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ECOTOURISM IN DISASTER-PRONE CONSERVATION AREAS AND ITS UNDERLYING GOVERNANCE : A CASE STUDY IN THE MOUNT MERAPI NATIONAL PARK

MASTER THESIS

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RIJKUNIVERSITEIT GRONINGEN
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MASTER THESIS

Thesis is submitted in partial fulfilment of the requirements for the Master Degree
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And

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PREFACE

My curiosity about ecotourism began when I was assigned in one of national parks in the heart of Kalimantan, Indonesia. There are no mass-tourism in the area as only few hundreds travellers coming to the area every year. This picture was what I thought about ideal ecotourism condition. When Merapi volcano erupts, I have been awaken by a reality that a new phenomenon occurs. People coming to witness the massive effects of natural disasters and afterwards tourism activities are generated in the area. This new phenomenon perturbs my mind and asking whether the ecotourism practice in the conservation area which is prone to disaster can be considered as an ideal image of ecotourism or not. Then, I started to find literatures, newspaper and any development of tourism in the Merapi area including tourism in other disaster areas to satisfy my curiosity. This thesis is a representation of that and hopefully can shed a light on ecotourism literatures especially discussing disaster-prone area.

Groningen,   August, 2013

Marwedhi Nurratyo

ABSTRACT

Mass tourism is criticised because of the use of non-local products which means it does not generate multiplier effects on local development. It also jeopardises environment, economic, socio-integrity of tourism destinations, and it can lead to impoverishment of local societies. In response to that, ecotourism emerges as an alternative of tourism which is more environmentally friendly and offers inclusion of social responsibility. Amongst many ecotourism literatures, the role of governance underlying ecotourism in disaster-prone conservation area is under-researched. This research aims to assess whether the ecotourism practices in disaster-prone conservation area fulfil the ideal ecotourism criteria. And then, the underlying governance determining ecotourism practices in the area is studied to explain the importance of governance in realising ideal ecotourism practices. Furthermore, the research is intended to fill the gap of knowledge in the ecotourism literature because this offers a new insight where ecotourism criteria will be used to assess uncommon character of tourism destinations (disaster-prone prone conservation area) whilst ideal ecosystem criteria are constructed and are mainly used to test normal character of tourism destinations. In this research, the Merapi disaster-prone conservation area is chosen to represent ecotourism practices in a unique and uncommon area which is continuously exposed to disasters and at the same time also serves as conservation area. The research uses qualitative paradigm with two analyses used. First, ecotourism fulfilment analysis is used to assess whether ecotourism practices in the studied area fulfils ideal ecotourism criteria. Second, governance underlying ecotourism practices in the studied area is also analysed with stakeholder analysis. The result showed that ecotourism practices in the Merapi area are insufficient to fulfil ideal ecotourism criteria. This is marked by the failure to fulfil certain criteria: educational tourism products and minimum environmental impacts. In terms of governance, multi-scales and multi-levels of government; private companies, local communities and some non-profit organisations shapes ecotourism governance in disaster prone conservation area. There are three categories of institution form the governance of ecotourism in the Merapi area (core, user and complimentary stakeholders). It is found that quality of communication and collaboration, political views and character of planning (reactive or adaptive) determine the practice of ecotourism. However, this study needs some improvement especially based on the finding that the use of existing ecotourism criteria might not be used as a panacea to assess all ecotourism practices especially in an uncommon area (disaster-prone zone) where ideal criteria might have different values with that of non-disaster-prone area. It is recommended to redefine the ideal ecotourism criteria by incorporating experience from extreme and unique conditions of places such as disaster-prone conservation area.

Keywords: *ecotourism, disaster prone, conservation, governance, ideal ecotourism criteria*

GUIDELINE FOR USING THESIS

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I. INTRODUCTION

1.1. Background

This thesis raises an issue of the emergence of a new tourism phenomenon which occurs in two distinct areas namely disaster-prone area and conservation area. This new phenomenon term evokes the questions whether ecotourism practices in those two unique areas fulfil ideal ecotourism criteria. And how does the multi-layered governance in the distinctly-characteristic area underlie the tourism practices? Those questions will be answered in this research.

Tourism as one of the largest industries in the globe contributes to fast economic growth. More than 9 % of global employment serves on the tourism activities whilst more than 11% of GDP is generated through tourism activities (UNEP, 2012). According to (UNWTO, 2012) the tourism industry grew around 25 % in the last decade with more than 760 million international arrivals in 2004 and produced US$ 622 billion revenue and the number is still increasing. By the year 2020, The World Tourism Organisation (WTO) predicted that there will be over 1500 million international arrivals or more than double than the current level (UNWTO, 2012).

Those figures describe that current tourism relies on the quantity of tourists which also means tourism is still defined as mass-tourism where numbers of arrivals and numbers of visitors are used as indicators. Albeit mass-tourism has been hailed as a gem of tourism industries, more and more critics have been addressed. The mass-tourism phenomena has been criticised due to the fact that it jeopardises the environmental, economic, and socio-cultural integrity of the destinations especially in developing countries (Weaver, 2001). Moreover, the use of non-local products in mass-tourism is also criticised because in the end there will be little local multiplier effects generated from the tourism activities (Fennell, 2008). For instance, mega-resort as a symbol of mass-tourism which attracts so many visitors has used little or no local food products, more emphasising the metropolitan interests, also the tourism industry has not always operated with the interests of local people and the resource base in mind (Fennell, 2008).

Owing to those circumstances and based on efforts to provide more environmentally friendly and sustainable tourism, the term alternative tourism was launched. Here, the social responsibilities as well as the environmental sustainability issues are addressed. Alternative tourism can be roughly defined as the opposite of mass tourism (Neil, 2009). Unlike the mass-tourism which involves large scale industries, alternative tourism is supposed to be small-scale,

locally controlled, conducive to the formation of linkages with other sectors of the local economy, and dispersed within low-density neighbourhoods (Weaver, 2001). Alternative tourism demands to the tourist to involve in the effort of preserving the originalities both socially and culturally as well as reducing the environmental impacts due to the tourism activities (Neil, 2009). Based on those characteristics, ecotourism has emerged as one of the most emblematic types of tourism for its capability to materialise sustainable principles.

The term ecotourism itself has continuously evolved (Donohoe & Needham, 2008) from merely describing the nature-tourism phenomenon (Wallace & Pierce, 1996) to the inclusion of other dimensions such as ethical, educational experiences, conservational satisfaction and giving benefits to locals (Weaver , 2005). Nevertheless, in 85 ecotourism definitions, most variables define ecotourism as: (1) location or natural setting, (2) conservation, (3) culture, (4) benefits to locals and (5) education (Fennell D, 2001). These are likely to be used widely to determine the ecotourism criteria by many authors.

Indonesia is known as one of the world's tropical heavens as is blessed with rich natural resources and huge varieties of biodiversity. The natural beauty condition has brought Indonesia as a major tourism destination including ecotourism. The growth of tourism in Indonesia is reflected by the numbers of tourists visiting the country which reached 7.6 million in 2012. This figure represents an increase of 18.75 % compared with that of the previous year. Tourism activities contributed to USD 7.9 billion of revenue in 2012 or increased 49 % from USD 5.3 billion in 2007. In comparison with other South East Asian countries, Indonesia shares 10 % of international tourist arrivals of total international travellers to this region (World Economic Forum, 2012). Tourism in Indonesia is also the fastest growing sector (10%) contributing to GDP of the country (Statistics Indonesia, 2013). This large amount of tourism activities is generated mostly by the attractiveness and uniqueness of Indonesian livelihood and natural beauty. There are a lot of tourist destinations scattered across Indonesian archipelago, mostly are conservation areas and naturally given (Sekartjarini & Legoh, 2004).

Currently there are 28.167 million hectares of total conservation areas in Indonesia, in which 58 % of them consist of national parks (Ministry of Forestry, 2005). Aside from as a protection of life support system and preserving biodiversity national parks can also be functioned as tourism destination (Ministry of Forestry, 2005). Most international travellers visiting Indonesia is lured by the natural attraction along with its indigenous cultures and traditions

from many beautiful places including ones located in national parks. Therefore, currently tourism industries in Indonesia rely on how well the natural landscapes and traditions are preserved and maintained.

Aside from its natural beauty, on the other hand, the country lays on the hazardous areas where tectonic plates with active faults are located (BNPB, 2010; OECD, 2010). Not only does the country lies over fragile tectonic faults, but the ring of fires consisting of a series of volcanic mountains situates Indonesia as one of the most vulnerable countries and is prone to natural disasters (Suroso, 2012). According to Bappenas-BNPB (2010) activities located in the hazardous area is supposed to be mitigated. Nonetheless, harnessing the natural phenomenon which occurs during the disaster and aftermath sessions, tourism activities emerge in the area. An example of this condition can be found in Merapi Volcano where tourism activities go side by side with the risk of volcano eruption. This produces a contradictory condition with risk of disaster/hazards on one hand, and practices of conservation/ecotourism, on the other hand.

As a consequence, institutions managing this area are also multi-layered. This also makes multiple interests exist amongst various institutions. According to Pratiwi (2008) institutional aspect is another aspect that also determines the successfulness of ecotourism concept implemented in the area. Hence, the need to study the institutional aspect is necessary to determine the extent of institutional arrangements in supporting the achievement of compliance with the ideal ecotourism adequacy criteria.

In Indonesia, there are several institutions involved in managing disaster-prone conservation zones. From the conservation side, on one hand, national park agency is the authority responsible for the conservation[1]. In the regulation, national park boundary is determined by an agreement between the central government and the local government including involvement of local societies as a social entity which much or less depends on the conservation area. This agreement then leads the national park agency as an institution in charge of the area.

On the other hand, for managing and mitigating disasters the National Board for Disaster Management is responsible to react when disasters occur as well to mitigate the hazard. Hence, unlike other conservation area managements where all have a full authority on managing their

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[1] The basis for determining the boundaries of national parks authority is set by Government Regulation Number 68 / 1998 about Natural Sanctuary Areas and Natural Preservation Areas and the Ministry of Forestry Ministerial Decree (Decree) No.32 / 2011 about criteria and standard of forest area enactment.

area, the park management located in disaster-prone conservation areas has to share the authority with other institutions such as disaster mitigation institutions and other local agencies. This situation makes the management of disaster-prone conservation areas become more intertwined. One example of this is Mount Merapi National Park Agency which has to share the authority with Disaster Management Agency in the same area.

Therein lay an interesting cleft to be explored especially in the debate of ecotourism governance. Although ecotourism has been largely explored by academics the governance role in ecotourism is still under-researched (Parra, 2010). Governance have in used as governance-beyond-the-state system, defined in terms of the interactive relations between independent and interdependent actors within inclusive participatory institutional or organizational associations (Swyngedouw, 2005 p. 1994).

This thesis aims at examining how Indonesian institutions are currently governing "disaster-prone conservation areas". Is this governance sustainable? Does the existing ecotourism management and practice meet ideal ecotourism criteria?

1.2. Research Problems

Currently, ecotourism in disaster prone conservation areas is still under-explored, but is needed as pre-requisite of tourism in conservation areas. Moreover, the governance of ecotourism in the

1.3. Research Objectives

This research aims at understanding the central role of governance in paving the way to ideal ecotourism practices especially in hazardous-conservation areas. Through this thesis identification and evaluation of ecotourism practices shown in disaster-prone conservation areas are done and compared with ideal ecotourism criteria. This also includes in determining the role of governance in the supporting the fulfilment of ecotourism criteria.

To answer these questions, some objectives are proposed:

1. To examine the tourism practices in disaster-prone conservation areas in meeting ideal ecotourism criteria.
2. To evaluate the degree of responsibilities in governance in managing ecotourism practices in hazardous areas.

3. To determine the role of governance in disaster-prone areas with regards to ideal ecotourism criteria.

4. To propose recommendations on ecotourism policy planning and practice in disaster conservation areas

5. To specify ecotourism governance needed for successful ecotourism in disaster prone conservation area.

Those objectives are acquired through the analysis of ecotourism and stakeholder arrangements.

1.4. Research Questions

Distinguishing the role of institutional arrangements involved in managing disaster-prone and conservation areas toward ideal ecotourism concept is essential since the management of the area depends on the policy, perceptions and/vision of each institution and stakeholder. Related to that, questions can be proposed:

1. To what extent does ecotourism in disaster-prone conservation areas fulfil ideal ecotourism criteria?

2. How does governance in disaster-prone conservation areas support the ecotourism practice?

3. What kinds of aspect influence the governance of disaster-prone conservation area to establishing ideal ecotourism practices?

4. Do the existing ideal ecotourism criteria is suitable with the extreme and unique condition of disaster-*prone conservation area?*

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┌─────────────────┐              ┌─────────────────────────┐
│  Mass Tourism   │              │ Ideal concept of ecotourism │
└────────┬────────┘              └────────────┬────────────┘
         │                                    │
         ▼                                    ▼
┌─────────────────┐              ┌─────────────────────────┐
│   Ecotourism    │              │ Conservation purpose, Active local │
└────────┬────────┘              │ participation, Local economic │
         │                       │ development, Educational products, │
         ▼                       │ Minimum environmental impacts │
┌─────────────────┐              └────────────┬────────────┘
│ Conservation Areas │                         │
└────────┬────────┘                            │
         │          └──────────────┬───────────┘
         │                         │
         │                         ▼
         │                  ╭──────────────╮
         │                  │   Tourism    │
         │                  │  Activities  │
         │                  ╰──────┬───────╯
         │                         │
         ▼                         ▼
┌─────────────────┐       ┌─────────────────────┐
│   Governance    │──────▶│   Disaster Prone    │
└─────────────────┘       │  Conservation Zones │
                          └──────────┬──────────┘
                                     │
                                     ▼
                          ┌─────────────────────┐
                          │ Fulfilment of the criteria │
                          └──────────┬──────────┘
                                     │
                                     ▼
                          ┌─────────────────────┐
                          │ Does the ideal concept of ecotourism │
                          │ are found in disaster-prone │
                          │  conservation zones?  │
                          └──────────┬──────────┘
                                     │
                                     ▼
                          ┌─────────────────────┐
                          │ How the Governance affects toward │
                          │ the ideal concept of ecotourism │
                          └─────────────────────┘
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Figure 1. Research background. (Source: Author)

1.5. Research Significance

The result of this research is expected to provide benefits to science, institutions involved in the study areas and community at large. This research contributes to give scientific thinking for each institution's role in supporting ecotourism development toward ideal concept in areas where two distinct characteristics collide such as risk of disaster on one hand and function of conservation on the other. Currently, the study of ecotourism mostly takes place in non-disaster-prone areas whilst the study about the ecotourism in hazardous areas is still minor. Therefore, this research is intended to fill that knowledge gap in order to give more comprehensive understanding about ecotourism in many different characteristics of location. Aside from that, the ecotourism practice in conservation areas which is also located in

hazardous zones can shed a light to ecotourism literatures especially in explaining the role of governance in managing ecotourism practices in hazardous places since the concept of ideal ecotourism is under-researched in this area.

Furthermore, this research is intended to contribute to strengthen policy implementation especially determining role of governance in managing multi-purpose-areas where prone to disaster and carries conservational function at the same time to meet the ideal concept of ecotourism. Therefore, this research can strengthen both literately and for the stakeholders to develop an ideal implementation of ecotourism concept in conservation areas which are located in disaster-prone zones.

1.6. Thesis Structure

This thesis will be presented in six chapters. First, following this Introduction Chapter, the theoretical framework of this thesis is presented in Chapter II. In this section, various definitions about ecotourism, types of ecotourism and its prerequisites, role of governance underlying it and the importance of ecotourism in disaster-prone conservation areas will be discussed. In the Chapter III the methodology justification to examine this study is then discussed. This includes the explanation about the area studied, research tools and analysis used for this research.

Chapter IV comprises of an analysis of data obtained from the field survey. First, is presented the data obtained from the field survey. Second, an ecotourism fulfilment analysis of ecotourism in Merapi Hazardous Area is discussed. Hereafter, a stakeholder analysis is done to assess governance role with regards to the fulfilment of ecotourism criteria.

The focus of chapter V is to present the result of the study by synthesising and discussing the result from previous chapters. The discussion comprises a synthesis about governance in disaster-prone conservation areas and degrees of responsibility in managing tourism practices in hazardous areas. This chapter will be closed by addressing objectives of this research and formulating a model of ideal ecotourism governance in disaster-prone conservation areas.

The main conclusion of this thesis will be described in chapter VI. Also in this chapter, some recommendations for policy planning and practices in order to materialise ideal ecotourism criteria, is proposed. This chapter also explain whether the existing ideal ecotourism criteria is suitable to assess all conditions including uncommon condition such as disaster-prone

conservation area. In the end of this chapter, it will be an advice of governance specification needed to have ideal ecotourism practices in disaster-prone conservation area.

II. THEORETICAL FRAMEWORK

2.1. Ecotourism: definition and its history

In developing tourism, there are two approaches namely mass tourism development and sustainable tourism development (Gartner, 1996). Mass-tourism is often associated with large-scale, externally controlled and concentrated in high-density tourist spots (Weaver, 2001). Moreover, it is also characterised by the hastened and massive establishment of many tourism facilities, emphasising on economic profits, and lack of environment and social consideration. It is often characterised as uncontrolled, unorganised and unplanned tourism development (Pratiwi, 2008). This circumstance creates concern about negative impacts of mass tourism both socially and environmentally then brings sustainable tourism as an alternative to mass tourism (Bruntland et al., 1987). Meanwhile sustainable ecotourism development is defined as a concept aiming to pursue long-term benefits rather than on short-term ones by protecting and preserving the natural resources by which tourists can be attracted (Gartner, 1996). This concept later on inspires to the ecotourism development.

According to Lindberg (1998), in the mid-1990s there were at least four institutions paving the way to the development of ecotourism concept which are based on each interest. First, the tourism industry sees ecotourism as the marketing tools to attract tourists to areas having natural tourism objects and cultural attraction. Second, institutions engaged in economic development seeing the ecotourism as a way to provide employment in remote areas where the facilities and infrastructure is hardly reachable. Third, are the natural resource and conservation managers who see the ecotourism as a way to produce to fund conservation programmes and also as an educational tools to promote conservation. Last, the community who is concerned by the negative impacts of mass-tourism and sees that ecotourism is a way to promote sustainable tourism.

To distinguish between ecotourism with other types of tourism, we need to understand definitions properly. Even though there are broad definitions of ecotourism, commonly it can be defined as an idea that challenges the tourism world to be more responsible to the nature as their objects of the travelling activities (Christ et al., 2003). In other words, ecotourism can be described as a low scale, minimal impact, interpretative tourism, where conservation, understanding, and appreciation of the environment and cultures visited are sought (Neil, 2009 p.4). Parra (2010) in her dissertation emphasises the importance of the sustainability goal in

ecotourism as an alternative form of tourism. The importance of the philosophy of sustainable development in ecotourism can be implemented by maximising the probability of positive impacts whilst minimising the negative impacts (Weaver, 1999) The Ecotourism Society defines ecotourism as a planned trip to natural areas in order to learn about cultural and natural history whilst maintaining the integrity of natural ecosystems, generate opportunities for local communities (Ceballos-Lascurain, 1996). Combined all those criteria, Weaver (2001 p.105) wrapped into one definition which is

"Ecotourism is a form of nature based tourism that strives to be ecologically, socio-culturally, and economically sustainable while providing opportunities for appreciating and learning about the natural environment or specific elements thereof."

Various definitions mentioned say that ecotourism is still developing toward maturity of the ecotourism discipline. Based on those definitions, there are some similar aspects which guide toward ideal ecotourism implementation, which are: natural based tourism activities, active participation of local communities, conservation purpose, educative message, and involvement of local economic development (Pratiwi, 2008).

The use of the definition of ecotourism in Indonesia mostly takes from knowledge of ecotourism. Ecotourism was introduced in the country by Indonesian Ecotourism Communities which corresponds with the definition that has already acknowledged worldwide. They define ecotourism as responsible travelling activities in unspoiled areas or other natural areas which aim to not only enjoy the beauty of nature but also involve educational goals, understanding, and support for conservation efforts, and also increase incomes for local communities (Sudarto, 1999). In addition, Indonesia Ecotourism Network uses The International Ecotourism Society definition of ecotourism which is *"a responsible travel to protected natural areas, as well as to unprotected natural areas, which conserves the environment (natural and cultural) and improves the welfare of local people"* (Indecon, 2010 p.6).

