

**EVALUATING PROTECTED AREA GOVERNANCE: IS COMMUNITY BASED FOREST
MANAGEMENT (CBFM) BETTER THAN STATE BASED FOREST MANAGEMENT (SBFM)
IN MANAGING PRESERVED FOREST AREAS AT SOUTH SUMATERA?**

THESIS



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The Approval Statement

THESIS

Evaluating Protected Area Governance: Is Community Based Forest Management (CBFM) Better Than State Based Forest Management (SBFM) in Managing Preserved Forest Areas at South Sumatera?

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ABSTRACT

Preserved forest can provide important benefits in protecting life-support systems especially in water management, landscape protection, and soil fertilization maintenance. Unfortunately, in Indonesia, the existence of preserved forest is threatened by the high rate of deforestation, that is often associated with poor quality governance.

This research aims to evaluate the applying of good governance principles in preserved forest at South Sumatera Province managed through two types of governance namely Community Based Forest Management (CBFM) and State Based Forest Management (SBFM). This paper also correlated between applying good governance principles with deforestation rate to understand the effect of good governance on management effectiveness. This research is a qualitative research by using semi structure interview. Evaluation method follows that developed by Lockwood (2009) using 5 of 7 principles of good governance namely transparency, accountability, fairness, connectivity, resilience and adaptability.

This research reveals that SBFM gets an exemplary level in 2 principles and the rest earns a high-level performance. Meanwhile CBFM obtains a substantial level of desirable improvement for all principles. It can be concluded that SBFM is better than CBFM in applying good governance principles. Furthermore, analysing of GIS reveal that deforestation rate in SBFM higher than SBFM in the period 2011-2015 recorded for 9.84% and 6.37% respectively. In term of correlation between good governance and deforestation, this study reveals that better in application of good governance principles did not lead to lower deforestation rate. Further research is required to understand the difference between the result of this research and the supporting theories in terms of the effect of good governance to management effectiveness.

Keyword: Preserved forest, Good Governance, Deforestation, Stated Based Forest Management, Community Based Forest Management, South Sumatera.

TABLE OF CONTENTS

| | |
|--|------|
| Thesis Title | i |
| Thesis Approval | ii |
| Originality Statement | iii |
| Acknowledgement | iv |
| Abstract | v |
| Table of Contents | vi |
| List of Tables | viii |
| List of Figures | xi |
| CHAPTER I: INTRODUCTION | 1 |
| 1.1. Background | 1 |
| 1.2. Research Questions | 13 |
| 1.3. Research Objectives | 14 |
| 1.4. Significance of Research | 14 |
| CHAPTER II: LITERATURE REVIEW | 15 |
| 2.1. Previous Research | 15 |
| 2.2. Theory | 23 |
| 2.2.1. Protected Area | 23 |
| 2.2.2. Public Administration | 25 |
| 2.2.3. Good Governance | 27 |
| 2.2.4. Good Governance of Protected Areas | 31 |
| 2.2.5. Evaluating Governance | 35 |
| 2.2.6. Evaluating Protected Area Governance | 36 |
| 2.2.7. Principles of Good Governance in Protected Area | 38 |
| CHAPTER III: CONCEPTUAL FRAMEWORK | 43 |
| 3.1. Evaluating protected area governance | 43 |
| 3.2. The effects of applying good governance principles on forest sustainability | 45 |
| CHAPTER IV: RESEARCH METHOD | 49 |
| 4.1. Research Type | 49 |
| 4.2. Locus and Focus | 49 |
| 4.3. Source of Data | 51 |
| 4.4. Technique of Collecting Data | 51 |

| | |
|--|-----|
| 4.4.1. Interview..... | 51 |
| 4.4.2. Document Analyzing..... | 52 |
| 4.5. Data Analysis..... | 52 |
| 4.5.1. Design of Data Analysis | 52 |
| 4.5.2. Assessing Governance Quality in SBFM | 54 |
| 4.5.3. Assessing Governance Quality in CBFM | 55 |
| 4.5.4. Examining The Effect of Applying Good Governance Principles on Forest Sustainability | 55 |
| CHAPTER V: RESULT AND DISCUSSION..... | 56 |
| 5.1. Research Object Overview | 56 |
| 5.1.1. Geographical Condition | 56 |
| 5.1.2. Demography | 58 |
| 5.2. Data Description | 76 |
| 5.3. Data of Research Informants..... | 77 |
| 5.4. Analysis of Good Governance Assessment Data | 78 |
| 5.4.1. Legitimacy..... | 79 |
| 5.4.2. Transparency | 91 |
| 5.4.3. Accountability..... | 97 |
| 5.4.4. Inclusiveness | 102 |
| 5.4.5. Fairness Will | 105 |
| 5.4.6. Connectivity | 113 |
| 5.4.7. Resilience and Adaptability | 118 |
| 5.4.8. Assessment Summary and Assessment Result Comparison | 122 |
| 5.5. Analysis of Effect of Applying Good Governance Principles on Forest Sustainability..... | 125 |
| 5.5.1 Deforestation Rate..... | 125 |
| 5.5.2.Effect of Applying Good Governance Principles on Deforestation | 131 |
| CHAPTER VI: CONCLUSION AND RECOMMENDATIONS..... | 133 |
| 6.1. Conclusion..... | 133 |
| 6.2. Recommendations..... | 136 |
| REFERENCES | 138 |

LIST OF TABLES

| | |
|--|-----|
| Tabel 1.1. The Big Ten of Forest Areas in Indonesia | 1 |
| Tabel 1.2. The Comparison of Forest Area and Deforestation Rate in Asia | 4 |
| Tabel 2.1. Summary of Previous Studies | 22 |
| Tabel 2.2. UNDP and Institute on Governance Principles of Good Governance | 35 |
| Tabel 2.3. The Relation Between Good Governance Principles from UNDP, Institute on Governance, and Lockwood | 39 |
| Tabel 3.1. Principles and Outcomes | 44 |
| Tabel 5.1. Number of Population | 58 |
| Tabel 5.2. Population Variable | 59 |
| Tabel 5.3. Number of People Working in Agricultural Sector | 61 |
| Tabel 5.4. Data of District in South Sumatera Province | 62 |
| Tabel 5.5. Civil Servants Based on Education Classification | 63 |
| Tabel 5.6. State Forest Area in South Sumatera | 66 |
| Tabel 5.7. Deforestation Rate in South Sumatera | 67 |
| Tabel 5.8. Balance of Forest Resources | 68 |
| Tabel 5.9. Research Code | 76 |
| Tabel 5.10. Informants Description | 77 |
| Tabel 5.11. Assessment Summary and Its Comparison | 124 |
| Tabel 5.12. Land Cover Change in SBFM period 2011 to 2015 | 130 |
| Tabel 5.13. Land Cover Change in CBFM period 2011 to 2015 | 130 |

LIST OF FIGURES

| | |
|---|-----|
| Figure 1.1. The Link Between Governance, Pressure, and Outcomes | 2 |
| Figure 1.2. Map of State Forest in South Sumatera | 3 |
| Figure 3.1. DPSIR Framework | 45 |
| Figure 3.2. Framework of Governance Effect on Management Effectiveness | 46 |
| Figure 3.3. Conceptual Framework | 48 |
| Figure 4.1. Design of Data Analysis | 53 |
| Figure 5.1. Map of South Sumatera Province | 56 |
| Figure 5.2. Map of State Forest in South Sumatera | 65 |
| Figure 5.3. Organization Structure of Forestry Agency | 73 |
| Figure 5.4. Map of Forest Area in Lintang Kanan | 74 |
| Figure 5.5. Work Permit Area of CBFM of Pengentaan | 75 |
| Figure 5.6. Land Cover of Preserved Forest Area in Lintang Kanan 2011 | 126 |
| Figure 5.7. Land Cover of Preserved Forest Area in Lintang Kanan 2015 | 127 |
| Figure 5.8. Land Cover of Preserved Forest in CBFM Pengentaan 2011 | 128 |
| Figure 5.9. Land Cover of Preserved Forest in CBFM Pengentaan 2015 | 129 |

CHAPTER I

INTRODUCTION

1.1. Background

South Sumatera is province of ninth largest forest area in Indonesia with total area 3,418,289,03 hectare (as can be seen in table 1) that is managed dominantly by regional government.

Table 1.1: The Big Ten of Forest Areas in Indonesia

| No. | Province | Total Forest Area | Percentage |
|-----|-------------------------|-------------------|------------|
| 1 | Papua | 40.546.360,00 | 30,49% |
| 2 | Kalimantan Tengah | 15.300.000,00 | 11,51% |
| 3 | Kalimantan Timur | 14.651.053,00 | 11,02% |
| 4 | Riau | 9.456.160,00 | 7,11% |
| 5 | Kalimantan Barat | 9.101.760,00 | 6,84% |
| 6 | Maluku | 7.146.109,00 | 5,37% |
| 7 | Sulawesi Tengah | 4.394.932,00 | 3,31% |
| 8 | Sumatera Utara | 3.742.120,00 | 2,81% |
| 9 | Sumatera Selatan | 3.418.289,03 | 2,57% |
| 10 | Nangroe Aceh Darussalam | 3.335.713,00 | 2,51% |

Source: Central Agency on Statistics, 2016

Similar with other areas, South Sumatera also faces deforestation that is one of important environmental issues interesting international attention.

Moreover, South Sumatera is also accused as the representative of the worst cases in Indonesia with respect to anthropogenic impacts within buffer zones which evidenced by 22 cases of state forest land conflict involve community in 2016 that is the sixth province with the highest number of land conflicts after

Riau, East Java, West Java, North Sumatera, and Aceh (Kartika, 2017). Some parties assume that the emergence of forest problem in South Sumatera is a government failure where bad forest governance is considered as the main problem (Forest Watch Indonesia, 2014). These facts have encouraged some

parties to evaluate the forest management in South Sumatera especially in term of community involvement in forest management.

Forest areas are considered not to be managed by the government alone. The limited number of government personnel and infrastructures is considered not able to manage the size of the forest area. For example, total area of state forest in Empat Lawang regency is 88,766.84 hectares with total number of government personnel is twelve personnel. It means that 1 personnel must supervise 7,397.24 hectares that is impossible to be supervised. Involving all stakeholders have to be done to overcome it. Therefore, governance becomes a viable alternative.

Community-based Forest Management (CBFM) is proposed to be implemented in South Sumatera as the solution of forest problem. CBFM is considered as better pattern of forest management applying the principles of governance mainly in community involvement. NGOs, especially in environmental field, began to assist local community in getting access to forest resources. In 2010, Ministry of Forestry issued forest management permit to local community in Muara Merang located in Musi Banyuasin Regency that becomes the first forest village in South Sumatera. It is followed with establishment of state forest area that is reserved for CBFM with an area of 586.393 hectares.

High expectation of CBFM has been questioned when Forest Village of Muara Merang has failed to meet expectation in achieving forest sustainability where the rate of deforestation in there was higher than state forest area. In average, deforestation rate in Muara Merang was 5.67% per year in the period of 2011-2013 while deforestation in state forest was only 0.41% per year in

same period (<http://www.mongabay.co.id/2014/08/05/degradasi-hutan-desa-di-musi-banyuasin-memprihatinkan/> and Statistic of Forestry Ministry 2012-2014). It then triggered debate about whether CBFM is suitable pattern for sustainability in preserved forest area in South Sumatera or not. The other debate is whether CBFM has applied the principle of good governance or not.

Protected area is regulated based on Presidential Decree Number 32/1990 regarding protected area management. This regulation is formulated with the aim to ensure the sustainability of life and development and to maintenance conservation functions. However, this regulation only regulates the criteria of protected area, the appointment mechanism, and also prohibited things. Furthermore, Law Number 41/1999 regarding forestry also mentions preserved forest management although it is still very normative at all. These regulations are not able to answer socio-economic changes that occur in the area surrounding the forest area. For example, agricultural cultivation activities that become the main activity of forest encroachers do not get room in these regulations. While to solve these problems requires a socio economic approach that is not regulated in these regulations. In addition, the assessment of the suitability of the governance type to the existing conditions and the governance quality can not be covered by these regulations.

In Indonesia, one of the world's biologically mega diverse countries, the question of whether protected areas are effective in protecting its biodiversity and ecosystem has already been brought up. This concern has been raised, especially considering its preserved forest areas and recent land use change and deforestation processes in state forest area managed primarily through state-based forest management. Forest Watch Indonesia

(FWI) stated that Indonesian deforestation rate in period of 1980-1990, 2000-2009, and 2009-2013 are 2 million hectares, 1.5 million hectares, and 1.1 million hectares respectively. The decline of deforestation rate was not caused by improving in forest governance but caused mainly by the decline of forest area (FWI, 2015). Indonesia is the country with highest rates of deforestation in Asia in the period of 2010-2014, where the rate of deforestation in Indonesia accounts for 50,26% of total deforestation in Asia. The comparison of forest area and deforestation rate between countries in Asia can be seen in table 1.2.

Table 1.2. The Comparison of Forest Area and Deforestation Rate in Asia

| Country | Forest Area (x 1000 Ha) | Deforestation Rate (2010-2014) | |
|-------------|----------------------------|--------------------------------|--------|
| | | Total Loss Area (x1000Ha) | % |
| Indonesia | 160.978,0 | 7.718,0 | 4,79% |
| Malaysia | 29.415,6 | 2.347,6 | 7,98% |
| Myanmar | 42.859,3 | 1.038,4 | 2,42% |
| Cambodia | 8.810,8 | 939,5 | 10,66% |
| Lao PDR | 19.118,7 | 842,1 | 4,40% |
| Vietnam | 16.577,7 | 782,9 | 4,72% |
| Thailand | 19.962,4 | 531,0 | 2,66% |
| India | 38.814,0 | 428,0 | 1,10% |
| Philippines | 18.600,3 | 336,7 | 1,81% |
| PNG | 42.940,9 | 335,4 | 0,78% |
| Bangladesh | 1.959,6 | 29,5 | 1,51% |
| Nepal | 3.636,0 | 12,0 | 0,33% |
| Brunei | 527,8 | 8,0 | 1,52% |
| Bhutan | 2.580,6 | 7,7 | 0,30% |

Source: http://rainforests.mongabay.com/deforestation_forest.html

Deforestation processes are associated with habitat elimination and fragmentation, loss of biological diversity, reduction in ecosystems services (water, nutrients and carbon cycling) and even climate change, all of which severely undermines the effectiveness of a protected area (Ellis and Porter-Bolland, 2008, p.1972). According to WWF, there are some main causes of deforestation in Indonesia namely forest encroachment (dominated by plantation), illegal logging, and industrial-plant forest. Neglecting local

communities was accused as one of the government failures in overcoming the deforestation. Local communities are not given access to utilize Preserved forest areas even encouraging illegal activities that is difficult to be anticipated by government considering its limitation in resources and large area of Preserved forest areas. It encouraged assertion to involve community directly in forest management.

A more difficult question to answer is whether in Indonesia protected areas are more effective when they directly involve local communities in the management of land and natural resources. Actually, it has been reported that the protected areas policy in Indonesia has historically ignored local inhabitants, and that conflicts with local communities are recurrent.

