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Research Paper

Environtment Power Support Area and Wain River Protection Forest Ecotourism (HLSW), Borneo – Indonesia

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ABSTRACT:- This research aimed to analyze the environtmental carrying HLSW region ecotourism capacity to achieve sustainable ecotourism development. Research location conducted in Kutai Kartanegara protected forest. The population in this research is all the people who live in HLSW area, provincial community in this case is represented by Balikpapan society, domestic and foreign tourist who visited HLSW, and the government who in charge in HLSW is Kutai Kertanegara District Government. There are 100 respondents research study sampled. Considering there are four elements of the population, then 100 respondents were obtained from : (1) 30 samples are selected communities around, (2) 20 samples are selected provincial society, (3) 30 samples are goverments/institutions, (4) 20 samples are foreign/domestic tourists who visiting HLSW. From the result of this research conclude that the carrying capacity of Bunaken Island ecotourism area in the higest category, will be ecological, physical, environtmental, economic and social. From Sustainability Livelihood Approach, the main factor in ecotourism area development is environtment carrying capacity.

Keywords:- Regional Carrying Capacity, Sustainable Ecotourism Development, Ecotourism Activities Impact.

I. INTRODUCTION

The study of the environment is the object of continuous attention these days. Environment refers to the elements of the abiotic, biotic, and culture (ABC) on the one hand and on the other is the natural environment, social, and economic. The environment also regarding to the natural system. Natural systems that require harmony, diversity, interdependency, and sustainability.

One obvious natural systems is forest. As part of the natural forest let likewise. Forests have a variety of functions on biodiversity protection, that is why it is proper that the forest must be protected. Forests can be processed for the welfare of man as far as the above requirements are met.

Management and forest protection is not just a regional problems (national) but already the world's problems (global). This is related to the function of forests in maintaining the ecological balance that also affect the global climate, such as the effects of 'global warming' that can threaten the safety of human life. However, the fact shows that the economic function of forests, namely as a source of livelihood for a group of people, as a means of accumulating capital (capital) for employers (capitalists), and as a source of income for the country, often beating functions of forests in maintaining the ecological balance (including global climate). Pressure of

increasing population is one of the factors that helped accelerate the destruction of forests. This occurs because the need for broader land and building materials more, better land for settlement and land for farming activities, and materials for new buildings.

One of the unique coastal and marine ecotourism in Indonesia is in Kutai regency of East Kalimantan namely Sungai Wain Protected Forest (HLSW). The protected forest has a variety of natural wealth of flora and fauna. These forests should be protected and away from human economic activity that threatens its sustainability. But in reality, these protected forests, in the vicinity there are natives and immigrants. Urged by the necessities of life, some residents economic activity, in this case the farming/gardening, extraction of forest products such as resin, rattan, wood. In addition, the farmers whose fields are moved, illegal logging, forest fires, and so on. This has a negative impact on the existence of protected areas, such as erosion, natural disasters, land conversion, as well as the reality of a conflict of interest from various parties.

HLSW as one of the natural resources through the development of Ecotourism can bring positive effects such as increased efforts to reservation of natural resources, development of national parks, protection of coastal and marine parks, and maintaining mangrove forests. But on the other hand, the management of ecotourism activities that are less precise can cause a negative impact in the form of pollution, damage to the physical environment, excessive use, construction of facilities without regard to environmental conditions, and damage. The change in environmental quality tourist area will have an impact on the existence of the number of tourists who visit thereby affecting earnings in the tourism sector and local communities. Therefore, on every tourist location need to consider environmental factors such as salinity, tidal, and topography, as far as possible be maintained as the first condition, and also rehabilitation needs to be done at ranging damaged or critical locations.

Environment in ecotourism area will be maintained if visitors have a good appreciation of the ecotourism aspects, so they do tourist activities that are environmentally friendly. But when a visitor appreciation of the aspects of ecotourism less, will affect the activities of visitors who are not environmentally friendly to produce garbage, pollution, vandalism and damage. Environmental degradation as the negative impacts of ecotourism activities related to environmental carrying capacity (carrying capacity). Excessive number of visitors is the main problem which is almost always found in the implementation of tourism activities in marine parks and national parks (Clark, 1991; 13). Good water pollution by garbage, soap, oil spills by boat or motorboat and lai - other forms of pollution that reduces comfort traveled for visitors.

