes and values form the foundation of a society, where people always participate, encouraging conditions and changes in demographic, economic, political / legal, and technology [25].

1.2.13 Technological development

Technological developments affecting many elements in society. The effects of arising technology are through products, processes, and new materials [25].

1.2.14 Increased globalization

Global segment includes relevant new global market, global market is changing, political events of international importance, and cultural and institutional characteristics that determine global markets [25].

2. MATERIALS AND METHODS

2.1 Miles and Huberman Model

This model suggests that activities in qualitative data analysis are conducted interactively and continuously until the data is complete, so the data is saturated. Steps in data analysis, i.e. data reduction, display data, and conclusion drawing / verification [27].

2.2 External Factor Evaluation Matrix (EFE)

EFE Matrix is a method used by the framers of the strategy in summarizing and evaluating information about the economic, social, cultural, and demographic, environmental, political, governance, legal, technological, and competitive [28].

2.3 Internal Factors Evaluation Matrix Evaluation (EFI)

Matrix IFE is a method used by the framers of the strategy in summarizing and evaluating the strengths and weaknesses of the major functional areas of business, and also the foundation to identify and evaluate strengths and weaknesses of the major functional areas of business and also become the basis for identifying and evaluating relationships in between these areas [28].

2.4 SWOT Matrix

SWOT Matrix is a matching tool that is essential to help managers develop four types of strategies, namely (1) Strategy SO (strengths - opportunity), which utilizes internal strength to take advantage of external opportunities (2) Strategy WO (Weakness - opportunities), which aims to improve internal weaknesses by taking advantage of external opportunities (3) ST Strategy (strengths - threats, using force a company to avoid or reduce the impact of external threats (4) Strategy WT (weakness - threats) that the tactics of defensive directed to reduce internal weaknesses and avoid external threats [28].

2.5 Quantitative Strategic Planning Matrix (QSPM)

QSPM technique is the only analytical technique in the literature designed to determine the relative attractiveness of various alternative options. Mechanical QSPM objectively will show where the best strategy in developing the governance of sustainable tourism in the Thousand Islands Tourism Area. QSPM utilize input analysis of External Factor Evaluation (EFE) and Internal Factor Evaluation (IFE) and the results of a SWOT analysis that objectively determines the strategy to be executed among alternative strategies. That is, the EFE matrix, IFE matrix, coupled with SWOT matrix is the information required by QSPM [28].

Design research, resign and action research are conducted in the Thousand Island Tourism Area, District of Thousand Island, Jakarta Capital Special Region, Indonesia. According to data and its analysis, this research approach is a qualitative approach, began with the explanatory research which aims to get general overview also

understanding on the problem situation being studied to get insight and understanding. Explanatory research that conducted in this research, were carry out by analyzing secondary data from several journals research that have similar variables and purposes [29] so that it can be obtained research overview for sustainable tourism in Thousand Island Tourism Area that supported and involves local communities' empowerment in planning, execution and management of sustainable tourism and all benefits gained. Data analysis during the field utilizing [27].

Research activities are conducted in 2 (two) stage, consist of (a) Stage 1, this stages are collecting secondary data, collecting primary data and compilation of research results. The aim at this stage is to find a complete profile on the potential of Thousand Island Tourism Area, a profile of sustainable tourism that consist of community based tourism, conservation oriented, carrying capacity, education and training, also promotion (Fig. 1). (b) Stage 2, this stages activity is determination of vision and mission of sustainable tourism, evaluation of external factors of sustainable tourism, evaluation of internal factors of sustainable tourism, SWOT analysis, alternative strategy, quantitative strategic planning matrix, choosing sustainable tourism development strategy, determining a

sustainable tourism model strategy for Thousand Island Tourism Area (Fig. 2).

