POLICY MODEL ONMARINE TOURISM DEVELOPMENT IN WAKATOBI REGENCY (SE SULAWESI,INDONESIA)

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ABSTRACT

Wakatobi Regency has a huge capacity in natural resources with its beautiful and pristine coastal ecosystems that host 25 coral reefs species in diverse forms. The regency is considered as the world's best biosphere and frequently visited by local and international tourists for diving/snorkeling. The objectives of this study are to determine the role of marine tourism in Wakatobi's economy and formulate an appropriate and strategic policy for its marine tourism development plan. Methods used in this research are the Location Quotient (LQ) analysis to determine the relative ability of a sub-area to a wider area in specific sector, and the Prospective Participatory Analysis for preparing marine tourism development plan. The LQ analysis for the marine tourism (trade, hotels and restaurants) sector based on GDP data from 2004-2007 shows values ranging from 0.808-0.881, which indicate poor potential and low contribution of this sector to Wakatobi's economy. The Prospective Participatory Analysis involving 18 variables related to marine tourism development indicates that Wakatobi Regency has four key variables. These are: community behavior towards environmental protection, community character, human resources and motivation. These variables would play an important role in preparing and implementing marine tourism development plan in Wakatobi Regency.

Keywords: prospective participatory, Location Quotient (LQ), marine tourism, Wakatobi Regency

INTRODUCTION

Increased regional autonomy in Indonesia has been translated into policies by local governments differently. Many regions respond the new regional autonomy by managing its resources more independently from the central government. Within this perspective, increased revenues from managing natural resources become a priority particularly in some regions with abundant natural resources (Wibowo, 2013), that sustainability issue may be neglected.

Wakatobi Regency of the SE Sulawesi province formed its regional autonomy in December 2003 by Law No. 29 of 2003. Wakatobi it self is an acronym off our islands comprising of Wangi-Wangi, Kaledupa, Tomia, and Binongko Islands. Wanci, the regency's capital, is located on Wangi-Wangi Island.

The Wakatobi archipelago is situated in the center of coral reefs biodiversity known as the Coral Triangle. Geographically, Wakatobi Regency is flanked by the Banda Sea on its north and west sides, and the Flores Sea on its south and east. The land area of Wakatobi is about 823 km^2 with sea area covers about 18.377,31 km^2 (Anonymous, 2010).
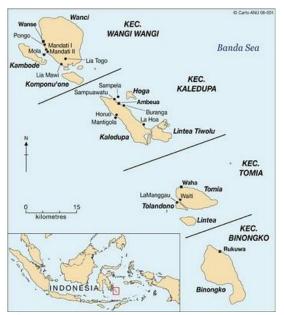
Figure 1. Map of studiedarea.

The area of Wakatobi Regency overlaps with the Wakatobi Marine National Park (MNP). The MNP, which has an area of approximately 13,900 km^2, was designated by Decree of the Minister of Forestry RI No. 393/Kpts-VI/1996. With its spatial extent and coral conditions, Wakatobi MNP's marine biodiversity is one of the highest priorities for marine conservation in Indonesia (Ayiful, 2004).

Wakatobi has a huge capacity in natural resources including beautiful and pristine coastal ecosystems with 25 coral reefs species in diverse forms (Anonymous, 2007). The regency is considered as the best biosphere in the world and frequently visited as diving and snorkeling sites by local and international tourists (Rangka and Paena, 2012). Observation of water quality parameters in Wangi-Wangi Island waters shows that it is still in good condition. However, temperature and salinity were somewhat different from the standard quality set by Decree of the Minister of the Environment Number 51 of 2004 (Rustam etal., 2014).

It is important to study the preparation of 'Marine Tourism Development Policy Model in Wakatobi, SE Sulawesi Province'. Therefore the purposes of this research study are to determine the role of marine tourism in Wakatobi's economy and formulate an appropriate and strategic plan for marine tourism development in Wakatobi Regency.

RESEARCH METHODS

Research Location

This research was conducted on May15-20,2013, in Wakatobi Regency, SE Sulawesi, Indonesia (Figure1).

Location Quotient (LQ)

The Location Quotient (LQ) analysis can give a description of relative ability of a sub-area to a wider area in specific sector (Rustiadi et al., 2009). Since the 1940s, many economic studieshave used the LQanalysis to effectively describe regional economic structure (Gibson, Miller and Wright, 1991; Kiser, 1992). Theanalysis uses small amount of data and analytical skill, andthe results can be gained in short time and inexpensively (Isserrman, 1977).