Based on this background, the authors are interested in conducting research aimed to analyze the environmental carrying capacity of ecotourism HLSW region in order to achieve sustainable ecotourism development .

II. THEORETICAL OVERVIEW

2.1 . Ecotourism

The term ecotourism translated into ecotourism in Indonesian, which is a type of environmentally sound tourism or tourism activities carried out with regard to nature and the environment that makes the tourists moved to love nature and referred back to nature (Ziffer 1989; Young 1992; Valentine 1993; Scace 1993 in Baksir 2010). It implies that ecotourism is a form of tourism that is responsible for the preservation of the area 's natural, economic benefits and maintain cultural integrity of local people.

Dowling (1995) suggested that ecotourism is a form of travel that is responsible for the preservation of natural environment and provide economic benefits as well as maintaining the integrity and preservation of local culture. There are several equivalent terms ecotourism, among others : nature - based tourism, green travel, low impact tourism, village -based tourism, sustainable tourism, cultural tourism , heritage tourism and natural

tourism.

Cater and Lowman (1994), defines ecotourism as a form of agreement which is responsible to the environment protected natural areas and improve the welfare of local residents. Furthermore, Carter and Lowman (1994) suggests there are four picture labeled ecotourism trip, namely : 1. Based nature tourism (nature -based tourism), 2. Conservation area as an object supporting the environment (conservation supporting system), 3. Tourism is very concerned about the environment (environmentally aware tourism), 4. sustainable Tourism (run sustainability of tourism) .

Ecotourism is a tourist development model that respects the rules of nature by implementing an integrated development and conservation of natural resources conservation with sustainable community economic development (Fandeli, 2000). Meanwhile, Bjork (2000), describes ecotourism is a form of tourism that rely on natural resources and cultural values that are not consumptive utilization that can create jobs and income for local communities and economic development for conservation efforts so that, it can be said that ecotourism is an nature trips experience that can contribute to environmental conservation in order to maintain and improve the integrity of natural resources and social and cultural elements. Therefore, ecotourism in its implementation does not require the availability of modern accommodation facilities are equipped with the all luxury or excessive artivisial building. Ecotourism in the implementation is done with simplicity, maintaining the authenticity of nature and the environment, maintain the authenticity of art and culture, customs , habits of life (the way live), creates peace, silence, maintaining the flora and fauna, as well as the preservation of the environment so as to create a balance between life humans with the natural surroundings. In ecotourism, tourists who come not merely to enjoy the surrounding nature, but also to study it as an increase in knowledge or experience (Act 9 of 1990) .

2.2 . Carrying Capacity of Sustainable Development

As sustainable development, the definition of ecotourism is also very difficult in the operational phase. However, a series of parameters commonly used to refer to sustainable tourism, among other tours that have minimal impact on the environment have a beneficial impact to communities and local communities, and provide conservation education for visitors (McMinn 1997).

Yudaswara (2004) analyzed the marine tourism development policy in the management of small islands in a sustainable manner (case study Buleleng-Bali Menjangan Island District), was chosen to be the area of sustainable tourism for the optimal scenario Menjangan Island area management. On the island group Village Coconut Island District of Thousand Island Islander communities have economic activity that is closely related to the natural resources of fisheries and tourism, tourism activities of the people involved have a better income (Ruyani 2003).

Tosun (2001) states that sustainable development is a concept to bridge the regional development without compromising biodiversity. The concept of sustainable development based on a lot of the fact that the use of biodiversity, in fact, tend to lead to the exploitation behavior (Dymond 1997). This concept suggests the use of sustainable natural resources between generations .