The government of Indonesia likely has the same definition of ecotourism which is in line to the definition above. According to Indonesian Ministry of Tourism & WWF (2009) ecotourism is defined as "a trip by tourists to remote areas in order to enjoy and learn about nature, history and culture in an area, where the pattern of tourism helps local economies and supporting conservation".
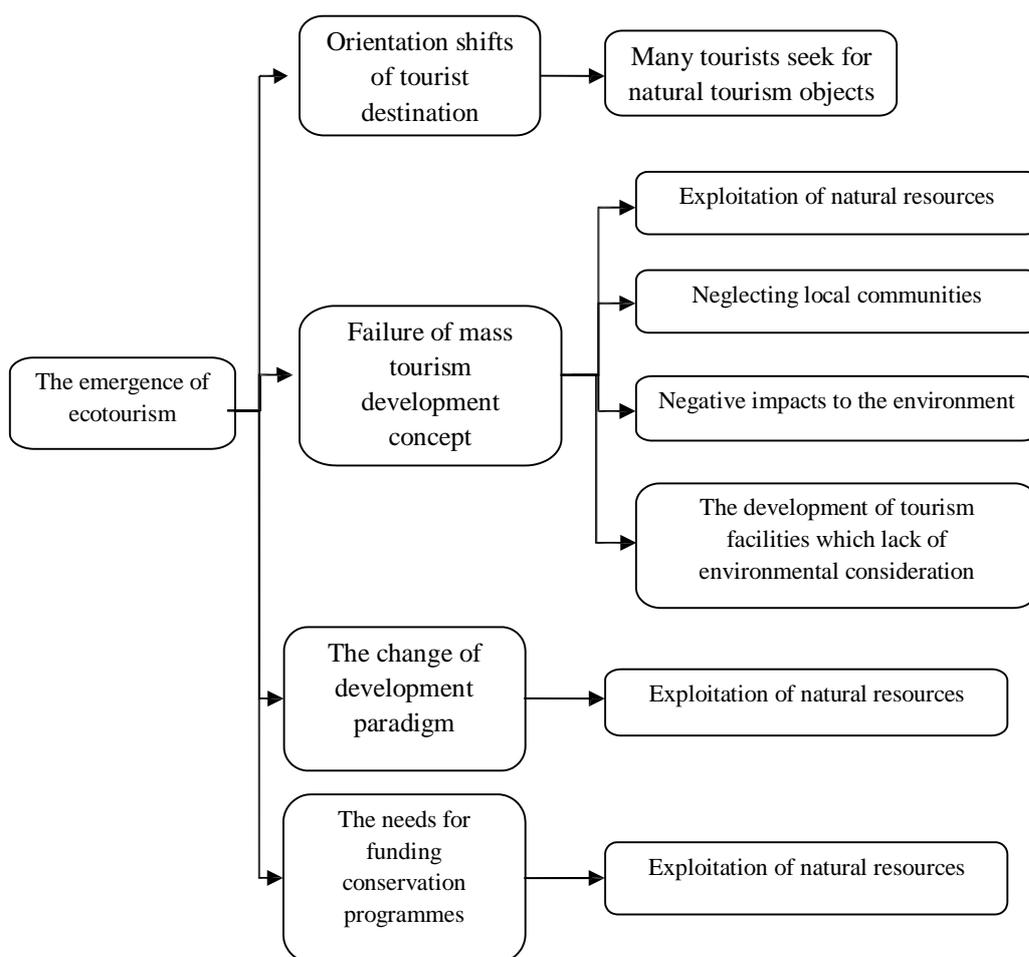
Figure 2. The background of the emergence of ecotourism. (Source: Author)

Concern of the government to develop ecotourism can be examined by the amount of laws and policies regulating the ecotourism in Indonesia. Currently, there are several laws regulating the natural tourism including ecotourism which are:

Table 1. Laws regulating natural tourism and ecotourism in Indonesia

No.	Title	Mentions
1.	Act Number 10 / 2009 about Tourism mentions about principles of tourism practices	nature sustainability and environment is an important aspect in administering tourism
2.	Government Regulation Number 36 / 2010 about Nature Tourism in National Parks, Wildlife Sanctuaries, Grand Forest Park and Natural Tourism Park	Declares some prerequisites of nature tourism such as conservation purposes; support local economic; social values and norms; preservation of environmental quality; sustainable tourism activities; and regional and community welfare.

3.	Minister of Home Affair Decree Number 33 / 2009 about Guidelines of Regional Ecotourism Development	States that Ecotourism is responsible natural-tourism activities with regards to elements of education, favour on local economic development and support on conservation purpose.

<div align="right">(Source: Author)</div>

Based on those regulations, ecotourism is recognised and institutionalised as one of the important tourism types in Indonesia. Examining those definitions and regulation, it is clear that there are similarities of definition and principles used worldwide. There are some words that can be highlighted from the debate on ecotourism which are: conservation, learning process, and socially, economically and/or environmentally sustainable. These notions also form the principle of ecotourism and then are used to measure how ecotourism is practiced.

In the implementation of ecotourism principles, those principles determine the degree and types of ecotourism activities. The following section discusses this.

2.2. Types of ecotourism and their pre-requisite

There are wide ranges of activity that can be generated from ecotourism. In order to make it easier to be organised, according to Weaver (2001) two ideal types of ecotourism are proposed: hard and soft ecotourism activities. Harder activities tend to have stronger commitment to environment, usually consist of smaller groups, longer trips, physically active and emphasises on personal experience rather on merely interpretation. Whilst softer activities have moderate environmental commitment, consist of larger groups, physically passive and unlike the harder one, they emphasise on interpretation rather than personal experience.

Characteristics of hard and soft ecotourism as ideal types

Hard (Active)	The Ecotourism Spectrum	Soft (Passive)

Strong environmental commitment .... Moderate environmental commitment
Enhancement sustainability .... Steady-state sustainability
Specialized trips .... Multi-purpose trips
Long trips .... Short trips
Small groups .... Large groups
Physically active .... Physically passive
Few if any services expected .... Services expected
Emphasis on personal experience .... Emphasis on interpretation

Figure 3. Characteristic of Ecotourism. Source: Weaver (2001)

This distinction between hard and soft ecotourism helps to understand why there is a wide range of institutions involved in ecotourism practice. Even so, the core of ecotourism is the natural aspects where the activities should embrace on three aspects as what Weaver (2001) mentioned. In addition, the sustainability of ecotourism relies on the environmental ability to deal with the use within acceptable limits of change (Nugroho, 2007). Other categorisations of ecotourism are used widely including the degree of responsibility, form of traveling, sustainability, types of travellers, *et cetera* (Parra, 2010). Another important aspect is the social involvement in the tourism activities (Weaver, 2001). In this aspect, ecotourism development should not only be born solely on economic and environmental aspects but should also touch the social consideration especially in pursuing social justice (Axheim & Ng, 2009). On top of that, the idea to balance between economic, environment and social aspects as a sustainable practice of tourism is the main essence of ecotourism (Weaver, 2001).

In order to be defined as ecotourism, a tourism activity should fulfil some requirements. The pre-requisite of ecotourism can be extracted from its definition. Wallace and Pierce in Fennell (2008) suggest that tourism may be ecotourism if addresses six key principles, namely:

a. A type of use that minimises *negative impacts to the environment* and to local people;

b. The *awareness and understanding* of an area's natural and cultural systems and the subsequent involvement of visitors in issues affecting those systems;

c. The *conservation* and management of legally protected and other natural areas;

d. The early and long-term *participation of local people* in the decision-making process that determines the kind and amount of tourism that should occur;

e. Directing *economic and other benefits to local people* that complement rather than overwhelm or replace traditional practices (farming, fishing, social systems, etc.);

f. The provision of special opportunities for local people and nature tourism employees to utilise and visit natural areas and learn more about the wonders that other visitors come to see.

Meanwhile, according to Fennell & Dowling (2003) in ecotourism the context of sustainable, regional, national and even international tourism development should be linked within the community level. In addition, they add sustainable development principles that can be applied to regional ecotourism development which are:

a. *Ecological sustainability* ensuring the compatibility between the development and the maintenance of essential ecological processes, biological diversity and biological resources (Fennell & Dowling, 2003 p.13).

b. *Social and cultural sustainability* which ensures that development increases people's control over their own lives is compatible with the culture and a value of people affected by it, and maintains and strengthens community identity (Fennell & Dowling, 2003 p.13).

c. *Economic sustainability* fostering the efficient economic development in which resources are managed to support future generations (Fennell & Dowling, 2003 p.14).

In the context of Indonesia, synthesising principles stated in various debates on ecotourism, the government has also stated pre-requisites for a more specialised ecotourism amidst other tourism activities which is: sustainable use of natural resources, active society's involvement, tourism products emphasising education principal, affect positively on local economy and planned appropriately with minimum environmental impacts (Ministry of Tourism & WWF, 2009). Those pre-requisites are stated as legal parameters to calculate ecotourism practices in Indonesia. Therefore, in order to define the ideal ecotourism concept, those pre-requisites should be found in the tourism activities. Those five principles of ecotourism have been deemed as the extraction of broad ecotourism definitions and principles and also are seen as the most suitable principles to be operated in Indonesian ambience (Ministry of Tourism & WWF, 2009).

Thus, according to Ministry of Tourism & WWF (2009) the government of Indonesia generates principles for ideal ecotourism based on the aggregation of all those pre-requisites which are:

a. Management objectives: conservation

Ecotourism development should be intended to achieve sustainability of the environment including conservation programmes in the tourism product and its management (Sekartjakrarini, 2003). In addition, she added that through ecotourism especially by environmental interpretation activities, conservation programmes can be campaigned effectively to both visitors and local communities (Sekartjakrarini, 2003).

b. Active Participation of Local People

Opposite to mass-tourism, ecotourism encourages the participation of local people in the tourism development (Weaver, 2001). Moreover, involvement of local communities

is important as social practice in ecotourism which consists of interactions and discussions amidst locals and tourists from which is possible to form a way of important learning in pursuing regional sustainability (Parra, 2010). Hence, by involving local people to actively participate in the tourism further environmental degradation can be avoided (Furze et al., 1997).

c. Local economic development

Not only the technical aspect of participation is sought by ecotourism principles, but also empowerment is also another aspect pursued (Lindberg, 1998). Some mechanisms can be practiced to increase local economic revenues. For instance, income from ticket sales and taxes (sales and tax revenue), employment opportunities, and income obtained by the communities involved in tourism activities (Pratiwi, 2008). Tax systems can also be imposed in which ticket fee goes to the government and the government will provide infrastructure and facilities to reinforce local communities' capacity (Lindberg, 1998).

d. Ecotourism as an educational products

This dimension is strongly related to the core of ecotourism as defined in many definitions. As an educational product, ecotourism should offer learning and educative material about nature which the tourism is located and also cultural communities living near the tourism objects (Pratiwi, 2008). Interpretation of phenomena which occurs in the tourism destination is a method to convey the educative materials lay on the areas (Sekartjakrarini, 2003). By doing interpretation an understanding is achieved in which the appreciation generated will produce a band between tourists and the nature (Sekartjakrarini, 2003).

e. Minimum environmental impacts

According to Boo (1990), to reduce the impact on the physical environment, the environmental carrying capacity factors are the main factors considered in the development of ecotourism facilities and infrastructure. Environmental carrying capacity for ecotourism is the maximum capacity of the use of an area that can meet the optimum visitor satisfaction, and a minimum negative impact on the resource (Boo, 1990). Environmental carrying capacity is influenced by two main factors that travellers and the characteristics of the biophysical environmental factors (Pratiwi, 2008).

Whilst all principles are important in every ecotourism practice in Indonesia, its implementation often varies between one and another place depending on the types of areas and tourism activities practiced. In Indonesia, ecotourism activities are mostly found in natural areas, especially in conservation ones (Ministry of Tourism & WWF, 2009), and hence it is very common to state that ecotourism is the only ideal tourism which is allowed and sustains conservation areas especially national parks. Ideal ecotourism is generated through criteria which derived from those principles. These criteria are stated in Quebec Declaration on Ecotourism (UNEP-WTO, 2002) and has been used in Indonesia as stated by Ministry of Culture and Tourism in 2004 (Sekartjarini & Legoh, 2004).

2.3. Definition of disaster-prone conservation area

Albeit ecotourism is widely practiced in national parks and other conservation areas, the practices found are mostly in a safe area where there is considerably a small exposure to hazards. However, not all tourism practices are practiced in considerably safe areas especially in areas characterised by constant disastrous events which are also home for tourism activities. On top of that, the area can also be a conservation area in which ecotourism principles should be exhibited.

Combining two characteristics of those areas (disaster-prone area and conservation area), the term disaster-prone conservation area is used. The definition of disaster-prone conservation areas is somewhat unique and hardly founded in the literature on the topic. The term is derived from two terms: disaster prone area and conservation area. Therefore, to understand the meaning of disaster-prone conservation area, we need to define each term.

First of all, discussing the term disaster-prone area results in some findings in which is defined as an area which often or has high potencies of natural disaster (Kemen PU, 2007). Another way to refer to disaster prone areas is as hazardous areas which are frequently exposed to sudden overwhelming and unforeseen events which could result in a major illness, death, a substantial economic or social misfortune (Saltbones, 2006).

According to Brauch et al. (2011), disaster-prone areas are areas where vulnerability conditions depend on exposure and susceptibility of physical elements (human settlements, infrastructure, and environment), the socioeconomic and ecological fragility and the lack of resilience or ability to cope with the disturbances. It means that vulnerability, and therefore, risks are the

result of imbalanced economic growth, on one hand, and on the other hand the deficiencies that may be corrected by means of adequate development processes.

Furthermore, Bappenas-BNPB (2010 p. 19-20) defines the disaster-prone area as "a region in that are exposed to a high level of physical vulnerability due to the existing infrastructure and facilities are not developed in compliance with the prerequisites for areas with high potential hazard". Physical vulnerability indicators depend on the type of hazard which may occur in the area.

Therefore, based on these definitions, there are some aspects that should be highlighted. An area can be categorised as a disaster-prone area if it presents high vulnerability and exposure to natural disasters, lacks of resilience regarding the socio economic, ecological and physical aspects for coping with disasters.

The second term forming the term "disaster-prone conservation area" is the conservation area. Generally speaking about conservation, some understandings are proposed as follow:

    a. Utilisation of natural resources to benefit as many people as possible for the longest period of time (Herfindahl, 1965 cited in Pratiwi, 2008).

    b. Maintenance and utilisation of earth resources wisely (MacKinnon et al., 1990)

    c. The protection, utilisation of natural resources, in accordance with the rules that can ensure the utilisation of these resources for local communities economic gain (Eagles et al., 2002)

    d. Provision of an environmental rationale through which the claims of development to improve the quality of (all) life Redclift (1987) cited in Parra (2010).

In the case of Indonesia, the government imposed an act on conservation which is defined as natural resources management through wise and manner utilisation to ensure the sustainability of biodiversity and maintaining and improving quality of environment (Act No. 5, 1990). In another statute, the government also mentions the term conservation to refer to the management of non-renewable natural resources for a wiser utilisation and the continued availability whilst maintaining and improving the quality and biodiversity (Act No. 23, 1997).

Therefore, referring to the definitions and regulations mentioned, conservation areas can be defined as areas designated as protected areas, preservation, management, utilisation, and improvement of natural resources and environment in a sustainable and wise way in accordance with the rules to obtain social and economic benefits by considering the needs of today and the

future (Ministry of Forestry, 2005). The definition of conservation used in the context of Indonesia is similar with that of international scholars.

In practice, conservation areas in Indonesia are divided into two categories which area: Natural Preservation Areas and Nature Sanctuary Areas. The former comprises of National Park, Nature Tourism Park, and Grand Forest Park, whilst the latter includes wildlife sanctuary, natural preservation areas and biosphere reserves (Ministry of Forestry, 2005). The former has more strict rules and emphasising more on protection compared with the latter. According to the Act No. 5 / 1967 about Principle Law of Forestry and Act No. 5 / 1990 about Conservation of Biological Resources and Ecosystem, the area enacted as a national park belongs to the state (state property) and the management in charge of the area is conducted by the central government in this case is Ministry of Forestry.

Since, this study is focused on the tourism activities in both disaster-prone areas and conservation areas, each definition (conservation and disaster-prone) should be observed simultaneously in the same area. Therefore, combining two distinct definitions of conservation areas and disaster-prone areas mentioned above, the disaster-prone conservation area can be defined as a protected area which carries tasks as preservation, management, utilisation, and improvement of natural resources and environment which has high vulnerability and is exposed to frequent natural disasters.

Characterised by two distinct views of the environment, the disaster-prone conservation area itself carries burden of complex interests intertwining within the management. The conservation area itself has showed that the area has a fragile condition in which only specific institutions are appointed to undertake the task in preserving endemic environment. On the other hand, disaster-prone area also means that there are specific institutions which are responsible in keeping away activities exposed to hazards.

This makes a complex system of governance with overlapping institutions for conservation and disaster mitigation. A more thorough discussion about the role of governance in disaster-prone conservation areas is presented in the next section.

2.4. The Role of Governance

Managing two distinct environmental conditions requires broader entities with different interests and goals. According to Gordillo de Anda (1997) p.2 institution is defined as a set of

rules, both formal and informal, which bind, regulate and restrict the behaviour or the relationship between people who accommodated within an organization or network. Therefore, institutions managing more than one purpose will involve more sets of rule and regulation to restrict and manage the behaviour of people within the area.

While implementing an ideal ecotourism is seen as a multi-actor institutional arrangement including tourists, locals and managers, the governance role is still not explored in addressing ecotourism (Parra, 2010). In developing ecotourism, the participative forms of governance reflect the need to integrate local communities in both the planning and development because the essence of ecotourism is the active participation of local communities in which without one, ecotourism will be out of track from its original lofty goals. Examining the governance role in ecotourism, public regulation and political dimensions is carried by government in different levels. The role of government is a central driving force (Parra, 2010) underlying tourism development, biodiversity conservation and disaster mitigation in the disaster-prone conservation areas is coordinating stakeholders involved. Thus, it is interesting to see not only which institution supports ecotourism development and which are not but also to find out how those institutional arrangements contribute to ecotourism practice toward ideal concept.

Discussing the governance of ecotourism, it is undeniable not only talking about tourism components such as travel agencies, traditional foods, low-scale accommodation, ecotourist agents but also regulations, NGOs, public services and spatial planning, among others (Parra, 2010). The institutional arrangement in the host area where the ecotourism exists is also an important factor to determine the extent of ideal criteria on ecotourism practices. The relationship between all of these aspects including tourism stakeholders, hosts, and institutions forms the pattern and characteristics of governance of ecotourism. The characteristic of ecotourism governance play a major role in the softness and hardness of the ecotourism practice. The following figure pictures the governance system of ecotourism.
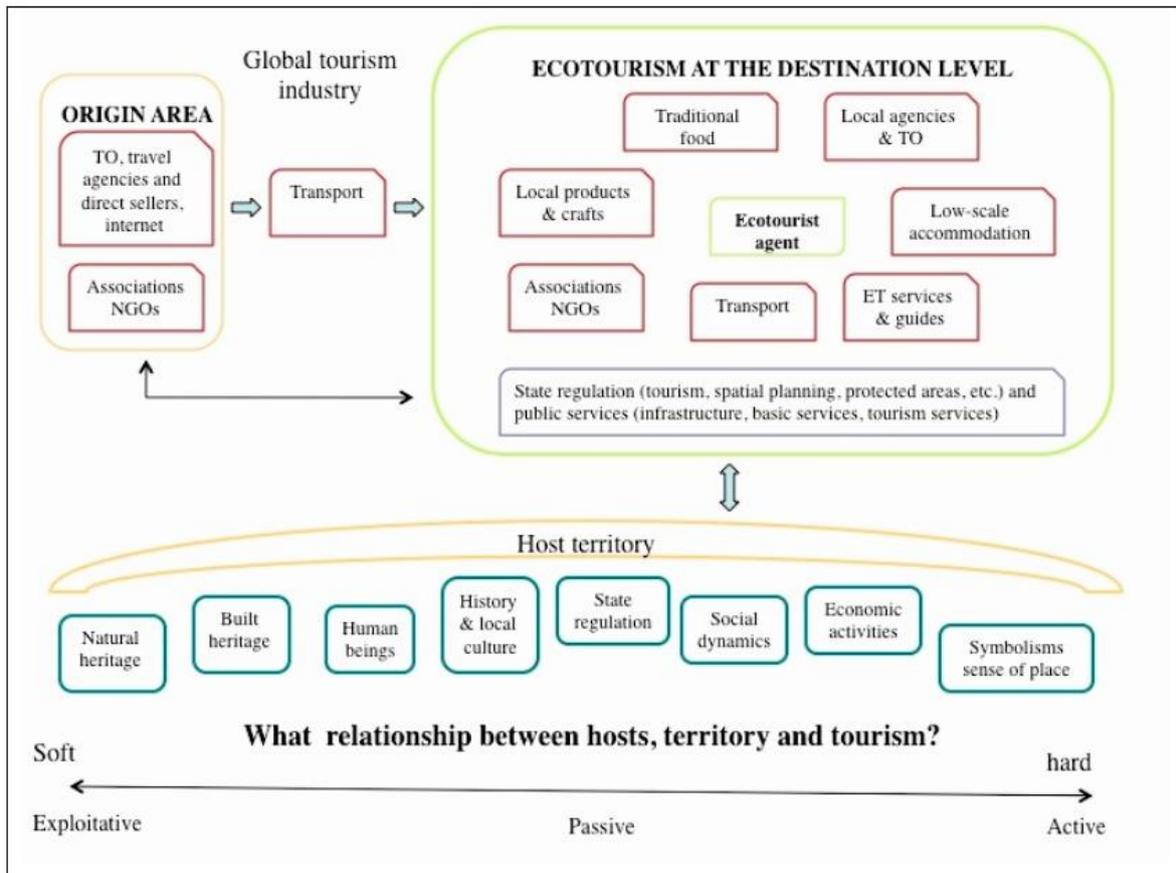
Figure 4. Ecotourism and its governance. Source: Parra (2010) p.158

Parra (2010) has classified actors involved in ecotourism practices which are: eco-tourists, public sector and the different levels of government, private sector, local communities, NGO, and ecotourism associations and certification. With those various actors, in managing the same area it is like the property rights system where the land tenure issue occurs. In land property system, there are four categories of ownership is known, namely private ownership, communal ownership, open access and public or state ownership (Pratiwi, 2008). Not only this tenurial issue occurs between society and land owners, but also between institutions managing the same area, especially concerning the division of responsibility regarding the successfulness of mutual institutional goals (Gordillo de Anda, 1997). In the areas where different interests are pursued, each institution has its own role in treating the areas according to their own success definition. Therefore, there might be contradictory interests between institutions and stakeholders involved in the areas.