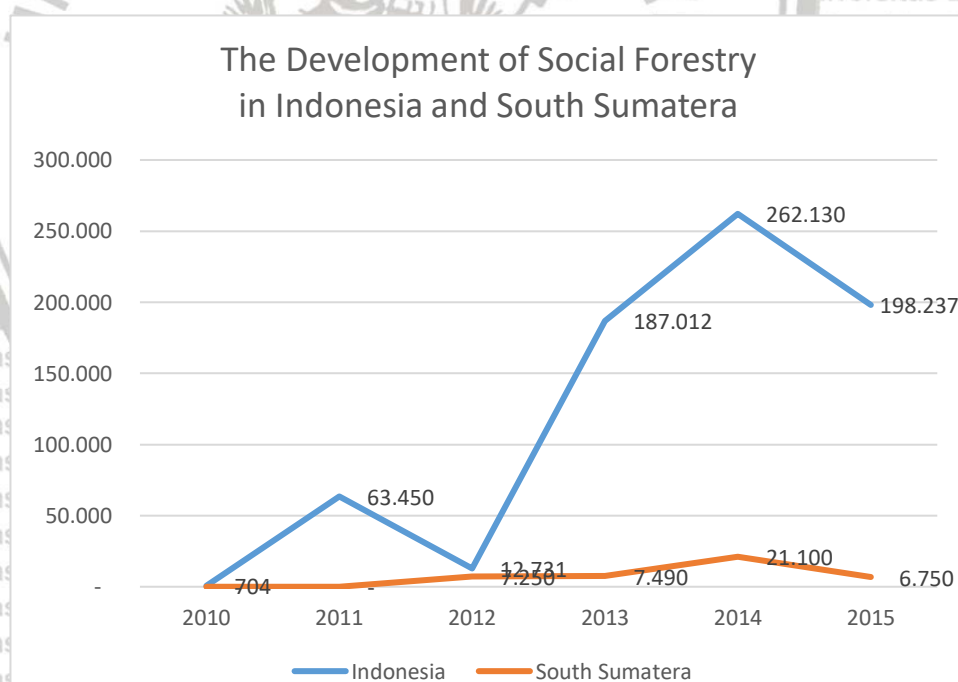
In Indonesia, CBFM emerged not as the academic response to scientific forestry recognized by colonial era in the end of 19th century. CBFM emerged as the empirical response to forestry problems happened in the field especially in state forest area that is near with the forest villages. At least, there were two phases where empirical response emerged. First, empirical response happened in period of 1970's when conceptualization of CBFM was still packaged in very limited framework namely social forestry. It was limited because social forestry was designed by the state to dampen the people's resistance caused by centralized forest management system. Second, it was empirical response to massive timber-pillage in the state forest area after in the end of Soeharto era. Economic and political crisis generated freedom euphoria and also redemption to the forestry institution due to strict control, limitation, excision, and criminalization in forest management (Peluso, 1992).

In other word, CBFM emerged as the community response to inequity on

forest management, lack of community participation, and also poverty in forest villages.

CBFM has been one of priority programs in Environmental and Forestry Ministry through directorate general of social forestry and partnerships. In period 2015-2019, 12.7 million hectares of state forest or almost 10% of total state forest area are prepared to be managed through CBFM scheme. Indonesia experienced the significant increase of social forestry since recognized in 2010. The development of social forestry in Indonesia can be seen in the chart below:

Chart 1.1. The Development of Social Forestry in Indonesia and South Sumatera



Data source: Ministry of Environmental and Forestry in Forest area statistic period of 2011-2016.

Indonesia offers some successful examples of community-based forest management cases that have had a positive impact regarding forest conservation and people welfare. Kali Biru, one of tourism object in Yogyakarta, is the example of successful preserved area managed by local community where improving not only forest sustainability but also people welfare. The implementation of CBFM in Ciremai Mount National Park also showed that there is an increase of income encouraging the decrease of poverty (Kusmana et al., 2007). Hence, it emerged a widely acceptable opinion that CBFM is the most appropriate model of Preserved forest areas management.

In other hand, there are some examples of the failure of community-based management in Indonesia. In Hutamonu, a CBFM in Gorontalo Province, CBFM is accused as the justification for illegal activities in forest area. Issuing permit for local community is even utilized to convert forest area to agricultural use. In forest village of Namo located in Central Sulawesi Province, community income sourced from CBFM is relatively smaller than income component from non-forest sectors and it did not give yet significant impact on income equity (Aji et al., 2015, p. 84).

The effectiveness of protected areas for biodiversity conservation has been an on-going debate for over a decade. There is no question that these areas contribute towards biodiversity conservation. The discussion revolves more on when and how they become effective conservation strategies. Some argue that protected areas are more effective when decision-making and management adopts a more exclusionary approach towards local communities. Others argue that protected areas are more effective when local

communities participate in decision making regarding conservation and resource management, especially within surrounding lands or buffer zones. A third argument sustains that protected areas alone do not guarantee effective conservation, and rather, there is a growing agreement that many types of protected areas are needed, including those that integrate human populations as management actors. Moreover, successful biodiversity conservation is frequently observed in regions that are not under any official protected area status and where local communities benefit from their own local management of land and natural resources. In these cases, strong local institutions and rules regarding land and natural resource use are critical for biodiversity conservation, and many times these local institutions do not result from protected area programs or policies (Ellis and Porter-Bolland, 2008).

Some researches revealed that CBFM showed improvement on forest sustainability. CBFM in Nepal has resulted in more efficient use of forest resources, contributed to a decline in the use of slash-and-burn agricultural practices, reduced the incidence of forest fires, spurred tree plantation and encouraged the conservation and protection of trees on both public and private land (Niraula et al., 2013). In Mexico, 502.656 ha in 25 communities had been certified under criteria of the Forest Stewardship Council (FSC) due to compliance in applying sustainable forest management (Bray et al., 2003).

In term of community welfare improvement, CBFM may reduce poverty in the less developed countries accounting for range of 5-12 percentage point and also increase food security levels in the range of 12%-19 (Ali et al., 2015).

In spite of success experience, there are also some unsuccessful implementations of CBFM. In Madagascar, both of CBFM and commercial use

of forest resources are not guarantees of forest conservation (Rasolofoson et al., 2015, p.1). In Uganda, poor households in areas neighbouring CBFM programs might have been harmed. The implementation of CBFM did not increase community income, even it reduced community income accounting for 6% (Samii et al., 2014, p.10).

There has been growing recognition that Preserved forest areas can precipitate a range of impacts, both positive and negative, on neighbouring communities that can either enhance or inhibit conservation efforts. While the impact of protected areas on the well-being of adjacent communities stems from a range of factors, governance is central to the effective designation and management of Preserved forest areas throughout the world, and for creating positive social-ecological outcomes (Kisingo et al., 2016, p.1).

PA governance refers to the “interactions among structures (i.e. institutions), processes and traditions that determine how power and responsibilities are exercised, how decisions are taken, and how citizens or other stakeholders have their say in the management of Preserved forest areas” (Graham et al., 2003:2). The last few decades have witnessed a shift in PA governance from being predominantly the responsibility of the state to a diverse set of arrangements under which powers are variably distributed among government, private and community-based actors (Kisingo et al., 2016, p.1). However, there is no ideal governance setting for Preserved forest areas, but a set of “good governance” principles can always be considered.

There are some assumptions that governance play important role in achieving forest sustainability. International Union for Conservation of Nature

(IUCN) stated that conservation of nature depends on well governed systems of protected and conserved areas in the landscape and seascape.

Governance that is both appropriate to the context and “good” is crucial for effective and equitable conservation (Borrini-Feyerabend et al., 2014, p. 9).

Governance is now recognized as a critical aspect of effective conservation and is a prominent part of the Convention on Biological Diversity’s work program on protected areas (Dearden et al., 2005, p. 1). While Ministry of Environmental and Forestry stated that applying good governance is a key in sustainable forest management (Ekawati et al., 2014, p. 3).

Some researches gave evidence of those assumptions. Siswoko (2009) stated that by applying good forest governance that is always based on social and ecological aspects, it is expected that forest resource sustainability and community welfare improvement can be realized. The successful of participative forest rehabilitation applying the principles of good governance especially in participation is an evidence of it (Siswoko, 2009). While, low rate index of good governance in forest managed by the state especially in participation, accountability and law enforcement was correlated with some problems in forestry that can encourage the deforestation and poverty (Ichsan et al., 2014). Hence, this fact encouraged some scholars to evaluate applying good governance principles in Preserved forest areas.

Considering to successful and unsuccessful story and also large area of state forest prepared to CBFM that it can cause broad impact on social and ecological aspect if it is conducted without proper analysis, it is important to evaluate the implementation of CBFM in Preserved forest areas. Whether it is more effective than state-based management in achieving sustainable forest

management (SFM) or not. In addition, as mentioned before, governance play important role on forest sustainability so that the evaluation of CBFM have to be addressed to applying good governance principles. As the comparison, state-run Preserved forest areas will be assessed using same method. It is necessary to determine which pattern is better in applying governance principles. Furthermore, it is also important to analyze whether better in applying of good PA governance principles will give better impact to forest sustainability and people welfare. This research concerned to these matters so that this research is important to be conducted.

Defining and evaluating 'good' governance in this context has been an area of important research for some time and a range of scholars have worked on analysing governance systems and reviewing Preserved forest areas governance performance, from local to global levels (Kisingo et al., 2016, p. 750). In 1997 the United Nations Development Program (UNDP) put forward ten principles of good governance that have since been drawn on by diverse authors. For example the Institute on Governance summarized them into five key principles (Graham et al., 2003).

Lockwood (2010) drew on (and also critiqued) these and other sources and, coupled with expert panels and field tests with PA officials, suggested a list of seven principles, including legitimacy, transparency, accountability, inclusiveness, fairness, connectivity, and resilience. Each of these principles was associated with a set of 'performance outcome', or standards against which performance can be evaluated (see also Abrams et al., 2003; who developed a list of governance indicators). There is some degree of overlap between these various sets of principles, what each principle is intended to

encompass, and the indicators associated with those principles. Connectivity and resilience are concepts that are not obviously associated with the principles mentioned by UNDP. Connectivity broadly refers to connections across scales and geographies while resilience broadly refers to the level of disturbance that can be accommodated without the system being reconstituted (Lockwood, 2010).

IUCN (2013) has also formulated the comprehensive guideline of PA governance. This guideline provides a deep information about the definition of governance, good governance, good PA governance, and assessing and evaluating governance for Preserved forest areas. Assessing and evaluating governance of Preserved forest areas can be defined as understanding and analysing the exercise of authority, responsibility and accountability for a PA system or specific site (assessment), and drawing conclusion and recommendation (evaluation) in light of the Preserved forest areas mission and objectives and the shared values of the wider society (Borrini-Feyerabend et al., 2014, p. 66).

Furthermore, Governance Forest Initiative (GFI) released a set of indicators of forest governance version 2.0 in 2011. It is a comprehensive methodological framework to conduct research or assessment on forest governance. These indicators are developed by a civil society coalition in global level from tropical-forest countries such as Brazil, Cameroon, and Indonesia. This indicator framework divides forest governance activities into four main aspects describing forest governance from upstream to downstream namely tenure aspect, forest stewardship aspect, forest management aspect and forest income aspect (Jaringan Tata Kelola Hutan, 2011).

There are also some previous researches conducted regarding CBFM and PA governance. Secco et al. described an original set of indicators to measure the quality of forest governance at local administrative/spatial level and the method used to develop them (Secco et al., 2014). Ellis and Bolland compared land use/land cover change in two Preserved forest areas managed through CBFM and SBFM (Ellis and Porter-Bolland, 2008). Firmansyah et al. conducted comparison analysis between CBFM and SBFM in Tanah Datar Regency to put emphasis on forest management aspect (Firmansyah et al., 2015). Eagles et al. revealed the stakeholder's perception of good governance in Preserved forest areas conducted in British Columbia and Ontario Provincial Parks (Eagles et al., 2013). Jaringan Tata Kelola Hutan assessed good forest governance in Lombok Barat Regency used the GFI Indicator (Jaringan Tata Kelola Hutan, 2014). Kisingo et al developed a PA governance evaluating tools based on community perspective that is a set of 65 statements related to governance principles developed from a literature review (Kisingo et al., 2016). In contrast with previous research, this research will not only evaluate the applying of good PA governance in CBFM but also comparing it with SBFM and then measuring its effectiveness in term of forest sustainability. Evaluating will use framework for governance assessment in terrestrial protected areas developed by Lockwood.

1.2. Research Questions

Based on the research background, the research question is formulated as follows:

- 1 How is the application of good governance principles at CBFM and SBFM in South Sumatera?

2. Does applying the good governance principles affect forest sustainability in South Sumatera?

3. Which one is better management scheme for managing preserved forest areas at South Sumatera?

1.3. Research Objectives

There are some objectives of this study that are describing and analysing the problem as follows:

1. The application of good governance principles in managing Preserved forest areas at South Sumatera Province through CBFM and SBFM scheme;
2. The effects of applying good governance principles in managing Preserved forest areas to forest sustainability at South Sumatera Province;
3. The better scheme for managing Preserved forest areas at South Sumatera Province;

1.4. Significance of Research

The benefit of this research in detail as follows:

1. Practically, the findings obtained from this study will be valuable information for Provincial Government of South Sumatera as a contribution of ideas and concepts to improve preserved forest governance and also to determine appropriate management scheme for Preserved forest areas;
2. Theoretically, this study will enrich the scope of the science of Public Administration, in particular, related to the study of the preserved forest management success factors towards the good governance principles practice in South Sumatera Province.



CHAPTER II

LITERATURE REVIEW

2.1 Previous Research

There are several previous studies related with protected area governance, comparison study between state-based management and community-based management in protected areas, and evaluating governance of protected areas. This follows several previous types of research that used as references in this thesis (summary of pervious studies can be seen in table 2.1):

1.1.1. Governance of Ecosystem Services: A framework for empirical analysis

in 2015. This research aims to identify the different modes of governance in policy implementation from biodiversity and environmental conservation literature and incorporates them in a conceptual model of ecosystem services commonly utilized at present, the cascade model. This study results in a conceptual framework emphasizing hierarchical governance, scientific technical governance, adaptive collaborative governance, and governing strategic behaviour (Primmer et al., 2015).

Relevance: This research provides a framework that will be useful in analysing and supporting policies in conservation and sustainability impact.

1.1.2. Quality of governance and effectiveness of protected areas: crucial

concepts for conservation planning in 2016. This study focuses on terrestrial protected area and give a clear description of protected area effectiveness including governance, distinguishing between

1.1.3. management and ecological aspects. They suggest that the quality of governance affects conservation outcomes described in conceptual framework that is an extension from pressure-state-response framework used by OECD. This study also illustrate that is important to separate pressure and response and how these together will lead to the observed conservation outcomes. Relevance: This research provides a framework to analysis the effects of governance quality and governance type to protected areas.

1.1.4. Indicators for assessing good governance of protected areas: Insights from park managers in Western Australia in 2016. This research uses the standards provided by the UNDP's characteristics of good governance for sustainable development as a starting point. It can be categorized as participatory research because it involved government, NGOs, and universities. This research process established a set of 20 indicators addressing public participation, consensus orientation, strategic vision, responsiveness, effectiveness, efficiency, accountability, transparency, equity, and rule of law. Management plans, annual reports, audits, and stakeholder engagement provide output measures. The findings highlight the contributions of management plans and annual reports in establishing evaluation requirements and providing a place where results are publicly available. Relevance: This research enriches knowledge in assessing governance in protected areas.

1.1.5. The failure of community-based forest management in fulfilling its promises in 2016. This research was conducted in community forest

area in Boalemo located in Gorontalo Province. The authors stated that if there is no funding from third parties for publication and explanation about community-based forest management, automatically, it will be conducted by local government. It is the starting point of community-based forest management failure in Boalemo. It encourages the establishment of groups such a hurry that many communities are not empowered even ruled out its role in the program is supposed to involve them. It should be overcome by appointing a facilitator, but the parties are supposed to be facilitators still need for enhanced capacity. Implementing community-based forest management program also not equipped with good training and impressed allowed to walk alone. This failure is also exacerbated by the poor inter-agency coordination, overlapping roles, and lack of funding. Relevance: This research gives preliminary information about community-based forest management especially affecting factors of implementation failure.