Theoretically, the concept of sustainable tourism is expressed by Casagrandi and Rinaldi (2002) that the sustainability of small islands tour follows the "minimalist model" depends on three aspects of the three main components : environmental conditions (E = Environmental); Investment (C = Capital); and Tourism (T= Tourism). These three components are interrelated (Figure). Hereinafter described, tourists will visit when the environment is good, but with the increase in tourists exceeds the carrying capacity of the environment will worsen, and will result in capital, traveler otherwise would add a lot of capital, and capital can be returned for environmental improvement

The concept of 'sustainable' (sustainability) in fact has long been recognized as part of biology. At the conference "Analysis and Management of Tropical Forest Land sustainable use" (Forests Land Assessment and Sustainable Management for Uses) the words 'sustainable use' is defined as : 'national continuing use of land without severe or permanent deterioration in the quality and quantity of one or more components of the integrated ecosystem orlandscape unit'.

In the meantime, the term 'sustainable development' or sustainable development is new concepts related to the concept of development. Linkages meaning can be connected with the problem of efficient and inefficient to development enlarge, and justice (equity) for the distribution of viable and sustainable use. Sustainable development meaning can be found either eksplisit and implicit in various international treaties and other instruments. Report of the Brundtland Commission in 1987 is extensive law meaning and widely held notion that giving 'sustainable development' as : "development that meets the needs off the present without compromising the future generation to meet ability of Reviews their own needs".

Carrying capacity is defined as the intensity of the maximum use of natural resources that continues over time without damaging nature. Bengen and Retraubun (2006) states carrying capacity as the level of utilization of natural resources or ecosystems sustainably without causing damage to natural resources and the environment. Carrying capacity can be defined as the maximum condition of an ecosystem to accommodate components of biotic (living organisms) contained therein , by also taking into account environmental factors and other factors that play a role in nature .

Davis and Tisdell (1996), the carrying capacity of the environment is divided into two ecological carrying capacity (ecological carrying capacity) and carrying costs (economic carrying capacity). If associated with tourism activities, Mathieson and Wall (1989) in Zhiyong and Sheng (2009) defines carrying capacity as the maximum number of people who can use a region without disturbing the physical environment and degrade the quality of the visitor obtained adventure, and without a loss of social side, economy and culture of the local community (Inskeep 1991, Liu 1994). Tourism carrying capacity in practice is a broader concept that includes three parts: the carrying capacity of the ecological, economic carrying capacity and carrying capacity of psychology (social) (Zhiyong and Sheng , 2009) . Ecological carrying capacity is the maximum number of animals in an area that can be supported without causing death due to density, and environmental damage is permanent (irreversible). This is determined by environmental factors. This is in line with Tantrigama (1998), the analysis focused on the carrying capacity of the ecological dimension, physical and environmental. Carrying capacity of the economy is the level of production (scale enterprises) that provide maximum benefit and defined by economic business objectives. In this case the parameters used in the economic feasibility. Pearce and Kirk (1986) in Wong (1991) describes several types of differences in the carrying capacity (physical , environmental , and social) that can be applied in some parts of the coastal environment (land, dunes, beach and sea), and the dimensions associated with the travel system such as accommodation and services, transit, and recreational activities.

- Ecological carrying capacity, according to MacLeod and Cooper (2005) states the maximum level of use of an area or a errands sustainable ecosystems , both in the number of populations and activities which are accommodated therein, before there was a reduction in the ecological quality of teh ecosystem Definition of carrying capacity based on Odum's theory, that the limit maximum biomass that can support a set of primary production and the food web structure variables obtained when the same total respiratory system primary number of production and import of detritus (Christensen and Pauly 1998).
- Physical carrying capacity of an area or areas represent the number maximum use or activities that can be accommodated in the area or areal without damage cause or degradation of the region physically (Wong 1991; McLeod and Cooper 2005). Physical carrying capacity, the maximum number ofuse or activity that

can be accommodated without causing damage or loss of quality. Physical power needed to increase visitors comfort. Physical carrying capacity can be studied through how much capacity and coastal space available to build tourism infrastructure for the tourists convenience. (Tantrigama 1998; McLeodand Cooper 2005). Cooper et al. (1998), the physical carrying capacity associated with the visitors experience or the maximum level that can not be accepted because of decreasing in satisfaction of any excess utilization.