The contradictory interests occurring between institutions are also caused by the decentralisation process in Indonesia since the reformation era in 1998. A lot of business

nowadays are decentralised to local government which increases the authority of local government to manage their regions. However, conservation is not included in the authority decentralised to the local government. Central government in fact still possess the hegemony to conduct conservational purposes in the regions. The multi-level of governance managing the disaster-prone conservation area will not always have the same perception of the sustainable goals. This often triggers tensions between institutions because amidst the heads of the management might have different lines of responsibility. For instance, national park which is governed by central government managed by central government (National Park Agency) will not have responsibility to extinguishing forest fires occurring in the Protected Forest which is managed by the Forestry Agency (local government). This kind of egocentric behaviour is often found on the relations between different levels of government institutions in new democratic era of this country.

According to Parra (2010 p.158), these tensions refer to: 1. Constraint in the goal articulation of ecotourism; 2. Several policy sectors involved in nature-based forms of tourism; 3. Challenge of sustainable socio-spatial articulation; 4. Relation between ecotourism and global tourism forces; 5. Tensions in the host territory between tourists, host community, public institutions and the private sector and; 6. Conflicts amongst different territorial governance in the specific context of protected areas.

Apart from that, the governance of protected areas has shifted from parks managed by public institutions which exhibit nature conservation through top-down policies, towards a new governance style of protected areas which focuses on the integrated management and participatory approach (Parra, 2010). This circumstance has made broader interests to be included in managing the areas. Therefore, each institution has its own role in determining how the areas would be. In accordance with ecotourism, this means that each actor has certain degrees of influence in the areas toward ecotourism concept.

2.5. Why is Ecotourism important in disaster-prone conservation areas?

The characteristic of ecotourism which is not only touch the natural consciousness but also involves educating and empowering society is an alternative to bridge the gap between the consternation of disasters and the aims of conservation (Harley et al., 1977). The practice of ecotourism is able to encompass the border of regular tourism such as the demand of wilderness and more challenging to natural phenomenon (Higham & Lück, 2010). Therefore, ecotourism

can be an effective way to reconcile the debate between conservation and the pessimism of tourism practices in such hazardous areas.

The following figure describes that the governance structure of ecotourism in disaster-prone conservation areas comprises of a complex system of institutions and parties. It consists of a multi-layered government along with its rigid bureaucratic characteristic with embedded regulations and laws. Apart from that, the governance system also comprises other parties such as private companies, local communities, and non-governmental organisations. Not only institutional arrangements influence the fulfilment of the ideal criteria of ecotourism, but the interaction among those institutions will also influence each another, and hence it will likely shape the whole group of arrangements of ecotourism governance.
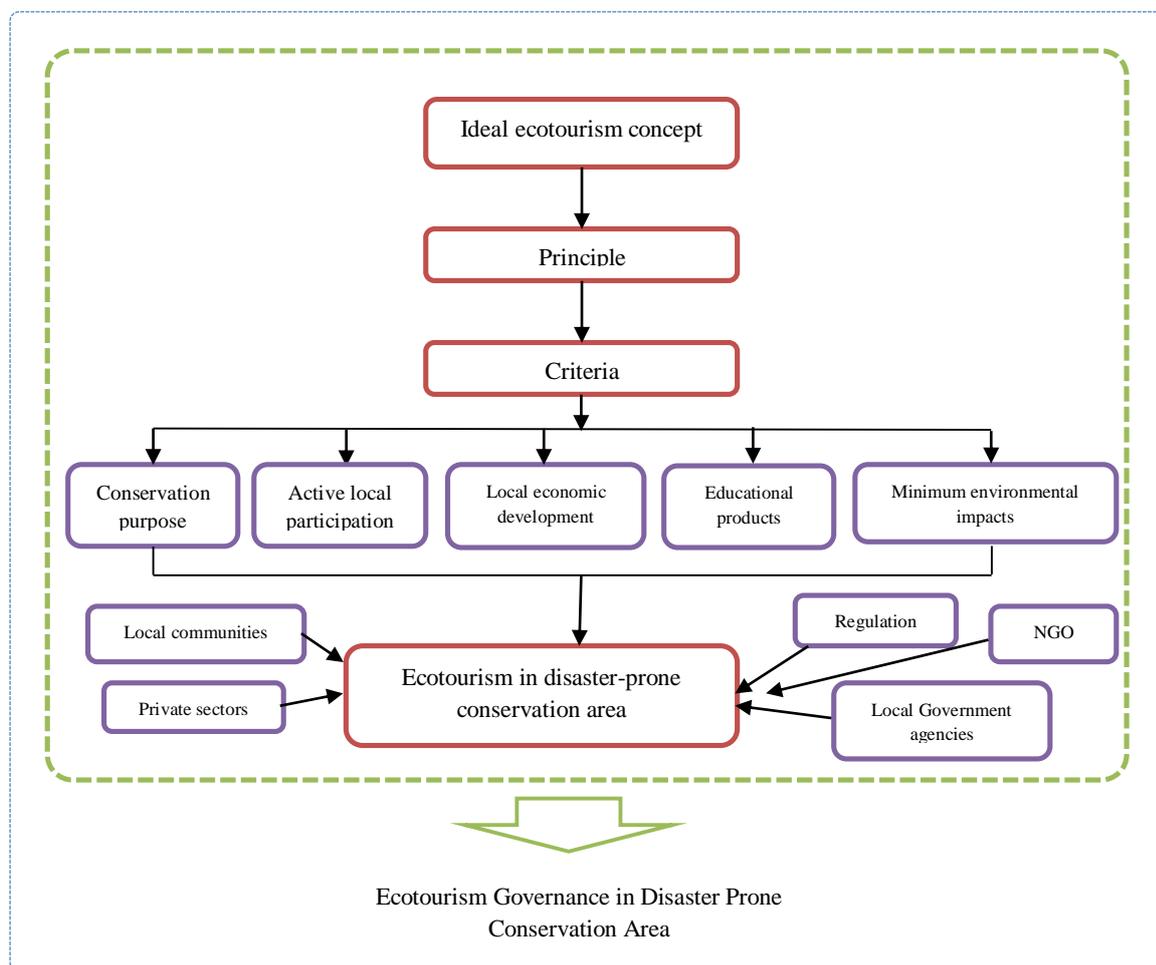
Figure 5. Theoretical framework. (Source: Author)

Furthermore, the place where two distinct characteristics such as disaster-prone and conservation mingle would be the place where multi-interests and institutions are intertwined. In this situation, each institution and organisation will have singular views of success. For

instance, the National Board for Disaster Management will have a success vision based on the minimum number of fatality during the disaster period, therefore they will tend to disagree about any activities in the hazardous areas. Another example is when the National Park Agency states that their success is preservation of biodiversity in the Merapi Slope which sees that disaster will be a threat to this vision. An additional layer in the existing governance structure has resulted in an increasing complexity of the governance of ecotourism in this disaster-prone conservation area. This often triggers mismatch between the structures of governance in disaster-prone conservation area when each institution has its own objectives to pursue. Therefore, there is a need to better understand how to achieve consensus on the success criteria that will be embraced by all sectors. Ecotourism again could offer a solution because the share of tourism activities in the Merapi slopes reach as high as 20 per cent of the Local Regency Revenue (Bappeda Sleman, 2011). The decent contribution of tourism sector will be a robust reason to endorse more tourism development. Ecotourism as a branch of tourism can also be proposed in this situation especially examining that the area has the potential to manifest the value of ecotourism in the tourism practices.

2.6. Conclusion

The governance of ecotourism has encompassed not only on institutional arrangements but also in other aspects which contribute in implementing ideal concept of ecotourism. Since the ideal ecotourism concept is never been contested to capture the position of ecotourism in disaster-prone conservation zones, the need of evaluation is obvious. In addition, not only the activities itself contributes to the fulfilment of the criteria, but also the role of institutions managing the hazardous areas as well as conservation areas needs to be addressed.

In measuring the fulfilment of ideal criteria as well as determining governance of ecotourism in disaster-prone conservation area, some scientific methods are applied. The following chapter presents about it including explanation about the data collection and types of analyses used.

III. METHODOLOGY

This chapter provides a description of the methodology used in answering research questions on the fulfilment of ecotourism in disaster-prone conservation areas to meet ideal criteria and governance underlying it. First, theoretical reasons for choosing case study approach as a method to explain the phenomenon will be delivered. After this, research tool for data analysis is explained. The third section mainly discusses how collected data was analysed and is followed by a section which mainly presents the Mount Merapi Disaster-prone Conservation Area as the location of this research. Lastly, the discussion will be wrapped up in the conclusion.

3.1. Case Study Approach

A lot of literature has studied tourism from many points of view. This research mainly focuses on ecotourism as an alternative of tourism, specifically examining the fulfilment of ideal criteria in disaster-prone conservation area and its underlying governance. The use of a case study approach to explain the phenomenon of ecotourism in disaster-prone conservation area is mainly because the case study is a quick method that can represent some social phenomenon in societies (Babbie, 2007).

Case study is defined as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence" (Sharp, 1998 p.785). Case study refers to qualitative research tradition and presupposes that conditions are described in the fields (Babbie, 2007). Case study comprises a thorough investigation often with time-series data collection over a period of time to understand phenomena (Cassell & Symon, 2004).

There are some advantages of the use of case study to explain phenomena: First, it is able to "close in" on real-life situations and is able to explain the views directly relating with phenomena shown in practice (Flyvbjerg, 2006). Second, case study is also suitable to answer research questions which demand detailed understanding of social or organisational processes through various institutions, organisations, groups and individuals. (Cassell & Symon, 2004).

Third, harnessing abundant resources as samples, case study can assist in understanding the degree to which certain phenomena are exist in particular groups whilst non-exist in other groups (Flyvbjerg, 2006).

Albeit some advantages, case study approach also has some drawbacks such as other qualitative methods, case study carries high degree of subjectivity due to solely relying on verbal descriptions (Babbie, 2007). Second, the participants often find themselves confronted by ethical dilemmas which involve hard choices as whether or not to inform negative things about the authorities and potentially dangerous activities (Cassell & Symon, 2004). Moreover, the issue of generalisation in case study is also one of drawbacks of this approach (Stake, 1978).

These issues have not made the case study approach abandoned in research studies. In fact, some literatures try to reinforce its drawbacks by providing solutions. For instance, in dealing with inter-subjectivity issues, sample can be chosen theoretically (theoretical sampling), and use triangulation to counterbalance the weaknesses on particular sides of data collection (Marschan-Piekkari & Welch, 2004). Moreover in tackling issues of generalisation in single case study approach, the use of holistic approach and analytic generalisations is recommended over statistical generalisations (Yin, 1994).

Prior conducting the survey to obtain data needed for analysis in an area where a case study is stated, research design is formulated as a basis of analytical flow of the research. Next sub-chapter will discuss about this.

3.2. Research Tools for Data Analysis

In order to answer research questions, research objectives are needed to be addressed. To support in achieving those objectives some methods and mechanism are needed to be done. The first objective involves data obtained primarily and secondarily from various sources. Primary data is obtained by surveying through in-depth-interviews and questionnaires whilst secondary data was obtained from documents including books, planning documents, regulations, statutes and also from documentary film and news.

Following this, in order to fulfil the next objective, all tourism activities mapped was evaluated by contrasting them with the ideal criteria of ecotourism. Aside from that, the existing institutional arrangement is identified and evaluated whether they concern toward ideal criteria of tourism activities or not. Lastly, policy recommendations are proposed based on the earlier findings of previous objectives. The following table provides more comprehensive information especially about the data needed and analytical method that was used in the research.

Table 2. List of Data/Information and Method by Research Objective

Research Objectives	Required data	Data Sources	How to obtain the data	Data Analysis
To examine tourism practices in disaster-prone conservation areas in meeting ideal ecotourism criteria.	All tourism objects, activities, facilities, local economic development, level of local participation, community characteristics, initiation to participate, tourist perception, tourist purposes, physical attributes (soil, water, vegetation and wildlife) and sociocultural aspects Analysed primary and secondary data	Documents and in depth interview with Mount Merapi National Park Agency, Development Planning Agency, Local Culture and Tourism Agency, Local Disaster Management Agency, Agriculture, Fisheries and Forestry Agency, Water resources, Energy and Mineral Agency Direct interview with tourists, local communities, private sectors	Collecting secondary data Conducting primary survey and direct observation in the field	Content analysis and Ecotourism assessment (ecotourism criteria fulfilment analysis)
To evaluate the degree of responsibilities of governance in managing ecotourism practices in hazardous areas.	Tourist perception, standard operational procedure, examining tourism facilities, literature review	Idem, Direct interview with tourists, newspapers, documentation	Collecting secondary data Obtaining primary data through interview	Stakeholder analysis and content analysis
To determine the role of governance in disaster-prone areas with regards to ideal ecotourism criteria	All institutions involved in managing the area, impacts of the policy to the ecotourism in the area, interest of each stakeholder, the influence level of stakeholder to the ecotourism activities, and estimation of stakeholder behaviour toward ecotourism	Idem	Collecting secondary data Obtaining primary data through interview	Stakeholder analysis and content analysis
To propose recommendations for ecotourism policy planning and practice in disaster conservation areas. and Determining the specificity of governance needed for successful ecotourism in disaster prone conservation area.	All results from previous objectives are used as the sources	Findings on previous objectives	Extracting previous information	Constructing policy based on ecotourism analysis and institutional analysis

(Source: Author)

This research embraces the qualitative paradigm and emphasises on descriptive and explanatory of a phenomenon. It utilises a scientific approach where the researcher acts neutrally with certain systematic procedures. The reason why the qualitative paradigm is used is the purpose of the research which is to understand phenomena (ecotourism in disaster-prone

conservation zones) from the perspective of the actors and objects involved. This paradigm helps to understand the definition of the situation studied by providing a description of the phenomenon.

In order to measure and evaluate each criterion of ecotourism, some parameters are needed as measurement point. Below is a figure explaining the position of each parameter in the analysis.
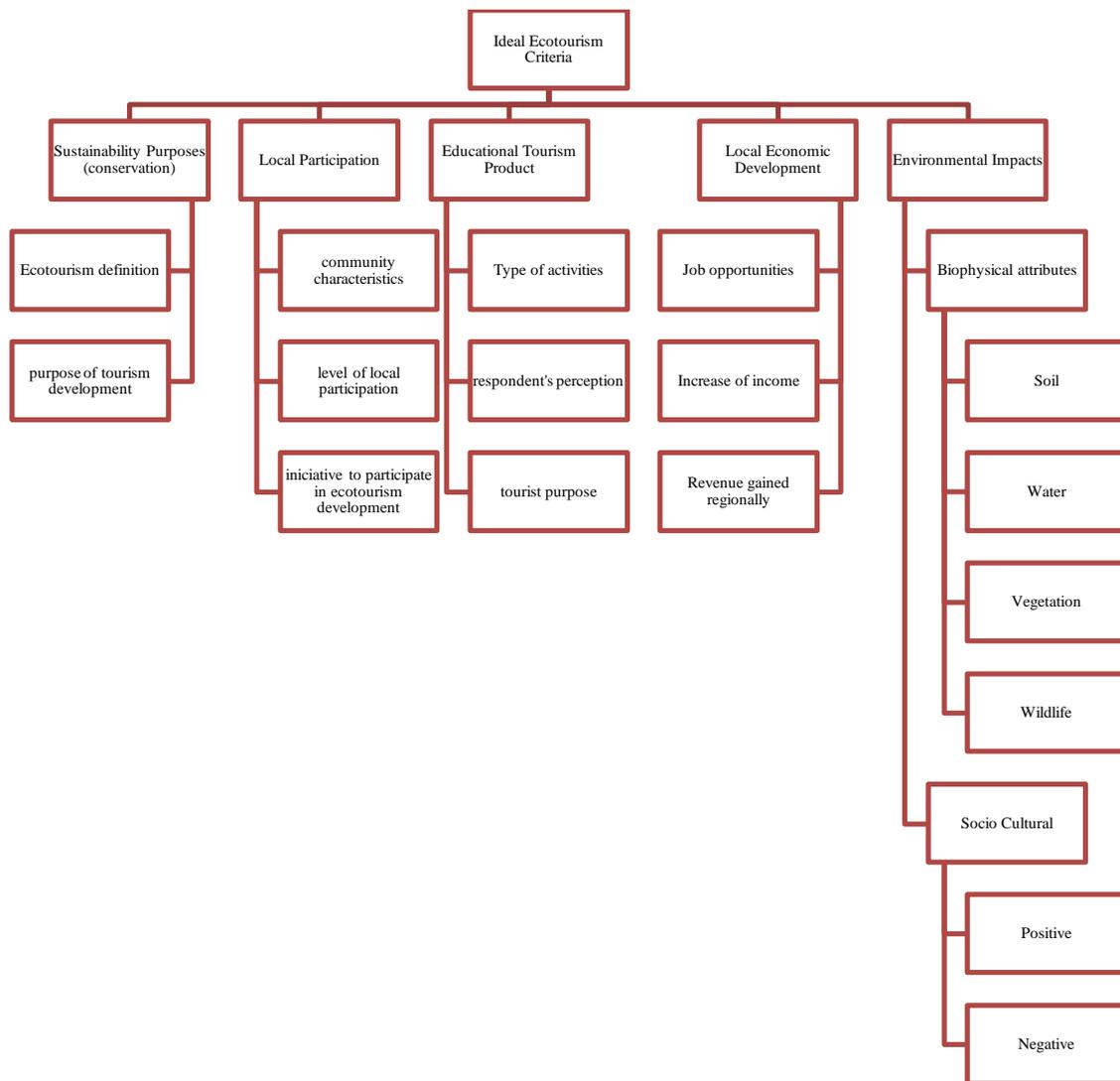
Figure 6. Parameters needed for Ecotourism Fulfilment Analysis (Source: Author)

The parameters come from various sources which are mainly collected from primary and secondary data through interviews, questionnaires and content analysis. The table below provides information about the source of data and the use of each parameter in the analysis.

Table 3. List of parameters measured

Parameter	Used for	Data Source
Criterion: Sustainability Purpose		
1. Understanding of ecotourism definitions	Ecotourism Analysis	Documents and interviews
2. Understanding of ecotourism development purpose	Ecotourism Analysis	Documents and interviews
Criterion: Local Participation		
3. Community characteristic	Ecotourism Analysis	Interviews
4. Level of Society's Participation	Ecotourism Analysis	Interviews
5. Initiative Participation in Ecotourism development	Ecotourism Analysis	Interviews
Criterion: Educational Tourism Product		
6. Types of Activities	Ecotourism Analysis	Documents and interviews
7. Respondent's perception on educational tourism product	Ecotourism Analysis	Documents and interviews
8. Tourism purpose	Ecotourism Analysis	Documents and interviews
Criterion: Local Economic Development		
9. Job opportunities	Ecotourism Analysis	Interviews
10. Increase of income	Ecotourism Analysis	Interviews
11. Revenue gained regionally	Ecotourism Analysis	Documents and interviews
Criterion: Environmental Impact		
12. Biophysical attributes (soil, water, vegetation and wildlife)	Ecotourism Analysis	Direct observation and interviews
13. Sociocultural Impacts (positive and negative)	Ecotourism Analysis	Direct observation and interviews
Factor: Influence of Institutions		
1. Core (strong influence)	Institutional Analysis	Documents and interviews
2. User (directly influenced)	Institutional Analysis	Documents and interviews
3. Complementary (indirectly influenced/influencing)	Institutional Analysis	Documents and interviews
Factor: Institutional Interest		
1. Vision and Mission	Institutional Analysis	Documents and interviews
2. Benefit gained	Institutional Analysis	Documents and interviews
Factor: Estimation of Institutional Behaviour		
1. Supportive	Institutional Analysis	Documents and interviews
2. Indifferent	Institutional Analysis	Documents and interviews
3. Against	Institutional Analysis	Documents and interviews

(Source: Author)

Both primary and secondary data were used on the analysis. Primary data are collected through observations to verify data and information obtained from secondary data. Aside from that, a field survey based on questionnaire and in-depth-interview were undertaken. The respondents for questionnaire were chosen by applying convenience sampling method, meaning that the respondent is chosen randomly (or sometimes called accidentally) without depending on their attributes, educational level, incomes, etc as long as the respondents are tourism practitioners (Neuman, 2006). Meanwhile for the in-depth-interview method, a snowball technique is applied to find the best person representing their institutions in order to gain adequate and robust information (Neuman, 2006).

Meanwhile, secondary data consists of published documents from related institutions. It can be a book, research report, conference proceedings, journal, planning documents, etc. Two method of sampling is used namely: convenience sampling and purposive sampling. Convenience sampling is used due as the population of the objects (document) related with the research is unidentified, whilst purposive sampling design is applied to find out documents which match with the research requirement (Neuman, 2006).

After data were collected, the information obtained from interviews was extracted and organised with content analysis. According to Babbie (2007) content analysis is the study of recorded human communications, such as books, websites paintings, and laws. Here, the unit of analysis consists of documents, videos, and recorded interviews. This technique has advantages as it is unobtrusive characteristics meaning that the research objects will not be disturbed/harmed. Aside from that, it is also inexpensive, replicable and no space and time boundary (Babbie, 2007). On the other hand, the limitation of documents and uncertain validity due to different perception between the testers are considered as the drawbacks. In conducting content analysis, stability, reproducibility and accuracy are important things to give reliability of the analysis.