2.6 Participants

The techniques of taking the number of participants or sources used are snowball sampling, that is an effective way to build a deep sampling frame, in relatively small populations, each of which tends to relate to one another. In taking this sample, the researcher determines one or more individuals or key figures and asks him or them to call others who in turn can be found [30]. Selected social situation or the participants [31,32] are aware group travel, the people who engage in activities such as the owner of the home stay tourism, transport manager, the manager of the diner, the tour guide, and the Local Government of Thousand Islands. Number of participants are consist of elements of government (3) elements of community leaders (1), elements of tourist guide community (4) elements of ship management (1), elements of homestay management (2), elements of restaurant management (1), tourism group awareness community (3) and elements of society (6). Primary data collection techniques in this study using interviewing techniques where the authors want to get things more deeply from the participants so that the number of participants tend to be small.

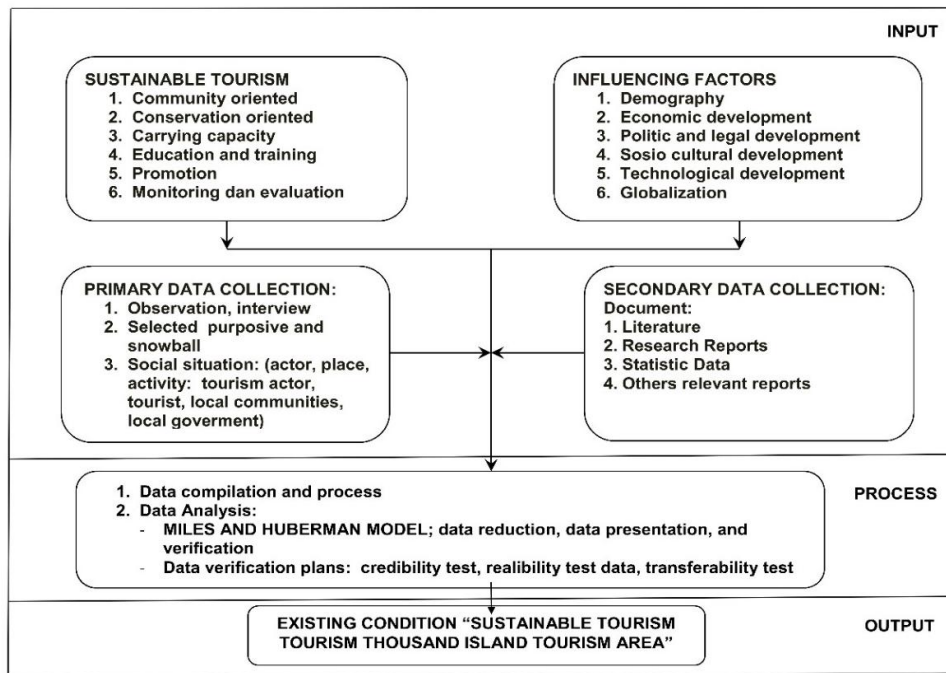


Fig. 1. Research process stage 1

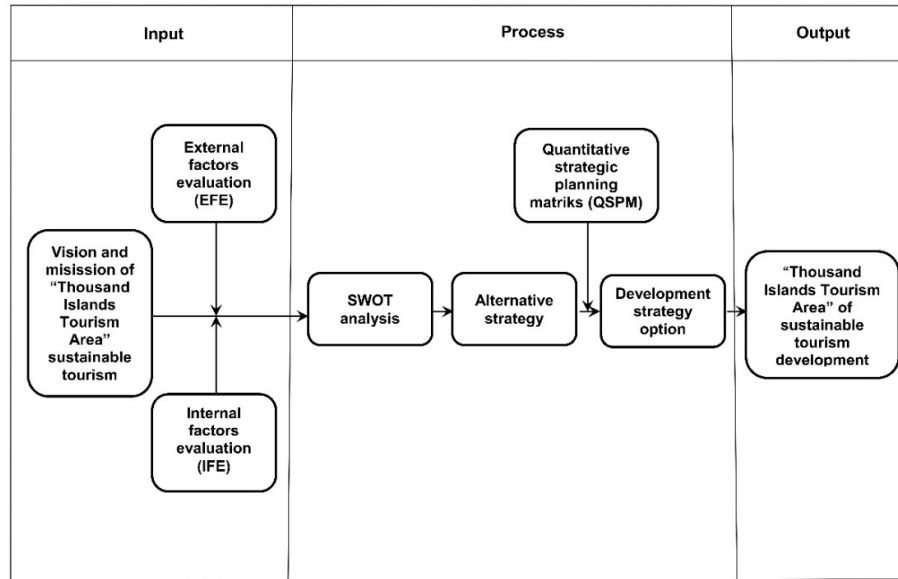


Fig. 2. Research process stage 2

2.7 Sample Description

Tourism activities have not been centralized to local community development let alone to create competition through capacity because the level of education and community skills is still very low. The level of community education generally does not finish high school and has no skills in managing homestays, restaurants, and even no management skills in managing the business. Keywords of tourism activities not yet centered on community development are: "It's a matter of skill and society is not ready with the development of tourism; For example, in managing homestay, it should be when the tourists stay in homestay, they eat there also no other place, well ... now, if tourists stay in one homestay then eat it elsewhere, supposed to eat in homestay also. Means that homestay managers have no skills in managing professional homestay "(Government element).

2.8 Time and Place of Research

Research was conducted on March 2016 - March 2017. Research location was chosen based on islands that inhabitant by local communities and the island is a tourist destination that relativity visited by many tourists. The islands used as object in this research are the Great Tidung Island, the Small Tidung Island, Pramuka Island, Panggang Island, Bidadari Island, and Pari Island.

3. RESULTS AND DISCUSSION

Based on the analysis results on factors that influenced on sustainable tourism in Thousand Islands Tourism Area, a complete existing condition profile of sustainable tourism of Thousand Islands Tourism Area was found that consist of strengths, weaknesses, opportunities and threat.