- The concept of social carrying capacity in a region is a picture of a person's perception of the use of space at the same time, the region user perception to the presence of other people together in exploit a certain area. This concept regard to confortability level and region users appreciation because of over-crowding effect in an area. A social carrying capacity region is expressed as the limit of the maximum level, the number and user's level, in an area where the conditions have over carrying capacity will lead to a decrease in the level and quality of the user experience or satisfaction (user) in the region. Beeler (2000) states the social carrying capacity as the maximum limit being tolerated by someone who acts as a host (host resident) to induced tourism activities negative effects .
- Carrying capacity of the economy is the level of production (scale enterprises) that provide maximum benefit and defined by business goals economically tourism business management. In this case use the economic enterprices feasibility parameters, for example the maximum profit, maximum worker absorbed by the utilization of tourist sites, long of investment return and the multiplier effect of the business (Tisdell 1998a ; McLeod and Cooper 2005). Tourism products derived from the combination of the potential resources (resources), capital (capital), labor (labor) and the ability to manage (management) which will be marketed as an economic good. Ecotourism sector accounted economic role makro. Micro and micro-economic aspects activities of ecotourism in generating studies of tourist products, packaging, quality and quantity, actors and price. Generally tourism product has the same characteristics as consumer goods. The goods presented with very diverse characteristics, and flexibly chosen by tourists. On the macroeconomic side, the share of economic discuss about ecotourism sector, income and employment, and economic linkages. Environmental carrying capacity is the level of environmental quality which provides a utility to support the activities of the state of the environment around it. There is a tourist area life cycle theory related premises environmental carrying capacity refers to the opinion in Pitana Butler (2005) is divided into seven aspects, namely : exploration, involvement, development, consolidation, stagnation, decline, and rejuvenation.

2.3 . Research Accomplished

Studies on the measurement of the environmental benefits of ecotourism -based approach to some of the methods has been done in Indonesia. There are several approaches that use contingency method, travel cost method, hedonic price method and many other methods. Several studies about tourist attractions as follows : First, the Center of Coastal and Marine Resources Research Tanjung Pinang (2010), this study aim to analyze Ecotourism Development Maritime studies as Alternative Living for People in Bintan regency. Using WTP and WTA approach. The results indicate the potential for eco-tourism can be developed around 62 objects and ecotourism activities and economic potential is high enough. Achmad Budiman (2007), aims to clicking Economic Benefit Analysis of Ecotourism Around Lake Toba. The analysis tool used is the WTP and WTA with survey methods and contingency. The results showed that the total value of the WTA rating is greater than the total value of WTP tourists to attractions around Lake Toba. Word (2003), Assessing the impact of two factors, namely economy travel costs and per capita income of the rate of tourist arrivals in pasir putih beach Situbondo. It is known that these two variables affect the rate of tourist visits to Tourism Object pasir putih beach significantly, the cost of the trip is a limiting factor in the person's participation to enjoy the attraction of pasir putih beach.

III. RESEARCH METHODS

Research location is in Kutai Kartanagara Protected Forest. Primary data is the data that directly observed by researchers during the study. In connection with this primary data, carried out observations of the object, which is about the study population. The population in this study are all the people who live in the area HLSW, provincial community in this case is represented by the Balikpapan people, domestic and foreign tourists who visited HLSW, and the government in charge of HLSW namely Kutai Kertanegara Regency. Given a large enough population, so in this study using the technique of sampling. The sample is part of the population that can be used to explain (generalization) population. According to Sekaran (2006 : 123) sample is part of the population, where the sample consists of a number of selected members of the population. The minimum sample size was 100 respondents sampled research study. Considering there are 4 elements of the population, then the 100 respondents were obtained from : (1) 30 samples are selected communities, (2) 30 samples are selected provincial society, (3) 20 samples that governments/institutions, (4) 20 samples namely foreign tourists / domestic visiting HLSW . Based on objectives research , several analytical tools are used as follows for SEM analysis to determine the level of the carrying capacity of the ecological, social, economic, physical, and environmental sustainability approach Livelihoods Approach (SLA) .