Finally, collected data are then analysed with ecotourism fulfilment analysis and stakeholder analysis. The data collected from the field survey including how the analyses were conducted can be found on the following sections.

3.3. Data Collected

Data collection was done at June 2013 in the Merapi National Park and surrounding areas. The data collection involves 208 respondents. Of that figure, 200 interviewees including 100

tourists, and 100 local people are interviewed through questionnaires and 8 people who are institutional representatives are interviewed through in-depth-interview. The representatives interviewed can be divided into three institutions which are: *Government:* (National Park Agency, Local Development Planning Agency, Local Culture and Tourism Agency, Local Disaster Management Agency, Local Agriculture, Fisheries and Forestry Agency, Water Resources, Energy and Mineral Agency); *Local Community Groups:* Gadung Melati Trail Community and *Private sector*: P.T. Anindya.

The following table shows the interviews conducted.

Table 4. Table of Respondents and Observations

What	Where	When	Details
Interviewing tourists	Merapi National Park	Between 8-14th June 2013	Talked with visitors by asking questions listed in the questionnaires
Interviewing local people	Kaliurang, Kaliadem, Kinahredjo, Pangukrejo	Between 14-17th June 2013	Talked with local street vendors, local communities
Interviewing National Park Agency	MMNP office, Jalan Kaliurang, Sleman	17th June 2013	In depth interview about the policy, strategy and problems faced in the field
Interviewing Local Development Planning Agency	Local Development Planning Agency Office, Beran, Sleman	8th June 2013	An interview and document collection about the general policy of Sleman Regency and strategy to develop ecotourism in disaster prone conservation area
Interviewing Local Culture & Tourism Agency	Local Culture & Tourism Agency Office, Beran, Sleman	20th June 2013	Interview and document collection of tourism strategic plan in Sleman Regency
Local Disaster Management Agency	Local Disaster Management Agency Office, Beran, Sleman	21st June 2013	Interview and document collection of disaster management in Sleman Regency
Local Agriculture, Fisheries and Forestry Agency	Local Agriculture, Fisheries and Forestry Agency Office, Beran, Sleman	22nd June 2013	Interview about the policy of forestry in Sleman and its utilisation

Water Resources, Energy and Mineral Agency	Water Resources, Energy and Mineral Agency, Beran, Sleman	22nd June 2013	Interview about mining activities in Merapi slopes
Gadung Melati	Kinahredjo, Sleman	15th June 2013	Discussion about the new emergence of job activities and local involvement and local economic development in tourism sites
PT.Anindya	Anindya Office, JEC complex, Janti	16th June 2013	Interviews about prospects and challenges of tourism in disaster prone conservation area

(Source: Author)

Aside from primary data, secondary data were also collected through various documents and documentary films which comprise of spatial planning documents and strategic planning documents. The following table provides the detail information about the secondary data gathered:

Table 5. Documents collected for the research

No.	Documents	Source
1.	Yogyakarta Province Development Plan 2005-2025	Provincial Development Planning Agency
2.	Yogyakarta Province Spatial Plan 2005-2025	Provincial Development Planning Agency
3.	Sleman Spatial Planning Documents 2011-2031	Sleman Regency
4.	Development Planning Agency Strategic Plan 2011-2015	Development Planning Agency of Sleman Regency
5.	Culture and Tourism Agency Strategic Plan 2011-2015	Sleman Regency Tourism Agency
6.	Mount Merapi National Park Agency Strategic Plan 2010-2014	Mount Merapi National Park Agency, Ministry of Forestry
7.	Mount Merapi Tourism Development Plan	Mount Merapi National Park Agency, Ministry of Forestry
8.	Rehabilitation and Reconstruction Action Plan	National Development Planning Agency – National Disaster Management Board

9.	Agriculture, Fisheries and Forestry Agency Strategic Plan 2011-2015	Agriculture, Fisheries and Forestry Agency of Sleman Regency
10.	Disaster Management Agency Strategic Plan 2011-2015	Disaster Management Agency of Sleman Regency
11.	Water Resources, Energy, and Mineral Agency Strategic Plan 2011-2015	Water Resources, Energy, and Mineral Agency of Sleman Regency
12.	Business Plan 2010-2015	PT. Anindya
13.	2010 Merapi Eruption and Lava Flood	Documentary film

(Source: Author)

Content analysis was conducted on those policy documents to extract the information needed for the analysis. The result of the information extraction was necessary for determining the governance of ecotourism especially in favour of ideal ecotourism practices. Aside from that, the information obtained from content analysis will be useful for stakeholder analysis as the document can help to describe the main task, visions and missions of each institution.

After all data were obtained, two types of analyses were then carried out which are Ecotourism Fulfilment analysis and Stakeholder analysis.

3.4. Ecotourism Fulfilment Analysis

This analysis is required to assess whether or not the ecotourism in disaster-prone conservation area fulfil ideal criteria of ecotourism. Based on the discussion on ecotourism principles in the previous chapter, this research uses some criteria to examine the extent of tourism practices in disaster-prone conservation areas satisfy the ideal criteria of ecotourism. There are five criteria used in this thesis namely:

- Aims for nature protection and preservation (conservation).
- Active participation of local communities
- Tourism products which carry educational element
- Positive impacts on the development of local economic
- Minimum environmental impacts

In assessing those criteria, data is obtained through direct interview with questionnaires consisting of one hundred visitors and one hundred local communities. Therefore, the result is based on the perception of the interviewees about certain condition of tourism in the area. The

repetition is set in quite high numbers to minimise errors and imbalanced opinion (Babbie, 2007).

The questionnaires are then divided into five main sections in which each section represents each criterion of ideal ecotourism criteria. For instance: questions about the first criterion which is: Aims for conservation comprises of questions: "Have you know about the term ecotourism and its definition?" Respondents are also asked whether they are able to define the term ecotourism correctly and mentioning the main purpose of ecotourism. More detailed questions are available in the appendix section.

After all results of questionnaires are aggregated, we are then able to determine whether the ideal types of ecotourism is fulfilled or partly fulfilled or unfulfilled at all. All criteria are weighted equally in order to achieve a robust conclusion. In order to find out the mechanism of how the ecotourism practices are influenced by institutional arrangements, an analysis on stakeholders is necessary.

3.5. Stakeholder Analysis

This analysis is intended to reveal the underlying mechanism of how the governance of ecotourism determines the ecotourism practices in the area. Stakeholder analysis was done to find out the goals, missions, and tasks of each institution that will likely impacts ecotourism development in the area. To do a stakeholder analysis, first it is necessary to categorise institutions based on their strength, power, and influence to ecotourism practices. In this research, three categories of institution are set which are Core, User and Complement.

This categorisation is intended to draw more balanced view on stakeholder because without dividing into some categories, a small stakeholder which in the field has weak influences on ecotourism practices can show an anomaly result in the analysis. Below is the list of stakeholders and their categories

Table 6. Categorisation of Stakeholders in Disaster-Prone Areas

Category of Stakeholder	Explanation	Institutions
Core Stakeholders	Stakeholders which have legal authority of decision making in disaster-prone conservation areas.	Central Governmental organisations (Mount Merapi National Park Agency)

		Local Governmental Agencies (Tourism Agency, Disaster Agency)
User Stakeholders	Stakeholders which are directly affected positively or negatively by policies/plans in disaster-prone conservation area	Local communities, visitors, private sectors
Complementary Stakeholders	Stakeholders which have indirect relation with the policies/plans in disaster-prone conservation area.	Local Governmental Agencies (Agriculture, Fisheries and Forestry Agency, Water Resources, Energy and Mineral Agency, Local Development Planning Agency)

(Source: Author)

After classifying each stakeholder according to its category, then each stakeholder is assessed by measuring parameters attached. Those parameters are: Institutional Interests, Role of Institution and Policy Formulation. Each of parameters consists of a set of indicators as follows.

Table 7. List of indicators measured for stakeholder analysis

Parameters	Indicators
Institutional Interests	Vision and Mission of Institution Benefit gained of policy in DPCA Concern on Ecotourism
Role of Institution	Institution's power on DPCA All situation or only normal situation Conflict of interest
Policy Formulation	Fragmented policy formulation or integrative policy, Synchronisation of policy, Clear delineation of location and situation boundaries, Reference for policy formulation, Attitudes toward ecotourism development

(Source: Author)

The data is obtained from in-depth-interview by capturing through voice-recording and note-taking method, after decoding all of the recording and notes, the data is then transliterated into texted format to make easier selection of required information.

All of these stakeholders are the ones which operate and manage different institutions located in the Merapi Disaster-Prone Areas. The reason why this area is chosen will be explained in the next section.

3.6. Why Choosing Mount Merapi National Park?

To understand the context, this section will explain the reason why Merapi National Park laying in Disaster-Prone Conservation Areas was chosen as the case study. Following this, the historical overview of the area since prior to enactment of conservation areas until today is presented. The focus on the historical overview is the vicissitudes of institutional arrangements and also tourism practices.

The Mount Merapi National Park which lays over hazardous areas is opted as the laboratory for this research for several reasons. First, it is conservation area where ecotourism is practiced. Secondly, Mount Merapi National Park is located in disaster-prone areas where it contradicts with regular tourism characteristics. Thirdly, the institutional arrangements managing the area vary from local to central government, private to NGOs and across many sectors. This will help to understand how the mechanism of governance toward ideal type of ecotourism materialises in this area.

The existence of Mount Merapi National Park within the disaster-prone areas as one of the natural conservation areas is important to examine because according to ecotourism literature, ecotourism practices in natural areas exhibit their ideal criteria practices (Ceballos-Lascurain, 1996) and hence, comparing ideal ecotourism criteria on ecotourism practiced in the Merapi can be a robust finding. On the other hand, this laboratory is also located in the disaster-prone areas which are exposed to disaster because Mount Merapi Volcano often erupts in cyclical period in which the eruption phenomena often generate tourism activities. On top of that, the complexity of the institutional arrangements in the area results in unknown mechanisms of how the governance can shape ecotourism practices to meet ideal criteria.

Therefore, undoubtedly that Merapi National Park matches the requirement of disaster-prone conservation area along with characteristics attached on it. It will be interesting to see whether (or not) the ecotourism practices in the area can be exhibited to meet ideal criteria. In the perspective of knowledge, the use of this park as case study also contribute to the debate of ecotourism especially in the discussion of governance which is not yet massively lifted in research (Parra, 2010).

Lastly, the use of the Mount Merapi National Park as the case study can be a test to the existing ideal criteria of ecotourism which was commonly applied in non-disaster-prone areas.

Therefore, it is fascinating to see the result of the study whether it is only affected by the governance of ecotourism or else the criteria is not generally standardised.

Figure 7. Mount Merapi prior last big eruption in 2010 Source: Google Images (2012)

3.7. Historical Overview of the area

The Merapi volcano is located in Java Island, Indonesia. Administratively, it lies between two provinces which are Special Province of Yogyakarta and Central Java Province. Aside from that, this volcano is also under the jurisdiction of four regions/municipalities which are Sleman, Magelang, Boyolali and Klaten.

Figure 8. Map of Mount Merapi National Park Area. Source: TNGM (2009)

Merapi is known as the most active volcanoes in the world with unique periodical eruption (Dharoko et. al., 2011). The eruption often occurs every 4 years and mostly throw out incandescent lava, hot clouds (*nuée ardente*), or lava flow (Marfai et al., 2012). Historically, this volcano has erupted several times including the last big eruptions in 2010. Below is the timeline of eruption scale measured by Volcano Explosivity Index (VEI) from 1768 to 2010.

Figure 9. Timeline of Eruption Scale. Source: Marfai et al. (2012)

The last eruption was in October 2010 destroying villages located close to the crater. Unique phenomenon occurred after the eruption when a lot of people come to witness the devastation and ruins caused by the eruption. On the other hand, up to 70%t of people living in the

catastrophe areas are farmers and highly depend on the soil fertility in the Merapi slope (TNGM, 2009).

Figure 10. Mount Merapi during eruption in 2010 Source: The Big Picture (2010)

Tourism in this area was first introduced by the Dutch East-Indies geologist in 19th century when they sought a place for seclusion and retreat. They finally found a suitable place in Kaliurang northern part of the city of Yogyakarta located in the slope of Merapi Mountain (Said, 2009). This area is one of the main tourism destinations in Yogyakarta up until todays. Formerly prior to the enactment of the national park, the area was divided into three functions which were Protected Forest, Wildlife Sanctuary and Natural Park (TNGM, 2009). This made the management also consist of three different institutions in which the Protected Forest was led by the local government, whilst Wildlife Sanctuary and Natural Park were under jurisdiction of central government (Ministry of Forestry, 2005). Not until 2004 when the Mount Merapi National Park was established, the management of the area was handed over fully to the central government (Ministry of Forestry: Mount Merapi National Park Agency).

Table 8. Historical timeline of Mount Merapi

13th century	Private place of Dutch geologist	Dutch East Indies
1931	Enactment of the Merapi slope as a protected area	Dutch East Indies
1984	Enactment of the area as a wildlife sanctuary	Natural Resources Conservation Agency
2004	Establishment of the Mount Merapi National Park	Mount Merapi National Park Agency

Source: Author, 2013

3.8. Social and Economic Context in the Merapi Area

Merapi Area consists of six districts with the total area reaches as large 35 thousand hectares. This vast area is inhabited by 249 thousand residents with various density from 476 people/km^2 to 961 people/km^2 (TNGM, 2009).

Most population is dominated by farmers and cattle breeders (milch cows) which comprise of 87% (13.587 people) of total occupation of the area (15.600 people) (TNGM, 2009). This is also reflected from the income of the people from their main jobs which is dominated by the group of income up to €50 per month, under provincial minimum wage standard (€82) (TNGM, 2009). The below average incomes dominating this region is in line with the educational level of the residents. Most residents were only finishing their education at elementary level comprising of 70% of total population.

This shows that the Merapi area is dominated by lower income residents and hence, local involvement in developing this area is important. Ecotourism as one of tourism types which concern on social involvement and local empowerment is deemed as a sustainable way to alleviate poverty in the region through tourism practices.

3.9. Tourism in the Merapi area

The tourism practice in the slope of Merapi Mountain itself is not a new phenomenon prior to the big disaster in 2010 and even before the establishment of the national park. The establishment of the Mount Merapi National Park in 2004 was not only intended to preserve biodiversity in the area but also to foster more sustainable forms of tourism (BTNGM, 2010).

The numbers of tourists visiting the Merapi area annually reaches 1.5 million domestic travellers and around 10 thousand foreign travellers (Statistic Bereau of Sleman Regency, 2013). This figures are about one third of total visitors travelling to Sleman Regency which

reaches around 3.6 million visitors annually (Government of Sleman Regecy, 2012). The number of tourism facilities in this area is presented in the following table:

Table 9. Tourism Facilities and Accommodation in Sleman Regency

No.	Types of Accommodation	Numbers of Business / Rooms		
		2009	2010	2011
1.	Starred Hotel	14/1.592	15/1.667	20/2.114
2.	Budget Hotel	120/2.007	125/2.337	138/2.223
3.	Cottage	236/1.943	223/1.184	239/1.233
4.	Restaurant	49	51	56
5.	Café	179	204	208
6.	Public entertainment	103	82	105
7.	Tour operator	110	121	121

Source: (Government of Sleman Regecy, 2012).

Tourism has flourished as one of important sectors contributing 23.16% in 2009 on regional Gross Domestic Products (Government of Sleman Regecy, 2012). The economic growth of tourism sector in the region also marked as 6.75%, the highest in 2011 amongst other sectors, compared with 5.04% average growth (Government of Sleman Regecy, 2012).

Currently there are five main tourism spots in the Mount Merapi National Park namely: Kaliurang, Selo, Musuk, Ketep and Deles. Having an authority in the area, Mount Merapi National Park Agency theoretically is assumed to able to steer an ideal ecotourism practice in those places. However, since the area is located in two distinct characteristics which is not common compared with other national parks in Indonesia, the preliminary assumption can be untrue.

Unlike other national parks the establishment of Mount Merapi National Park is rather unique. It carries additional task to preserve the ecological cycle (eruptions and successions) of Mount Merapi ecosystem (Dharoko et al., 2011). This means that the national park is mainly serving to keep the natural phenomenon occurs and preserve the cycle of biodiversity in periodical time rather than 'blindly' preserves biodiversity without understanding the natural phenomenon.

Aside from that, the establishment of the park is intended to minimise casualties that might occurs during disaster periods. The residential areas living near the Mount Merapi are growing fast and thus getting closer to the volcano. The tight regulation in which national park

institutions are constituted is considered to be able to handle further encroachment which means casualty reduction during calamity period.

As the volcano erupted, local people lose their occupations. Therefore, along with the mushrooming numbers of people visiting the area, tourism activities arise and hence stimulating the local to involve in the tourism practices. To some extent, the emergence of tourism practices in the disaster areas will likely provide a substitution of job-less situation for the inhabitant to crawl back from adversity of disaster impacts.

Figure 11. Devastation impacts of the 2010 eruption. Source: RNW (2010)

Tourism practices in the Mount Merapi hazardous areas have never been so famous until the latest eruption in 2010 where the volcano erupted in its biggest scale of modern periods devastating several villages located closer to the mountain. One example, is the emergence of lava touring as a self-organised activity initiated by local people has attracted many visitors to this area. People from around the world enjoy and witness the staggering effects of the eruption.

Figure 12. Witnessing night lava tour. Source: The Big Picture (2010)

Figure 13. Ruins of forest as tourism attraction post-eruption in 2010. Source: The Big Picture (2010)

Being situated in unique situation, the Merapi hazardous zone is managed by complex system of governance. It consists of multi-level institutional arrangements including National Park Agency, Indonesian National Board for Disaster Management, Local Culture and Tourism Agency, Water Resources, Energy and Mineral Agency and other private entities including Non-Governmental Organisations and Local Community Groups showing diversity of the

institutions involved in administering the area. The complexity of governance in the area can be used to find out the impact of the institutional arrangements in determining the fulfilment of ideal criteria of ecotourism.

3.10. Conclusion

To conclude, this research uses both primary and secondary data to answer the research questions through two analyses methods which are Ecotourism Fulfilment Analysis and Stakeholder Analysis. The data were obtained by doing a field survey and interviewing respondents through questionnaires for visitors and local people and also doing in-depth-interviews for institution representatives including government, privates and local communities. The research was done in tourism objects in the Merapi Disaster-Prone Areas including the institutions which have activities and management in the area.

The use of the area as the location of the study is considered to be able to provide more thorough knowledge in explaining the governance of ecotourism in disaster-prone conservation areas because by reflecting upon the real examples the mechanism of multi-layered governance of ecotourism can be understood easier.

By considering all governance characteristics which shape the disaster-prone conservation areas, research on this unique hazardous conservation area becomes interesting. Not only to examine the ecotourism practices in the area which has never been done before and hence enriches ecotourism literature but also understanding how the governance of disaster-prone conservation areas shapes the tourism in the area to fulfil the ideal criteria.

IV. RESULTS AND ANALYSES

To answer the research questions proposed in the Chapter I, this chapter presents the result of data analyses which are:

- Ecotourism Fulfilment analysis: to assess whether or not tourism practices in disaster-prone conservation areas fulfil ideal ecotourism criteria.
- Stakeholder analysis: to reveal the governance of ecotourism in disaster-prone conservation areas.

A wrap up summary in the end of this chapter will be delivered before entering discussion and result synthesising in the next chapter.

4.1. Ecosystem Fulfilment Analysis

The ecotourism fulfilment analysis is a comparison between five ideal ecotourism criteria with the people perception of the real condition of ecotourism practices. To have a more robust result on the analysis, additional information gathered from secondary data including reports, documents, and also a direct observation is also included.

4.1.1. First Criterion: Conservation Purpose
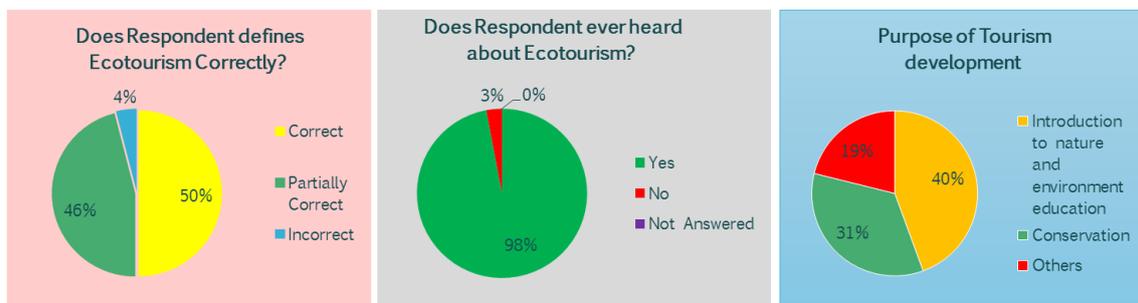
Figure 14. Respondents' responds on the first criterion of ecotourism: Conservation purpose
(Source: Author)

Based on data collected from primary survey, most respondents understand about the term ecotourism. There are 98% of respondents at least ever heard about the term ecotourism. Furthermore, most of those who know the term ecotourism defined the ecotourism correctly. This is marked by the numbers of respondents who answered completely correct reach 50% whilst 46% or respondents answered partially correct letting only 4% answer incorrectly.