The data used in the processing are Wakatobi's GDP (obtained from the Central Statistics Agency or BPS of Wakatobi district for its Gross Regional Domestic Product) and Indonesia's GDP (BPS online). The GDP data are taken at constant prices in 2000 by taking

focal points in (i) agricultural and (ii) trade, hotels and restaurants sectors.

LQ equation is as follows:

$$LQ_{ij} = \frac{X_{ij}/X_{i.}}{X_{.j}/X_{..}}$$

in which the parameters are:
(i) LQ value of j-sector in the i-sub-region (Wakatobi Regency level), (ii) Products of j-sector in the i-sub-region (Wakatobi Regency level), (iii) Total products off all sectors in the i-sub-region (Wakatobi Regency level), (iv) Products of j-sector in higher region (national level), and (v) Total products of all sectors in higher region (national level).

The LQ Index yields values ranging from:
LQ>1: The sub-region has a big potential in the sector that it can meet the needs of other areas to support the economy in a higher level.
LQ = 1: The sector can only fulfill the needs of its own region.
LQ <1: The sub-region does not have sufficient potential in the sector.

Participatory Prospective Analysis

Participatory Prospective Analysis is an important tool to make decisions in sustainable development. It is designed to anticipate changes with the involvement of experts and stakeholders. The method can provide quick results in gaining policy choices at local and community levels.

The Participatory Prospective Analysis was conducted via a Focus Group Discussion (FGD). The meeting was attended by 25 experts and participants including decision makers from national and local governments, such as the Marine and Fisheries Office at Wakatobi Regency, the Marine Technology Engineering Office, the Local Planning and Development Agency, the Culture and Tourism Office and The National Conservancy (TNC) and WWF of Wakatobi as a representative from non-governmental organization. The Participatory Prospective Analysis stages are described on Table 1.

Table 1. Stages of the Participatory Prospective Analysis.

No	Condition	Approach
1	Defining the system	Preparatory work and community discussion
2	Identification	Brainstorming
3	Determining key variables	Structured community discussion
4	Inter-variables impact analysis	Structured and teamwork analysis
5	inter-variables impact and dependency analysis	Community discussion supported by results of the analysis (in graph and table)
6	Defining future variables condition	Morphology and community discussion analysis
7	Scenario building	Brainstorming
8	Arrangement of strategic implication and future actions	Structured discussion

Source: Bourgeois and Jesus (2004) in Daman (2012).

Table 2. Wakatobi and National GDP Value (2004-2007) in Billion Rupiah

Nu	Sector	2004			2005		
		Wakatobi	**National**	**LQ**	**Wakatobi**	**National**	**LQ**
1	Agricultural	65,676.80	247,163.60	2.73	67,993.88	253,881.70	2.69
2	Mining	6,358.88	160,100.50	0.41	7,011.48	165,222.60	0.43
3	Processing Industry	8,053.98	469,952.40	0.18	8,663.48	491,561.40	0.18
4	Electricity, Gas and Water	3,288.97	10,897.60	3.10	4,187.28	11,584.10	3.63
5	Building Construction	7,073.21	96,334.40	0.75	8,426.81	103,598.40	0.82
6	Trade, Hotels and Restaurants	23,279.76	271,142.20	0.88	24,794.73	293,654.00	0.85
7	Transport and Communication	4,042.66	96,896.70	0.43	4,661.86	109,261.50	0.43
8	Finance, Rent and Business Services	9,784.09	151,123.30	0.66	12,529.47	161,252.20	0.78
9	Other Services	33,874.86	152,906.10	2.27	35,889.96	160,799.30	2.24
	GDP	161,433.2	1,656,516.8	1.00	174,158.95	1,750,815.2	1.00
Nu	Sector	2006			2007		
		Wakatobi	**National**	**LQ**	**Wakatobi**	**National**	**LQ**
1	Agricultural	211,234.87	**262,402.8**	3.64	72,016.73	**271,509.30**	2.71
2	Mining	11,470.99	**168,031.70**	0.31	7,912.28	**171,278.40**	0.47
3	Processing Industry	11,483.12	**514,100.30**	0.10	9,411.94	**538,084.60**	0.18
4	Electricity, Gas and Water	3,487.08	**12,251.00**	1.29	1,439.40	**13,517.00**	1.09
5	Building Construction	14,698.48	**112,233.60**	0.59	10,310.06	**121,808.90**	0.86
6	Trade, Hotels and Restaurants	55,856.09	**312,518.70**	0.81	28,098.67	**340,437.10**	0.84
7	Transport and Communication	8,766.92	**124,808.90**	0.32	5,457.54	**142,326.70**	0.39
8	Finance, Rent and Business Services	27,046.27	**170,074.30**	0.72	16,622.06	**183,659.30**	0.92
9	Other Services	64,514.86	**170,705.40**	1.71	41,317.21	**181,706.00**	2.32
	GDP	408,558.69	**1,847,126.7**	1.00	192,585.88	**1,964,327.3**	1.00

