

Tourism Development Of Gili Iyang Island Based On Blue Economy

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Abstract. Giliyang island is one of the beautiful islands in Sumenep, Madura, Jawa Timur. Giliyang Island is commonly called health tourism island because this island has high oxygen content and become the island with the second highest oxygen content in the world after Jordan. This island has oxygen content 3-4 % higher than usual. In Giliyang island there are still few facilities, if this island wanna be a good tourist place, it is necessary to apply the blue economy concept. Blue Economy concept is the de-coupling of socioeconomic development from environmental degradation. To achieve this, the Blue Economy approach is founded upon the assessment and incorporation of the real value of the natural (blue) capital into all aspects of economic activity (conceptualisation, planning, infrastructure development, trade, travel, renewable resource exploitation, energy production/consumption). The aim of Blue Economy concept are to shift society from scarcity to abundance based on what we have and to start tackling issues that cause environmental and related problem through novel ways. Implementation blue economy for Giliyang island can increase revenue of Sumenep in tourism sector. The success of implementation blue economy will give positive impact not only in economic sector, but also in social sector and technology development

1. Introduction

Tourism is a major global industry; in 2012 international tourist arrivals increased by 4% despite the global economic crisis and constituted 9% of Global GDP (direct, indirect and induced impact). In 2012 tourism supported 9% of global jobs and generated US\$ 1.3 trillion or 6% of the world's export earnings²³. International tourism has grown from 25 million in 1950 to 1,035 million in 2012 and the UNWTO forecasts further growth of 3-4% in 2013²⁴; the forecast for 2030 being 1.8 billion. A large portion of global tourism is focused on the marine and coastal environment and it is set to rise. Trends in aging populations, rising incomes and relatively low transport costs will make coastal and ocean locations ever more attractive. Cruise tourism is the fastest growing sector in the leisure travel industry; between 1970 and 2005 the number of passengers increased 24-fold to 16 million by 2011. Overall, average annual passenger growth rates are in the region of 7.5% and passenger expenditures are estimated in the order of US\$ 18 billion per year²⁵. The tourism consumer, however, is driving the transformation of the sector with a 20% annual growth rate in ecotourism; about 6 times the rate of growth of the overall industry. Blue economy defines sustainable economic development through utilizing the advantage and strategy of exploring the resources of the blue water. In general, it refers utilization of ocean resources through

systematic way. The concept aims to garner radical resource efficiency and minimal waste. As the coastal states' ocean activities continue to expand, concerns as to maritime safety would also wade to the fore. Due to this, maritime security falls under the rubric of blue economy. The principles of blue economy aim at generating new jobs, building up social capital and augmenting income. (Pauli, 2016). According to the World Bank, the concept blue economy delineates such marine based economic development which at the same time spearheads the human wellbeing and social equity in tandem with decreasing the potential environmental harm and ecological scarcities. (Patil, 2016). A Blue Economy approach where ecosystem services are properly valued and incorporated into development planning will further advance this transition, guiding tourism development and promoting lower impact activities, such as ecotourism and nature-based tourism, where the natural capital is maintained as an integral part of the process.

Compared to countries in ASEAN, the growth of the tourism industry in Indonesia still lagging behind as shown in the following data this:

Visitor Table of Tourism Objects in Countries Southeast Asia 2014-2017 based on Asdep Litbang Jakpar (KemenPar) & BPS

Country	Tourist 2014	Tourist 2015	Tourist 2016	Tourist 2017	Sum
Malaysia	769.988	891.353	1.117.454	1.179.366	3.958.161
Thailand	42.155	68.050	76.842	109.547	296.594
Singapura	1.401.804	1.352.412	1.397.056	1.272.862	5.424.134
Indonesia	21.222	19.981	19.903	18.281	79.387
Brunei	8.965	11.209	12.134	15.709	48.017
Vietnam	9.229	9.754	12.215	14.456	45.654
Myanmar	8.901	9.296	10.879	12.856	41.932
Filipina	74.982	137.317	159.003	162.463	533.765
Kamboja	8.863	8.982	11.231	11.966	41.042



Fig. 1. Batu Canggih, one of destination in Gili Iyang Island

Based on the table above, it can be seen that the Indonesian state ranks fifth to the large number of visitors to tourism objects in various countries in ASEAN. So the growth of the tourism industry in Indonesia still lagging behind in terms of the growth of the tourism industry.