The vast majority of respondents were also able to define the purpose of tourism development in disaster-prone conservation areas as an introduction to nature with educational and also conservation purposes, whilst only 19% of respondents state that the tourism development in the disaster-prone conservation areas is not intended for conservation and environmental purposes.

Apart of that, secondary data are gathered from documents on Mount Merapi tourism development. They were obtained from Mount Merapi National Park Agency and Culture and Tourism Agency. The documents all mention that tourism planning in this area emphasises on the purpose of nature conservation through tourism practices and the use of natural landscape in sustainable way. The document mentions "Nature tourism development is put in as a pillar in the context of conservation (TNGM, 2009 p.18) and "... the Merapi area is developed as a tourism destination and conservation area simultaneously (Local Culture & Tourism Agency, 2010 p.179).

Direct observation on the field also shows that the conservational purpose is an important aim that is pursued by tourism practitioners in the Merapi area. As evidence of this, visitors and service providers are encouraged to maintain the area as it is because the area is also a conservation area where disturbance, insertion of non-endemic flora and fauna is strictly prohibited.

Based on the perceptions of visitors and local people in the tourism area, documents stating that tourism practices should aim on conservational purpose, and direct observation of the tourism practices in the area the first criterion is fulfilled. The conservation purpose dominates over other purposes in the tourism sites. Moreover, the development of tourism in the area is intended to serve conservational purpose which emphasises on the sustainability of natural landscapes and phenomenon as well as social wisdom as components which compose tourism practices. Therefore, the tourism practice in disaster-prone conservation areas meets one of ideal ecotourism criteria.

4.1.2. Second Criterion: Local Participation

Second criterion which is local participation in tourism practice is acquired by asking questions such as: "Which party has the most substantial initiative to manage the ecotourism in this area?" and "What kinds of involvement of local people in tourism practices in this area?"; "Does the local wisdom / characteristics support the participation

on tourism practices?"; "What products local people can offer to support tourism practices in the area?"
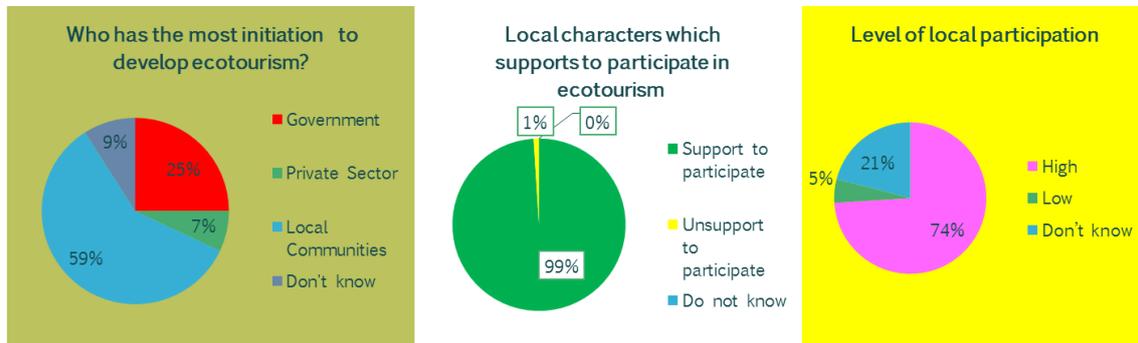
Figure 15. Respondents' responds on the second criterion of ecotourism: Local Participation. (Source: Author)

Examining data obtained during primary survey shows that local communities are led the initiation of tourism development in the area. 59% of the respondents answered that local communities has the most important role in initiating tourism practices in disaster-prone conservation areas, whilst only 25% of respondents said that the government is the main initiator of the tourism development. The rests of respondents answered private companies (9%) and 9% were uninformed.

When participants were asked whether the characteristic of local people supports the initiation of tourism practice, vast majority of respondents agree that the original character of people living in this hazardous areas is important to support the initiation of tourism practices. Local people living in Mount Merapi slope is characterised by: friendliness, tough, ductile and uneasily discouraged even though they live with disaster events. Thus, based on participant responses, local initiation and participation in tourism practices in the disaster-prone conservation areas is high. As evidence of this, many tour operators were initiated and operated by groups of local people. They also organise and arrange tour packages as well as establishing community market to sell the craft products and culinary products.

When examining documents about the local participation in tourism, it is found that the societies living in the slope of Merapi are actively involved in tourism practices. The document states that there are numbers of local community which highly depends on the tourism practices in the Merapi area. There as many as 1.289 small and medium businesses which correlate with tourism practices in Merapi (Harwati et al., 2012). These businesses

are run by local people who join small communities producing goods and services in the Merapi tourism area.

Meanwhile based on direct observation it is obvious that there are a lot of local involvement in providing goods and services in the tourism area. All of local respondents who run their small business in the tourism area live near the tourism spots. Those local entrepreneur groups includes jeep tour community, guide community, moto trail rental, food and beverage sellers, and many more. All members of these communities are mostly indigenous people who are formerly (prior the 2010 eruption) have occupations as farmers.

Figure 16. Merapi Jeep Tour Community (Source: Author)

Therefore, based on those results, the second criterion which is active local participation in tourism practice is fulfilled. This conclusion is aggregated from the perception of visitors and local people that a lot of initiations were done by the locals in sustaining the tourism practices in the area. Secondary data including documents studying the local participation in the area and direct observation also reinforces this conclusion.

4.1.3. Third Criterion: Educational Tourism Products

This criterion mandates that an ideal ecotourism product should have an educational message in its products. This means that the tourism products exhibited in the tourism practices not only deliver amusement and recreational aspects but also contains inserted educational messages.
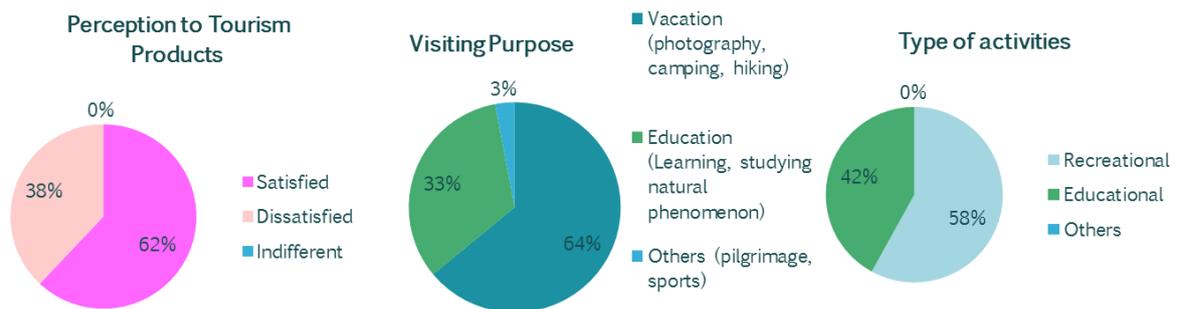
Figure 17. Respondents' responds on the third criterion of ecotourism:
Educational tourism product (Source: Author)

Some questions on this topic included: "What is the purpose of your travel in this area?"; "What kinds of activities are you doing here?" and "Did you get lessons/valuable experience after this journey? If it is, what are they?" and questions for local people such as: "What are the activities tourists visiting here?"

Based on the survey results, tourism practices in disaster-prone areas are mostly dominated by leisure and amusement purposes, and only one third of respondents assumed that tourism practices in the area carry educational messages whilst only 3% believe that tourism in the area is mainly for other purposes such as pilgrimage and sports. Even so, vast majority of respondents (60%) are satisfied with the tourism facilities to support their activities in the area, whilst only 38% show dissatisfaction. When types of activities are asked, recreational activities dominate over educational activities by proportion of 58% : 42%.

Aside from primary data, secondary data also shows a similar result. This is shown from a study of tourist preference on the Merapi area which mentions that the vast majority of visitors (68.42%) coming to this area are for vacation purpose, whilst only 20% are coming for learning and research purposes (Dwiputra & Rosyidi, 2013).

Based on direct observation in the area, the education facility in national park area is not so prominent, therefore most tourists coming to this area do not seek for educational tourism products. In fact, the main educative tourism destination is in the Merapi Volcano Museum which is located separately from the national park area. This results on the localisation of educative tourism product in the museum rather than on the field.

Figure 18. Merapi Volcano Museum

Aside from that Mount Merapi is known as one of the sacred places aside from Parangtritis Beach and the Palace of Yogyakarta Sultanate (Government of Yogyakarta, 2012). This results on the importance of Merapi area as a pilgrimage place and grows as an important destination for ritual ceremonies held by the Palace. Therefore, a lot of travellers coming to this area seek for this spiritual purpose rather than educational purpose.

Based on those results, the tourism practices in disaster-prone conservation areas do not fulfil third criterion of ideal ecotourism criteria which is educational tourism products because result shows recreational products dominates over educational ones.

4.1.4. Fourth Criterion: Local Economic Development

Local Economic Development is an important indicator to measure ideal ecotourism practices. This is also the essence of ecotourism in which the development can be spread broader to the local people where they are actively involved in tourism practices. To assess this criterion, some questions were asked to the respondents such as: "Do you believe that tourism activities in this area bring positive impacts on local incomes?" "Does tourism increases job opportunity?" and "How is the impact of tourism practices in the area on regional development?" Local people are also asked "How many income increase they earn as an impact of tourism practices in the area".
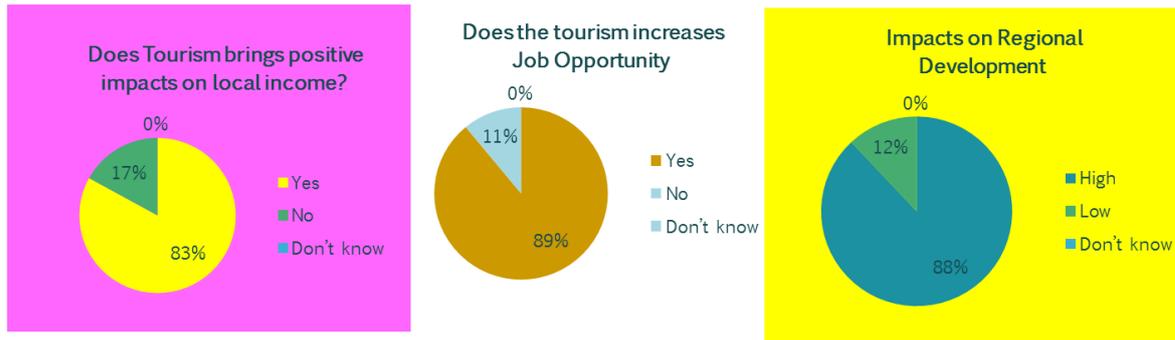
Figure 19. Respondents' responds on the fourth criterion of ecotourism:
Local Economic Development (Source: Author)

Based on the data collection result, majority of respondents (83%) believe that the tourism activities in the area generate economic development in the area. Moreover they also believe that job opportunity can be generated through tourism practices in the area (89%). As evidence of this, new job opportunities flourish along with the existence of tourism practices for instance there are 175 new jeeps and drivers and more than 100 trail rentals to serve the increasing demand of lava tourism. Another evidence of the increase on local economic development is shown by an increase of additional income for locals in average which reaches as high as €80/month. As for information, provincial minimum wage set by the government of Yogyakarta Special Province is €82/month which means the additional income is a very adequate amount for the locals.

Based on direct observation, most of job opportunities are dominated by high-skilled occupations such as jeep drivers and motocross riders who need special skills to drive or ride the vehicle in rocky and harsh environments. The fare for enjoying the whole lava tour package is €20 per jeep and is around €5 for moto-trail rental per 30 minutes. This results on the increasing incomes of these service providers above the provincial minimum wage. For the information, they formerly were farmers with incomes below the provincial wage standard. And interestingly, the new business is harnessed fully by the local people as a substitution of the loss of occupation due to volcano eruption. Even so, multiplier effects will likely be generated in larger areas.

Furthermore, 80% of respondents agree that tourism practices in the area bring positive regional development of their area. They mark the increasing numbers and quality of public facilities such as road, market, mosque, electricity and public toilet as the evidence of the development.

Based on the report of National Team for Accelerating Poverty Eradication, the amount of money spent on the Merapi area for increasing local infrastructures reached as high as 636 thousand Euros (TNNPK, 2011 p.17). This budget is mainly intended to revitalise damaged infrastructures affected by the volcano eruption. Apart of that, increasing tourist arrivals in the area also contributes to the huge amount of money spent on infrastructures because the demand of public facilities is also scaling up.

Therefore, summing up the results on this criterion, tourism practices in disaster-prone conservation areas are able to generate local economic development in the area. This means that the forth criterion: local economic development is fulfilled.

4.1.5. Fifth Criterion: Minimum Environmental Impacts

Aside from four criteria mentioned above, an ideal type of ecotourism should also generate minimum environmental impacts which mean that effects of tourism practices are letting the environment unharmed. To assess this criterion, parameters used are not merely on physical components but also comprises social components such as value, norms and culture. The purpose of this criterion is to ensure that tourism practices will preserve the existing condition of physical and social attributes of the area.

Some questions proposed in order to assess the extent of environment is affected by tourism practices. For instance: "Do you believe that tourism practices will change local value?" "What do you find about the biophysical quality in the area after some tourism practices emerge in the area?" and "Does the tourism bring positive or negative impacts on socio culture? Can you give example?"
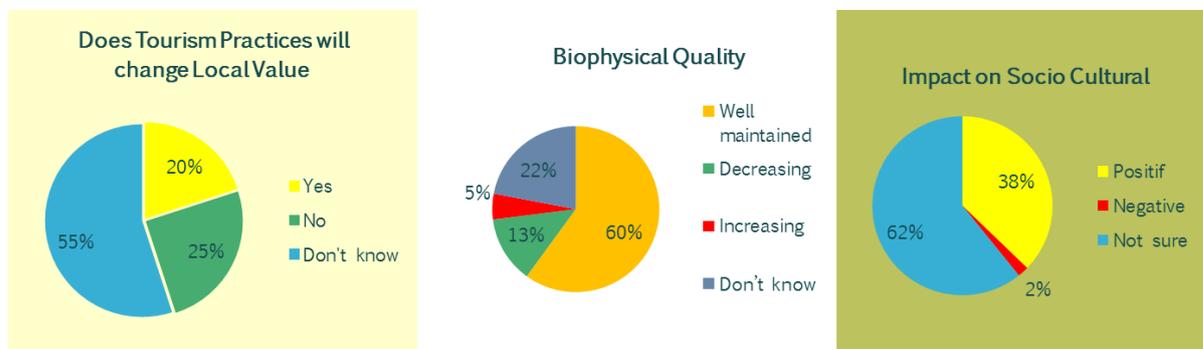
Figure 20. Respondents' responds on the fifth criterion of ecotourism: Minimum Environmental Impacts. (Source: Author)

The results show that most respondents (55%) still do not know whether the tourism practices in the area will alter local value. However, amidst the rests, most respondents (25%) believe that tourism practices will not change local value. In terms of biophysical quality, 60% of respondents argue that the environmental quality is well-maintained and only 13% of respondents assume there is a degradation of physical attributes of environment. Meanwhile, vast majority of respondents (62%) are unsure about socio-cultural impacts of tourism practices in the area whilst 38% of them believe that there are positive impacts of tourism on socio-culture of society. As evidence of this, they said that new technology brought by tourism practices can bring positive impact on the development of socio-cultural attributes.

Direct observation on the field found that local value is still upheld and maintained which is found in everyday life of the local people. Local custom and tradition is still practiced through ceremonies and rituals which is characterised by thick Javanese culture. A common character of rural inhabitant in Indonesia especially for Javanese is mutual aid amongst society members. This also found in Merapi area where the tradition to assist each other can be found everywhere in the area. For instance: when a jeep driver has difficulties to find customers, other drivers who have already been booked can give the opportunities to their less fortunate colleagues. Also when one person has already started to provide a certain kind of business, he will not be allowed to enter other's occupation field. For instance: a person who run jeep lava tour business should not establish a trail rental provider. This effort is a local value to avoid business redundancy which in the end can yield a single powerful entrepreneur.

In terms of biophysical aspect according to Local Environmental Agency endangered species in disaster-prone conservation area is vanished by the last eruption in 2010. Those species are Gaultheria plant, three-coloured-panda orchid, castanopis fruit, Javan Eagle and Lovebird (Local Environmental Agency, 2012). The data shows a different opinion with that of the perception of respondents. This means that the change of environment is unnoticeable by the vast majority of visitors.

Direct observation also found that the numbers of monkey living in the area is decreasing with that of pre-eruption periods. Currently there are only around 150 long-tailed monkeys inhabiting in Kaliurang tourism spot whilst on the pre-eruption periods reached around

250 monkeys. However since the change of some environmental parameters were not noticeable except for researcher/scientist, most environmental parameter indicators are in good condition before and after the aftermath periods. For instance, water quality is as good and fresh as the period before the eruption and before the establishment of tourism object in this area. Another parameter example is soil quality. After the eruption, soil become noticeably more fertile because in one year post disaster events, the area turns from sea sand into green carpet

Figure 21. Condition few weeks after 2010 eruption (left) and current condition 2013 (right). (Source: Author)

Based on those results, albeit some parameters are responded differently by respondents and data from both secondary and direct observation, the positive result in shown is quite obvious especially in socio-cultural aspect and some biophysics aspects. Therefore, it can be concluded that tourism practices in disaster-prone conservation areas are able to show minimum environment impacts. This also means that fifth criterion is quite fulfilled.

Wrapping up discussion of ecotourism fulfilment analysis, the analysis shows that tourism practices in disaster-prone conservation areas fulfil four out of five of ideal ecotourism criteria. One criterion which fails to satisfy the ideal ecotourism criteria is Educational Tourism Products. To find out the underlying governance which shapes the ecotourism practices in disaster-prone conservation areas will be presented in the next sub-chapter.

4.2. Stakeholder Analysis

After completing the ecotourism fulfilment analysis we need to draw the system of governance underlying ecotourism practices in disaster-prone conservation areas. To do that, a stakeholder analysis is required. Based on the methodology of stakeholder analysis as mentioned in the previous chapter, the following section presents the result of the information extracted from

primary survey data collected through in-depth-interviews. The discussion will be divided into three sections consisting of three categories of stakeholder namely: Core, User and Complementary stakeholder.

4.2.1. Core Stakeholders

Core Stakeholders consist of key institutions which have legal authority of decision making process (Maryono et al., 2005) in disaster-prone areas. In this research, core stakeholders are identified based on its authority in imposing regulations the areas. According to Acts Number 41/1999 about Forestry article 10 states that as national park area, Mount Merapi National Park is under the jurisdiction of central government and the management is conducted by Mount Merapi National Park Agency. Therefore, the National Park Agency is included as one of core stakeholder managing the area. Furthermore, as this area is located in disaster-prone areas, local Disaster Management Agency is also in charge especially in a wary situation. Lastly, Tourism Agency is also a core actor in deciding policy in this area because they are in charge of all tourism practices in the regency. Therefore, in this category, core stakeholder can be distinguished between central government and local government. Below is presented the result of the analysis on each stakeholder based on parameters measured.

4.2.1.1. Institutional Interests

Core stakeholder is mainly the main actor in disaster prone conservation area because policies are formed and steered by this stakeholder and hence can directly impact the development in the area. Central government which is represented by the National Park Agency has a clear vision to "Establishing sustainability of Mount Merapi National Park area as a life support system and providing optimum benefit for the society" (BTNGM, 2010). Meanwhile Tourism Agency states its vision which is "Establishment of prosperous, dynamic and progressive civil society through conservation, culture and tourism sustainable development with concern on environment" (Local Culture & Tourism Agency, 2010). Finally Disaster Agency has stated its vision which is "Establishing a professional disaster management agency to create resilient communities in dealing with disaster" (BPBD, 2010). Examining those visions stated by key stakeholder in disaster-prone conservation areas, it is likely that all actors have likely similar interest to foster toward better civil society even though each institution has its own vision in materialising it. Amidst three institutions included as core stakeholders, it

is likely that Disaster Agency has more responsibility in managing disaster rather than to overcome or preparing societies from disaster. With regards to this, there are different interests in managing the disaster-prone conservation area between the National Park Agency, Tourism Agency, and Disaster Agency.

Even though they have different interests, all institutions have equal responsibility mandated by the law to each institution. For National Park Agency, the enactment of conservation area makes them have more flexibility to conduct management not only in utilisation zone where tourism practices are allowed but also in wilderness and core zone where the essence of conservation is applied and strictly protected for activities. The agency has also authority to issue ticket for visitors entering the national park.

Meanwhile, Tourism Agency also gains their benefit by collecting entrance tickets for tourist entering Merapi area. This makes visitors should pay various tickets to enter different spots in the Merapi area. This is due to the different management on each tourism spot even though each spot is located in adjacent with other tourism spots.

On the other hand, Disaster Agency has seen that the tourism practices in which a lot of people crowding the hazardous areas is seen as a challenge to prepare them when disaster occurs. Moreover, the agglomeration surrounding tourism objectives is seen as another challenge that should be taken into account. Therefore, this contributes to their different views on tourism/ecotourism.

To sum up, National Park Agency sees that ecotourism is important to be established in the area as mass tourism can endanger the existing ecosystem in the park. Meanwhile, Tourism Agency argues that mass-tourism is the one that should be developed because the regional revenue is highly depends on the numbers of tourist visiting the area. On the other hand, Disaster Agency which takes over as the main actor during disaster events acknowledges that the area is tourism destination and hence it is hard to move the activities away from the area and what they can propose is to prepare people when disaster occurs. Wrapping up this discussion on institutional interest, it is explained that the governance in disaster-prone conservation areas has different views on the management of the area.