RESULTS AND DISCUSSION

LQ Analysis

The result of processing Wakatobi GDP and Indonesia GDP data shows that during 2003-2007 (4 years of observation), the LQ index is above 1 for the agricultural sector and below 1 for the trade, hotels and restaurants sector. It is worth reminding that the GDP data is taken at constant prices in 2000 focusing on agricultural and trade, hotels and restaurants sectors. The results indicate that Wakatobi has a good potential in its agricultural sector and the opposite is true for its trade, hotels and restaurants sector during the studied period (Table 2).The LQ indices for all sectors from 2004 to 2007 are shown in Table 2, Figures 2 and 3.

From the LQ calculation, the agricultural sector has an LQ index of about 2-3. This condition illustrates the potential of the agricultural sector including food crops, plantations, livestock, forestry and fisheries to contribute significantly to national GDP. Therefore, good management in the agricultural sector needed to be done in preserving, maintaining and improving agricultural products.
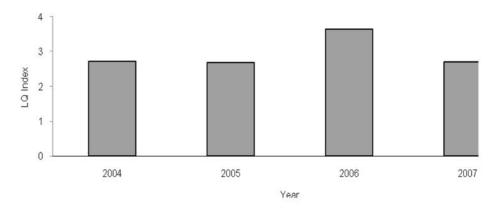
Figure 2. Location Quotient Index of GDP for the agricultural sector in Wakatobi Regency.
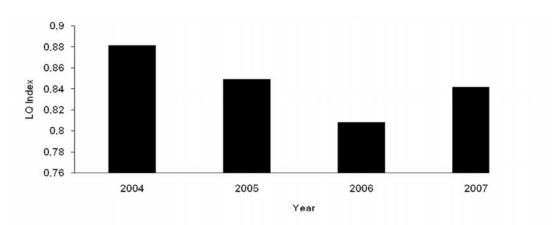

Figure 3. Location Quotient Index of GDP for the trade, hotels and restaurants sector in Wakatobi Regency.

The LQ analysis for the trade, hotels and restaurants sector suggests low potential as indicated by values around 0.8. It reveal slow contribution of this sector to the national GDP as it is not sufficient to meet the needs of Wakatobi. Consequently, this sector need to be better developed given the potential of Wakatobi's natural resources as a tourist destination. Developing infrastructure and facilities is a priority in order to ease access to the region and avoid shortage of accommodation.

Participatory Prospective Analysis

The Participatory Prospective analysis was conducted with a Focus Group Discussion(FGD)involving with 25 experts from local government, private sector, non goverment organization and stakeholders. During the discussion, all participantsactively identified key variables related to marine tourism development in Wakatobi Regency.

Determining Key Variables

The data used in the analysis are related to the concept of marine tourism, which consist of18 variables (Table 3).Dependence between these variables can serve as an entry point for effective planning (Godet and Roubel at, 1996, Bourgeois and Jesus, 2004 in Damai, 2012).

Table 3. Stages of the Participatory Prospective Analysis.

No	Variables	The strength of the global variable weighted
1	Community behavior towards environmental protection	1.104
2	Community character	1.104
3	Human resources	1.094
4	Motivation	1.092
5	Tourism management	1.068
6	Empowerment of small island community	1.047
7	Participation	1.026
8	Capital sources for tourism	1.026
9	Coordination among agencies	1.026
10	Information	1.021
11	Travel services	1.011
12	Intermediation	0.985
13	Tourism infrastructure	0.980
14	Transportation	0.980
15	Tourism facilities	0.934
16	Collectivity	0.880
17	History	0.867
18	Natural resources	0.752

Analysis of Inter-Variable Dependence

In order to analyze dependence between the 18 variables, participants determined inter-variable dependence through structural analysis and team work. This analyzes the influence/dependence of direct influence/dependence, (I / D) of each variable with other variables, using a consensual valuation approach. The structural analysis gives valuation for each variable's direct influence on other variables using scales from "0 = no influence" to "3 = very strong influence". These values, which were discussed and agreed by participants, are then inputed into the I/D matrix I/D following Bourgeois and Jesus (2004) using Excel software (Figure 4).