Based on the analysis on factors that influence towards sustainable tourism in Thousand Islands Tourism Area, a complete existing condition profile of Thousand Islands Tourism Area sustainable tourism was found that consist of strengths, weaknesses, opportunities and threat. Next, the existing profile condition will be analyzed using the SWOT method. The result from SWOT analysis is identified so that various alternative strategy is formed in one exclusive chain (Table 1).

Based on the above grouping of the alternative strategies, the next step is development of QSPM matrix and producing the formula for urgency table (Table 2).

Score on Table 2 (Total Attractive Score) is calculated based on the Attractive Score Value, ie as a numerical value indicating the relative attractiveness of an alternative series of sustainable tourism strategies in the Thousand Islands. Attractive score is determined by

observing every major external or internal factor, at any given time, while asking the question "Does this factor influence the choice of strategy made?" If the answer to this question is yes, then the strategy is compared relative to the main factor. In particular, Attractive Score is given in every strategy to show the relative attractiveness of one strategy over another, taking into account certain factors. The Attractive Score range is 1 = no attraction, 2 = low attraction, 3 = medium attraction, and 4 = high attraction. The next step, calculate the Total Attractive Score which is as the result of times between the weight of EFE and EFI with Attractive Score on each line [28]. Total Attractive Score indicates the relative attractiveness of each alternative strategy, taking into consideration only the impact of external or internal factors of adjacent success. Then summing up the Total Attractive Score, the highest score indicates a more attractive and relevant strategy that can influence stakeholder decisions in developing sustainable tourism in the Thousand Islands.

Based on the Total Attractive Score calculation results in a matrix QSPM [28], it can be determined urgency will be considered to

develop sustainable tourism in the Thousand Islands in the order of priority described in the Model Urgency of Sustainable Tourism Development Tourism Area Thousand Islands (Fig. 3).

Under the model approach of urgency as well as the duties and functions between the roles of government and the role of the DMO, furthermore, the model was developed into 4 (four) strategies are summarized in the Sustainable Tourism Development Strategy.

Fourth sustainable tourism strategy will be implemented in the DMO. DMO has a function to lead and coordinate the regional elements (attractions, amenity, accessibility, human resources, image, price), marketing, and environmental sustainability. In this case, the DMO becomes a perspective that gives space for the participation of all parties involved in managing a tourism region. DMO not only contribute to product development, marketing and promotion, as well as planning and research, but rather plays a role as team building and community partnerships [33,34].