4.2.1.2. Role of Institution

The share of power of key stakeholders in disaster-prone conservation area can be seen from its management boundaries. Merapi National Park Agency, as an institution fully in charge of national park area in the Merapi has strongest authority in decision making within their jurisdiction. Tourism Agency has more vague boundaries because even though national park (as the main tourism destination) lays in their regency's jurisdiction they cannot control tourism policy of the national park agency.

On the other hand, Disaster Management Agency can establish their activities during disaster events across other jurisdictions without a clear boundary of area which is restricted for any activities (such as core zone of national park). Instead, this institution can encompass other jurisdiction during the disaster events.

Examining those facts, it is undeniable that conflicts often occurs in the area because overlapping authority. For instance, around 2004 there was a dispute in ticket collections between National Park Agency and Tourism Agency during the handover from the old management (Tourism Agency / local government) to the new management (National Park Agency / central government) in which each institution issued its own ticket which makes visitors protest against this policy. Other conflicts are also found when a disaster strikes as National Park Agency changes function from conservational purposes into more disaster management function where they mainly focus on the area outside the national park.

4.2.1.3. Policy Formulation

In policy making processes, all institutions argue that each agency often hold a multilateral meeting involving other institutions when a policy is being formulated. However, in practice when strategic plan formulated overlaps with other institutions there is no explicit statement about cooperation with other institution which may joggle with their interests. Therefore an integrative plan and policy is not predominantly shown in the document instead a distinctly formulated plan is found. This made the policy is not synchronised between institutions. Not only between local and central government, but also amongst local institutions have a discreet plan which less collaborative statement.

Furthermore, unclear jurisdiction boundary is also found because each institution can overlap one another in terms of locational and situational boundaries. Even though there

is a regional spatial plan, the plan is formulated prior to big eruption in 2010 in which the affected area is not matched with current condition. Worse than this, strategic plan of each institution often mismatched with regional spatial plan. For instance in strategic plan from Disaster Management Agency which mandates to restrict any activities within dangerous distance from the crater but in national park plan the area is used for activities such as tourism

As a matter of fact, although core stakeholders are the main actors in disaster prone conservation area, seems that only the National Park Agency concerns a lot about ecotourism development compared with other institutions.

To conclude, as key stakeholders, it is likely that there is no agreement between key stakeholders to develop the area as ecotourism objects. However, the strongest power of stakeholder which is MMNPA has more concerned on the development of ecotourism compared with other key stakeholders.

4.2.2. User Stakeholders

This group of stakeholder consists of institutions which are directly affected by policy (policy users) in the area (Maryono et al., 2005). Based on that, there are two stakeholders included in this category which are local communities represented by two communities managing trail rental services (Gadung Melati Trail Community) and local motorcycle taxi services; a private company (PT Anindya) which have been permitted to conduct tourism activities in the area; and tourists visiting this area. Below is presented the result of the analysis on each stakeholder based on parameters measured.

4.2.2.1. Institutional Interests

To start with, this category of stakeholder consisting of private companies, local communities and tourists/visitors mainly conducts their activities independently. Therefore, there is no clear vision and mission neither is stated nor written in documents except for private companies.

Based on the interview on local communities, they established organisations to provide goods and services for tourists to substitute their loss of income as stock farmers due to eruption in 2010. Other members of the group also said that the organisation have a vision to reduce unemployment.

Meanwhile according private company views, their vision and mission is clearly stated which is "become a tough, independent and professional company which contributes to regional development". They argue that all stakeholders can gain benefit from tourism activities in the area. The policy on disaster-prone conservation area also favours their interests in developing the area as one of tourism objects.

From tourist perspectives, their main goal is to fulfil recreational needs and spending their money on experience, foods and souvenirs. In facts, visitors are the first trigger of tourism activities in the area where there is a demand of tourism service and economic demands from local communities.

Albeit economic reasons binding these stakeholders, there are different views on how ecotourism practices are actuated in the Merapi area between local communities and private companies. Local communities tend to have more involvement in developing the area as tourism/ecotourism objects whilst the private company is eager to manage and develop their product with their own interests. Reflecting on ideal ecotourism criteria, local communities tend to be more suitable with the ecotourism principles compared with that of the private companies.

Meanwhile, visitors view that establishing tourism in an uncommon and dangerous condition provokes adventure passion amongst the travellers. Therefore they are satisfied with the policy in the establishment of tourism objects in disaster-prone conservation areas.

Despite there are differences on how each stakeholder actualising their view on succeeding tourism practices, it can be concluded that user stakeholders are all agree that disaster-prone conservation area can be developed for tourism/ecotourism destination.

4.2.2.2. Role of Institution

First of all, as a user of the policy, this group of stakeholder identifies their role in disaster-prone conservation areas mainly as an object of policy products. This is because even though there are some public involvements in policy making, not all applied as what these stakeholders want. For instance, National Board for Disaster Management releases a hazard map containing affected areas when eruption occurs.
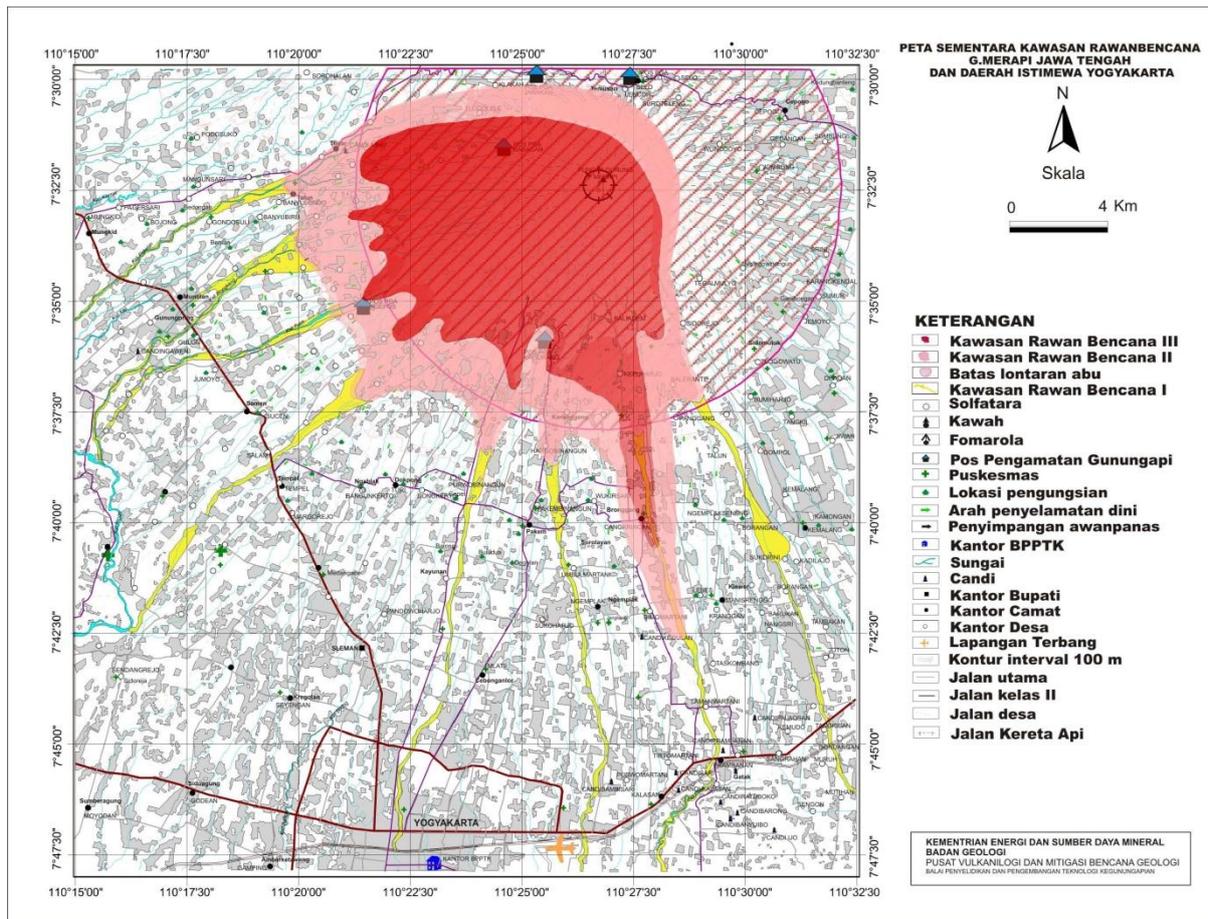
Figure 22. Map of Merapi Disaster-Prone Areas. Source: BNPB (2010)

In this map, areas exposed to high risks of disaster (red and pink coloured) are not allowed for any activities including tourism services. In fact, the area is currently serving as tourism spot, residential area, office and commerce. Even though during the mapping process through public hearing, all of these existing functions will be accommodated on the map (by not colouring it red) but it does not happen. Therefore, user stakeholder is in dilemma whether they obey the rule and lose their businesses or disobey it to survive their businesses. I argue that the latter will be mostly chosen. This is because the application of the rules is also not as strict as they thought and hence letting them to earn money in the hazardous areas.

Moreover, the loose of regulation enforcement also makes visitors enjoy the area freely even for climbing to the top of the mountains is possible. Reflecting on the fact mentioned, it is remarked that user stakeholders have lower power compared with that of core stakeholders.

Second, in terms of role between safe and wary situation, user stakeholders understood that they will only conduct their activities mainly during safe period, even though the period post disaster often generates more incomes but it is incomparable with the high risk they should bear.

Third, conflicts amongst members of institutions rarely happens. This is argued that similar economic reasons once again unite different parties with different perspectives. If there is a conflict that can be mentioned, it is when different groups of local communities issuing tickets without integration with one and another. It only occurs in the beginning of this lava tour period when the communities are not neatly managed as todays.

Wrapping up this section, role of user stakeholder in disaster-prone conservation area is mainly low in terms of power distribution in governance of ecotourism system. They state their role as mainly as object even though actually they are the main actor in the field.

4.2.2.3. Policy Formulation

In policy making processes, user stakeholder sees that there is still non-integrated policy making instead of integrated one. They identify that each institution can impose policy without an obligation to have opinions from other institutions. It is reflected from the statement of the user stakeholder representatives saying that there are no strong efforts from government in planning and developing the area toward better tourism/ecotourism practices.

User stakeholders argue that aside from fragmented policies, most of them are project-based with less concern on long-term goals. This makes user stakeholders mostly do their businesses in self-organisation form of management. However, since the delineation of each management's role is also quite biased, tourists often feel irritated because there are too many tickets they should pay in order to access certain areas.

Furthermore, user stakeholders see that with the current institutional arrangement, overlapped interests within core stakeholders might also occur. For instance, in terms of deciding safe zone in disaster-prone conservation zones including how the tourism should be conducted, conflict of interests amongst governmental parties is very likely to

occur. Therefore, as a user of the policy, user stakeholders see that there is still no document as main reference in which they can refers to conduct ecotourism practices in disaster-prone conservation areas.

Overall, all user stakeholder members agree that they support ecotourism development in the area as it can give more economic benefits for service vendors as well as social satisfaction for visitors.

4.2.3. Complementary Stakeholders

Complementary stakeholders consist of institutions which are not directly affected nor affecting the policy in the area (Maryono et al., 2005). There are three institutions included in this category which are Forestry Agency, Mining Agency, and Planning Agency. Albeit all of them are local government agencies but all are located outside disaster-prone conservation zones and hence do not have direct responsibility of the area.

Forestry Agency is considered as complementary stakeholder because even though it conducts management in protected forest located in the border of national park, its policy is not directly affected nor affecting the management of disaster-prone conservation area. Meanwhile, Mining Agency is responsible for all mining activities in the region. All mining activities are located outside the disaster-prone conservation area and mostly are sand quarries along the river. Planning Agency has a task to construct planning for the whole regional development. Albeit all institutions have an impact of policy formulation in disaster-prone areas, their roles are not as decisive as core stakeholders. Below is presented the result of analysis on each member of this stakeholder based on parameters measured.

4.2.3.1. Institutional Interests

Even though complementary stakeholders will not likely have a direct influence on the development of disaster-prone conservation area, the policies formed can indirectly affect the development of the area. Forestry Agency for instance, as institution in charge of protected forest located in the outer border of national park forest can also have an impact on national park itself. This institution states its vision as "Establishment of agricultural, fishery and forestry society which is independent, competitive and prosperous" (AFFA, 2010). Since the protected forest is located in adjacent with national

park, a decision in the protected forest can influence the condition of the national park and hence also indirectly influence the tourism practices in the national park.

Meanwhile Mining Agency has their vision to "Establish management of water resources, energy and mineral with concern on environmental issues and community empowerment" (Water Resources, Energy and Mineral Agency, 2010). Lastly, Planning Agency has a vision to "establishing development realisable and visionary planning" (Bappeda, 2010). This agency is responsible for all developments within regions and is very likely have an impact on the disaster-prone conservation area also even though through indirect process.

Examining the vision of three stakeholder members, society and community involvement is an important part of the development. Even though there are differences in vision, but the essence is quite similar which pursue a workable policy with collaboration with communities toward better civil society.

These stakeholder gains benefit indirectly by imposing policy on each sector. For instance, Mining Agency can empower local people and small businesses by harnessing the potent of mineral sources in the foot of the Merapi Mountain to collect sands which have the highest quality amongst other sands in the island (Water Resources, Energy and Mineral Agency, 2010). Another instance is that Forestry Agency can gain more protections on their forest as it is located in adjacent with national park area.

In terms of ecotourism concern, all stakeholders see that ecotourism can give benefit not only for institution involved but also for societies. This is not only reflected from their missions where society and community empowerment is important but also from the programmes which directly touch local communities.

In practice, all stakeholders encourage the involvement and empowerment of local communities. To support this opinion, there are many programmes in empowering local people for instance, Forestry Agency has a cattle protection programme to protect all cows and sheep which died during eruption. This effort has increased the participation of local people in growing cattle in the Merapi region which yields the increasing milk production up to 12.19% and beef production up to 2.51% (Sleman Forestry Agency, 2013).

To sum up, complementary stakeholder in disaster-prone conservation areas are agree that the establishment of tourism areas especially ecotourism in disaster prone conservation zone can give benefit not only for local people through some empowerment programmes but also for the institution interests.

4.2.3.2. Role of Institution

Complementary stakeholders in disaster-prone conservation area share different degree of power in affecting the policy in disaster prone-conservation area. As evidence of this, Planning Agency has more power to conduct spatial planning on every aspect on the region. However, the plan formulated is not as detailed as what other agencies translate. Also, since the spatial plan constructed cannot encompass the jurisdiction of core stakeholders they cannot directly affect the development of disaster-prone conservation area. Notwithstanding the bigger role of Planning Agency in conducting strategic and spatial planning, its authority is limited by the area managed by central government such as the national park.

Even though institutions in complementary stakeholder has no overlapping interests, some disputes are inevitable, for instance between Mining Agency and the National Park Agency. Mining Agency ever issues sand mining permit in the area where it is very close to the border of the National Park. Even though it is legal and located outside the conservation area, the effects of mining activities can endanger the sustainability of biodiversity and ecotourism practices in the national park area.

Another instance is that new proposed spatial plan arranged by Planning Agency is potential to trigger a conflict. This is because in the new proposed spatial plan, all regions in affected areas in hazardous zones will be converted into protected forest and local communities should be relocated in safer places. To sum up, even though the role of complementary stakeholders is not as strong as core stakeholders in deciding ecotourism practices in the disaster prone conservation area, their decisions are important as it can trigger multiplier effects which in the end also influences the ecotourism practices.

4.2.3.3. Policy Formulation

In formulating policy in the disaster prone conservation area, all complementary stakeholders said that routine discussions and meetings are often held. However, after crosschecking the strategic plan and practices in the field, some unsynchronised policies

are found. For instance, when Planning Agency proposes the conversion of affected areas into protected forest, the data used by Planning Agency is not match with the data from Forestry Agency. This shows that there is no synchronisation of data during policy making amidst these institutions and in the future it is very likely to have a dispute.

The difference in data synchronisation also often happen between other stakeholders. For instance, Mining Agency also often has a mismatch data with National Park Agency when they issue mining permit which according to their data is located far away from National Park area but according to the National Park Agency is very close to conservation area.

Aside from that, local spatial plan also looks rigid especially to deal with a shock event such as disaster. This is because the plan is not adaptive to the dynamic natural and social systems. Every change, which sometimes is required, will be confronted with the existing spatial plan. For instance, the need to change the status of land function from residential areas into new tourism area as the effect of disaster will require a very long process and often fail in the middle of the process.

Those instances show that policy formulation is often ineffective including the policy of ecotourism development in disaster prone conservation area. Because of complementary stakeholders are not possessing direct power to control the area, their policies will impact indirectly to the development of ecotourism in the Merapi hazardous conservation area.

To sum up, complementary stakeholders will both influence and be influenced by the development of ecotourism in the Merapi disaster prone conservation area. This relation can be negative or positive for the development of the ecotourism practices. Aside from that, ineffective policy formulation problem will need to be solved in order to have a more future-proof plan especially on ecotourism development.

4.3. Conclusion

After undergoing two analyses on tourism practices in disaster-prone conservation areas which is ecotourism fulfilment and stakeholder analysis some preliminary remarks can be formed. First, ecotourism practices in disaster prone conservation areas are currently unsatisfactory to meet ideal ecotourism criteria. There is insufficiency in fulfilling the ideal ecotourism criteria

which was formulated based on the perspective of local people and visitors, and also taken from documents and direct observation.

Second, stakeholder analysis succeeds to analyse that there are three polarisations of stakeholders of ecotourism governance in disaster-prone conservation areas. Those three stakeholders share different degrees of power, influence and responsibility in conducting ecotourism practices in disaster-prone conservation areas.

To find out more about the mechanism of governance in influencing ecotourism practices, chapter V will present the discussion.

V. SYNTHESIS AND DISCUSSION

This chapter is intended to address the objectives stated in the chapter I. In general, this chapter contains a synthesis in response of research questions of this research. The chapter will be divided on three parts. First, synthesis about governance of ecotourism will be drawn. Second, degree of responsibility in managing tourism practices in hazardous areas will be discussed. In the last part, the discussion will be wrapped up by addressing research questions of this research.

5.1. Governance of Ecotourism in the Merapi Disaster Prone Conservation Area

In this section, results of the previous chapter will be the base for discussing the governance of ecotourism in disaster-prone conservation area. The analysis shows that there are three polarisations of governance in disaster-prone conservation area namely Core Stakeholder, User Stakeholder and Complimentary Stakeholder.

In the analysis it is shown that the term ecotourism is already understood by primary stakeholders who consist of local communities, visitors and private companies. This is marked by high numbers of correct answer on ecotourism definition. However, not all stakeholders understand that one of the purposes of ecotourism in the area is to support conservation interests. Amongst key stakeholders, both the National Park Agency and Tourism Agency states that the importance of sustainability and conservation in their visions whilst Disaster Agency only states resilient communities. The difference of vision will also reflect on the way organisation manages in the area. As there is no similar vision on how the area is managed, it will lead in to self-contained type of governance meaning that each party can decide their own path independently (Marks & Hooghe, 2003). This will result in lack of concern on conservational purpose of tourism in the area.

5.1.1. Communication

Another finding on the governance of ecotourism is the lack of quality on communication and coordination amongst different stakeholders. As there is no direct command line between the National Park Agency (central government) and other local agencies there is no direct responsibility between them. The National Park Agency with its own authority on the conservation area is able to unfollow local policies which is assumed to have negative impacts on the park, and also on the other way around.

This also happens to many institutions in Indonesia after the decentralisation period, in which locally elected governors/mayors have different visions and / or policies with the central government (Ministry). In disaster prone conservation area, ineffective communication also occurs, however active role of the National Park Agency to communicate with the local government has reduced the communication gaps as found in many other areas in Indonesia. To be actively involved in communication is an important attribute for national park agencies in Indonesia because they will conduct the management in multi-layered governmental areas (local and central governments) where the possibility of conflict is higher.