- 1.1.6. Forest management comparison study between community-based and state-based in 2015. This study compares the forest management in protected area of Bukit Barisan I managed by the state and by the community. State-based forest management tends to use sustained yield principle approach that aims to optimize aspect of economics, social and ecology. It emphasizes on landscape controlling and relies fully on law formality without support of strong capacity of institution. Every forest utilizing must be under government permit. This approach proved unsuccessful in controlling the rate of forest destruction. In other hand, community-based forest management uses ecosystem-based

management of forest resource. They use local wisdom that sustains forest resources until today. This research also reveals inequity where there is neglecting of custom right that should be accommodated in forest management. Relevance: This research provides general overview of comparison between community-based forest and state-based forest.

1.1.7. Evaluating “good governance”: The development of a quantitative tool in the Greater Serengeti Ecosystem in 2016. The authors emphasize the role of governance as key success in effectiveness of protected areas especially in delivering benefits to conservation and communities. Therefore, they suggest that it is important to develop frameworks of evaluating governance. The developed framework is a framework perceived by community because focusing on the perception of local community also presents an opportunity to examine empirically examine the relationship between the various good governance principles and indicators associated with them in the literature. The evaluating tool developed by them is a set 65 statements related to governance principles developed from literature review. Those statements load onto 10 common factors that are: legitimacy, transparency and accountability, responsiveness, fairness, participation, ecosystem-based management and connectivity, resilience, achievements, consensus orientation, and power. The method developed by them is a quantitative evaluation method. Relevance: This research provides a set of statements that can be used to assess the quality of governance in protected areas.

1.1.8. Is CBFM more effective than protected area? A comparison of land use/land cover change in two neighbouring study areas of the Central Yucatan Peninsula, Mexico in 2008. This research attempts to illustrate the importance of local community role towards forest conservation by a comparison of two adjacent areas in which land use cover change analyses were conducted. The result shows that forest managed by local community enterprises experienced increase land cover. In contrast, protected area managed by the state experienced deforestation despite in low level. The authors concluded that community forest management can play effective role in forest conservation and they argue that a regional land use management approach as a conservation strategy in which local inhabitants are considered key actors. Relevance: This research illustrates how to analysis the land use change as the indicator of deforestation considering deforestation will be used to assess the effect of governance.

1.1.9. Why and how to measure forest governance at local level: A set indicators in 2013. The research presents and discusses an original set of indicators to measure the quality of forest governance at local administrative/spatial level and the method used to develop them. A draft list of indicators (mainly process-oriented) has been formulated with respect to seven governance key-dimensions (sustainability, efficiency, effectiveness, participation, transparency, accountability and capacity). This draft list has been tested in two pilot applications (data collection by means of questionnaires). The indicators, which include both dichotomous and continuous variables, can be standardized in a few

composite indicators to provide concise information about governance performance. Despite some methodological limitations that need to be further explored, the final set of 78 indicators appears to be a simple and practicable assessment tool, that can be used either for external or internal evaluations. Additional tests are needed to consolidate the tool (Secco et al., 2014). Relevance: This research can be a guidance to assess governance in local level where my research was conducted in local level.

1.1.10. Evaluating the effectiveness of protected areas for maintaining biodiversity, securing habitats, and reducing threats in 2013. This is a PhD thesis from faculty of science in University of Copenhagen. The author stated that protected areas are amongst the most important conservation responses to halt the loss of biodiversity and cover of the terrestrial surface of earth. The aim of research is evaluating the performance and effectiveness of protected areas in conservation by evaluating their ability to either improve conservation responses, the state of biodiversity, or alternatively to reduce the human pressures responsible for loss biodiversity. The evaluating process used the pressure-state-response framework developed by OECD. The author concluded that protected areas have conserved forest habitat and also effective in maintaining species populations. This research shows the importance of quality governance or good governance in the effectiveness of protected areas (Geldmann, 2013). Relevance: This research gives a brief information about how to use PSR framework in assessing the effect of governance on protected areas.

1.1.11. Governance assessment of terrestrial protected areas: A framework and three case studies in 2009. The author stated that Establishing and maintaining good governance is critical for the future effectiveness and acceptability of protected areas. Fulfilling the promise and avoiding the pitfalls inherent in contemporary protected area governance will require an understanding of what is meant by good governance and development of associated mechanism to assesses performance and provide a basis for improvement. Therefore, this research provides a framework that positions governance quality in relation to governance and management effectiveness. The author then suggests a set of seven principles to describe good protected area governance namely legitimacy, transparency, accountability, inclusiveness, fairness, connectivity and resilience. Together, the framework, governance principles and related performance outcomes provide a platform for assessment of governance quality for an individual terrestrial protected area (Lockwood, 2009). Relevance: This previous study will be the main reference in this research.

Table 2.1. Summary of Previous Studies (Source: Researcher, 2017)

| No. | Author/Title | Research Objectives | Technique of Analysis | Research Results | Relevance to This Study |
|-----|----------------------------------|---|-------------------------|---|---|
| 1 | Primmer et al. | Identifying the different modes of governance in ecosystem service | Literature study | A framework providing a structure for empirical analysis of ecosystem governance | Providing a framework to analysis policies in conservation and sustainability impact |
| 2 | Eklund and Cabeza | Clarifying the protected area effectiveness | Literature study | A conceptual framework linking the underlying mechanisms by which governance affects conservation outcomes in PAs | This research provides a framework to analysis the effects of governance quality and governance type to protected areas |
| 3 | Shields, Moore and Eagles | Developing a set indicators for governance evaluation | Qualitative | A set of governance evaluation indicators | Enriching knowledge in assessing governance in protected area |
| 4 | Royer, Pradhan, and Juita | Describing challenges and threats in Implementation of CBFM | Descriptive Qualitative | An analysis of CBFM implementation failure | Giving the preliminary information about the implementation of CBFM |
| 5 | Firmansyah, Dinkin, and Hidayati | Comparing between CBFM and SBFM | Descriptive Qualitative | An comparison between CBFM and SBFM on landscape controlling | Providing a general overview of comparison between CBFM and SBFM |
| 6 | Kisingo et al. | Developing a quantitative method for measuring effectiveness of protected area governance | Quantitative | A set of statements related to governance principles | Providing a set of statements that can be used to assessing quality of protected area governance |
| 7 | Ellis and Bolland | Examining key environmental, socioeconomic and institutional drivers associated with deforestation | Quantitative | An analysis of contrasting annual deforestation rates among CBFM and SBFM | Illustrating how to analysis land use change as indicator of deforestation |
| 8 | Secco et al. | Discussing an original set of indicators to measure the quality of forest governance in local level | Quantitative | A set of 78 indicators for assessment tool | A guidance in assessing governance in local level |
| 9 | Jonas Geldmann | Evaluating the performance and effectiveness of protected area in securing biodiversity | Quantitative | Showing the importance of quality governance in the effectiveness of protected area | Giving a brief information about how to use PSR framework in assessing the effect of governance on protected areas |
| 10 | Lockwood | Refining and undertaking initial testing of a governance assessment framework | Descriptive Qualitative | An assessment framework based on principles for good governance | Main guidance in assessing protected area governance |

2.2 Theory

2.2.1. Protected Area

IUCN defines a protected area as a: “clearly defined geographical space, recognized, dedicated, and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. Protected areas are essential component of conservation strategies but they must be integrated into the wider landscape and seascape, and into the wider society, if they are to be successful in the long term. This theoretical definition is important to assess whether or not preserved forest area, that is the research locus, can be categorized as protected areas (Borrini-Feyerabend et al., 2014, p.5).

In Indonesia, protected areas is regulated through Presidential Decree Number 32/1990 regarding protected area management. In this regulation, protected area is defined as an appointed areas with the primary function of protecting the environment which includes natural resources, artificial resources, and historical and cultural values of the nation for the sustainable development. The scope of protected areas includes areas that provide protection of the underlying areas, local protected areas, nature reserves, cultural heritage areas, and natural disaster prone areas. Preserved forest area is a part of areas that provide protection of the underlying areas.

Forestry is regulated through special regulations namely Forestry Act number 41/1999 regarding forestry. There are several terms used in this regulation namely:

a. State Forest Area, a certain territory appointed and or established by the government to maintain its existence as a permanent forest;

b. State forest area can be classified based on its function into 3 (three) groups namely conservation forest, preserved forest, and production forest.

c. Preserved forest area is a unique characteristic area that able to protect the surrounding area as well as downstream prescribed by government with major function as life support system in water managing, flood preventing, erosion controlling, sea water intrusion preventing, and soil fertilization maintaining. Preserved area has some criteria that are:

1. Factor score for slope field, soil type, and rain fall is more than 175 and/or;
2. Having slope field more than 40% and/or;
3. Located in area with height more than 2.000 meters above sea level

Preserved forest area must be appointed by government and having clear area that is given clear marks to ease in recognizing.

Preserved forest area is also managed through legal means by regional government. Its functions can also be associated with ecosystem services. So that, preserved forest area can be categorized as protected area and can be analysed by using the principles of good protected area governance.

2.2.2. Public Administration

The emergence of public administration occurred in 1887 which was initiated by Woodrow Wilson through his journal entitled the study of administration. This paper is a form of concern over the conditions of the United States government at that time that judged ineffective and inefficient. Wilson wrote that Administration is the most obvious part of government; it is government in action; it is the executive, the operative, the most visible side of government, and is of course as old as government itself. It is government in action, and one might very naturally expect to find that government in action had arrested the attention and provoked the scrutiny of writers of politics very early in the history of systematic thought (Wilson, 1887, p. 198).

In its development, there are a lot of definitions of Public Administration. Denhardt stated that public administration is concerned with the management of public programs. Fesler and Kettl suggested that public administration includes the shaping of policy on the way up, execution of policy after it has been made, and as a necessary part of the execution, decision making about policy matters on the way down. While Simon defined it as the activities of groups cooperating to accomplish common goals.

Rosenbloom (1986) suggested that public administration uses theories and processes of management, politic and legal to fulfil mandate of legislative, executive, and judicial and to provide public service. From the political aspect, public administration is what the government does. Here, public administration is any government activity

that affects the daily life of society, both on national and regional scope.

From management aspect, public administration is definitely concerned with government actions in managing public affairs or public policy implementation. From the legal aspect, public administration exists and is limited by legal instruments. Public administration is then interpreted as law in action and is inherently an implementation or execution of public law. Administration could not exist without a legal foundation.

According to Nicholas Henry, the development of public administration study can be divided into some periods. First period was 1900-1926 and well known as politic/administration dichotomy in which administration was a new field. Second period was from 1927 to 1950. Focus of this period was finding and articulating basic principle of public administration that can be seen as universal principle. Third period was public administration as political science from 1950 to 1970. Some political scientist viewed administration process as a phase of modern civilization, human ecology, place, technology, problem, and as the social and governmental process. While other scholars focused on behaviour of organization participant and public policy making. Therefore, public administration loses its focus and identity.

Frederickson et al. (2012) described the primary theory of public administration consisting of 8 (eight) theories namely: theories of political control of bureaucracy, theories of bureaucratic politics, public institutional theory, theories of public management, postmodern theory, decision theory, rational choice theory and irrational behaviour, and theories of governance.

2.2.3. Good Governance

The idea of governance, as distinct from government, has become intellectually fashionable in academic circles over the preserved forest areas decade or so, constituting a new conceptual paradigm that embodies ideas about dispersal and fragmentation of formerly centralized state authority, the increasing involvement of civil society in delivery of public goods and services, and network collaboration of a wide range governmental and non-governmental bodies in the pursuit of public purposes and the public interest (Gregory, 2014, p.15).

While 'government' can be understood as an entity, embodying such components as the 'machinery of government', governance is better understood as a process. 'Good governance', therefore, refers to processes that work well or badly according to certain criteria. Just what these criteria are or should be is a matter of political choice. Good governance occurs in a democratic polity in which officialdom (political and administrative) serves the interests of all, is non-corrupt, is not given to the abuse of power, seeks effectively to reduce inequality, unemployment and poverty, uses public resources in the pursuit of collective purposes, operates, according to the rule of law, and maintains fair and open electoral process. Good governance is experienced by people in a wider community of shared interest, a polity which may be another way of saying that good governance is a process which effectively promotes and secures some albeit elusive notion of the public interest (Gregory, 2014, p.16).

Kaufman et al., as cited by (World Bank, 2014) describe governance as the traditions and institutions by which authority in a country is exercised. In a related way, United Nation Development Program (UNDP, 2014) interprets governance as the exercise of economic, political, and administrative authorities to manage a country affair at all levels. It comprises some mechanisms, processes, and institutions through which citizens and groups articulate their interests, exercise their chartered rights, meet their obligations, and mediate their differences. This definition not only navigates the other overly broad or narrow definitions but also, simultaneously promotes a beneficial way of thinking in understanding governance issues.

The World Bank popularized the use of the term governance as a concept that is different from the government since 1992. According to the World Bank good governance is a combination of the two terms good and governance where the two are inseparable. Good governance as a form of development management, which is also referred to as the administration building, which puts the role of central government that becomes Agent of change of a society growing/developing in developing countries. Agent of Development is defined as driving the development process and changes in the community of nations. The government pushed through policies and programs, projects, and the role of planning in the budget.

Kaufman et al., as cited by the (World Bank, 2014) called good governance is a concept in the implementation of development management of reliable and responsible in line with the democratic and

efficient markets, avoidance of wrong allocations and investments are rare and the prevention of corruption both political and administrative, running a budget discipline and the creation of a legal framework for the growth of entrepreneurial activity. Also, the World Bank also called the good governance as synergistic and constructive relations between the state, private sector, and public.

IUCN stated that achieving good governance is critical to the success in all four governance types. Good governance is a measure of how far certain principles and values are adhered to. These may be derived at the national level, for examples as enshrined in constitutions, legislation, policies, cultural practices, and customary laws, or they may come from internationally agreed principles for good governance, developed by international organizations and conventions. Although governance values are influenced by the cultural context, we assume that some norms can be taken into account across all cultures (Borrini-Feyerabend et al., 2014, p.57). Good governance might be defined as a mode or model of governance that leads to social, environmental and economic result sought by citizens (Graham et al., 2003, p.6).

From the various terms of good governance can be concluded that the concept of good governance in the administration of the use of political authority and power to manage resources for community development that robust and accountable effectively through rulemaking, policies and also applying principles and values are valid and which refers to the welfare of the people, decision-making, governance and policy implementation.

According to UNDP, good governance comprises the existence of effective mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences, in which its essential characteristics are:

1. Participation. All men and women should have a voice in decision-making, either directly or through legitimate intermediate institutions that represent their interests. Such broad participation is built on freedom of association and speech, as well as on the capacity to participate constructively,
2. Rule of law. Legal frameworks should be fair and enforced impartially, particularly the laws on human rights.
3. Transparency. This concept is built on the free flow of information. Processes, institutions and information should be directly accessible to those concerned, and enough information should be provided to render them understandable and monitor able.
4. Responsiveness. Institutions and processes should serve all stakeholders.
5. Consensus orientation. Good governance should mediate differing interests in order to reach broad consensus on the best interests of the group and, where possible, on policies and procedures.
6. Equity. All men and women should have equal opportunity to maintain or improve their well-being.