2. Gili Iyang Island

Giliyang Island located in Sumanep Regency in Madura, East Java. Geographically, this island has 6° 59' 9 LS - 114° 10' 29 BT. Giliyang has 921.2 hectare large. Giliyang Island has 17 caves. Those caves located in Banra'as village and Bacanmara village. The incredible oxygen level on this island has been tested through some experiments and researches each year. In 2006, Pusat Pemanfaatan Sains (LAPAN) researcher recorded the oxygen level in Pulau Giliyang reached 21%. From the laboratorium & research LAPAN and BLH Jatim concluded that the content of oxygen in the Giliyang island range of 3.3 to 4.8 percent above normal. High levels of oxygen content is believed to be the cause of the majority of the population on the island Giliyang young and still up in good shape, although he reached 90 years, even to 101 years. To arrived to the giliyang island needs 30-45 minutes from Dangke Port by using a boat. In Giliyang, visitor can enjoy some beautiful destination such as Batu Canggih, Goa Mahakarya and Titik Oksigen. Batu Canggih is a big stone that located in edge of beach. This stone is a refutation of the land around the coast. Goa Mahakarya is a cave that has beautiful stalaktit and stalakmit. In this cave some stalaktit can produce a sound. Titik Oksigen is an area, that has content of oxygen in the air higher than the other area in this island. Based on the references, the Ministry PU and Public Housing stated that the level of oxygen in Gili Iyang lowest in the range (20-23)%, and highest reaches 27% (Ciptakarya, 2014)



Fig. 2. Goa Mahakarya, the beautiful cave in Gili Iyang Island



Fig. 3. Titik Oksigen, an area with the highest oxygen content in Gili Iyang Island.

Based on visitor table of Tourism Object in Sumenep 2014- 2016

Tourist Object	2014		2015		2016		Sum
	FT	DT	FT	DT	FT	DT	
Gili Iyang	13	3.098	14	14.359	18	14.463	31.95
Gili Labak	102	12.096	121	22.941	88	30.908	66.256
Pantai Lombang	43	10.131	47	19.584	59	26.840	56.704
Pantai Badur	0	2.925	0	7.639	0	6.706	17.270
Pantai Slopeng	8	3.207	10	10.943	13	11.518	25.699
Museum dan Keraton	57	9.250	85	20.271	57	24.790	54.311
Masjid Jamik Sumenep	0	11.447	0	20.764	0	26.246	58.457
Asta Jokotole	0	2.303	0	8.941	0	9.616	20.860
Asta Katandur	0	1.111	0	8.225	0	5.448	14.784

Source : Dinas Pariwisata, Kebudayaan, Pemuda dan Olahraga Kabupaten Sumenep.

Note :

FT : Foreign Tourist

DT : Domestic Tourist

Based on table above, it can be seen that Gili Iyang island in ranks fifth of tourism object in Sumenep. It is happen because in Gili Iyang island has minim facility. So we need to improved the facility if we want to increase tourism in Gili Iyang island. The one way to increase Gili Iyang tourism is using blue economy concept.