Conflicts also happen in DPCA where many interests jumble. The study shows that primary stakeholders ever have a dispute with key stakeholders. For instance, during the enactment of the area as national park in 2004 there were protests from local communities who feel threaten because it would not be allowed to access the forest once it is enacted as a protected area. Even though this instance finally can be accommodated in national park zoning system, the lack of campaign and communication of the government can result in unintended situation. Not only does the conflict occur against government, but it also happens between governmental agencies. The relation and communication amongst parties in ecotourism governance of DPCA can be found on the following figure.
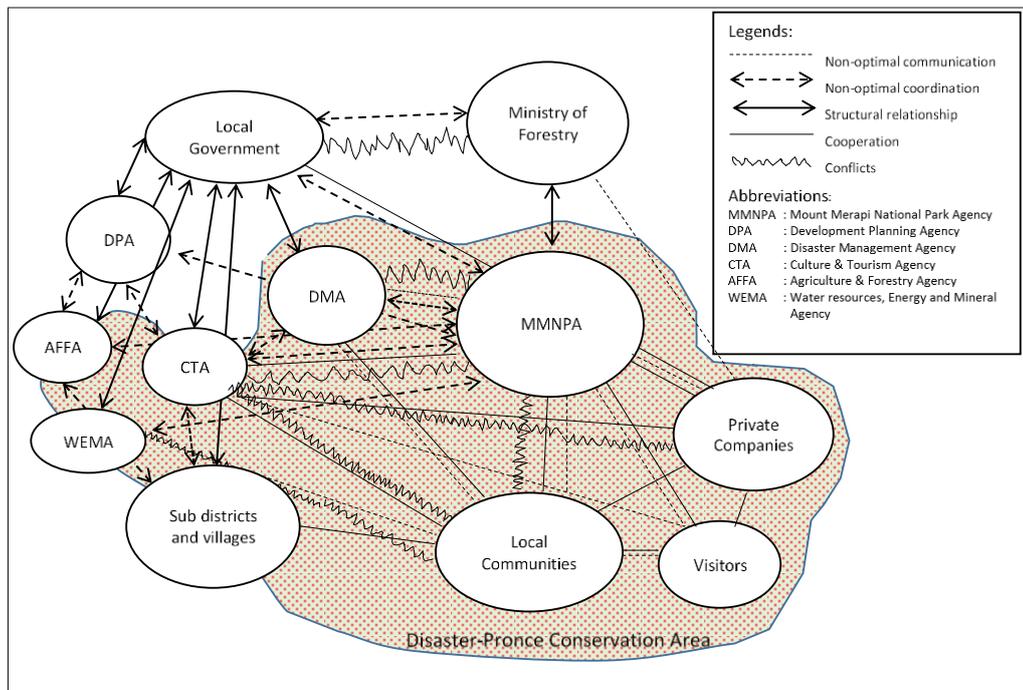
Figure 23. Ecotourism Governance map in Disaster-Prone Conservation Areas (Source: Author)

The map shows the relationship amongst different institutions in disaster-prone conservation area in which there are many non-optimum communications. This results in some conflicts which occur between parties. This also affects the fulfilment of ideal criteria of ecotourism as there is not sufficient communication amongst different parties. Moreover, multi-layered government aggravates this condition because indirect command line between central government agencies and local government agencies will not the necessity to comply on other's policies.

On top of that, there will not be a mutual mission in developing the area unless there is a mediator to link between different layers of government. Long dispute between governmental bodies will result in the self-organising type of management. Notwithstanding the role of government in developing the area, but based on the analysis most tourism participations are initiated by local communities. The negative effects of this are the sprawling and unorganised tourism practises in the area in which definitely needs an improvement.

5.1.2. Failing on Fulfilment of Educational Products

As stated in the previous chapter, one of the criteria of ideal ecotourism cannot be exhibited in the ecotourism fulfilment analysis. Albeit vast majority of stakeholders understood the ecotourism term, not many of them sees the importance of educational tourism attribute as a component of ecotourism. They are mostly seeing the area solely as a recreational place to visit.

In the past, the purpose of people to go to the Merapi Mountain was dominated by pilgrimage which is embedded in Javanese culture assuming that the mountain is the source of power. Even after the 2010 catastrophe period and tourism activities began to flourish again, some people still see pilgrimage as an important purpose. This condition cannot be separated by the eccentric figure of Merapi caretaker "Mbah Maridjan" who is hailed as the true caretaker (in spiritual) to guard the mountain until his death when the pyroclastic flows swapped his house. The ruins of his house are still attracting many visitors until today.

The underlying reason of less educational products in ecotourism is the lack of ecotourism campaign which is not only viewing tourism as a matter of amusement and recreation practices, but also tourism practices containing educational message. Core stakeholders

which currently actively campaigning it is only the National Park Agency in which they have conservative cadre to spread the message such as educational products on ecotourism. Meanwhile, the importance of educational products is not yet understood by user stakeholders. Be it tourists/visitors, local people and private companies.

Figure 24. Ruins of the Spiritual Mountain Caretaker's House (Source: Author)

This shows that there is a missing link between core and user stakeholders on how tourism practices are packed in more informative way. The gap between what user stakeholders want and the strategy used by core stakeholders in promoting the educational purpose needs to be reduced. For instance, tourist information albeit is existed on the area does not give a comprehensive understanding such as the history of the area, livelihood of local people, educational message, and what the impacts of disasters in the development of the area.

Moreover, because of tourism practices in the area are mostly self-organisation by local communities, educational aspect is often neglected. The lack of government concerning this matter makes visitors are dominated by less experienced tourists. Aside from that, as mentioned in the previous chapter, the Merapi Volcano Museum serves as main educative tourism destination. This will reduce the amount of tourists interesting in more educative products and leaving non experienced travellers go to the national park.

Meanwhile non-governmental organisations which concern on ecotourism development in disaster prone conservation is not so prominent in the area. Even so, their programmes

indirectly affect the quality of ecotourism practices in the Merapi area. Most of environmental NGOs focus on the preservation of natural habitat and biodiversity. Their programmes (with cooperation with the National Park Agency) such as Birding Competition and Bird Tour (Kutilang, 2010) will likely help to convey the message of educative tourism product in the area.

5.1.3. Politics

It is undeniable that politic plays a major role in a decentralised democratic country such as Indonesia. In Indonesia, all of heads of local agencies are chosen directly by the governor/regent/mayor. In Sleman Regency where this study was conducted, the Regent has the absolute power to choose the head of local agencies. As an impact of direct election, the Regent will likely choose the ones who have the same political views as him. This also occurs in the area in which many positions are occupied by the officer who have political proximity with the leading regent's parties.

In disaster-prone conservation area, not only local governments are involved but also other layers of government are responsible in managing the area. The difference in political view is potential to divert the aim of sustainable tourism development. As evidence of this, the spatial and strategic plan cannot be synchronised between multi-levels of government (local-provincial-national). Even though the regulation states that the plan should be scrutinised by the upper level of government layers, many plans are executed without communication and consultation from the provincial/ministry level due to the stronger political position of the local government's leaders.

Furthermore, because the ruling leaders have only five-year period of mandate, not many of them formulate a long-term plan nor executing long-term projects. In the governance of ecotourism, this tendency also comes up when many planning documents are regularly changed in accordance with the change of leaders. This makes the plan is inconsistently applied and hence will reduce the ability to reach ideal ecotourism criteria.

Not only in local government is this occurrence found, but also in central government when a new minister is appointed the planning and programmes will likely change according to the minister views. This also affects the strategic planning and programmes of the extended ministerial bodies such as Mount Merapi National Park Agency as an extension of Ministry of Forestry in the area.

Those political vicissitudes will directly affect the management of ecotourism in the Merapi area. A clear evidence of this is by examining the amount of budget allocated on tourism development compared with other programmes. Currently, the National Park budgets are still focused on the protection of biodiversity including forest patrol and forest fire prevention amounting of 30% budgets of the park which totals at around €912 thousand per year in 2013 (TNGM, 2013). For developing ecotourism and other environment services the park allocates 25% of total budgets whilst the biggest amount 42% is for routine expenses including employee salaries and honorarium. This is also influenced by political reasons because officials who propose certain programmes can influence the amount of budget to be proposed by the head of the park to the central office. More budgets on ecotourism will show that the institution concerns more on ecotourism rather than other instances and *vice versa*. Therefore, political aspect can also play a part in determining degree of governance's concern on the tourism practices in disaster prone conservation areas.

5.1.4. Reactive rather than proactive

Currently role of government in the ecotourism governance in the Merapi area tends to be reactive rather than pro-active. This can be identified through interviews and planning documents as they start to act after new circumstances occur. For instance, as mentioned in the previous chapter, ecotourism practices in post-disaster places are initiated by the interaction between visitors and local communities rather than a programme constructed by governments. This results in uncoordinated and unsynchronised tourism practices during the early period after disaster as they were not accommodated in planning documents yet. Prior to disaster, there are no programme to assign the current emerging tourism sites as the tourism objects. Albeit later on the government reacts on this tourism practices but since the establishment was firstly made by communities, the government had a difficulty to issue levies. Although currently Tourism Agency as local government managing tourism practices in the region has collaborated with local people, there had been a conflict in this levy issue.

Similar example is also found in the national park area where the main attraction is diminished which is the waterfall because the water is stopped due to some environmental changes in natural ecosystems after the eruption in 2010. All visitor walkways lead to this waterfall area, and since the main attraction is diminished the pathways lead to a spot which

is not attractive anymore. This is not anticipated in the planning documents and only later the management finally find a new attraction which is volcano observation spot to substitute the former attraction.

Another instance is when disaster occurs; government has difficulty to manage the evacuees out of the area as there is not enough space, road and mode of transport in the area to get out as soon as possible. This results on casualties which always found in every disaster event.

To overcome those problems, an adaptive approach is needed in the plan. Adaptive planning will give flexible approach when dealing with the shock events such as disaster. In disaster-prone areas where shock events are more likely to occur, an adaptive plan will be more future-proof rather than a rigid plan. Not only will it favour for the development of ecotourism in disaster-prone areas, but also it can reduce the number of death toll in every disaster period. An adaptive plan will not be effective without a good communication and collaboration amongst all stakeholders involved in managing disaster-prone and conservation areas. As this entire system is interdependent, it requires mutual and strong willingness from one or more stakeholders to start to change the condition and affects the whole system chain to be more communicative, collaborative and adaptive.

5.2. Degree of Responsibility of Governance in the Merapi disaster-prone conservation area

Another thing which is important to be discussed is how the governance responsible for the risks of tourism practices in disaster-prone areas. Being located in disaster-prone area, tourism practices in Merapi Volcano has higher degree of risk compared with tourism practices in non-hazardous area. However since the risk itself is a part of the tourism attraction in the area, the organisation of risk should be wisely implemented.

Based on the respondent's opinion most visitors (95%) tend to flee from the area when sudden emergency situation happens. Only 1% of respondents willing to hide on safety-bunker. This shows that most visitors do not want to rely their life on the facility in the disaster-prone areas. In terms of disaster management facilities, currently, there are some evacuation route signposts to guide evacuees into assemble areas which is football field or other vast areas. Another facility is safety bunker. These bunkers are built by local government and several bunkers which are self-funded by local residents (Putrohari, 2010). However on of this facility failed to

protect the evacuees during 2006's eruption when two escaping local farmers were dead burnt inside this protection building.

Figure. 25. Self-Protection Bunker Facility before (left) and after (right) 2006 eruption.
Source: Putrohari (2010)

After the latest eruption in 2010 the bunker is totally buried and currently is being excavated for research and tourism purposes (vivanews, 2013).

Figure. 26. Evacuation signpost (left: Source, Author) and bunker after re-excavated (Upper right and bottom right). Source: vivanews (2013)

Institutionally, all of disaster management is handled by Disaster Management Agency under coordination of National Board of Disaster Management. Both Tourism Agency and National Park Agency do not have disaster mitigation programmes in their strategic plan even though disaster occurs periodically. The absence of disaster crisis sense amongst stakeholders in the area has resulted to unpreparedness actions during the shock events and the transformation after it.

Another problem is when the National Board of Disaster Management issues disaster mitigation plan including Merapi hazard map. In the latest version of the plan[2], the area where currently serves as tourism objects along with some residential places are prohibited for any activities because they are located in the first inner ring of disaster-prone areas. This makes a dilemma between all stakeholders which have activities in disaster-prone areas especially tourism because on one hand according to the plan, their activities are prohibited whilst on the other hand, local government and local communities requires revenue gains from tourism practices in the area. Up to now, the disputes about this dilemma are still on-going.

Therefore, in dealing with disaster, the stakeholder who has the primary role is Disaster Agency. Aside from that, some self-organised disaster managements also exist which are initiated by local residents. Local farmers build their own protection bunkers near their farm fields. However, in terms of degree of responsibility, the Disaster Agency as core stakeholder plays the most important role during disaster events, whilst other institutions support from emergency phase until reconstruction processes.

5.3. Addressing the Research Questions and Conclusions

Ecotourism in disaster-prone conservation area is not a simple model of ecotourism government. There are many interests laid at the same place which makes the coordination and communication become difficult. Moreover the existence of multi-layered governance in the area which contains multi-level government, multi-stakeholders and different types of social status of societies made the effort to realise ideal ecotourism practices become harder. One thing that can be underlined is the need to enhance the quality of communication between all of the institutions involved. Lack of communication is likely make there is no integrated plan amongst stakeholder in the area to sustain and develop the tourism practices even better. On top of that, to increase the quality of communication is required. This includes the synchronisation of data, finding mutual solution and anticipating mutual problems. Moreover, since the area is located in routine disaster area, it essentially requires a resilient and adaptive plan to deal with sudden occasion which can occur anytime.

Ideal Criteria = Panacea?

Based on the analysis in the previous chapter, ecotourism practices in the Merapi National Park as a disaster prone conservation area is not sufficient to meet ideal ecotourism criteria. Lack of

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[2] See Figure 21. Map of Merapi Disaster-Prone Areas. p.59

educational tourism products is note as the cause of the failure to meet ideal ecotourism criteria. Another criterion which is not fully satisfied is the minimum environmental impacts which only quite fulfil the ideal ecotourism criteria.

This situation can be because of two things. First, the tourism practiced in the Merapi area is indeed unable to qualify the minimum prerequisite of ideal ecotourism. Second, the ideal principles of ecotourism stated in many documents cannot be applied in extreme condition of tourism such as tourism in disaster-prone conservation area. This is because the condition of the Merapi disaster-prone area cannot be considered as a prevalent, whilst the ideal criteria itself is constructed based on the experience of existing ecotourism practices which popularly are in non-disastrous zones. For instance, measuring minimum environmental impacts in disaster-prone area where cyclic disaster events occur most of the time will result in inadequacy. This is not because the tourism practices harm the environment, but instead the nature itself induces the quality of environment which results on increasing or decreasing environmental quality.

Furthermore, ideal criteria of ecotourism requires to be redefined to suit for various conditions including disaster-prone and conservation areas. This research contributes to the literature as an example how the tourism practices in disaster-prone conservation area is compared with the existing ideal ecotourism criteria. In constructing ideal ecotourism criteria which can be used in broader conditions, only by using this research will not be a robust standard without findings from other disaster-prone conservation areas as a comparison. Hence, collaborating various findings on the fulfilment of ecotourism in various places in the world will increase the quality of ideal ecotourism criteria itself. Not until that stage, the ideal ecotourism criteria will not be a panacea to assess ecotourism practices.

Governance underlying ecotourism practices
Regarding with governance of ecotourism in disaster-prone areas, there are two important stakeholders which support tourism practices toward the fulfilment ideal ecotourism criteria. They are local communities and the National Park Agency. On one hand, local communities are important in the ecotourism practices as they are the main actors in succeeding ideal ecotourism practices and also gaining benefits both economically and socially. On the other hand, the National Park Agency is important to coordinate and facilitate the tourism practices in the disaster-prone conservation area to meet ideal ecotourism practices. The National Park

Agency is responsible to increase local economic and social development through sustainable tourism practices which also reduce environmental degradation due to mass tourism.

Other stakeholders mostly act indifferently to the ecotourism practices in DPCA. CTA as tourism agency only acts after some tourism activities emerge in their area in which they finally build gate and levies tickets to the visitors. However, amidst all of the stakeholders, interaction both from tourists and local communities are the initiator of tourism activities which generates economic activities along with tourism practices. Being located in democratic country another interesting aspect is political aspect. This aspect cannot be neglected as an important part within the governance in disaster-prone conservation area, because the supportiveness of governance in conducting ecotourism management also relies on which direction the political wind blows. Hence, beside merely focuses on technical aspect, political aspect is important to engage in governance of ecotourism in disaster-prone conservation areas.

Another important finding is that the governance of disaster-prone conservation areas still solely constructs a reactive planning rather than a pro-active planning. This means the level of adaptivity is not satisfactory to implement ideal ecotourism practices especially in disaster prone areas where disasters happen in continuous periods. It is doubtful if reactive approach is still practiced, sustainability of ecotourism would not be achieved. This is because reactive planning tends to have short-term period rather than a long term sustainability goal. Therefore, more adaptive approach management is required to deal with uncertain events such as sudden disasters, changes in political situation, new tourism phenomenon, new level of tourist experience, *et cetera.*

To sum up, this chapter will end on the answering of research questions as what stated above. The following chapter which is the last part of this research will be the conclusions and recommendations. All of objectives and recommendations will be wrapped up in that chapter.

5.4. Reflection

This paper is intended to measure the tourism practices in the Merapi Area which is quite unique compared with other tourism sites because it expose to routine disaster events and is also located in conservation area. Ecotourism principles which largely determined as ideal ecotourism criteria are used for a guidance to measure the ecotourism practices in the area. However since those criteria were built from ideal condition and absence in including ecotourism practices in non-ideal condition, this research will provide a finding about it. Based

on the discussion, the failure of fulfilling conventional ideal ecotourism criteria does not always means that the tourism practices are not match with ideal ecotourism criteria but rather the range of criteria is too narrow. For instance, the limited criteria of ideal ecotourism hardly accommodates the tourism practices in disaster-areas where most area is highly impacted by the disasters.

Reflecting on that, it is necessary to develop a more adaptive criteria in which not only favour the development of new emergence ecotourism practices and types, but will also enrich the debate on ecotourism literatures.

Governance of ecotourism also determines how the ecotourism is practiced in the area, and therefore it contributes to the fulfilment of ideal ecotourism criteria. In the multi-interests situation like disaster-prone conservation area, adaptive governance is necessarily demanded. This is especially in the new democratic era such as Indonesia where uncertainty is bigger than mature democratic countries, there will be a lot of changes in regulations, public awareness, and political systems which needs a flexibility of governance to deal with that changes.

VI. CONCLUSIONS AND RECOMMENDATIONS

Having all of the debate in the fulfilment of ecotourism and its underlying governance in disaster-prone conservation areas, some concluding remarks and recommendations can be proposed which are:

1. Ecotourism practices in disaster-prone conservation areas are not sufficient to fulfil the ideal ecotourism criteria.

2. Ecotourism practices in the hazardous areas where routine disasters occur, the role of disaster management agency is prominent to mitigate the risks during emergency and reconstruction process. Nevertheless, the role of local communities as self-organising entities in dealing with risks during tourism practices in disaster-prone conservation areas is also substantial.

3. Governance of ecotourism in disaster-prone conservation areas is undeniably essential to determine the ecotourism practices to meet ideal ecotourism criteria. Not only in technical aspects, but also in political and social aspects the ideal ecotourism are shaped through the practices of each component on the governance of ecotourism in disaster-prone conservation areas. The importance of communication, cooperation and collaboration amongst institutions in disaster-prone conservation areas will likely determine the quality of ecotourism.

4. Merapi case provides a lesson for managing ecotourism practices in the routine disastrous areas where consistent and comprehensive planning is essentially required. This will not occur without strong attention from all stakeholders involved. Leaders from each institution should have long term vision in developing the area as ecotourism destination toward better management and ideal criteria. First, a collaborative and communicative planning amongst all stakeholders involved should be strengthened. This is due to the intertwined relations between stakeholders and different kinds of interests are needed to be communicated and cooperated. Only with mutual relationship through active communication the ecotourism in disaster-prone conservation areas can be developed toward ideal ecotourism. Second, engaging on political aspect is an essential outlook as shown in democratic countries; many decisions are formulated and executed based on political argument. It will require additional attributes from the

society representatives, managers and government leaders to identify political agenda slipstreamed within planning processes. And finally, preparing to have adaptive planning approach is also essential to deal with uncertain events such as disaster. Disaster events experienced in the disaster-prone conservation area should be a note to prepare more adaptive planning approach. Only with more adaptive governance of ecotourism in disaster prone conservation areas, the effects of uncertain events can be minimised and managed effectively.

5. Ideal criteria of ecotourism is required to be redefined by incorporating the experience from extreme and unique conditions of places such as disaster-prone conservation area. By doing so, the criteria of ecotourism can be used in a broader condition. This does not mean to reduce the quality of ideal ecotourism criteria by accommodating insufficient tourism practices, but rather to have a more robust standard to define the ideal ecotourism criteria for various places in the world.

6. Governance specification in managing ecotourism in such complex situation such as disaster-prone conservation areas requires tougher and better managed stakeholders compared with other governance in less complex situation. To sum up, based on the discussion on the ecotourism governance in disaster-prone conservation areas, some key specifications of governance can be underlined as follows:

- Located in the multi-levels and multi-scalar institutional interests, ecotourism governance in disaster-prone conservation areas should implement collaborative approaches with all stakeholders involved in order to have more effective management.

- Communicative turn is the key to start to collaborate amongst all of the stakeholders involved and hence it should take precedence over technical rationale.

- Being adaptive is important because the business is not only to manage tourism practices in the area, but also the fact that risks of disaster overshadows all activities in the area. In this stance it demands more pro-active programmes to prepare the societies for disaster events rather than to react after disaster occurs which likely increases the disaster risks.

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Appendixes

QUESTIONNAIRE: ECOTOURISM IN DISASTER-PRONE CONSERVATION
AREA AND ITS UNDERLYING GOVERNANCE: A CASE STUDY IN MOUNT
MERAPI NATIONAL PARK

**rijksuniversiteit
groningen**
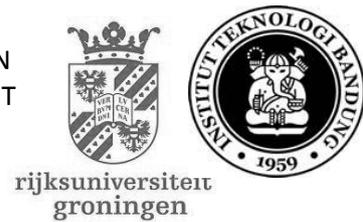
Date of Survey   :
No Respondent   :
Location   :
Responden Name   :

A genuine answer is greatly appreciated and respondent's identity will not be published

I. Natural resources utilisation for conservation
Understanding about ecotourism and goals of ecotourism development

1. Have you known about the term ecotourism / nature tourism?
   A. Yes
   B. No

2. If you have, what is ecotourism then?
   A. A nature tourism, culture supports conservation
   B. A tourism which brings economic benefit to the conservation areas and local people
   C. A tourism which intends to educate about nature and how to preserve it
   D. A B and C correct
   E. Don't know

3. Do you know where is this ecotourism practice done?
   A. Mount Merapi National Park Area
   B. Outside Mount Merapi National Park Area
   C. Don't know

4. What goal does ecotourism development pursue?
   A. Introduction to nature and education of environment for tourists
   B. Conservation and local society empowerment
   C. Increase participation of stakeholders
   D. Source of income for conservation area
   E. No information
   F. Others.
      Mentions!..