7. Effectiveness and efficiency. Processes and institutions should produce results that meet needs while making the best use of resources.

8. Accountability. Decision-makers in government, the private sector and civil society organizations should be accountable to the public as well as to institutional stakeholders. This accountability differs depending on the organization and whether the decision is internal or external to an organization.

9. Strategic vision. Leaders and the public should have a broad and long-term perspective on good governance and human development, together with a sense of what is needed for such development. There should also be an understanding of the historical, cultural and social complexities in which that perspective is grounded.

Principles set out above is a characteristic that should be met regarding good governance relating to the control and control, namely control of a good government that the way and manner of use truly achieve the desired outcome stakeholders.

However, the institution ways interpret the quality of governance as right or wrong, varies from one to another. In various places, good governance has been associated not only with economic development, but also with democracy and good civil rights, or with transparency, or with the rule of law, or with efficient public services (World Bank, 2014).

2.2.4. Protected Area Governance

During the past decade, the term "governance" has grown in importance and is used in many contexts, including that of protected

areas. As defined above, governance refers to principles, policies and rules regarding decision-making- all clearly relevant in the case of protected areas. The concept, however, is so rich that, like the concept of a protected area itself, it needs to be “unpacked” for meaningful understanding.

Governance is nothing new: someone, somewhere, has always been taking decisions about protected and conserved areas. The new things are paying better attention to governance, adding visibility, articulating concepts, and monitoring and evaluating practice.

There is no ideal governance setting for protected or conserved areas, but a set of “good governance” principles can always be considered. Governance is appropriate only when tailored to its specific context and effective in delivering lasting conservation results, livelihood benefits and the respect of rights. Governance is the variable with greatest potential to affect conservation coverage. Governance is a main factor in determining the effectiveness and efficiency of management and the appropriateness and equity of decisions. It also can ensure that protected areas are better embedded in society. Governance in protected areas can be improved and provide precious help in facing on going challenges and global change.

There is diversity of governance for protected areas when decisions are made by a variety of factors that enrich and strengthen conservation in practice. For instance, a national system of protected areas can enhance governance diversity by including in the system areas governed by different types of actors and under different

arrangements, and/or by providing better recognition and support to conserved territories and areas outside the system. Conservation depends on well governed systems of protected areas in the landscape and seascape and systems are made stronger by governance diversity.

Protected area governance also can be defined as the art of steering societies and organizations. Whether or not steering is the appropriate word, it seems clear to us that protected area governance is the interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken, and how citizens or other stakeholders have their say in the management of protected areas. Fundamentally, it is about power, relationships and accountability: who is influence, who decides, and how decision-makers are held accountable (Graham et al., 2003, p.2-3). This definition is referred by numerous scholars conducting research of protected area governance.

In line with previous explanation of good governance above, good governance in protected areas can be reached when decisions are made while respecting the good governance principles developed through time by a variety of peoples, nations, and UN agencies. IUCN formulated the principles of good governance for protected areas, includes: legitimacy and voice, direction, performance, accountability, fairness and rights. Thus, a good governance situation is one in which decisions are taken legitimately, competently, fairly, with sense vision, accountability and while respecting rights. This IUCN good governance situation can also be summed up as equitable and effective governance.

The criteria of legitimacy, voice fairness and (procedural and substantive) rights contribute to equitable governance. The criteria of direction, performance and accountability lead to governance that is effective.

Lockwood in Kisingo et al. (2016) drew on (also critiqued) these and other source and, coupled with expert panels and field tests with PA officials, suggested a list of seven principles, including legitimacy, transparency, accountability, inclusiveness, fairness, connectivity, and resilience. Each of these principles was associated with a set of 'performance outcomes', or standards against which performance can be evaluated (Lockwood in Kisingo et al., 2016). There is some degree of overlap between these various sets of principles, what each principle is intended to encompass, and the indicators associated with those principles. Connectivity and resilience are concepts that are not obviously associated with the principles mentioned in Table 2.2. Graham stated that connectivity broadly refers to connections across scales and geographies while resilience broadly refers to the level of disturbance that can be accommodated without the system being reconstituted (Graham in Kisingo et al., 2016).

There are 13 governance criteria were developed for social-ecological assessment: legitimacy, transparency, accountability, involvement, fairness, participation, strategic vision, achievements/outcomes, ecosystem-based management, effectiveness, responsiveness, consensus orientation and powers.

These governance criteria is a result from literature survey (Kisingo et al., 2016, p.751).

Table 2.2. UNDP and Institute on Governance principles of Good Governance

| Principles by Institutions | |
|----------------------------|--|
| Institute on governance | UNDP |
| Legitimacy | Participation |
| Direction | Strategic vision |
| Performance | Responsiveness, Effectiveness and Efficiency |
| Accountability | Accountability and Transparency |
| Fairness | Equity, Rule of Law |

Source: Kisingo et. al (2016) in Evaluating ‘good governance’: The development of a quantitative tool in the Greater Serengeti Ecosystem.

2.2.5. Evaluating Governance

The evaluation of governance processes is aimed at providing information about, learning from and improving governance processes, so as to, e.g., enhance the fit between policies (and the administrative structures that sustain them) and the features of the social-ecological systems they address. In addition, Europe Union member states have committed themselves through the Aarhus Convention (2001) to respecting a set of normative requirements for policy formulation and implementation. In this context, evaluation makes it possible to monitor compliance.

Challenges to evaluating governance processes are debated in the literature: they address, among other things, the evaluator’s perspective (ex-ante vs. ex-post vs. on-going); the question of who takes part in defining the aim of the evaluation and the selection of criteria; the

organization of the evaluation exercise itself; and the tension between a scientific realist and social constructionist worldview.

Evaluation is a process by which the results of the assessment are examined vis-à-vis specific objectives, goals, and values. In addition, evaluation is a process that needs for changes are identified. Furthermore, evaluation can be described as a clear set of recommendations is developed to move closer to desired situation (Borrini-Feyerabend et al., 2014, p.66).

There are two different approaches to evaluate governance namely outcome-oriented and process-oriented. The outcome of a governance process can be analyzed with regard to its direct outputs and the consequences of such outputs with respect to the objectives being targeted. Good processes contribute to good governance in different ways. First, good processes improve the substantial quality of the output through more and better information management and learning effects within the process. Second, a good process is instrumental for the implementation of the output-legitimate processes stand a better chance of getting their results accepted. The third argument, mentioned in the introduction and reinforced by the Aarhus Convention, focuses on the normative aim of certain characteristics of governance processes, such as openness and participation (Rauschmayer et al., 2009, p.9-10).

2.2.6. Evaluating Protected Area Governance

Assessing and evaluating governance of protected areas can be defined as understanding and analyzing the exercise of authority,

responsibility and accountability for a protected area system or specific site (assessment), and drawing conclusions and recommendations (evaluation) in light of the protected area's mission and objectives and the shared values of the wider society. It can be initiated and driven by many actors, including individuals, NGOs, academics, communities, protected area management bodies or other agencies of government.

Over the last two decades robust means of evaluating the management of protected areas have been developed, however, the evaluation of governance has lagged behind. These protected area evaluations, abbreviated as PAME (Protected Area Management Effectiveness), provide an overall framework or way of assessing how a protected area or system is performing (Shields et al., 2016, p. 40). The majority of evaluations are based upon the IUCN World Commission on Protected Areas Framework. This framework has six components: context, planning, inputs, process, outputs and outcomes. Governance appears as only one of 34 headline indicators servicing PAME evaluations, as the process indicator of 'Effectiveness of governance and leadership' (Leverington et al., 2010).

Lockwood (2010) provides one of the few published efforts to integrate evaluation of protected area governance with PAME evaluations. He suggests placing good governance principles 'above' the evaluation components of context, planning, inputs, process, outputs, and outcomes, while alerting us to the need to consider governance in all six components. Under his schema, the governance indicators being developed in this paper would most likely contribute to

evaluating the principles of good governance (Shields et al., 2016, p.40).

In line with this schema, this research will evaluate protected area governance based on applying good protected area governance.

Numerous scholars propose participatory evaluation process in evaluating governance of protected areas. Considering a governance process involves multiple actors with multiple preference leading to multiple goals so that it is important to use a participatory evaluation process (Rauschmayer et al., 2009, p.19). Participatory evaluation process can be defined a process where primary stakeholders – those who are affected by the intervention being examined – are active participants, take the lead in tracking and making sense of progress towards achievement of self-selected or jointly agreed results at the local level, and drawing actionable conclusions (Hilhorst and Guijt, 2006, p.4). In term of preserved forest area, local community can be called as primary stakeholder because local community are active participants and is affected directly by forest management. In addition, Focusing on the perceptions of local community members also presents an opportunity to examine the relationships between the various good governance principles and indicators associated with them in literature (Kisingo et al., 2016, p.750). This research will present evaluating governance of protected areas not only from government official view but also considering local community and forest business actors.

2.2.7. Principles for Good Governance in Protected Areas

As mentioned earlier (p.27), Lockwood (2009) suggested a list of 7 (seven) principles that can be used to assess governance in protected

area. These principles have overlapping degree and are related to the good governance principle proposed by Graham (2003) and UNDP. The relation between them can be seen in table 2.3.

Table 2.3. The Relation Between Good Governance Principles from UNDP, Institute on Governance, and Lockwood.

| Lockwood | Institute on Governance | UNDP |
|------------------------------|-------------------------|--|
| Legitimacy and Inclusiveness | Legitimacy and Voice | Participation |
| Connectivity | Direction | Strategic Vision |
| Resilience and Adaptability | Performance | Responsiveness, Effectiveness and Efficiency |
| Accountability and Fairness | Accountability | Accountability and Transperency |
| Fairness | Fairness | Equity, Rule of Law |

Source: Researcher analysis elaborated from some sources

This study will use the principles for good governance developed by Lockwood, namely:

1. Legitimacy. Legitimacy is „the acceptance and justification of shared rule by a community ... the question of legitimacy concerns who is entitled to make rules and how authority itself is generated” (Bernstein 2005, p. 142-3). Legitimacy is therefore a key factor in the ethical acceptability of governance arrangements. With respect to protected areas, legitimacy encompasses:
 - a. The validity of an organization’s authority to govern that may be conferred by law or democratic mandate, earned through the acceptance of stakeholders and or, earned through long association with particular place;
 - b. The extent to which the governing body’s decisions and actions are consistent with its mandate and the objectives of the protected areas for which it is responsible;

c. The integrity and commitment with which authority is exercised.

2. Transparency. Transparency is a requirement, grounded in ethics, of stakeholders" right to know about matters that affect them. In general, all decisions about protected areas should be accessible to stakeholders. Transparency is required in who has made a decision, the means by which it has been reached, and its justification. It refers to:

- a. The visibility of decision-making processes;
- b. The clarity with which the reasoning behind decisions is communicated;
- c. The ready availability of relevant information about a governance authority's performance.

3. Accountability. Instrumental conditions for effective accountability and good protected area governance are that: first, the roles and responsibilities of governing bodies and their personnel are precisely identified; and second, governing bodies have demonstrated acceptance of these responsibilities, for example through their plans and activities. It refers to:

- a. The allocation and acceptance of responsibility for decisions and actions;
- b. The extent to which a governing body is answerable to its constituency; and
- c. The extent to which a governing body is answerable to higher-level authorities.

4. Inlusiveness. Inlusiveness refers to the opportunities available for all stakeholders to participate in and influence decision-making processes and actions. Governance is regarded as inclusive when all those with a stake in governance processes and their outcomes can engage with them on a basis equal to that provided to all other stakeholders.

5. Fairness. Fairness refers to:

- a. The respect and attention given to stakeholders' views;
- b. The reciprocal respect between higher and lower level authorities;
- c. Consistency and absence of personal bias in decision making;
- d. Recognition of human and indigenous rights;
- e. Recognition of the intrinsic value of nature; and
- f. The consideration given to the intra- and intergenerational distribution of costs and benefits of decisions.

6. Connectivity. It requires:

- a. Effective coordination within and between levels of governance;
- b. Coherence in broad policy intent and direction within and between levels of governance; and
- c. Allocation of power to those institutional levels that best match the scale of issues and values being addressed

7. Resilience and Adaptability. Resilience refers to the amount of change or disturbance that can be absorbed by a system before it is reconstituted into a different set of processes and structures (Gunderson & Holling 2000). Important elements of resilient governance for protected areas are:

- a. Incorporating new knowledge and learning into decision-making and implementation;
- b. Finding the right balance between flexibility and security;
- c. Anticipation and management of threats, opportunities and risks; and
- d. Systematic reflection on individual, organizational and system performance.





CHAPTER III

CONCEPTUAL FRAMEWORK

The conceptual framework of the research is a relationship or link between one concept to other concepts of the problem to be investigated. The conceptual framework is useful to explain a topic to be discussed. The conceptual framework is expected to provide an overview and direct assumption about factors that will be investigated.

3.1. Evaluating protected area governance

As mentioned before in literature review, evaluating protected area governance is developed from PAME scheme. PAME scheme itself is a scheme that is used to assess the effectiveness of management where governance is one of its components. Instead, Lockwood (2009) developed an evaluating scheme that focuses on assessing governance quality governance referring to its scheme. Governance quality itself can be defined as a product of ethically and rationality sound processes and actions. Ethics and rationality thus provide twin bases to support identification of governance principles. The protected area governance principles provide a rational and ethical basis assessing protected area governance. Each principle indicates a series of outcomes that need to be met for an organization or individual to demonstrate good governance performance described in Table 2. An assessment of good governance can therefore be structured around these 31 desired outcomes.

This scheme is more suitable if using qualitative interviews and complementing by documents analysis. These activities are a basis for summative assessment of governance quality, and also support

recommendations and suggestions to improve performance that is the objective of this study.