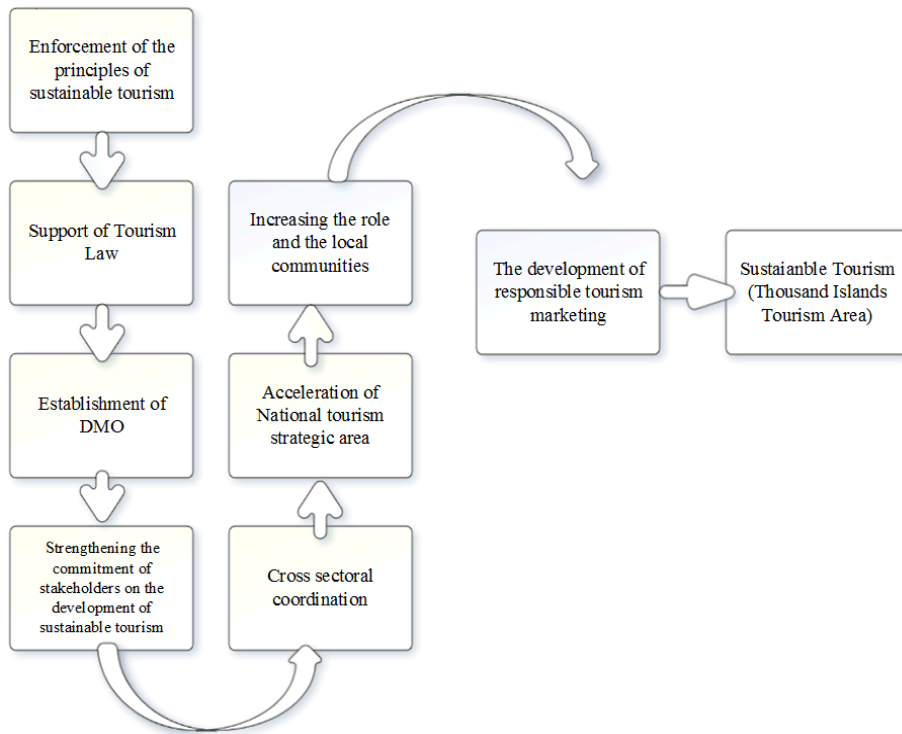


Fig. 3. Model urgency sustainable tourism development

Table 1. Identification of alternative strategy for sustainable tourism development thousand islands tourism area

SWOT analysis result	Alternative strategy
DMO designing roles and responsibilities to know and understand (who does what) so that stakeholders understand their respective roles.	(1) Establishment of DMO
Formulate a number of performance indicators, including indicators of socio-cultural success, indicators related to the environment (natural and artificial environment), and economic indicators.	
Build a database that is always up-to-date and checked regularly, widely disseminated to all key stakeholders, and includes all the tools/modes of communication can be contacted.	
Designing DMO program in order to promote sustainable tourism practices and the social values of the local culture and to prioritize education and skills enhancement programs for the community, especially related to the management of home stay and restaurant management.	
Conducting institutional synergy related to the management of the Thousand Islands especially National Tourism Strategic Area through legal protection issued by Presidential Decree.	(2) Cross sectoral coordination
Planning for the development of zoning, consider the trade system, and business ownership involving local communities.	(3) Acceleration the execution of Tourism National Strategic Area
Utilizing National Tourism Strategic Area programs related to waste management and water supply in the region.	
A change of mindset and consciousness to all stakeholders includes promotion, encouraging changes in the mindset of tourism stakeholders in aspects of sustainable tourism development.	(4) Strengthening the commitment of stakeholders on the development of sustainable tourism.
Raising awareness on relevant stakeholders the framework of sustainable tourism through media sharing and utilizing a respected figure or popular as a spokesman.	
Set up guide/sustainable tourism guidelines for stakeholders.	
Conducting awareness so that tourism activities are always hand in hand with the activities of raising public awareness and changing the behavior of the public about the need for conservation of natural resources and ecosystems	
Conducting carrying capacity in each travel dock, which exist in the area, so the number of visitors could be controlled.	(5) Enforcement of the sustainable tourism principles
Monitoring and evaluation, by governments (in particular) and the stakeholders of tourism using measurement instruments, command and control, economic, voluntary, and support.	
Synergize planning and development in the Thousand Islands under the coordination unit at the local administration level to develop a sustainable tourism plan.	
Reviewing the various regional tourism development plan (provincial, district/city) that is available to be transformed into a sustainable plan.	
Develop various regions accurately and consistently follow sustainable tourism development plans and avoid uncontrolled growth driven by economic reasons. Formation of DMO with the involvement of all stakeholders in the	