II.   Local Participation:
Society Characteristic, Level of Participation, Initiative to participate in ecotourism development

5. What do you know about original character of local society in this area (Merapi slope)? (can be answered more than 1)
   A. Hospitable
   B. Diligent and tenacious
   C. Not easily discouraged
   D. Friendly and harmonious
   E. Mutual aid
   F. Pessimistic

G. Idler
H. Coward
I. Individualistic

6. Have you found those characteristics in this area?
Yes/No

7. Do you think local people are involved in the development of ecotourism in this region? Yes/No. How do you know that?
   A. Products sold in kiosks (food and beverages, clothings, services)
   B. Explanation from local merchant, local guide and service providers.
   C. Information from the media
   D. Products' brand

8. In your opinion, which party has the most substantial initiative to manage the ecotourism in this area?
   A. Society / Local people
   B. Government
   C. Private
   D. Don't know

III. Elements of education in tourism products:
Tourism practices, Aims of travel and Perception of tourism products

9. What is the purpose of your coming here?
   A. Recreation (photography, camping, hiking, culinary)
   B. Witness rare nature phenomenon (education/observation)
   C. Research
   D. Pilgrimage
   E. Others. Mention! ....

10. What kinds of activity are you doing here (may be answered more than one)
    a. Taking pictures   c. Sports
    b. Camping   d. Others. Mention! ....
    c. Ritual/worship

11. Did you get a lesson / valuable experience after this journey? Yes/No. If it is, what kinds of experience do you get?

    A. ....
    B. ....
    C. ....
    D. ....

12. How much money did you pay for the ticket? IDR .... Is it include insurance? How do you think about the price?

    A. Expensive
    B. Just right
    C. Too cheap

13. Are you satisfied with the tourism facilities?
    a. Yes   b. No

14. Are there any special facilities as anticipation to natural disaster?

    a. Yes   b. No

15. Any facilities are needed to be added / fixed / upgraded?

    A. ....   C. ....
    B. ....   D. ....

16. Do you have any preparation when there is an emergency recall especially understanding that this place is prone to natural disaster?

    A. Immediately escape from this area
    B. Searching for protection bunker
    C. Not doing dangerous activities
    D. No preparation, I believe with the operator

17. Do you want to come back to this place? Yes/No. If Yes When? What are your expectations on the return visit here?
....

18. What is your input on the development of ecotourism in areas prone to disasters like this?

    A. ....   C. ....
    B. ....   D. ....

IV.	Local Economic Development:
	Job opportunities, Increase in revenue, Regional revenue

19. How much did you spend for:
Food and Beverages IDR ....
Renting vehicle IDR.................................
Hiring guide IDR...
Souvenir shopping IDR ....
Others IDR..

20. Do you belive that tourism practices in this area can provide jobs for locals? Why?
    A. Yes
    B. No

21. Did you make a deal with the merchants/service providers offered here? If Yes, What kinds of transaction are they?
    A. Vehicle Rental (trail, ATV, Jeep)
    B. Buying foods and beverages
    C. Buying souvenirs
    D. A, B and C
    E. Others. Mentions! ....

22. In your opinion, how is the price?
    A. Too high
    B. Good
    C. Too low

23. Do you think that tourism activities will develop this area in the future?
    A. Yes
    B. No
    C. Don't know

24. What is your suggestion for the trading activities in this area?
    A. ....   C. ....
    B. ....   D. ....

V. Environmental Impacts:
Biophysic and Social Culture

25. What do you think about the condition of environment after there are tourism activities?
    A. Still well maintained
    B. Getting dirty/deteriorating
    C. Don't know

26. In your opinion how is the water quality in this place? (can be more than 1 answers)
    A. Clear and nice
    B. Turbid
    C. Smooth and swift
    D. Stagnate

27. What do you think about the condition of vegetation after there are tourism activities?
    A. More types and variety
    B. Just the same, there is no influence
    C. Be on the wane
    D. Don't know

28. Compared with prior eruption period, do you find any differences of the plants?
    A. Now more arid
    B. Diversity is increase/decline
    C. Same
    D. Don't know

29. How is the condition of wildlife after there are tourism activities?
    A. More types and variety
    B. Just the same, there is no influence
    C. Be on the wane
    D. Don't know

30. Compared with prior eruption period, do you find any differences of faunas?
    A. Increasingly more rarely found
    B. Progressively fewer species
    C. Just the same
    D. Don't know

31. Are the tourist activities will change the values of the local communities? Why is that?
    A. Yes, because……..
    B. No, because……….
    C. Don't know

32. Are the tourist activities will improve the lives of local communities? Why is that?
    A. Yes, because……..
    B. No, because …….
    C. Don't know

33. Is local knowledge will be maintained with increased tourist activity here? Why?
    A. Yes, because………….
    B. No, because………….
    C. Don't know

QUESTIONNAIRE: ECOTOURISM IN DISASTER-PRONE CONSERVATION AREA
AND ITS UNDERLYING GOVERNANCE: A CASE STUDY IN MOUNT MERAPI
NATIONAL PARK

Date of Survey   :
No.Respondent   :
Location   :
Respondent Name   :

A genuine answer is greatly appreciated and respondent's identity will not be published

I.	**Natural resources utilisation for conservation**
	Understanding about ecotourism and goals of ecotourism development

1. Are the respondents understood what ecotourism / nature tourism is?
   A. Yes
   B. No
2. If they do, what is ecotourism then?
   A. A nature tourism, culture supports conservation
   B. A tourism which brings economic benefit to the conservation areas and local people
   C. A tourism which intends to educate about nature and how to preserve it
   D. A B and C correct
   E. Don't know
3. Are the goods / services you sell is in compliance with definition above?
   A. Yes
   B. No
   C. Don't know

II.	**Local Participation:**
	Society Characteristic, Level of Participation, Initiative to participate in ecotourism development

4. Are the traders/sellers around the area is only residents of around Merapi? Yes/No from what village?

   Village..............

5. In addition of trade, is there any other contribution of local communities to tourism activities in the area? Yes/No. If any, mention....

6. Is there any association that holds the merchants here also the manufacturers of goods / foods? Yes/No. If any, mention...

7. Members of the group are mostly female or male?
   A. Females
   B. Males
   C. Balanced
   D. Don't know

8. Is the income shared equally by members of the cooperative / association or not?

9. What is the average income per month from selling foods/goods/services?

IDR. ....

10. What is the role of the government / private sectors in developing economic activities in the tourist areas?

    A. Kiosk provision
    B. Promotion
    C. Enterpreunership training
    D. Establishment of business group
    E. Nothing

11. Is there any package that sells local tourist attractions such as local art performance? Yes/ No. If yes who is the initiator and what is the content of the package? ....
    A. National Park Agency
    B. Tourism Board
    C. Private Companies
    D. Local self-organised tourism group
    E. Don't know

12. Which are the most serious in developing tourism in this place?
    A. Local communities
    B. National Park Agency
    C. Tourism Board
    D. Private Companies
    E. Don't know

III. **Elements of education in tourism products:**
Tourism practices,Aims of travel and Perception of tourism products

13. Is the type of tourism is an important matter for you? Why?

    ....

14. What are the activities of tourists visiting here?

    A. Recreation (photography, camping, hiking, culinary)
    B. Witness rare nature phenomenon (education/observation)
    C. Research
    D. Pilgrimage
    E. Others. Mention! ....

15. Are the goods and services you sell support those tourist activities? Yes/No. Why?

IV. **Local Economic Development:**
Job opportunities, Increase in revenue, Regional revenue

16. Are the ecotourism activities in this area provide job opportunities for local communities? Yes/No. If it is, what kinds of job are they
    D. Guide, Porter
    E. Vehicle Rental, Foods Sector, Accomodation
    F. A and B
    G. Don't know

17. Is there an increase in revenue for engaging in the tourism activities? Yes/No. If it is, how much the monthly average? IDR..............

    F. 0 – 1 million / same with before (farming)
    G. 1 million – 2 million / higher than before
    H. Above 2 million / way higher than before

18. At what season is usually the most crowded visitors?
    A. School holiday
    B. Lebaran day
    C. Long weekend
    D. Weekend
    E. Post Eruption
    F. Don't know

19. At what season is usually the most empty?
    A. Fasting Month
    B. Weekdays
    C. Rainy Season
    D. Alert period
    E. Don't know

20. Is there any deposit/tax to be paid? Yes/No. How much?
    IDR……………. Remitted to
    A. National park officers
    B. Officers from Local Government Tourism Board and Tax Collector Board
    C. Managed by union (coop)
    D. Village
    E. District
    F. Don't know

21. Does the trading activity in the area bring positive impact to your local village development? Yes/No.
    For example ……………

22. How do you think the amount of levy?

    A. Too high
    B. Just right
    C. Too low

23. Whether the result from levy collected is used to repair facilities in the tourism objects? Yes/No. If it is in what form?
    A. Road infrastructure
    B. Structuring the area/Landscaping
    C. Public facilities (Toilet, Mosque, School, Market)
    D. Nothing

24. Are you satisfied with the facilities provided for entrepreneurs working in the area?
    A. Yes   B. No

25. If it is not, what needs to be added or fixed?

    A. …………………………….   C. ………………
    B. …………………………….   D. ………………

26. What is your input on the development of ecotourism in areas prone to disaster like this?
    A. …………………………….   C. ………………
    B. …………………………….   D. ………………

| V. | **Environmental Impacts:** |
| | **Biophysic and Social Culture** |

27. In your opinion, compared with prior to eruption, how the current environmental condition with many trading activities in this place?
A. Well maintained
B. Getting dirty/bad
C. More organised/neat
D. Don't know

28. How about water quality compared with prio eruption in 2010? Does it smoothly running or not?
A. Similarly clear and nice
B. Getting more turbid
C. Smooth
D. Clogged up

29. How do you think about the condition of the plants after there are some trading activities?
A. More varieties of types
B. Just the same, no significant influence
C. Threatened
D. Don't know

30. How do you think about the faunas after there are some trading activities here?
A. More varieties of types
B. Just the same, no influence
C. Getting more rare
D. Don't know

31. Are the tourist activities will change the values and custom of local communities? Why is that?
A. Ya, karena……..
B. Tidak, karena ……….
C. Tidak Tahu

32. Are the trading activities here will improve the lives of local people compared with the previous jobs? Why?
A. Yes, because……..
B. No, because…….
C. Don't know

33. Is the custom / local knowledge will still be preserved with the increasing tourist activity? Why?
A. Yes, because………….
B. No, because………….
C. Don't know

QUESTIONNAIRE: ECOTOURISM IN DISASTER-PRONE CONSERVATION AREA AND ITS UNDERLYING GOVERNANCE: A CASE STUDY IN MOUNT MERAPI NATIONAL PARK

rijksuniversiteit
groningen

Date of Survey   :
No. Responden   :
Location   :
Responden Name   :
Position   :

A genuine answer is greatly appreciated and respondent's identity will not be published

I. Institutional Interest

1. What is the vision and mission of national park which supports ecotourism development

2. How many official tourism objects in Merapi Hazardous Areas?

3. What kinds of tourism practices in Merapi Hazardous Areas

4. Amongst all of those tourism practices, which ones are belong to ecotourism activities and which ones are not?

5. Is ecotourism developed specifically or just the same with other tourism?

6. Amongst all of the tourism objects, which one is the most dangerous spot/place and still many visitors come.

7. What kinds of facilities are there in tourism objects in this disaster-prone conservation zones?

8. How much the annual budget proportion allocated for tourism management (does not include routine salary)

9. Amongst all of those facilities are there any specific facilities which are only exist in this disaster-prone conservation area?

10. Are there any impacts of ecotourism in this tourism area to local economic?

11. In what form the development of ecotourism in Merapi Hazardous Areas can increase incomes of local communities living around the tourist areas?

12. How many groups of people who actively participate in the development of ecotourism in Merapi Hazardous Areas?

II. Role of Institution

13. What is the role of institution in Merapi Hazardous Areas?

14. Is there any specific area in which this institution is given authority to manage?

15. Is the policy enacted by this institution pays attention to ecotourism activities?

16. Is there any significant difference on the role of institution Apakah ada perbedaan signifikan peran institusi ini during status: safe and alert?

17.	How many times in a month or year a collaborative cooperation meeting between instaitution managing the Merapi Hazardous Areas is held?
18.	What kinds of coordination aside from regular meeting do the institutions conduct to manage the area
19.	Is there any conflict of interests between institutions managing the Merapi Hazardous Areas?
III. Policy Formulation	
20.	Is there any common /mutual policy in managing the areas which is contained on MoU or documents?
21.	If it is, with any institution? And regulates what?
22.	Is there any task division on standard operating procedure during emergency response periode in the tourism objects?
23.	Are there any plans / spatial plans as the reference implementation of common policies amongst agencies in Merapi Hazardous Areas?

QUESTIONNAIRE: ECOTOURISM IN DISASTER-PRONE CONSERVATION
AREA AND ITS UNDERLYING GOVERNANCE: A CASE STUDY IN MOUNT
MERAPI NATIONAL PARK

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Date of Survey   :
No Respondent   :
Location   :
Respondent Name   :
Position   :

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I. Institutional Interest

1. What is vision and mission of this institution?

2. To what extent the authority of this institution in managing the area in Merapi Hazardous Areas?

3. Is there any direct contact with tourism activcities in the areas?

4. Is there any relation of programme and policy of this institution with the ecotourism strategy? Is the programmes of this institution supports ecotourism development or contradicts with that or there is no relation at all?

5. Is there any part of the areas where this institution is responsible during alert status?

6. What kinds of facilities that this institution owns to support the programmes

7. How many per cent of annual budget proportion is allocated to manage the areas in Merapi Hazardous Zones?

8. Does the institution also consider the existence of conservation areas which are prone to disaster?

9. If it is, in what kinds of form the consideration is?

10. Does this institution also responsible for improving local economic around Merapi Hazardous Zones?

11. If it is, in what form?

12. How it effects economic development in the community?

II. Role of Institution

13. What is the role of this institution which relates with Merapi Hazrdous Zones?

14. Are there any sigfnificant differences in policy / programmes between safe and alert status?

15. How many times in a month or year meeting between stakeholders managing the Merapi Hazardous Zones is held?

	16. What kinds of coordination other than regular meeting which is done with related stakeholders managing the Merapi Hazardous Areas? Both in normal (safe) condition and alerted condition.
	17. How often there is a conflict of interest between stakeholders?

III. Policy Formulation	
	18. Is there any common /mutual policy in managing the areas which is contained on MoU or documents?
	19. If it is, with any institution? And regulates what?
	20. Is there any task division on standard operating procedure during emergency response periode in the tourism objects?
	21. Are there any plans / spatial plans as the reference implementation of common policies amongst agencies in Merapi Hazardous Areas?

QUESTIONNAIRE: ECOTOURISM IN DISASTER-PRONE CONSERVATION AREA AND
ITS UNDERLYING GOVERNANCE: A CASE STUDY IN MOUNT MERAPI NATIONAL
PARK

Date of Survey   :
No Respondent   :
Location   :
Respondent Name   :
Position   :

A genuine answer is greatly appreciated and respondent's identity will not be published

I. Institutional Interest

1. What are the aims of the establishment of the association?

2. Who can be a member of this group?

3. What sectors do this association operate?

4. In what tourism site that this community conducts its activities?

5. Among those tourism practices, which ones are included in ecotourism practices and which ones are not?

6. Which locations that have the best prospect among others?

7. How many local communities are actively participating in the development of ecotourism in Merapi Hazardous Areas?

II. Role of Institution

8. What kinds of role of this group/association in the ecotourism practices in the area?

9. What kinds of benefits gained by the society as impacts of the existence of this association?

10. Does this group/association much rely on the tourism practices in the aera?

11. Are there any noticeable differences between prior the establishment of this organisation and todays?

12. What about the difference between safe and emergency status of the volcano in terms of this organisation operate?

13. Is there any routine meeting between all stakeholders involved in ecotourism in this area? If so, how often is it?

14. What kinds of topic that usually be discussed?

15. What is the added value of this institution to you?

16. How often a conflict of interest may occur between institutions managing this area?

17. Is there any way out to solve the conflict?
18. How effective the meeting can solve the problems?
19. Which institution gives the most attention to the local economic development through ecotourism? Is it society, National Park Agency, Local Government, NGOs or Privates?
20. Is there any training or capital assistance from one of those parties?
21. In what way? And how often?

III. Economic Development
22. With the establishment of this organisastion, is there any increase on society's income from ecotourism?
23. How much increase of income generated compared with prior the establishment of this organisation?
24. How many average income gathered by craftsmen? Which month is usually the highest demand? And what is the lowest?
25. Is there any goods sold outside this area?
26. What about the proportion between seller, craftsmen and organisation?
27. Compared with the condition prior the eruption, which one is better in terms of economic condition?
28. Does the association distribute the tasks according to each speciality and proviciencies?
29. Are there any mentors or experts placed in every groups to develop and increasing human resource capacity?
30. In the future, what is the plan of this association? Is this only for a short-term before people back to the old habit as cattleman, or is this an opportunity to achieve bigger goals in tourism practices? What do you think that is required to be prepared to achieve that?
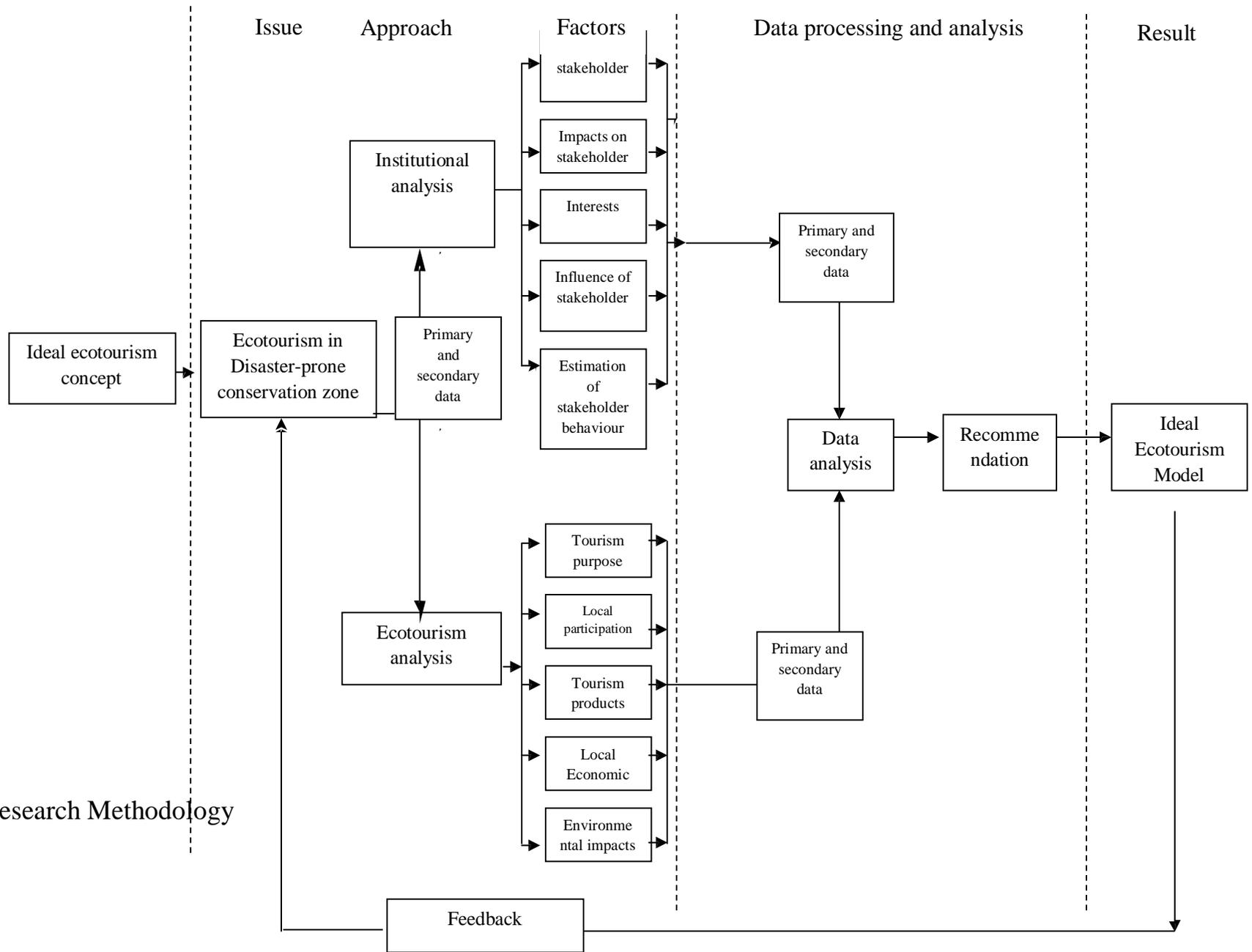
Figure 27. Research Methodology