ECOLOGICAL RESTORATION IN NATURAL CONSERVATION TOURISM AREA

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Abstract—Ecotourism is a concept of tourism development that pays attention to the physical, economic and socio-cultural environment and provides positive benefits to local communities and tourist experience. This concept of ecotourism that can be applied in national park areas is ecological restoration. This study aims to determine the application of ecological restoration in nature-based tourism areas. The method used is descriptive qualitative by conducting observations, interviews and literature studies. The results show that ecological restoration is part of the concept of ecotourism that can be applied in the national park area. Ecological restoration is the most important part of ecotourism development. Examples of the application of ecological restoration in the area of Mount Merapi is by replanting trees after eruption and conservation of water. Ecological restoration is carried out to improve the quality of the damaged nature in accordance with its original state and can also support tourism areas around the National Park of Mount Merapi such as Tlogo Muncar, Goa Japan and Plawangan Turgo Hill.

Keywords: Ecotourism, Ecological Restoration, Mount Merapi National Park.

1. INTRODUCTION

Tourism is a service industry sector that is the biggest source of income for the country. Based on tourism ministry that tourism is the fifth largest foreign exchange earnings position after palm oil and rubber. Foreign exchange income has declined in the non-service industry, contrarily, tourism provides an increase to the industry in Indonesia so that its income is expected to increase continuously. It can illustrate that tourism development has a positive impact especially on the economy.

One of the main goals in the development of tourism is to improve the economy, especially the local community. Thus, tourism will be emerged and developed, so that local people have a desire to become managers and policy makers in the destination. There is an important side in tourism management. That is, tourism can have a positive impact on the economy by well managed, on the contrary, it will have a negative impact both from the physical, social and cultural environment by poorly managed. One concept of tourism development that pays attention to these impacts is ecotourism.

Ecotourism is a concept of tourism development that pays attention to the physical, economic and socio-cultural environment and provides positive benefits to local communities and tourist experience. The International Ecotourism Society (TIES, 2006) defines ecotourism as a responsible trip to natural areas that conserve the environment and improve people's welfare. There are three main essence in ecotourism, namely (1) maintaining and improving environmental quality, (2) respecting local culture and providing tangible benefits to the community, and (3) education that is beneficial for tourists [3].

Ecotourism has become one of the fastest growing sectors of the tourism industry, three times faster than other industries on the last 15 years [4]. The increasing demand of tourists for tourism products based on ecotourism is an opportunity for the community, government and private sector to develop it. Based on tourist data according to Pasanger exit survey (2014) that tourists interested in nature-based tourism products for ecotourism occupy the first position (45%), followed by marine tourism (35%), then adventure tourism (20%). Thus, at this time ecotourism is becoming a trend of tourism development.

One of the government’s efforts to develope ecotourism by establishing conservation areas as tourist destinations. The main purpose of the conservation area is to maintain and restore existing land. However, the existence of tourism activities in conservation areas can have a positive impact on people's welfare. In the establishing conservative areas such as National Parks and Asylum areas is to restore damaged land or provide better benefits to the ecosystems in the area.
Ecological restoration in tourist areas based on nature conservation is a tourism activity that involving the community and tourists to maintain the physical environment so that the quality of the environment increases. Tourism development in conservation areas not only has a positive impact on the economy but also has a positive impact on the physical environment of the area. In this paper the author will discuss one example of a conservation area that is used as a tourist destination by having the purpose of restoring damaged land or maintaining and increasing the quality of the environment.

**Research Objectives**

The author conveys about ecological restoration relating to nature conservation-based tourist destinations. Several studies on land restoration have been carried out by several authors such as [4] on Ecotourism and ecological restoration and [6] on Management of sustainable development in ecotourism case studi in Rumania. The results of the study are tourism management whose natural products must apply ecotourism concepts such as ecological conservation and restoration, so that they can have a positive impact on the sustainability of the destination.

The purpose of this paper is to find out how ecological restoration can be applied to tourism areas based on nature conservation.

2. **LITERATURE REVIEW**

The Concept of Ecological Restoration and Ecotourism

Ecological restoration is a new concept in the management of ecotourism, because its implementation only several tourist destinations that embrace ecotourism as a development concept. This becomes interesting when introducing ecological restoration as a concept of ecotourism that must be developed. Many from the government, private sector and the public still think that how to conserve existing land, but have not yet thought about how to restore the land to become land that is in accordance with its natural characteristics and ecosystems.