Table 3.1. Principles and Outcomes

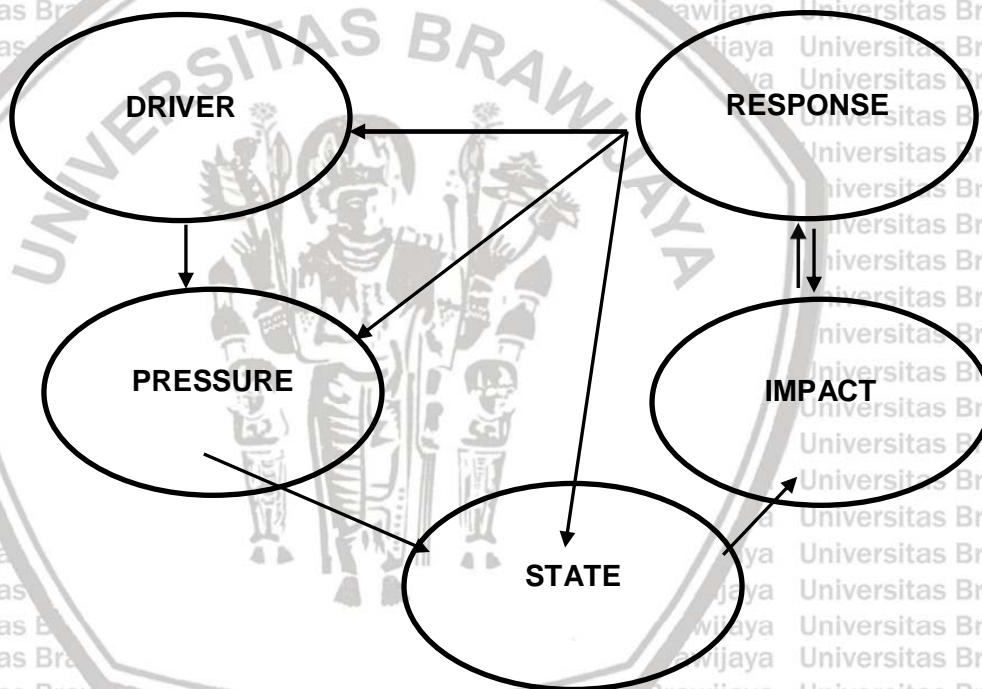
| Principle | Outcome |
|-----------------------------|--|
| Legitimacy | The governing body is conferred with a legal or democratically mandated authority |
| | Stakeholders freely accept the governing body's authority |
| | The governing body acts in accordance with its mandate |
| | The governing body's powers and responsibilities enable management that is consistent with the IUCN definition of a protected area and the associated guidelines for protected area categories |
| | The governing body has a long-standing cultural or spiritual attachment to some or all of the lands within the protected area |
| | Governors act with integrity and commitment |
| Transparency | Governance and decision-making is open to scrutiny by stakeholders |
| | The reasoning behind decisions is evident |
| | Achievements and failures are evident |
| | Information is presented in forms appropriate to stakeholders' needs |
| Accountability | The governing body and personnel have clearly defined roles and responsibilities |
| | The governing body has demonstrated acceptance of its responsibilities |
| | The governing body is answerable to its constituency ("downward" accountability) |
| | The governing body is subject to "upward" accountability |
| Inclusiveness | All stakeholders have appropriate opportunities to participate in the governing body's processes and actions |
| | The governing body actively seeks to engage marginalised and disadvantaged stakeholders |
| Fairness | Stakeholders, office-bearers and staff are heard and treated with respect |
| | There is reciprocal respect between governors from higher and lower level authorities |
| | Decisions are made consistently and without bias |
| | Indigenous peoples' and human rights are respected |
| | The intrinsic value of nature is respected |
| | The distribution (intra- and intergenerational) of the benefits and costs of decisions and actions are identified and taken into account |
| Connectivity | The governing body is effectively connected and coordinated with governing bodies at different levels of governance |
| | The governing body is effectively connected and coordinated with governing bodies operating at the same governance level |
| | The governing body's direction and actions are consistent with directions set by higher-level governance authorities |
| | The levels at which power is exercised (local, sub-national, national, international) match the scale of associated rights, needs, issues and values |
| Resilience and Adaptability | The governing body has processes to assimilate new knowledge and learn from experience |
| | The governing body has the flexibility to rearrange its internal processes and procedures in response to changing internal or external conditions |
| | Formal instruments or mechanisms provide long-term security tenure and purpose for the protected area(s) |
| | The governing body utilises adaptive planning and management processes |
| | The governing body has procedures to identify, assess, and manage risk |

Source: Lockwood (2009) in Governance assessment of terrestrial protected areas: A framework and three case studies.

3.2. The Effect of Applying Good Governance Principles on Forest Sustainability

Understanding the relationship between governance and forest sustainability is similar with understanding the effectiveness of protected area. The effectiveness of protected area can be illustrated by using a DPSIR (drivers, Pressure, State, Impact, and response) framework that can be seen in figure 1.

Figure 3.1. DPSIR Framework



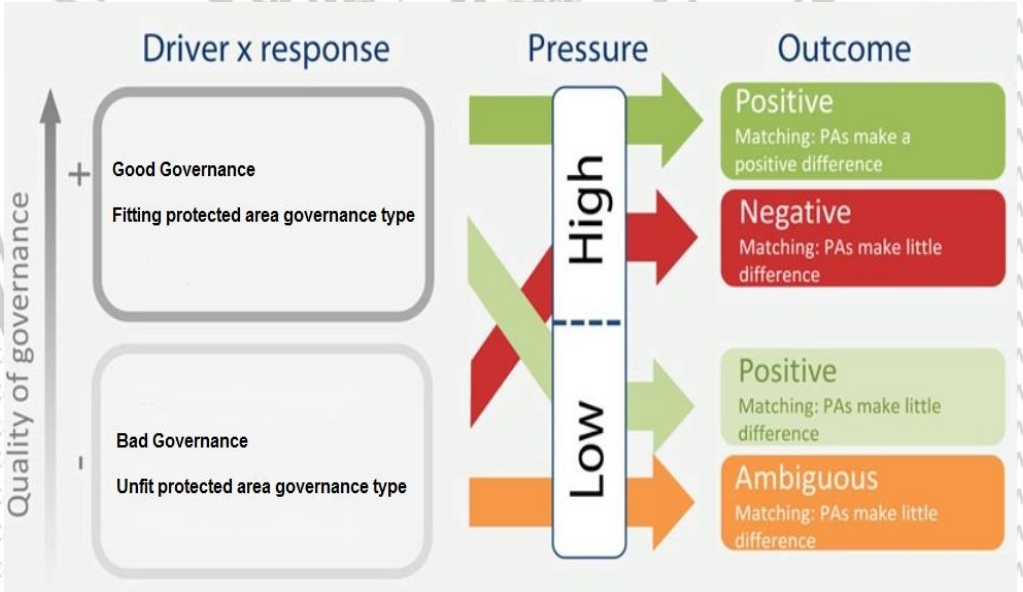
Source: Geldman (2013) in Evaluating the effectiveness of protected areas for maintaining biodiversity, securing habitats, and reducing threats.

DPSIR framework adopted by the European Environmental Agency is an extension of the pressure-state-response framework used by the Organization for Economic Corporation and Development (OECD). In this framework, driver refers to quality of governance (good governance), pressure

refers to factors that encourage deforestation such as agricultural expansion and wood extraction, state refers to forest condition such as forested area and biodiversity, impact refers to the change of ecological such as deforestation and of social such as people welfare, and response refers to the establishment of protected area and also governance type. From this framework, it is clearly seen that response including governance type affects the whole components.

Eklund and Cabeza (2016) proposed a simple framework to illustrate the link between governance types, governance quality, pressure and outcome referring to DPSIR framework above (Eklund and Cabeza, 2016, p.3). This framework then has been modified to adjust with this research (Figure 2).

Figure 3.2. Framework of Governance Effect on Management Effectiveness



Source: Eclund and Cabeza (2016) in Quality of governance and effectiveness of protected areas: crucial concepts for conservation planning.

This framework illustrates combinations where the response may take place in a context of good and bad governance and the pressure may be high or low. The column for outcomes includes two types of measure: a direct

evaluation of the state/impact with only those in green having positive outcomes, and counterfactual matching outcomes with only dark green showing protected areas as being effective and not being able to distinguish between the other three combinations.

Good governance in combination with high pressure can result in avoided deforestation and thus a positive outcome reflected by matching approaches. Instead, poor governance and high-pressure result in negative outcomes (example: high deforestation). On other hand, low pressure will also result in few differences between compared areas, regardless of whether there is scope for effective management.

Referring to those frameworks, it can be formulated the conceptual framework for this study as follow :

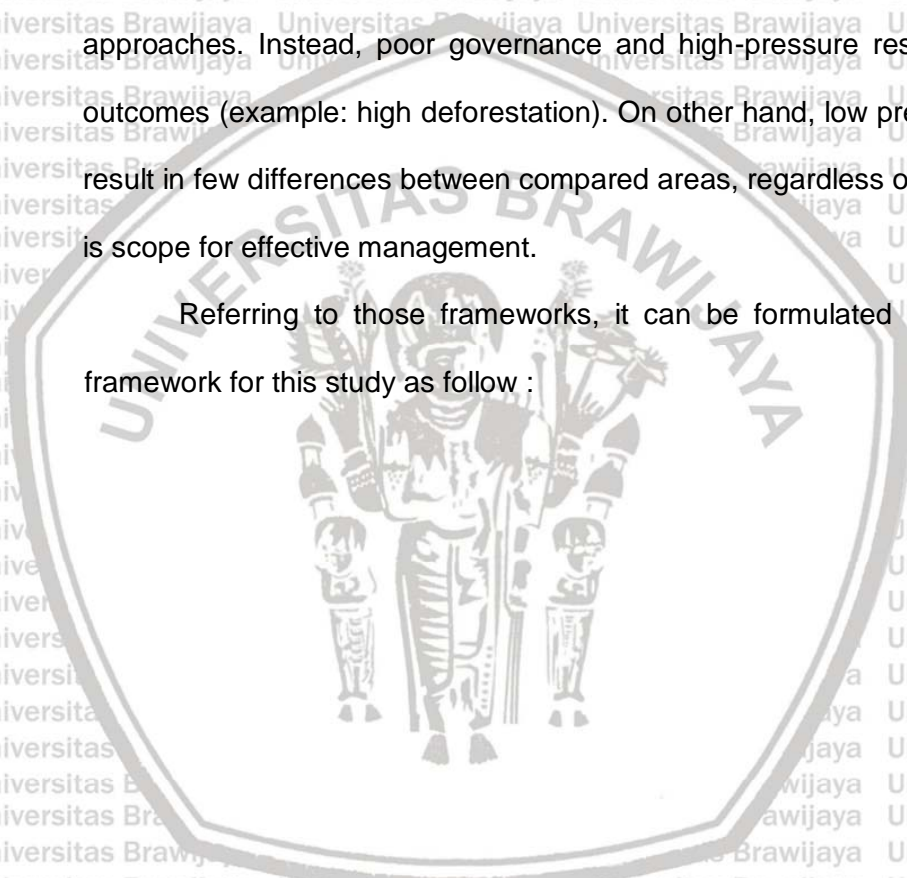
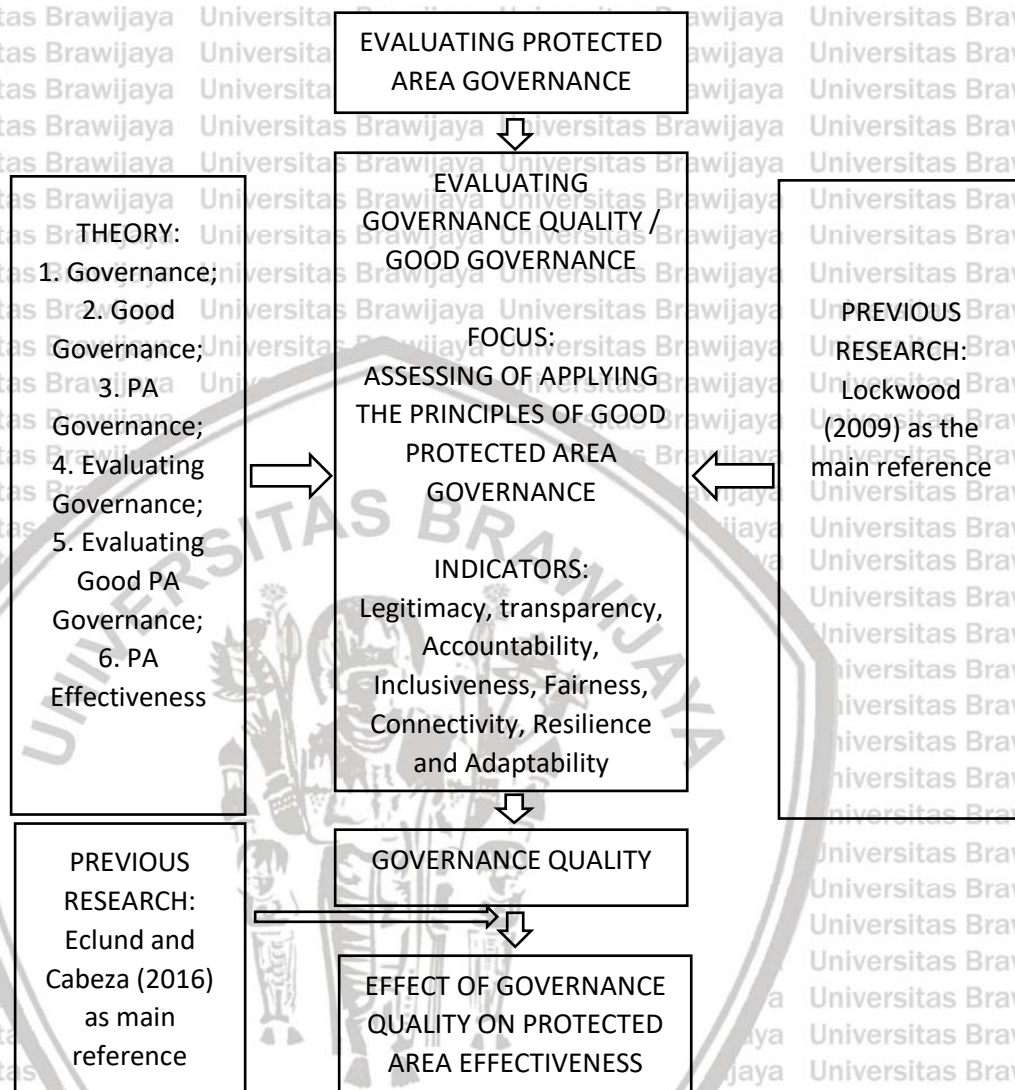


Figure 3.3. Conceptual Framework





CHAPTER IV

RESEARCH METHOD

4.1. Research Type

This study used qualitative method. It is line with the suggestion from Lockwood (2009) who developed framework of evaluating governance in protected areas. It considers the complexity of each outcome, and diverse forms and contexts in which protected area governance occurs.

Qualitative data is interesting. Qualitative data is a source of wide description and firmly grounded and also contains explanation about process happened in local scope. In qualitative method, we can follow and understand chronologically the flow of events and assess causality in mind local scope. It can also obtain a lot of useful explanations.

4.2. Locus and Focus

4.2.1. Locus

This study was conducted in two areas. First, village of Umo Jati located in sub district of Lintang Kanan, Empat Lawang regency. This village is adjacent to the preserved forest area of Bukit Dingin representing protected area managed by the state. Second, village of Pengentaan located in sub district of Mulak Ulu, Lahat regency. This village is adjacent to the preserved forest area of Bukit Patah representing protected area managed by the local community in the scheme of community-based forest management.

The selection of research sites due to several things as follows:

1. These locations are located in the upstream area of Musi watershed having important role in protecting downstream areas not only in ecological aspect but also in social aspect. Failure in the upstream area management of the watershed will have a broad impact on the watershed as a whole. On the other hand, proper upstream DAS management will improve the overall watershed quality as well.
2. Both locations are located adjacent and have similarities in landscape and socioeconomic conditions. This will minimize the possibility of bias in governance impact analysis of protected area sustainability. It is in line with the framework proposed by Eklund and Cabeza (2016) that there are three components influencing the outcomes on protected areas namely drivers, responses and pressures. These locations will eliminate influence of pressures.

4.2.2. Focus

This study focused on evaluating governance quality and governance effect in two protected areas with different governance type. Evaluating of governance quality emphasized on assessing the application of good protected area governance principles referring Lockwood's framework that consists of legitimacy, transparency, accountability, inclusiveness, fairness, connectivity, resilience, and adaptability. Furthermore, governance effect was evaluated to examine whether applying good governance principles improves the effectiveness of protected areas or not. Effectiveness of protected areas was assessed through deforestation rate.

4.3. Source of Data

Source of data is one of the most vital aspects in the research. If there is error in using or understanding the source of data, then the data obtained will also be questioned. Therefore, researchers should be able to understand which sources of data are used appropriately in the research.

According to the research focus and problems, there are two sources of data in the study namely:

- a. Informants. Choosing the informant is based on the subject matter related to the title, focus, problems, person owning some data and ready to share data to the researchers. This study used interview technique to collect data from the informants. In this study, the informants are forestry officials, LMDH members, farmer group members, forest business actors, and other parties who have interests with forest policy.
- b. Documents. Documents used in this study are documents of legislations, regulations, policies, plans, reports, memorandum of understanding, statistic book, maps, satellite imagery and other documents.