SWOT analysis result	Alternative strategy
Thousand Islands Tourism Area.	
Develop a comprehensive sustainable guidelines/standard, and institutionalized for a variety of products, services and tourism process.	
The embodiments of the various standards in the tourism industry and educational materials are disseminated to all stakeholders.	
Developing a certification system for tourism business based on standards and code of ethics of tourism as well as monitor and evaluate on an ongoing basis to ensure compliance with the code of ethics and standards in the long term.	
Creating a certification label for sustainable tourism in order to enable consumers to identify appropriate products and services, promote the label by using popular media and by direct information to tourists through tourist information centers, tourism service providers, tour guides, and so forth.	
Promoting law enforcement for the maintenance of the environment by keeping the authenticity of the landscape, the conservation of cultural, historic building conservation, conservation of ecosystems or habitats of animals/plants	
Efficient use of natural resources (e.g. efficient use of electricity and water; recycling efforts).	
Use of the products produced from recycled materials (e.g. environmentally-friendly souvenirs).	
The use of products produced from local materials (such as souvenirs and furniture are made from marine products)	
Protection and equal rights of women (gender mainstreaming).	
Promoting law enforcement on local community involvement in conservation efforts and other activities related to the tourism industry.	
Enforcing law enforcement against child labor which is controlled by the NGOs and the Government.	
Promote environmentally friendly products and services to all stakeholders through facilitation, training, and also a variety of incentives.	
Ensure support facilities are built on National Tourism Strategic Area project does not damage or established in a very unique ecosystem and vulnerable.	
National Tourism Strategic Area design of public facilities ensure as much as possible the local tradition, and the local communities involved in the planning and construction process.	
Ensuring that the project of National Tourism Strategic Area builds waste processing systems around public facilities.	
Calculating the carrying capacity of the transportation under normal conditions and when peak season.	
Calculating the carrying capacity to provide an indication of the threshold that can be tolerated by an area of some aspects of management capacity, physical capacity, environmental or ecological capacity, economic capacity, management capacity, infrastructure capacity, perceptual capacity.	
Conducting awareness in order to encourage tourism activities and develop community support conservation efforts	
The application of the principle of fair trade	
Legalization efforts of fiscal and legal obligations that it becomes a source of revenue for the government, which in	(6) Support of Tourism Law

SWOT analysis result	Alternative strategy
turn will use these funds for the development of environmental programs relevant to the travel industry	
Conduct settlement of issues of land disputes between local communities and tourism operators.	
Promoting the chain of tourism enterprises through credit and loan facilities to poor people with a view to economic advantage fairness in resource managed by the locals.	
Encourage the purchase of land rule without limitation to be stopped immediately.	
Enforcement of CSR programs and Environmental Management Plan/Environmental Monitoring Effort and employment rules for owners of the islands that managed by the investor.	
Innovation of environmentally friendly products and services through facilitation, training and incentives.	
Making policy on the separation of special dock for tourist so that the carrying capacity can be optimized and in order to increase the quality of service for tourist	
Empower local and provincial governments in the implementation of sustainable principles including the satisfaction of the community.	
Offering special incentives to young people to become sustainable tourism entrepreneurs'.	
The training program is designed as close as possible to the problems in the Thousand Islands such as hospitality management, restaurant management, management of marine transportation/taxi operators, management of marine tourism, souvenir management, excellent service and formulation of a sustainable marine tourism packages	(7) Increasing the role and capabilities of local communities
Support formal employment through outreach programs broader job that helps educate and inform local communities about job prospects in the tourism industry and related sectors, also about the consequences and risks of informality.	
Encouraging the potential of young people as perpetrators of travel and human resources and tourism sectors as well as active participants in promoting and supporting sustainable practices.	
Directing policy on educational institutions to conduct appropriate training required as regular programs, including continuing education that reopened an opportunity for those who drop out of school synergized with the intern policy for the tourism trainee and future employment.	
Develop an integrated and comprehensive training policy on entrepreneurship for potential young entrepreneurs and businessmen in the industrial production chain, which supported youth training policies.	
Develop capacity and skills training scheme for women workers in tourism, while encouraging their children to attend school.	
Encouraging Packet program and Open Junior High School to the community that dropout from school to boost the low educational structure.	
Organizing various training programs related to hospitality management by adopting the Seven Enchantment (SaptaPesona) materials for community and regional manager of tourism services thus able to increase its competitiveness.	
Encouraging Tourism Awareness Group work program to support sustainable tourism industry that contributes to the increase in value for the region's competitiveness.	