The principle of Ecological restoration planning is almost the same as conservation. But, if studied more deeply between restoration and conservation becomes something different. Conservation is a way to protect and maintain and utilize natural tourism destinations in a sustainable. While ecological restoration is a way to restore tourism destinations in accordance with natural characteristics and develop new concepts to improve environmental quality. In addition, Pattimahu (2004) says ecological restoration is one of the applied sciences that studies the repair or recovery of an ecological system that has experienced interference.

The concept of ecological restoration should be developed and become a regulation for the government, private sector and community in developing tourism. For example, by developing a natural conservation tourism area by improving environmental quality such as restoration of damaged land, or by providing additional food for the ecosystem that lives in the destination. The quality of environmental must always be considered to be improved, because at this time there are still many tourist destination managers who are still thinking about how to protect the area that impact by tourism activities.

Tourism areas that are designated as ecotourism destinations, both marine, forest, mountain, and karts have a range of tourist destinations to damage the ecosystem [7] The activities of tourist will directly or indirectly affect the ecosystem around the destination, it requires activities that are allocated to maintain and protect the tourist area. Even the concept of ecological restoration can contribute positively to the environment and improve the quality of the environment to be better than before. Enhancing environmental quality through ecological restoration can provide a deeper understanding of ecotourism, because restoration is a very important in the concept of ecotourism.

3. **RESULTS AND DISCUSSION**

Ecological Restoration in Nature Conservation Areas

Indonesia has a conservation area which is protected by around 50 National Parks and 75 Wildlife Reserve Areas spread from Sabang to Merauke. The purpose of establishing conservation areas is to protect and protect nature from damage to unexpected human activities. Nature conservation areas are usually located in areas that are unique in both the biotic and abiotic environments. By determining the nature conservation area, it means that Indonesia has implemented some of the main principles of ecotourism, namely conservation.

The implementation of the ecological restoration in conservation areas can be carried out by tourism stakeholders, namely the government, the private sector and the
community. The most important stakeholders are the government because conservation areas such as National Parks and Asylum Areas are fully managed by the government. In this context, the government must determine policies related to land restoration so that the private sector and the community will participate in ecological restoration of natural conservation areas.

Currently the growth in the number of tourists towards nature has increased, so that natural conservation areas are used as tourist destinations. Before tourism develops, both the regional government and the community avoid the establishment of conservation areas in their area. They assume that the existence of a conservation area cannot provide income, but instead require funds to conserve land. This is considered by the local government in establishing conservation areas. As time goes on, tourism continues to grow and has a positive impact on the economy of the community so that the government and the community develop it into a tourist destination.

The establishment of conservation areas is actually an attempt to restore damaged land or improve environmental quality. The examples of management cases in conservation areas as tourism destinations can be differentiated into several regions namely nature conservation areas and nature reserves.

Nature Conservation Area

Nature preservation area is an area that functions as protection of life support systems, preservation of plant and animal species diversity, and sustainable use of biological natural resources and their ecosystems [8]. This nature preservation area consists of (1) National Parks, (2) Great Forest Parks and (3) Nature Parks. The third of nature preservation area, the author will be discussed by the author is the National Park area. The National Park area is an area that is often functioned as a popular tourist destination such as Mount Merapi National Park, Bromo Tengger Sumeru National Park, Mount Rinjani National Park and many other National Parks that have different tourism potentials in Indonesia.

In this area, many of natural tourism destinations that have become a driver of the economy of the local community. The high interest of tourists towards nature-based tourism products is the reason for the government, the private sector and the public to develop the National Park area as a tourism destination. One example of supporting ecological restoration in community-managed natural conservation areas is in the Belize, community baboon sanctuary (CBS) which has maintained a long river in Belize to conserve one of the extinct populations of the Black Howler monkey [1]. CBS has objectives, namely (1) to protect forests in the Belize river area, (2) to preserve fruit trees and other trees that are important for the Howler monkey, (3) to maintain trees and vegetation in the area, and creating a corridor area for Howler monkey [4] In addition, [2] examined ecosystem restoration in the Ceremai Mountain National Park, the result that a type of ecosystem in the TNGC region that needs to be restored is a lowland and mountainous rain ecosystem. In general there are four types of TNGC forest damage that need to be restored (1) Former CBFM that is not managed properly as in the agreement, (2) The TNGC area is encroached on wildly, (3) the former forest kebaran area (4) the area experiences more burden or mismanagement / utilization that disrupts ecological and aesthetic functions. Here follows one form of restoration in the National Park.

National Parks that function as natural conservation areas are managed with a zoning system consisting of core zones, utilization zones and other zones according to needs [8]. In this area it was developed as a natural tourist destination that became a driver of the economy of the local community.