4.4. Technique of Collecting Data

The fundamental methods relied on by qualitative researchers for gathering information are, participation in the setting, direct observation, in depth interviewing, and document review (Marshall, Gretchen B. Rossman in Sugiyono, 2015). In this study, gathering information was conducted through interviewing and document analyzing.

4.4.1. Interview

Esterberg (2002) defined interview as a meeting of two persons to exchange information and idea through question and responses,

resulting in communication and joint construction of meaning about a topic (Esterberg in Sugiyono, 2015).

In this study, interview used a guideline of semi structure interview developed from 31 statements that is developed by Lockwood (2009). Interview will be addressed to protected area governing body, local community, forest business actors, and those interested in or affected by governance processes, decisions and outcomes. Governing body can be divided into two types namely forestry agency for state-based management and institution of village forest community (LMDH/Lembaga Masyarakat Desa Hutan) for community-based management.

4.4.2. Document Analyzing

Document analyzing was conducted to complement interview process especially in ensuring the credibility of information. In this study, maps or satellite imagery also was used to determine deforestation rate. It has to be conducted because there is no instant data of deforestation for each unit of forest management.

4.5. Data Analysis

4.5.1. Design of Data Analysis

Analyzing data is used to solve the research's problems. In this research, the data analysis used qualitative data analysis conducted by describing the collected data. Data analysis in this research will use interactive model. Furthermore, Miles and Hubberman (2014) claimed that the analysis using the interactive model can be done in the following

three procedures namely: reducing data, displaying data and drawing conclusions that can be seen in Figure 4.1.

Figure 4.1. Design of Data Analysis (Miles et al., 2014)

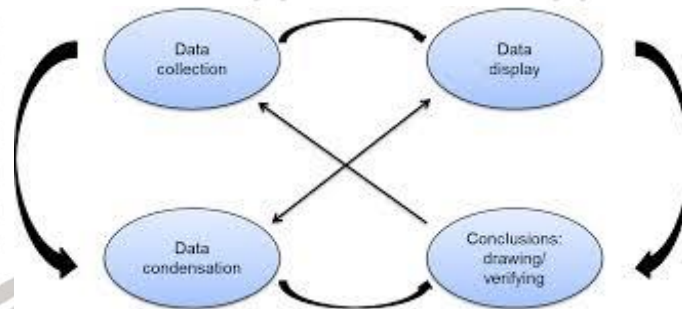


Figure source: Miles, Huberman, and Saldana (2014) in Qualitative Data Analysis – Third Edition.

- a. Data Condensation. In qualitative research, data condensation refers to the process of selecting, focusing, simplifying, abstracting, and/or transforming the data that appear in the full corpus (body) of written-up field notes, interview transcripts, documents, and other empirical materials. By condensing, we are making data stronger. Data condensation is a part of analysis (Miles, Huberman and Saldana, 2014).
- b. Data display. The notion of data display is intended to convey the idea that data are presented as an organized, compressed assembly of information that permits conclusions to be analytically drawn. These displays assist the researcher in understanding and observing certain patterns in data or determining what additional analysis or actions must be taken.
- c. Drawing and Verifying Conclusions. The third stream of analysis activity is conclusion drawing and verification. Conclusion drawing is

only half of a Gemini configuration. Conclusions are also verified as the analyst proceeds (Miles, Huberman and Saldana, 2014).

The coding of data, for example (data condensation), leads to new ideas on what should go into a matrix (data display). Entering the data requires further data condensation. As the matrix fills up, preliminary conclusions are drawn, but they lead decision, for example, to add another column to the matrix to test the conclusion (Miles, Huberman and Saldana, 2014).

Qualitative data analysis is a continuous, interactive enterprise. Issues of data condensation, display, an conclusion drawing/verification come into play successively as analysis episodes follow each other.

4.5.2. Assessing governance quality in state-based management

As mentioned before, assessing governance quality refers to 31 outcomes of governance principles (table 3.1, p. 43). A content analysis is performed on the interview transcripts and text block sorted into those outcomes. These data, together with relevant documentary evidence, are used to make judgments about the performance of the organization against each outcome. In presenting these judgments, efficiency of presentation led to some outcomes being combined. From the evidence, a summative judgment for each outcome is made according the following qualitative scale: very low, low, moderate, high, very high.

These judgments are then aggregated for each principle according to the following decision rules: substantial improvement desirable for one or more very low or low outcomes, improvement desirable for two or more moderate outcomes, high level of performance for one moderate

outcome with the remaining high or very high, and exemplary for one high outcome with the remaining being very high.

4.5.3. Assessing governance quality in community-based management

Assessing in community-based management was conducted through similar mechanism with state-based management. The difference is only in data source where community-based management assesses LMDH as the governing body. Local communities who are not a part of LMDH and also government officer was interviewed to verify the information. Document analysis is also needed to verify informations collected through interview.

4.5.4. Examining the effect of applying good governance principles on forest sustainability

Examining will be conducted by analyzing data of deforestation to describe ecological impact. Deforestation was provided by analyzing satellite imagery to determine change of land cover. This process will use GIS technique.



CHAPTER V

RESULT AND DISCUSSION

5.1. Research Object Overview

5.1.1. Geographical Condition

Province of South Sumatera is stretched along the equator between 1° to 4° South latitude and 102° to 106° East longitude. South Sumatera is the seventh province with the largest area in Indonesia in which total area in South Sumatera is 87.421,17 Km². South Sumatera is directly bordered by 4 (four) provinces namely Jambi in the north, Lampung in the south, Bangka Belitung in the east, and Bengkulu in the west.

Figure 5.1. Map of South Sumatera Province



South Sumatera has varying topographic conditions namely 23.5% area with altitude 0-25 meter, 17.7% area with altitude 26-50 meter,

35.3% area with altitude 51-100 meter and 23.5% area with altitude more than 101 meter above sea level. There is swamps and brackish areas influenced by tide with mangrove and palms in the east coast. There are broad plains in a little more to the west. There is also Barisan hills dividing the island of Sumatera which is a mountain area with an altitude of 900-1200 meter above sea level. Barisan hills consists of Seminung mountain (1,964 meter), Dempo mountain (3,159 meter), Patah mountain (1,107 meter) and Bengkuk mountain (2,125 meter). There is slope area in the west of Barisan hills.

Furthermore, South Sumatera is an upstream area of Musi Watershed covering 3 (three) provinces. This causes South Sumatera to play a strategic role in the conservation of natural resources. There are several major rivers in South Sumatera namely Mesuji river, Lalan river, Banyuasin river, Musi river, Ogan river, Komering river, Lematang river, Kelingi river, Lakitan river, Rupit river, and Rawas river. Almost those rivers are sourced from Barisan hills and empty into the strait of Bangka except Mesuji river, Lalan river and Banyuasin river.

Climate classification based on temperature and humidity with the symbols A and B. Climate A or tropical: the average monthly temperature not less than 18°C, average annual temperature 20°C-25°C, rainfall averages more than 70 cm/year. Climate B or desert climates or tropical dry climate with characteristics: there are desert areas and areas semiland (steppe), the lowest rainfall of less than 25,4 cm/year and large evaporation.

Community forest of Pengentaan is located in Preserved Forest Area of Bukit Patah which belong to sub district of Mulak Ulu, Lahat District. The total area allowed for this community forest is 474 hectares. The average altitude of this area is 550-700 meter above sea level. The average annual number of rainy days and rainfall is 10.8 days and 196.08 cm.

Village of Umo Jati is located in near of Preserved Forest area of Bukit Dingin which belong to sub district of Lintang Kanan, district of Empat Lawang. The average altitude of this area is 400 – 2.750 meters above sea level that is the highest sub district in Empat Lawang.

5.1.2.Demography

5.1.2.1. Population

Population data is the primary data required by government or private as the material for the planning and evaluation of development outcomes.

Table 5.1. Number of Population

| Year | Man | Woman | Total |
|------|-----------|-----------|-----------|
| 2011 | 3.861.485 | 3.737.044 | 7.598.529 |
| 2012 | 3.920.498 | 3.793.828 | 7.714.326 |
| 2013 | 3.978.712 | 3.850.028 | 7.828.740 |
| 2014 | 4.035.989 | 3.905.506 | 7.941.495 |
| 2015 | 4.092.177 | 3.960.138 | 8.052.315 |

Source: South Sumatera in Figures 2015-2016

Based on registration in 2015, the population in South Sumatera Province reached 8,052,315 with population growth

rate reached 1,40% compared with the previous research year (2014), which consists of 4,092,177 men and 3,960,138 women with a sex ratio figures show 1,03. Population growth in South Sumatera experiences decline trend from 2012 to 2015 accounting for 1,52%, 1,48%, 1,44%, and 1,40% respectively. With an area of 87.421,17 Km², South Sumatera has density of 92.11, meaning that in every 1 square kilometres on average inhabited by 92.11 people. City of Palembang is the area with highest density recorded for 4345,90 people/km² while District of Musi Rawas Utara is area with lowest density recorded for 31,32 people/km². In 2015, South Sumatera is dominated by productive age (15-59) accounting for 5,164,770 or 64.14% from total population. Even though experiencing decrease trend of population growth, population density still experiences increase trend in period from 2011 to 2015 accounting for 86.92, 88.24, 89.55, 90.84, and 92.11 respectively.

Table 5.2. Population Variable

| Population Variable | 2014 | 2015 |
|-----------------------------|-----------|-----------|
| <i>Number of Population</i> | | |
| Male | 4.035.989 | 4.092.177 |
| Female | 3.905.506 | 3.960.138 |
| Total | 7.941.495 | 8.052.315 |
| <i>Growth</i> | 1,48% | 1,40% |
| <i>Sex Ratio</i> | 1,03 | 1,03 |
| <i>Density</i> | 90,84 | 92,11 |
| <i>Age Composition</i> | | |
| 0 - 14 | 2.325.385 | 2.357.832 |
| 15 - 59 | 5.093.690 | 5.164.770 |
| > 64 | 522.420 | 529.713 |

Source: South Sumatera in Figures 2015-2016

In 2015, the number of labour force of South Sumatera was 3,934,787 people. Generally, the growth of labour force in 2014 showed an increase. While for the unemployment rate of South Sumatera in 2015 reached 6.07%. This figure was obtained by defining unemployment as people who are looking for a job, starting a new business, unable to get a job or who already having a job but still not starting yet.

In 2015, the population in Village of Umo Jati reached 2,449 with population growth rate reached 3,73% comparing previous research, which consists of 1,211 men and 1,238 women with a sex ratio figure show 97.79%. Population density was 152.43 people/km².

Village of Pengentaan has lower population than Umo Jati recorded for 537 people in 2015. Its population consists of 271 men and 266 women with a sex ratio figure of 101.88%. Population density reached 134.59 people/km².

5.1.2.2. Social Economic

Number of poor people in 2010 is 1,105 thousand people (14.80%) then decreased to 1,043.62 thousand people (13.48%) in 2012. The number of poor people has started to increase until it reached 1,112,53 thousand people (13.77%) in 2015. In general, the percentage of poor people in 2010 to 2015 has decreased up to 13.95% percent in spite of increase trend of the number of poor people.

Most of the people in South Sumatera work in the agricultural sector. In 2015, there were 2,023,064 people working in agricultural sector or 54.47% of total people in productive age.

This figure is higher than 2014 in which there were only 1,970,717 people or 53.37% of people in productive age. The higher percentage can be seen in Lahat District and Empat Lawang District accounting for 63.71% and 69.88% respectively. Even in sub district of Lintang Kanan, locus of this research, this percentage reached 94.28%. This indicates how much the community relies heavily on the agricultural sector that can affect the high pressure on preserved forest area. High pressure on preserved forest area is one of causes of deforestation and also one of reasons of the need on collaboration between government and local community in forest management.

Table 5.3. Number of People Working in Agricultural Sector

| Region | Number of Farmer | | | |
|----------------|------------------|-----------------------|-----------|-----------------------|
| | 2014 | | 2015 | |
| | Number | % From Productive Age | Number | % From Productive Age |
| South Sumatera | 1.970.717 | 53,37% | 2.023.064 | 54,74% |
| Lahat | 117.709 | 63,71% | - | - |
| Empat Lawang | 75.579 | 69,88% | 87.220 | 75,57% |
| Mulak Ulu | 13.461 | 77,41% | - | - |
| Lintang Kanan | 8.467 | 88,24% | 13.902 | 94,28% |
| Pengentaan | - | - | - | - |
| Umo Jati | 1.131 | 95,69% | 1.138 | 94,13% |

Source: Elaboration from some sources

5.1.3. Government Administration

Province of South Sumatera consist of 13 districts and 4 cities.

District of Ogan Komering Ilir is District with the largest area while Palembang and Lubuk Linggau are the smallest area accounting for 17,086.39 km² or 19.54% and 363.68 km² or 0.42% respectively. District of Lahat and District of Empat Lawang, the research location, are the eight and the twelfth largest area. However, in term of conservation, both Lahat and Empat Lawang play important role to ensure the stability of ecosystem considering both districts are located in upstream area.

Table 5.4. Data of District in South Sumatera Province

| No. | District / City | Capital | Total Area | | Administration | |
|-----|----------------------------|-------------------|------------------|-------------|----------------|-------------|
| | | | Area (Km2) | % | Sub District | Village |
| 1 | Bayuasin | Pangkalan Balai | 12.361,43 | 14,14% | 19 | 304 |
| 2 | Empat Lawang | Tebing Tinggi | 2.312,20 | 2,64% | 10 | 156 |
| 3 | Lahat | Lahat | 4.297,12 | 4,92% | 22 | 378 |
| 4 | Muara Enim | Muara Enim | 6.901,36 | 7,89% | 20 | 255 |
| 5 | Musi Bayuasin | Sekayu | 14.530,36 | 16,62% | 14 | 240 |
| 6 | Musi Rawas | Muara Beliti Baru | 6.330,53 | 7,24% | 14 | 199 |
| 7 | Musi Rawas Utara | Rupit | 5.836,70 | 6,68% | 7 | 89 |
| 8 | Ogan ilir | Inderalaya | 2.411,24 | 2,76% | 16 | 238 |
| 9 | Ogan Komering Ilir | Kayuagung | 17.086,39 | 19,54% | 18 | 327 |
| 10 | Ogan Komering Ulu | Baturaja | 3.747,77 | 4,29% | 12 | 157 |
| 11 | Ogan Komering Ulu Selatan | Muara Dua | 4.544,18 | 5,20% | 20 | 312 |
| 12 | Ogan Komering Ulu Timur | Martapura | 3.397,10 | 3,89% | 19 | 259 |
| 13 | Panukal Abab Lematang Ilir | Talang Ubi | 1.844,71 | 2,11% | 5 | 71 |
| 14 | Lubuklinggau | Lubuk Linggau | 365,49 | 0,42% | 8 | 72 |
| 15 | Pagar Alam | Pagar Alam | 632,80 | 0,72% | 5 | 35 |
| 16 | Palembang | Palembang | 363,68 | 0,42% | 16 | 107 |
| 17 | Prabumulih | Prabumulih | 458,11 | 0,52% | 6 | 37 |
| | SOUTH SUMATERA | PALEMBANG | 87.421,17 | 100% | 231 | 3236 |

Source: South Sumatera in Figure 2016

In general, civil servants working within the government of Sumatera Selatan Province can be grouped into three major groups of working units comprising of regional secretariat, the local departments

and services and boards, inspectorate, and agencies. Based on educational background, there are 4,870 employees with bachelor degree (include diploma and postgraduate program), 1,982 employees graduated from senior high school, and 314 employees graduated from junior high school and downward.