SWOT analysis result	Alternative strategy
Providing incentives to people who are living as a motorcycle taxi boat to be given soft loans for the procurement of ships that has a standard sea transport as well as providing training programs related to marine transportation safety.	
Designing educational programs related to carrying capacity, especially for local communities to form an understanding of the importance of maintaining the carrying capacity for the sustainability of the region.	
Designing education and training programs for local communities in a comprehensive manner by not taking account of age and level of education.	
Promotion to encourage change in the mindset of tourism stakeholders in many aspects of sustainable tourism development.	
Separating the dock for regular boat and rental boat so they can do the standard-setting price and avoid the practice of brokering	
Taking advantage of tourism area that free of exploitation of women, booze, and drugs became a brand image of Thousand Islands in an effort to carry the promotion of sustainable tourism	(8) The development of responsible tourism marketing market with the tourism industry
Develop business opportunities in environmentally friendly tourism and qualified	
Creating a business networking through tourist expenditures on various goods and services consumed, such as tour guides, restaurants, lodging, souvenir shops, local transport and other services items in both the formal and informal sectors of the economy.	
Strengthen collaboration between the tourism industry and local communities to associate local communities with the distribution network within the tourism industry, helping local communities to build their capacity to deliver services on an ongoing basis for tourism/hospitality.	
Increase the value of competitiveness with the concept of sustainable tourism so as to contribute to revenue and GDP source of foreign exchange so that the exploitation of energy and mineral resources can be minimized.	
Development of tourist packages that promote culture, art, local traditions and the environment.	
Designing tourist activities that support the reforestation of mangroves and coral reefs.	
Develop tour packages that promote culture, art and local traditions.	
Daily activities at sea, fishing and boating can be incorporated into the local attractions for travelers introduce the ways of living and invite them to appreciate knowledge and local wisdom.	
Education about the local culture and conservation for the tourists to be part of a package of ecotourism	
Develop a voluntary rating scheme which is involved in the conservation and management of ecotourism region during his visit	

Table 2. QSPM matrix result

Alternative strategies	Total attractive score	Level of urgency
Establishment of DMO	7.70	3
Cross sectoral coordination	7.47	5
Acceleration of National Tourism Strategic Area	7.36	6
Strengthening the commitment of stakeholders on the development of sustainable tourism	7.68	4
Enforcement of the principles of sustainable tourism	7.92	2
Support of Tourism Law	8.00	1
Increasing the role and the local communities	5.90	7
The development of responsible tourism marketing	5.80	8

3.1 Sustainable Tourism Development Strategy

3.1.1 Strategy #1-strengthening stakeholder commitment

The essence of this strategy is that all stakeholders are aware that thinking out of the box is very important. It is not enough each party doing business as usual. Sustainable tourism probably will not grow without the support of stakeholders and other sectors that are ready/prepared that have the same vision and mission. At the operational level of the DMO, which consists of a sphere of public management, visitors, businessmen and managers of the environment, it is important to ensure that all stakeholders towards the same direction, with the same vision and mission. Linkages among stakeholders are an important condition in order to grow tourism. Tourism as a system should be developed in a holistic manner, not just from the industry point of view, but also from areas inside and institutional community that includes human resources, organization, and regulation, as well as the demand/market potential.