IV. RESULTS AND DISCUSSION

Carrying capacity of the area on the actual conditions in the field only at the stage preceding section describes exposure HLSW region ability to accept tourists. In the next section, by using analytical tools Descriptive Analysis and Factor analysis approach to Sustainability Livelihood Approach (SLA) will be presented at the regional level of the carrying capacity of the five aspects, namely Ecology, Physical, Environmental, Economic, Social / Psychological (based on Bengen and Retraubun, 2006, Zhiyong and Sheng, 2009, Tantrigama, 1998, McLeod and Cooper (2005).

Factor analysis is used to support Sustaniability Livelihoods Approach (SLA). From the results of the analysis showed the carrying capacity of the five variables, formed one factor. The amount of diversity that is formed of five variables amounted to 48 292 % 48 292 % means that for these five variables measuring factors Ecotourism Carrying Capacity (X). Thus it can be said that the five variables: Ecology, Physical, Environmental, Economic, Social and significant as the determinant factor Ecotourism Carrying Capacity (X). Next Loading Factor calculation for testing Sustainability Livelihood Approach (SLA) as follows :

Table 1 : Loading Ecotourism Carrying Capacity Factor (X) Result

Carrying Capacity	Loading Factor
Ecology	**0.811**
Physical	**0.512**
Environtmental	**0.818**
Economic	**0.676**
Social	**0.698**

From the visible Table 1 is the environmental factor, it's the factor that has highest carrying capacity of ecotourism. This indicates that the carrying capacity of the environment affordability indicator visible from the location, the quality of the road to the location, and the availability of tourist transport is the highest factor that will shape the carrying capacity of ecotourism in HLSW. So to be able to increase ecotourism HLSW, the main thing to note is repaired and carrying capacity of the environment. Later in the second, third, and fourth is the ecological, social, and economic. On the other hand, the physical carrying capacity is the lowest in the measurement of carrying capacities of ecotourism in HLSW.

Perceptions and preferences of visitors to ecotourism HLSW Adaptation is based on the theory of Bennett. Bennett (1976) sees as the adaptive behavior of human adaptation to changes in their environment, in order to adapt to the situation and conditions. These changes responded in diverse forms. Such behavior by Bennett closely related to the necessities of life, after a certain circumstances, and then build a strategy to deal with the state of future situations.

Bennett's concept of adaptation has three orders : physical/biological ; cultural ; and patterns of relationship/behavior (behavior). Adaptive behavior is a form of behavior that adjusting means on purpose, achieve satisfaction, do the options actively or passively. Strategic actions more specifically refers to the active behavior of specific actions designed to achieve the goal. While the adaptive strategy refers to the specific action selected in the decision-making process with a degree of success that can be expected (Bennett 1976: 271-272).

The adaptation concept of Bennett with three levels : physical/biological ; cultural ; and patterns of relationship/behavior (behavior) is the basis for analyzing the perceptions and preferences of visitors to ecotourism HLSW. The data showed that 57 of 80 respondents or 71.25 % answered beautifuly. This means that the criteria HLSW ecotourism is quite beautiful because categorized under the category of beautiful or < 75 %. But according to the criteria of DKP (2002) the region is lower than the beautiful, that is between 60 % to 79 %. This means that ecotourism is still relying on the natural beauty that can be felt most visitors in general. While the perception of visitors to the region in the tourist area of comfort HLSW has a value of 61.25 %. This means that in this tourist area visitors feel quite comfortable though not meet the very comfortable criteria with the value must be above 75 %. This condition states that in the journey towards ecotourism often happens, motor boat engine does not work properly causing concern visitors coming of waves that make the boat swerved, as a result of a sudden the engine does not work. Likewise on the beach, less water and bathroom available and water closet so have to be queued because there is not many water closet and bathroom available. If all of this does not happen, then the visitor will feel comfortable during travel in the region of HLSW

To test the effect of the carrying capacity of ecotourism to sustainable ecotourism development and impact of ecotourism activities for local communities used SEM analysis. The independent variable in this study is The Ecological Carrying Capacity (X1), The Physical Carrying Capacity (X2), The Carrying Capacity of The Environment (X3), The Carrying Capacity of The Economy (X4), and Social Carrying Capacity (X5), while the

dependent variable is Sustainable Ecotourism Development (Y1) and the Impact of Ecotourism Activities (Y2) to the surrounding community.