Table 5.5. Civil Servants Based on Education Classification

| EDUCATIONAL CLASSIFICATION | MALE | FEMALE |
|--|-------|--------|
| Diploma, Bachelor, Master and Doctoral | 2.618 | 2.252 |
| Senior High School | 1.290 | 692 |
| Junior High School and Downward | 279 | 35 |
| TOTAL | 4.187 | 2.979 |

Source: South Sumatera in Figure 2016

5.1.4. State Forest Area

State forest area is a specific territory of forest ecosystem determined and or decided by the government as a permanent forest.

Such decision is important to maintain the size of forest area and to ensure its legitimation and boundary demarcation of permanent forest.

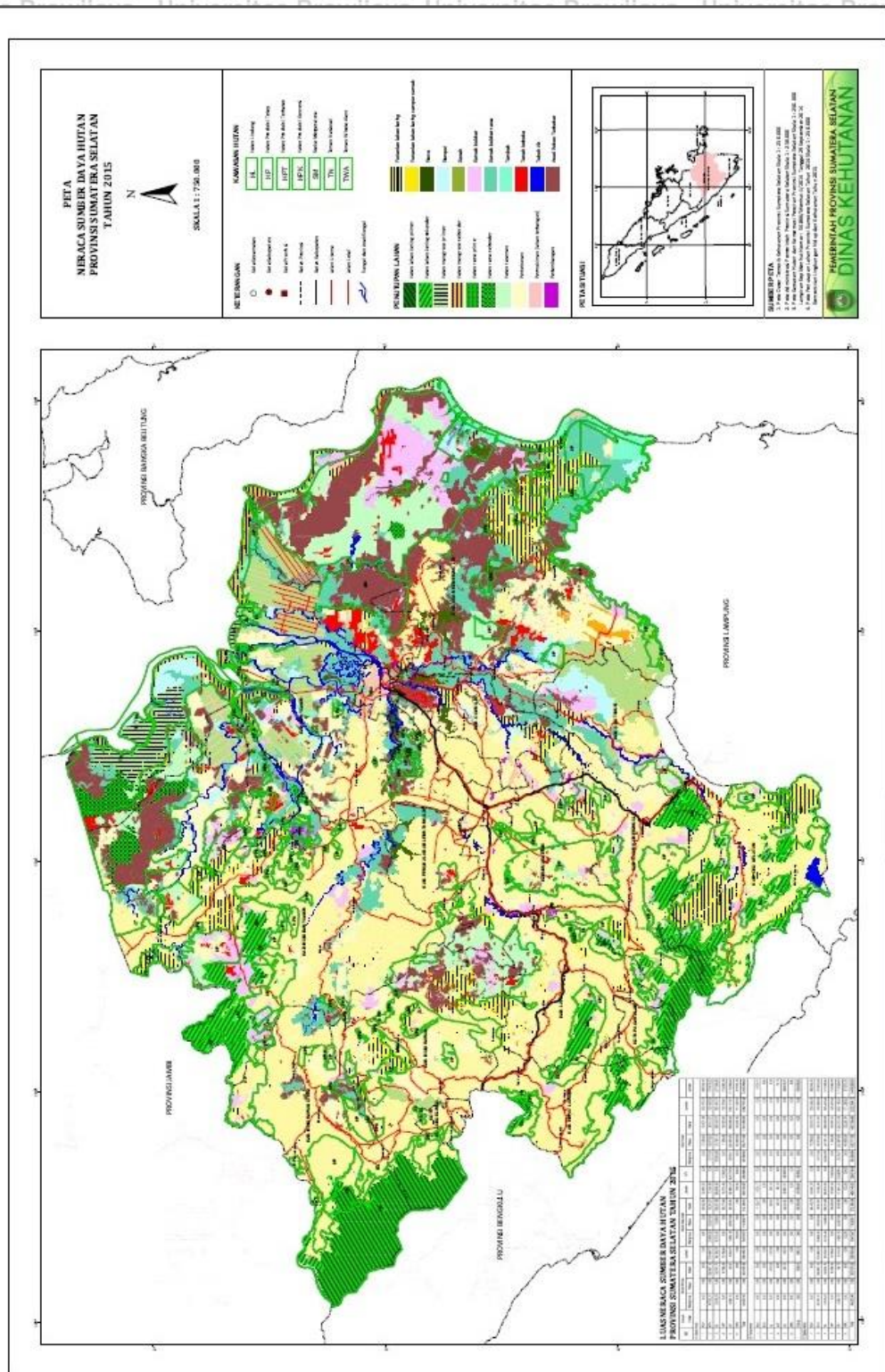
Appointment of forest area in South Sumatera Province was done through Regulation of Forestry Ministry number 866/Menhut-II/2014 regarding the appointment of forest area and water area in South Sumatera Province.

Total State forest area in South Sumatera is 3,418,289.03 hectares (Forest Agency of South Sumatera, 2016). It can be classified into some type based on its function, namely nature reserve area / KSA (including wildlife reserve), natural protection area / KPA (including national park, forest park, and nature park), preserved forest area / HL, limited-production forest area / HPT, production forest area / HP, and convertible production forest / HPK. Production forest is largest type

with a total area of 1,713,530.64 hectares or 50.13% from total area while preserved forest area is only 577,326.90 hectares or 16.89% from total area. There was no change in total area of state forest in last five years considering change in forest area have to be approved legally by Ministry of Environment and Forestry.



Figure 5.2. Map of Forest Area



Source: Forestry Agency of South Sumatera

Despite the status of forest areas, the land cover in most of the forest area is dominated by non-forest area with a total area of 2,222,364,12 hectares or 65.01% from total area. Land cover in preserved forest area is also dominated by non-forest with percentage 50.83% while primary forest is only about 16.27% from total area. It can be concluded that forest area in South Sumatera is in poor condition.

Table 5.6. State Forest Area in South Sumatera

| No | Forest Function | Primary Forest | Secondary Forest | Industrial Plantation Forest | Non Forest | Total |
|--------------|-----------------|-------------------|-------------------|------------------------------|---------------------|---------------------|
| 1 | KSA | - | 64.443,75 | - | 205.096,35 | 269.540,10 |
| 2 | KPA | 279.400,76 | 72.163,48 | - | 120.909,38 | 472.473,62 |
| 3 | HL | 93.953,19 | 189.912,69 | - | 293.461,02 | 577.326,90 |
| 4 | HPT | 10.798,49 | 59.649,34 | 14.004,64 | 129.451,52 | 213.903,99 |
| 5 | HP | 4.611,04 | 81.841,24 | 324.889,14 | 1.302.189,22 | 1.713.530,64 |
| 6 | HPK | - | 132,50 | 124,65 | 171.256,63 | 171.513,78 |
| TOTAL | | 388.763,48 | 468.143,00 | 339.018,43 | 2.222.364,12 | 3.418.289,03 |
| % | | 11,37% | 13,70% | 9,92% | 65,01% | |

Source: Forestry Agency of South Sumatera, 2016

Similar with other province, South Sumatera also faces deforestation in a big number. Average of deforestation rate in period 2009 to 2015 is 35,921.93 hectares. Deforestation rates are contributed largely to production forest area that are intended to produce timber. Preserved forest area performed well in term of deforestation in which there is a significant increase of forested areas in 2013 even though large deforestation re-occurred in 2014. Deforestation rate in preserved forest area was caused mainly by encroachment activities for community plantation and also forest fire. But the rate of deforestation was also offset by forest and land

rehabilitation activities undertaken by both central and local governments in collaboration with local communities.

Table 5.7. Deforestation Rate in South Sumatera

| No | Type of Forest | Deforestation Rate | | | | | | |
|----|----------------|--------------------|----------|-----------|-----------|-----------|------------|-----------|
| | | 2015 | 2014 | 2013 | 2011-2012 | 2009-2010 | TOTAL | Average |
| 1 | KSA-KPA | 1.147,23 | 1.312,80 | 2.261,70 | 597,70 | 2.013,10 | 7.332,53 | 1.466,51 |
| 2 | HL | 9,28 | 2.113,00 | -9.302,80 | 800,40 | 4.826,90 | 1.553,22 | 310,64 |
| 3 | HPT | 73,11 | 132,30 | 3.469,70 | 974,90 | 449,80 | 5.099,81 | 1.019,96 |
| 4 | HP | 138.415,07 | 704,70 | 5.011,10 | 14.640,00 | 10.105,20 | 167.466,67 | 33.493,33 |
| 5 | HPK | 819,47 | - | 110,60 | 230,60 | 103,20 | 1.263,87 | 252,77 |
| | TOTAL | 140.464,16 | 2.853,40 | 1.550,30 | 17.243,60 | 17.498,20 | 179.609,66 | 35.921,93 |

Source: Statistic of Ministry of Environmental and Forestry 2011-2016

One of indicator that can be used to be controller in forest management in term of sustainable forest management is balance of forest resources. From the results of the preparation of forest resource balance from year to year can be seen the decreased potential of forest resource. It can be resulted by land conversion from forested-area to non-forest area in which caused by forest encroachment, illegal logging, forest fire, and also company logging activity. In 2015, there was a decrease in the forested-area accounting for 139,636.63 hectares or 4.11% comparing to 2014. Balance of forest resources in 2015 also noted that there was a decrease in timber potential recorded for 14,000,000 m³ comparing to 2014 especially in production forest area. In addition, there was also a decrease of timber value in 2015 comparing 2014 noted for 9.3 trillion rupiah in which the value of all type timber in 2015 was 112.3 trillion rupiah. Besides timber forest products, the potential decrease also occurs in rattan which is one of the non-timber forest products. There was decline of rattan potential recorded for 2,937.20 ton in 2015 comparing to 2014 with a total loss

value of 2,581.05 million rupiah. From these figures, it can be concluded that forest area in South Sumatera is managed unsustainably. Balance of forest resources can be seen in table 5.5.

Table 5.8. Balance of Forest Resources

| No. | Parameter of Forest Resources Balance | Period | | | |
|-----|---------------------------------------|------------|------------|------------|------------|
| | | 2012 | 2013 | 2014 | 2015 |
| 1 | Forested Area (Hectares) | 722.398,25 | 750.827,52 | 946.401,75 | 807.161,43 |
| 2 | Timber Potential (x 1000 m3) | 162.647,68 | 165.838,64 | 183.766,00 | 169.765,00 |
| 3 | Timber Value (x Billions Rp.) | 107.591,44 | 109.702,26 | 121.559,00 | 112.300,00 |
| 4 | Rattan Potential (Ton) | 121.524,64 | 120.588,75 | 115.392,74 | 112.455,54 |
| 5 | Rattan Value (x millions Rp.) | 106.789,78 | 105.967,37 | 101.401,39 | 98.820,34 |

Source: Forestry Agency of South Sumatera, 2013-2016

5.1.5. Preserved Forest Governing Body

Preserved forest area is managed dominantly by the state through regional forestry agency. The authority of preserved forest management has been returned to the provincial government based on law number 23/2014 regarding local government since 2017. Preserved forest will be managed by Unit of Preserved Forest Management as translation to Kesatuan Pengelolaan Hutan Lindung (KPHL). KPHL has several duties and functions according to regulation number P.6/Menhut-II/2010 regarding norms, standards, procedures and criteria of forest management on Preserved Forest Management Unit (KPH) namely:

- a. Carrying out forest management covering: forest governance and forest management planning, forest utilization, forest area usage, forest rehabilitation and reclamation, forest protecting and nature conservation.
- b. Describing forest policy in all level to be implemented;

c. Carrying out forest management activities in its area from planning, organizing, implementing and supervising, and controlling;

d. Carrying out monitoring and assessment of the implementation of forest management activities in its territory;

e. Opening investment opportunities to support the achievement of forest management objectives.

There are 13 KPHs managing 577.326,90 hectares of preserved forest area spread over 17 districts. But until now, KPHL has not functioned because of unfinished legal umbrella for its formation at the regional level.

This research was conducted in preserved forest area of Bukit Dingen as the representation of SBFM. Preserved forest area of Bukit Dingen is located in the working area of KPH Kikim Pasemah covering District of Lahat and District of Empat Lawang. As mentioned before, KPH Kikim Pasemah is still not active yet considering unfinished law umbrella. In this research, interview was conducted to former employees of forestry agency of Empat Lawang Regional Government who manage preserved forest area of Bukit Dingen in period from 2009 to 2016. This was done with consideration of the similarity of duties and functions between KPHL and Forestry Agency.

Bukit Dingen has been managed by Forestry Agency of Empat Lawang Regional Government for 8 years before the implementation of law number 23/2014. Forestry agency of Empat Lawang consisted of 3 sections of work namely section of forest protection and utilization, section of forest product circulation, and section of land and forest

rehabilitation. Forestry agency was also supported by technical unit in each sub-district as well as forestry consular and the forest security working group. There are several of main tasks and functions of Forestry Agency according to local regulation of Empat Lawang number 17/2011 namely:

- a. Organizing forest protection and utilization;
- b. Organizing rehabilitation of forest and land;
- c. Organizing supervision of forest product circulation;
- d. Organizing permissions in forestry field;
- e. Formulating plan of forest area development;
- f. Formulating micro plan of forestry;
- g. Organizing statistic of forestry;
- h. Formulating technical guidance and inventorying facilities in forestry section;
- i. Conducting supervision, monitoring, development, and evaluation on business and institutions in forestry sector;
- j. Facilitating settlement of disputes between forestry entrepreneurs and the community;
- k. Implementing forest product management both timber and non-timber.

In general, forestry is a section of agency of Forestry, Plantation, Mining, and Energy. Forestry section was headed by a section head and was assisted by three sub-section heads in charge of each technical problem. In addition, there was a technical unit of forest ranger that was in similar level with sub-section and was headed

by a technical unit head. All activities in the forestry section were funded by a combination of central budgets and local budgets managed independently by the forestry section from the planning, implementation, and accountability process. However, lack of human resources is a big obstacle. Total employee in forestry section was 12 (twelve) persons who must manage 88,766.84 hectares with supervising area ratio 7,397.23 hectares/employee. Organization structure of Forestry Agency can be seen in picture 5.3.

Meanwhile, a small portion of preserved forest area is managed by local community through community-based forest management scheme as translation for Hutan Kemasyarakatan (HKm). CBFM is run under the regulation of Environmental and Forestry Ministry Number P.83/MENLHK/SETJEN/KUM.1/10/2016 regarding Social Forestry. Forest farmer group as translation for Kelompok Tani Hutan (KTH) act as governing body in area of CBFM. KTH runs all of management functions namely planning, policy implementation, and also supervision. However, KTH is obliged to give annual report to government as part of monitoring and evaluation of forest management permit.