Sustainable tourism which has been known to be used as a tool to drive new development and redirect irregularities in past development, underlining the new dimension that previously did not receive enough attention, thus requiring the steps of society: (1) Increase awareness at all levels about the framework of sustainable tourism through various media and take advantage of a respected figure or popular as a spokesman (2) Prepare guides/guidelines specifically and build consensus on sustainable tourism in the Thousand Islands Area (3) Take advantage of the inter-ministerial forum which has been formed or form a new forum with the communication system with local authorities and

local communities in the Thousand Islands (4) To empower local and provincial governments in the implementation of sustainable principles including the level of satisfaction of local residents (5) Promote, enforce, and monitor sustainable practices monotonically/ consistent and do something about the attitude of the worker at every opportunity (6) Developing employers' associations to supply the tourism industry production chain and unions/associations of tourism employees, and associate with the Chamber of Commerce and or Indonesia Business Association.

Unfirming perception of vision and is not a simple process. It is not just enough of the stakeholders are subject to change without convergence with other parties. All parties need to familiarize themselves, government, industry, and society as a host as well as tourists. Local Government must change their mindset while formulating various policies and plan implementation. Local Governments are supposed to lead and is the first industry association to be used to. Local Government and the Association shall establish criteria for sustainable tourism in policy-making, planning, and decision-making. Therefore, the local government should create a system of effective communication and coordination between sectors and an integrated management for sustainable tourism. Ministry of Tourism, Ministry of Environment and Forestry, Ministry of Maritime Coordinator, Ministry of Commerce, Ministry of Education and Culture, the Ministry of Women's Empowerment and Child Protection and other ministries also need to support the government in the tourism destination with the same mindset. The central government and regional leadership role direct and manage the development of sustainable tourism, using multi-dimensional indicators that have been agreed.

3.1.2 Strategy #2—Increasing the role and capabilities of the local communities

Increasing the role and capabilities of the local communities are supposed to be based on assumptions, values and principles that the implementation can empower people by initiative, ability and participation. Community participation plays a very important role in increasing the capability. Community participation will be realized if people volunteer to participate in a way; people are given the freedom to participate, the ability of the community to participate and their opportunities and the chance to participate.

Community participation is done by the consultative relationship patterns, where people have a right to be heard and to be notified, where the final decision remains with the decision maker. Community is an equal partner in decision-making position. Community together to discuss problems, find alternative solutions and discuss the decision. Therefore, participation has more advantages in increasing the capability of society then public participation needs to be developed. One strategy to generate the active participation of community members is through community approach. Communities participate mainly use the public media in society then in turn can empower communities. Empowerment in the context of public participation is based on the strength of the communities in the Thousand Islands Area.

A non-formal education strategy in order to increase the capability of the community is one solution to empower communities. Application of non-formal education strategy is to leverage the new opportunities that may occur in the future. Education basically serves to develop skills, improve the quality of community life and human dignity. Education serves as a means of empowerment of individuals and communities to face the future. The emphasis of non-formal education is the affective aspect which followed aspects of skills and cognition.

Adult education in society is essentially the strengthening of capacity (capacity building) so that people can grow and develop so that empower themselves and in turn empowering people. Dynamics of community life is generally determined by an adult. Therefore, adult education is very important in the development and empowerment. Adults have experience and readiness to learn and oriented towards solving problems and challenges of life. Learning for

adults includes changes to aspects of cognitive, affective and psychomotor.

The most strategic efforts in order to increase the capability of local communities, is implementing the program "compulsory" for the younger generation in the Thousand Islands as set out in Article 34 of the Law of the Republic of Indonesia Number 20 Year 2003 on National Education System. Compulsory education is subject to every Indonesian citizen, aged six years and above basic education. Overall compulsory so-called compulsory education that includes the primary school level and junior high school, or often called compulsory education nine years.