2. Blue Economy Concept

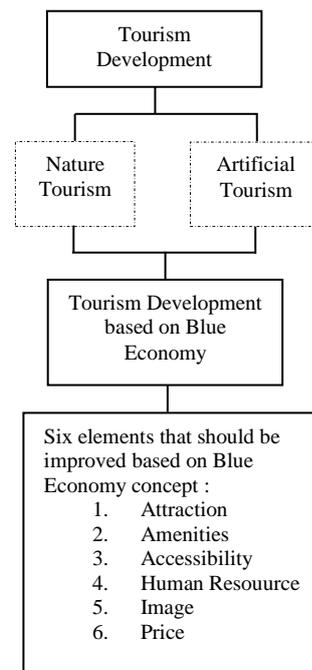
The Blue Economic Concept provides an opportunity to develop more economically and environmentally sound investments and businesses, utilize natural resources more efficiently and less environmentally, produces more efficient and cleaner systems, produces greater products and economic value, increase labor absorption, and provide an opportunity to benefit each contributors more fairly .

The Blue Economy will ultimately ensure that development will not only generate economic growth, but also ensuring ecological and social sustainability. In general, the Blue Economy can be understood as an economic model to encourage sustainable development with a mind-set such as the workings of ecosystems. This is not independent of the principles that exist in the Blue Economy concept, namely:

1. Natural resources efficiency.
2. Zero waste, leave nothing to waste. Waste for one is a food for another waste from one process is resource of energy for the other.
3. Social inclusiveness, self sufficiency for all, social equity more job, more opportunities for the poor.

4. Cyclic system of production, endless generation to regeneration, balancing production and consumption.
5. Open- ended innovation and adaptation, the principles of the law of the physics and continous natural adaptation.

In the tourism development needs to be considered some elements that support tourist destinations. Buhalis suggests most destinations comprise of a core of the following components named as the 6 As framework, which includes attraction, accessibility, amenities, available packages, activities and ancillary services. Apart from that, World Tourism Organization describes the tourism destinations of six elements,



1. Attractions.

Attractions generally the focus on attention of visitors and can provide initial motivation for tourists to visit. Attractions can be categorized as a natural tourist attraction (beaches, mountains,parks, weather), buildings, culture.

2. Amenities.

Amenities means supportive services and facilities include basic infrastructure for visitors, public transportation, and roads and direct services for visitors such as accommodation, visitor information, recreational facilities, guides, operators and dining and drinking facilities as well as shopping facilities.

3. Accessibility.

Accessbility means the ease of visitors to reach the destination by road, air, rail and sea lane.

4. Human Resources.

Tourism is a labor-intensive industry and interaction with local communities is an important aspect of tourism experience. Trained tourism workers and communities who realize the benefits and responsibilities associated with tourism growth are an indispensable element and need to be managed in accordance with tourism destination strategies.

5. Image

Image means a unique or an important picture in attracting visitors to visit. Included in the image of the destination is the uniqueness, scenery, scene, environmental quality, safety, service level, and friendliness.

6. Price.

Price is an important aspect of competition among tourist destinations. The price factor relates how much money have spend to get service and facilities

To create tourism based on blue economy, we must implementation of the six element destinations above. In terms of attractions, need to be created nature attractions that are environmentally friendly and nature conservation. So that there will be no decrease / damage both in terms of environment and the availability of flora and fauna. For example of natural attractions are turtle conservation, coral reef conservation, etc. Areas of tourist attractions that are vulnerable to damage need to be identified, and given the limits of tourism activities that can be done in the area. In terms of amenities, need to be used energy sources and technologies that are environmentally friendly, for example solar panels, biogas, air conditioning which use freon R23, etc. In addition, it is necessary to build a waste treatment plant on the existing infrastructure such as hotels, resorts, shopping place etc, so that the waste produced can be treated well and not pollute the environment. Infrastructure development should pay attention to the coastal ecosystem area so that the development undertaken does not damage the existing ecosystem. For example the construction of hotels and resorts is not built in the fragile coastal zone or in the estuary.