Each quadrant represents specific characteristics of the variables. Quadrant I (upper left) is the driving variable region. Quadrant II (top right) is the control (leverage) variables region, which is characterized by strong dependence of the effects. Some variables in this quadrant may also be classified as strong variables. Quadrant III (bottom right) is the output variable region, which has high dependent but slight influence. Quadrant IV (bottom left) is the marginal variable region that variables here are excluded from the analysis. In addition to the four quadrants, a gray area along the axis that separates quadrant IV from other quadrants represents a group of variables whose role in the system cannot be clearly identified.
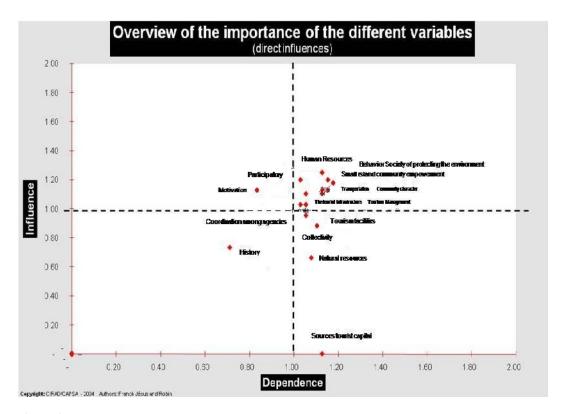
Figure 4. The result of direct effect among variables.

The results show that there are four key variables, namely: 1) Community behavior towards environmental protection, 2) Community character, 3) Human resources and 4) Motivation. Overall, these variables have weighted values higher than the ten other variables (Table 5).Thus, following Godet&Roubelat (1996) and Bourgeois&Jesus (2004), we can conclude these four variables (No 1-4 on the table) are the most effecting variables.

Strategic Implication and Future Actions

Marine tourism should be geared towards environment sustainability and conservation in order to develop the region more comprehensively. Such development approach would also be in line with the Masterplan for Acceleration and Expansion of Indonesia's Economic Development (MP3EI) policies.

The four keyvariables identified in our Participatory Prospective Analysis may play an important role in formulating small island development policies that focus on conservation in Wakatobi Regency. The implementation of those variables to support marine tourism can be described as follow:

a. Community behavior towards environmental protection

Marine tourism development and management must consider the environment by following the zonation of the Wakatobi Marine National Park (Forest Minister Decree no. 393/Kpts-VI/1996 on 30 July 1996 and no. 7651/Kpts-II/2002 on 19 August 2002). For example, marine tourism development must not operate in the core zone so that endemic natural resources can be protected. Also, the choice of catching tools should also be considered to support environmental sustainability.

b. Community character

In this regards, marine tourism development and management plan needs to encourage the community for an open-minded attitude when receiving tourists from different cultures and characters, while maintaining their own tradition and

values such as their culture to work together as a family.

c. Human resources

Educated and trained labors to support marine tourism industry needs to be increased.In order to increase the capacity and capability of existing human resources inWakatobi Regency, a technicalhigh school fortourism may be an option.

d. Motivation

Wakatobi Regency as an earth biosphere acknowledged by the UNESCO creates a strong motivation to protect its natural resources and develop its marine tourism as a source of income for the local community.

CONCLUSION

Data analyses of Wakatobi and Indonesia GDP during 2003-2007(4 years of observation) show that the LQ index is >1 for the agricultural sector and is<1 for the trade, hotels and restaurants sector. These indicate that Wakatobi's agricultural sector has a big potential, while it is the opposite for its trade, hotels and restaurants sector during the study period. Therefore, the trade, hotels and restaurants sector needs to be better developed in order to establish Wakatobi as a world-class tourist destination. Developing infrastructure and facility development is a priority in order to ease access to Wakatobi and avoid shortage of accommodation.

The results of this study reveal four key variables for developing marine tourism in Wakatobi Regency that could be implemented by stakeholders. These variables are community behavior towards environmental protection, community character, human resources and motivation.

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