3.1.3 Strategy #3 – Enforcement of the principles of sustainable tourism

A series of sustained performance indicators need to be developed that is referred from a variety of sources available and adapted to the conditions of the Thousand Islands Tourism Area. A performance indicator for tourism development needs to be identified for all levels of government the national, provincial and local. An important and appropriate indicator at the national level may not apply at the local level and vice versa. Although measurement is difficult/not easy and not simple, the impact on the socio-cultural life and the environment should be covered. Global sustainable tourism criteria as a minimum universal guide can also be used as a basis for developing a model indicator. Apart from that, it is also important to include indicators relating to the new policy dimensions such as poverty reduction, decent work and green jobs, jobs for youth, gender mainstreaming, and child protection. Appropriate success factors that indicate what makes a successful performance should also be agreed upon by stakeholders. Tourism performance is the result of many stakeholders. The integrity of all stakeholders in moving towards achieving the vision of tourism, the optimal synergy between the public and private sectors, between small and large industries along the production chain, consistent rules and regulations, all of which are part of the monitoring and measurement to balance the interests of all stakeholders. Therefore, a new indicator has been properly communicated and agreed upon by the stakeholders through strategic measures: (1) Establish a national technical commission to discuss the indicator system (2) 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 (3) Develop specific indicators for Decent Work and Work Environment-friendly in sustainable tourism, linking with various international organizations such as UNEP and OECD, which runs a similar program (4) Special indicators also need to be added to the evaluation of the success of the local area (5) To examine and evaluate the current situation now regularity/consistency of the various rules and regulations and the implementation of various tourism-related programs in different ministries and also between the public and private sectors, and the role of the informal sector.

3.1.4 Strategy #4 – Development of responsible tourism marketing

Another important dimension of sustainable tourism is to encourage and support domestic tourism, not only for Indonesia but also for international travelers broaden his experience and the economic benefits to the local revenue even to the whole world. Travelers are supposed to be introduced in the tourist ethics.

Strategic steps in adopting tourism product that have sustainable value: (1) Development through existing campaigns and introduces guidelines and/or standards on a sustainable tourist behavior. To support the campaign on the tourist behavior, local government and the tourism industry should also provide incentives and market place advantages for the tourism industry in order to support the practice of sustainable tourism. (2) Develop and disseminate the rules for the traveler/sustainable tourism travelers with the broadest (3) Shows the case that applying sustainable development practices will not increase (or even possibly reducing) capital and operating expenditure, which have an impact on cost reduction activities and increase economic benefits (4) Various tourism products are more giving experience, which convey information about benefits such as ecotourism, geo tourism, rural tourism, heritage tourism should be developed and access should be provided (5) Nautical tourism campaign that promotes visits to the Thousand Islands rather than traveling abroad. Promote marine tourism to all the provinces, especially the youth segment to be the main target (6) In essence campaign environmentally friendly behavior and local communities is required to affect the tourist activity. The choice of a variety of products, the use of water and electricity as well as others.

Such a campaign might also affect the rating on region selection. Some guides that convey a number of messages for the tourists on places to stay, restaurants and other places of culture, dress codes, food and minimum and also shopping is already available. Tourist demand will be a variety of environmentally friendly products will help the industry to switch to environmentally friendly products and services.

4. CONCLUSION

Implementing the principle of sustainable tourism in developing countries and already doing mass tourism practices as well as the Thousand Islands Tourism Area requires leadership and funding from the Government through DMO containers consisting of two scales, covering local and national scale. Through DMO's container, tourism development strategy model can be immediately applied so that all parties directly or indirectly related to the arrival of tourists in a tourism area can be interact and carry out their duties and functions to jointly develop sustainable tourism area.

The limitations of this study are not yet studying the perception of tourist satisfaction related to tourist expectations, the value of tourist experience, clean environment is guaranteed, the quality of the area, attractions and related services, expectations and interests, and the suitability of food. In the future the authors will conduct this study and will be integrated with the results of this research so as to obtain a comprehensive strategy in developing sustainable tourism in Thousand Islands Tourism Area.

ACKNOWLEDGEMENTS

The authors wish to thank Lembaga Pengelola Dana Pendidikan (LPDP) - Ministry of Finance of the Republic of Indonesia, for the full funding for our research implementation.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
<http://sciencedomain.org/review-history/20810>