Further SEM analysis that examines the effect of Ecological Carrying Capacity (X1), the Physical Carrying Capacity (X2), The Carrying Capacity of the Environment (X3), The Carrying Capacity of The Economy (X4), and Social Carrying Capacity (X5) on Ecotourism Development (Y1), and influence on the Impact of Ecotourism Activities (Y2).

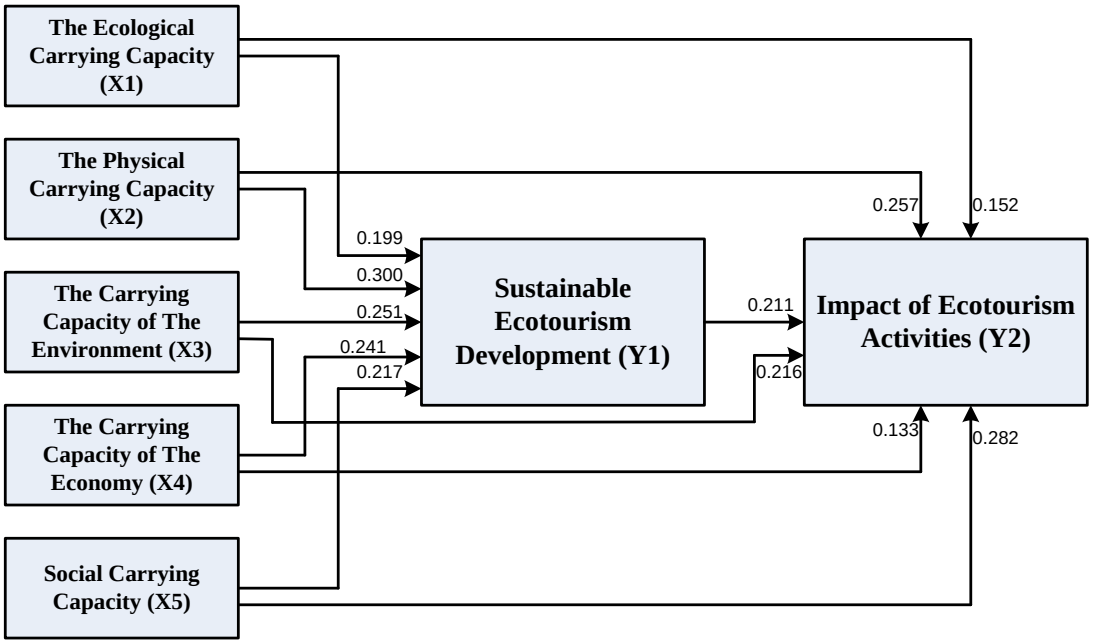

Figure 1
SEM Analysis of the Region Carrying Capacity Effect To Sustainable Ecotourism Development and The Impact of Ecotourism Activities

From the results of the SEM analysis showed that 69.3 % determinants of sustainable ecotourism development is due to carrying capacity. Of the coefficient of the highest SEM shown that the physical carrying capacity is the carrying capacity of the main advocates of sustainable ecotourism development. It is necessary for the study of the appeal of beauty, owned facilities attractiveness, and the appeal of hygiene and sustainability in order to improve the quality of sustainable ecotourism development in HLSW.

On the influence of carrying capacity and development of ecotourism on the impact of 84% shown that the impact of ecotourism activity was affected by the carrying capacity and sustainable development outcomes. From the highest SEM coefficient shown that the physical carrying capacity is the main bearing capacity on the impact. The better the physical carrying capacity, it will lead to the better or the more positive impact of ecotourism activities in HLSW.