In terms of Accessibility, using modes of transportation that are low emissions, for example electric cars or cars that use euro five emission standards. In terms of human resources, knowledge and skills of tourism workers need to be improved. It will create better service and will bring in more tourists so that economic growth will increase. In terms of image, same as the attractions in its implementation. In terms of price, the price offered must compete and not turn off other business units. Below is the example of comparison about six elements of destination

Table 1. Six elements that support Gili Iyang tourism

No	Elements	Gili Iyang Island
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1.	Attraction	There are not many attraction and water games in Giliyang Island, only swimming, relaxing and snorkeling. So the quality of attraction element is quite good
2.	Amenities	Amount of banking services like Banks, ATMs and money changers is less. Hotel, lodgings and restaurant is less. So, the quality of ofamenities element is not good.
3.	Accessibility	Access to this island is quite difficult, because we need some transportation such as boat, odong-odong, and rent a motorcycle. The quality of transportation mode is quite good. So the quality of amenities element is quite good too.
4.	Human Resource	The quality of human resource is quite good. Local people are friendly but some of them can not use Indonesian Language.
5.	Image	The environmental condition and air pollution is very good. Oxygen content in this island makes people more relax and stay young.
6.	Prices	The prices of hotel, transportation and restaurant is affordable.

Table 2. Six elements that support Dewata Island tourism

No	Elements	Dewata Island
1.	Attraction	There are so many nature attraction and water games in Dewata Island such as snorkeling, diving, water sport,surfing, banana boat. So, the quality of attraction element is very good.

2.	Amenities	There are so many banking service, hotels, lodgings, restaurant and shop. So, the quality of amenities element is very good.
3.	Accessibility	Access to this island is very easy. We can choose any transportation mode to arrive to Dewata Island.
4.	Human Resource	The quality of human resource is very good. Employee skill and response to complain is very good..
5.	Image	The environmental condition and air pollution is quite good.
6.	Prices	The price of hotel, transportation, restaurant is depends on your choice

From the two tables above, it can be seen that the Dewata island in Bali is more advanced and has applied the blue economy concept. If Gili Iyang Island wanna be like Dewata Island, the six element above must be completed.

3. IMPACTS TOURISM DEVELOPMENT

3.1 Economy Sector

Positive Impact :

- Increase Expenditures
- Creation of employment
- Increased in standard of living
- Increased in investment
- Foreign exchanges earnings
- A rise in gross national product
- Taxation revenue
- Regional export income

Negative Impact :

- Localised inflation
- Real estate speculation
- Failure to attract tourist
- Better alternative investments

- Capital outflows
- Inadequate estimation cost of tourism
- Undesirable opportunity cost including transfer of fund from health and education

3.2 Commercial Sector

Positive Impact :

- Increase awareness of the region as a tourism destination
- Increase knowledge about the potential for investment and commercial activity
- Creation of new facilities, attraction and infrastructure
- Increased in accessibility

Negative Impact :

- Acquisition of a poor reputation as a result of inadequate facilities, improper practices or inflated prices.
- Negative reactions from existing enterprise due to the possibility of new competition for local manpower and government assistance.

3.3 Socio-Cultural Sector

Positive Impact :

- Increase in permanent level of local interest and participant in types of activities associated with event.
- Strengthening traditional values and traditions.
- An improvement in social services

Negative Impact :

- Commercialisation of activities which may be of a personal or private nature.
- Modification of nature of event or activity to accomodate tourist.
- Potential increased in crime.
- Potential increased in prostitution.
- Change in community structure.
- Social dislocation.

3.3 Psychological Sector

Positive Impact :

- Increase local pride and community spirit
- Increased awareness of non local perception.

Negative Impact :

- Tendency towards defensive attitudes concerning host region
- High possibility of misunderstanding leading to varying degrees of host/visitor hostility.

4. CONCLUSION

The growth of tourism industry has had significant impact on the economic development of related industries such as accommodation, transportation, services and so on. Development of tourism also impact on commercial sector, psychological, and socio cultural sector. Growth of tourism can be happen because of blue economy. Blue economy is opportunity to develop more economically and environmentally sound investments and businesses, utilize natural resources more efficiently and less environmentally, produces more efficient and cleaner systems, produces greater products and economic value, increase labor absorption, and provide an opportunity to benefit each contributors more fairly.

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