Restoration Merapi National Park

The Merapi Mountain Forest Area is a state forest area that is important and strategic because it functions as a catchment area that is beneficial to the surrounding area and is a type of tropical forest with very active volcanic conditions. The history of the forests of Mount Merapi is protected for the function of nature conservation (maintaining hydrological, botanical and aesthetic functions and management of the area specifically as a disaster-prone area). In 2004 the Mount Merapi National Park was designated as the Mount Merapi National Park in accordance with the Forestry Minister's Decree No. 134 / menhut- II / 2004 concerning changes in the function of protected forest areas, nature reserves and Nature Tourism Parks in the Gunung Merapi Forest group with an area of + 6,410 ha, located in Magelang, Boyolali and Klaten Districts in Central Java and Sleman Regency, Yogyakarta.

Generally, Mount Merapi National Park (TNGM) functions as a conservation area that is
used as a natural tourist destination. The concept of conservation in tourist destinations is very important because it can reduce the negative impact of tourist activities. Tourism destinations located in the TNGM area such as Tlogo Muncar, Plawangan Turgo, Goa Japan, etc. are tourism areas that are conserved so that in their activities, environmental aspects are always noticed. At this time the government, private sector and the public indirectly have carried out ecological restoration in the TNGM area.

The natural disaster of the eruption of Mount Merapi in 2010 resulted in land damage in several areas such as Kinahrejo, Prononjiwo Hill and other areas around it. It has been around 6 years after the eruption of Mount Merapi that many activities were carried out during the land recovery process. Such activities are like planting trees in areas affected by hot clouds. Planting trees means restoring ecology in the area, so that it will restore damaged land.

The concept of restoration, not only maintaining natural conservation areas but should improve the quality of nature for the better. In the TNGM tourism area such as Tlogo Muncar, Goa Japan, and Plawangan Turgo Hill, the area is visited by many tourists. In this case, the management has indeed carried out ecological restoration such as making water reservoirs that are used to drink animals around it. In addition, tree planting of various types and also the addition of animals can also be regarded as ecological restoration.

The attraction of tourism in the area of Tlogo Putri which is very attractive is the long-tailed macaque. Long-tailed macaques are protected animals so it is mandatory to preserve and preserve them. The thing to note in this attraction is the number of long-tailed monkeys seizing food / snacks brought by tourists. If we just glance at this it is one of the unique attractions. However, we can actually conclude that this kind of long-tailed macaque in the area feels hungry, so it seizes the food brought by tourists. The management should restore the ecosystem by planting fruit trees that are intended for long-tailed macaques and creating the corridor area.

Ecotourism development can also be carried out by developing ecotourism-based businesses. The development of the ecodge is the right medium in developing natural conservation areas. Thus the government can facilitate and provide policies to every ecodge entrepreneur in addition to conserving land also required to improve environmental quality, so that in this context ecological restoration can be done.

4. CONCLUSION
Ecological restoration is an important principle in ecotourism, because it has a positive impact on the physical environment. This concept can be applied to tourist destinations that are in natural conservation areas, but what must be done is how managers can make policies related to land restoration. In this context not only conserve existing land but can restore land and improve the quality of ecosystems in the area. The author defines the Mount Merapi National Park which has carried out ecological restoration, however, there are still many things that need to be done for the management such as planting fruit trees for long-tailed macaques and creating a corridor area for ecosystems in the area.

REFERENCE
[1] Bruner Lash, G. (2003) Sustaining our spirit : Ecotourism on privately owned rural lands and protected areas. Desertation, Doctor of philosophy, University of Georgia, Athens, GA, USA.
[2] Hendra Gunawan, dkk. (2013). Kondisi Biosfik san Sosial Ekonomi dalam konteks Restorasi ekosistem Taman Nasional Gunung Ciremai, Jawa Barat, Pusat Litbang Konservasi dan Rehabilitasi
[3] Honey, M. (2006). Foreword on “Le guide des destinations indigènes”. Indegens edition. France : Montpellier
[4] Mehta,H., dan Blangy, S. (2006). Ecotourism and Ecological Restoration. Elsevier. Jurnal for Natur Conservation 14, 233-236
[5] Pattimahu, Debby, V. (2004). Post-mining crisis land restoration according to ecological rules. Institut Pertanian Bogor. Makalah falafalah sains (PPS 702).
[6] Tisca, I.A., dkk. (2015). *Management of sustainable development in ecotourism. Case study Romania*. Elsevier. 427-432

[7] Peraturan menteri dalam negeri nomor 33 tahun 2009 tentang pedoman pengembangan ekowisata didaerah.

[8] Undang-undang no 5 Tahun 1990 tentang konservasi sumber daya alam hayati dan ekosistemnya