From the analysis results based on the Butler's theory of Carrying Capacity, shows that today HLSW in a state of development. In this phase, foreign investment began to come in and as well as the emergence of the tourist market began systematically. Physically more open areas, promotion intensified, local facilities has been eliminated or replaced by a facility that is really touristic with international standards, and artificial attractions are already being developed to add the original natural attractions. Various goods and services imported into the foreign worker must include to support the rapid development of tourism. The approach is based on the carrying capacity of Sustainability Livelihood Approach (SLA) shows that the form of the ecological carrying capacity, physical, environmental, economic, and social are the aspects that support the

development of ecotourism in HLSW, and the results indicate that the carrying capacity of the environment is something that becomes the main focus in the development of ecotourism in HLSW.

From the SEM analysis result, showed that the carrying capacity will create ecotourism development in a sustainable manner. The main thing that must be executed first in the process of development in a sustainable ecotourism is the physical aspect of carrying capacity. Therefore the first step in ecotourism strategy HLSW, should give priority to the appeal of beauty, owned facilities attractiveness, and the hygiene and sustainability appeal (as an indicator of physical carrying capacity) in order to improve the quality of sustainable ecotourism development in HLSW. Carrying capacity will also support the impact of ecotourism activities in HLSW. The better carrying capacity of ecotourism that involves ecological, physical, environmental, economic, and social, it will create a more positive impact of ecotourism activities in HLSW. From the analysis of Importance Performance is assessed by the community. There are several things to consider its core activity for reducing the negative impacts of ecotourism (a) and maximize the participation tourists are in quadrant 1 (Q1), the level of satisfaction (performance) is low, but high interest rate. This gives the sense that the people around HLSW judge that a reduction of negative impacts due to the activity of ecotourism is currently rated yet done (based on the level of satisfaction / performance), but the public expect (based on the interest rate) that this negative impact should be reduced. Similarly, people around the judge that tourists participation is not maximized, whereas the contribution of the public wants a better traveler. To that end, the second step is the improvement strategy of ecotourism negative impact aspect reduction, travelers and maximize participation in the development of ecotourism in HLSW.

In connection with the carrying capacity of ecotourism is seen that the actual carrying capacity in terms of capacity in the region HLSW are in good category. Butler 's theory, this area is in the category of development and will someday reach the point of consolidation even stagnation. To achieve the conditions in a state of development necessary to take the third strategy that is create tourist traffic to HLSW. From the identification results of the regression analysis, the variable cost of travel to other places, recreation budget, motivation visits a positive effect on the number of tourist. It means, the high number of tourists due to the high cost of travel to other places, the high of recreation budget, the high motivation of visitors. On the other hand, the variable cost of travel, distance from home, and a long journey negatively affect the number of tourists. It means, the high number of tourist arrivals caused by the low cost of the trip, the closeness of the house, and quite short travel time.

V. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the research on the economic optimization model of ecotourism Bunaken National Park in North Sulawesi, it could be concluded as follows : Carrying capacity of ecotourism Bunaken island area in the high category will be ecological, physical, environmental, economic, and social. From Sustainability Livelihood approach, the main factor in the development of ecotourism is the carrying capacity of the environment. From the results of the SEM analysis showed the following results :

- 69.3 % determinants of sustainable ecotourism development is due to carrying capacity. From the higest coefficient SEM shown that the physical carrying capacity is the carrying capacity of the main advocates sustainable ecotourism development. It is necessary for the study of the appeal of beauty, attractiveness owned facilities, and the appeal of hygiene and sustainability in order to improve the quality of sustainable ecotourism development in HLSW.
- On the influence of carrying capacity and development of ecotourism on the impact of 84% shown that the impact of ecotourism activity was affected by carrying capacity and sustainable development outcomes. From the coefficient of the highest SEM shown that the physical carrying capacity is the

main carrying capacity at impact. Better the physical carrying capacity, it will lead to the better or more positive the impact of ecotourism activities in HLSW.

Some recommended suggestions as follows : (1) Ecotourism management HLSW must have more attention to the carrying capacity of the region in order to maintain continuity for the future viability of this region. This study is only as a model to optimize the utilization of the tourist area which can be used as guidelines for assessment and utilization of other attractions. (2) The parties or stakeholders who are directly involved with the management of this area in order to coordinate for good managerial advancement of the region so that maximum benefit can be obtained without sacrificing the environment. Beautiful condition and sustainable is a resource for the future of our children and grandchildren.

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