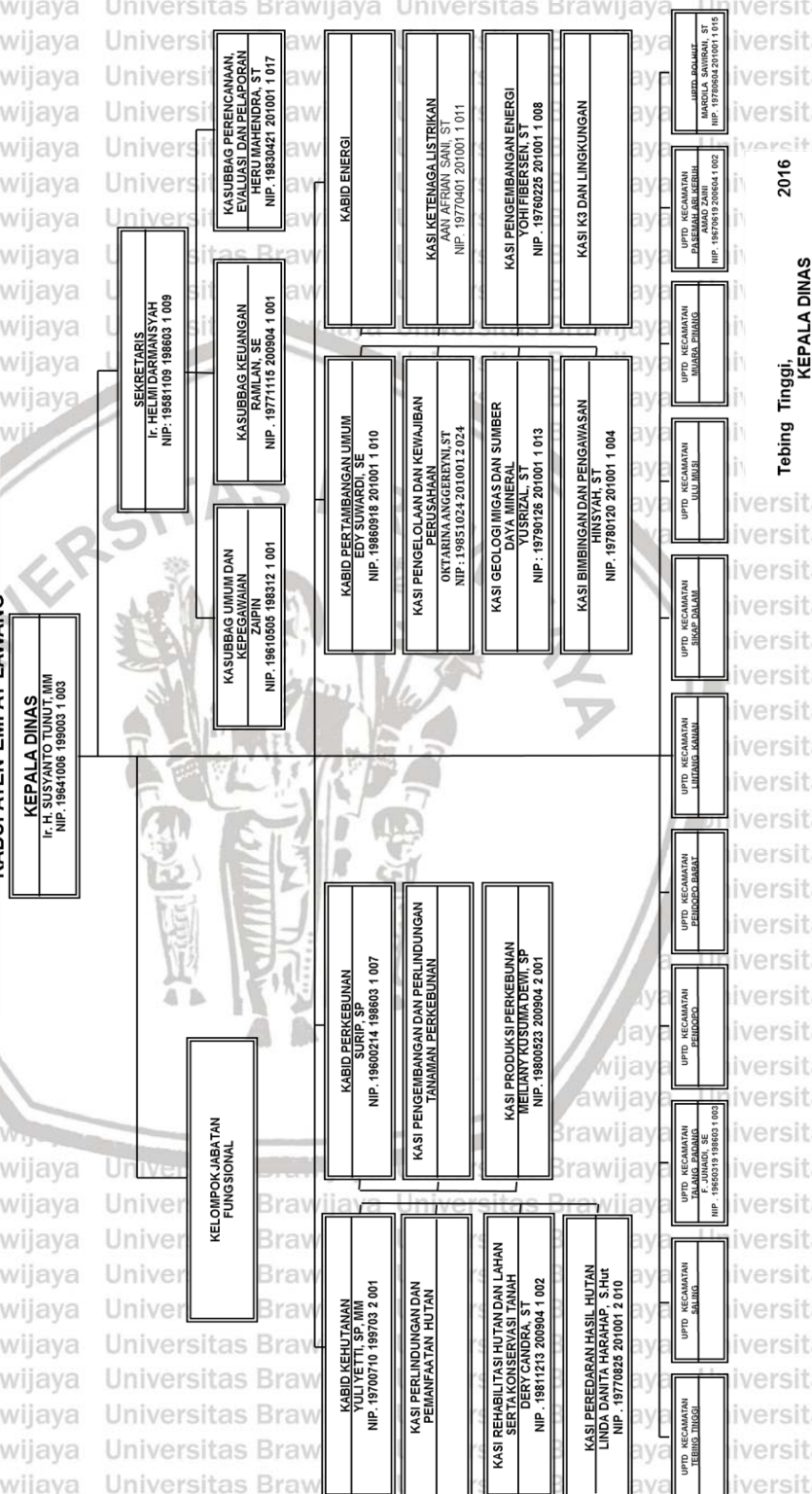
CBFM of Pengentaan located in preserved area of Bukit Patah is governed by KTH "Bersama" based on Forestry Minister Permit number 540/Menhut-II/2013 and also Lahat Mayor Permit number 522/08/KEP/DISHUTBUN/2015. The total area of work permit of CBFM of Pengentaan is 474 hectares. Work permit area of CBFM of Pengentaan can be seen in picture 5.5. KTH "Bersama" consists of 156

(one hundred and fifty-six) forest peasants divided into 4 (four) working groups by location. The member of KTH "Bersama" mostly come from 4 villages namely Pengentaan, Datar Balam, Padang Masat, and Penindayan. KTH "Mandiri" is currently chaired by Mr. Sanit.

Governing body of CBFM of Pengentaan is given some rights namely: to utilize forest area, to utilize environmental services, and to utilize non-timber forest products. In contrary, there are also some things that are forbidden namely changing the forest function, selling permit area, and using the permit outside the management plan. There are some obligations required in management permit of CBFM of Pengentaan namely:

- a. Implementing border setup of work permit;
- b. Formulating work plan of forest management for 35 years;
- c. Implementing forest protection;
- d. Implementing rehabilitation in work area of CBFM;
- e. Implementing wooden plant enrichment;
- f. Managing work permit area in accordance with forest sustainable principles.

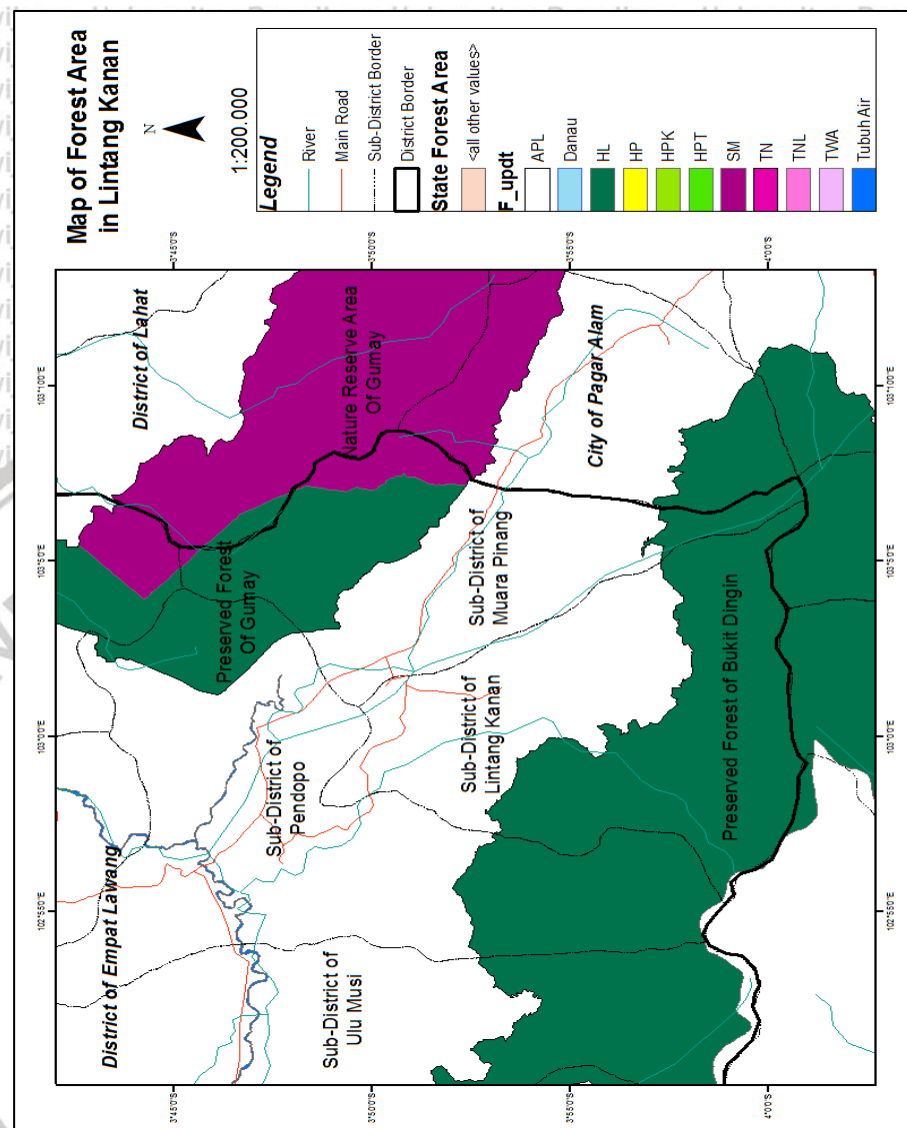
**STRUKTUR ORGANISASI
DINAS KEHUTANAN PERKEBUNAN PERTAMBANGAN DAN ENERGI
KABUPATEN EMPAT LAWANG**



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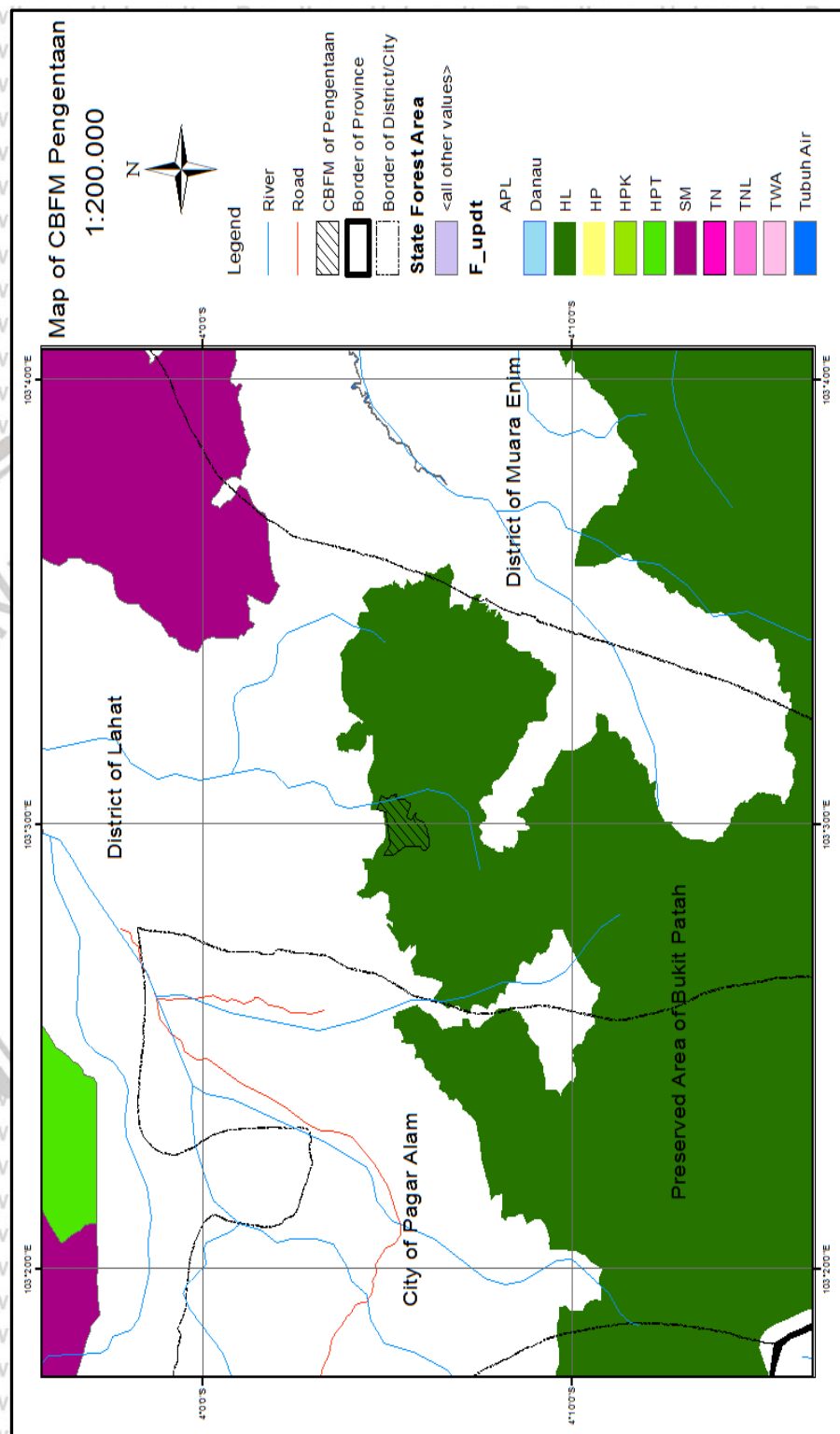
Source: Forestry Agency of Empat Lawang, 2016

Figure 5.4. Map of Forest Area in Lintang Kanan



Source: GIS Analysis by Researcher

Figure 5.5. Work Permit Area of CBFM of Pengentaan



Source: GIS analysis by Researcher

5.2. Data Description

Data description is a part to explain research that has been processed from raw data by using technique of data analysis both qualitative and quantitative. Researcher in this stage will conduct data analysis based on the result of interview conducted by researcher to 12 (twelve) research informants consists of government officer, forestry entrepreneur, forest farmer, and member of KTH using collecting technique of purposive sample.

Governance analysis of research using Lockwood method in which analyzing the implementation of good protected area governance namely legitimacy, transparency, accountability, inclusiveness, fairness, connectivity, resilience and adaptability. In addition, GIS analysis of land cover change was undertaken to demonstrate deforestation in order to see the relationship between good governance and forest sustainability.

This research is qualitative approach. So that, process of data analysing conducted analysis simultaneously. As mentioned before in previous chapter, data analysis uses interactive model proposed by Miles and Huberman. To simplify in data analysis, researcher uses code to particular aspects. These codes were determined based on similar answer and related to research problem.

Table 5.9. Research Code

| Code | Explanation |
|--------|-----------------------------------|
| I1-... | Informant from government officer |
| I2-... | Informant from entrepreneur |
| I3-... | Informant from community |

Source: Researcher

Based on table above, it can be seen several codes that consists of question and research informant. Informant codes of this research can be divided into three parts in which informant code I₁₋₁, I₁₋₂, I₁₋₃, I_{1-...} is informant code for government officer, I₂₋₁, I₂₋₂, I₂₋₃, I_{2-...} is informant code for entrepreneur, and informant code I₃₋₁, I₃₋₂, I₃₋₃, I_{3-...} is informant code for community. Informant code is aimed to simplify data analysing and to ease reader in exploring information from this research.

5.3. Data of Research Informants

Data of research informants describes informant description that is one of main source in this research. Informant description consists of name, age, job/position, and domicile. The description of research informant can describe role of each informants in the implementation of good protected area governance in preserved forest area. Selection of informants in this research used purposive technique. It was undertaken to get informants who were appropriate and credible. There were 12 (twelve) informants that consist of 5 (five) informants from government officer, 1 (one) informant from forestry entrepreneur, and 6 (six) informants from community. Informant description can be seen in table 5.10 below.

Table 5.10. Informant Description

| No. | Name | Age | Domicile | Position | Code |
|-----|----------------------|-----|---------------|----------------------------|------|
| 1 | Saibi | 56 | Tebing Tinggi | Ex Forestry Section Head | I1-1 |
| 2 | Linda Danita Harahap | 39 | Tebing Tinggi | Ex Sub Section Head | I1-2 |
| 3 | Dedi Harianto | 36 | Tebing Tinggi | Forestry Conselor | I1-3 |
| 4 | Surip | 56 | Lintang Kanan | Forest Farmer | I3-1 |
| 5 | Suyan | 61 | Ulu Musi | Forestry Entrepreneur | I2-1 |
| 6 | Safrin | 40 | Lintang Kanan | Head of Forest Farmer | I3-2 |
| 7 | Yeni | 40 | Tebing Tinggi | Staff of Regional Planning | I1-4 |
| 8 | Sanit | 30 | Pengentaan | Head of KTH "Bersama" | I3-3 |
| 9 | Radius Prawiro | 35 | Pengentaan | Forest Farmer | I3-4 |
| 10 | Pausi | 60 | Pengentaan | Forest Farmer | I3-5 |
| 11 | Ruslan | 60 | Pengentaan | Local community | I3-6 |
| 12 | Hendra Audi | 36 | Lahat | Ex Forestry Official | I1-5 |

Source: Researcher

5.4. Analysis of Good Governance Assessment Data

Analysis of research data is exposure of research result obtained by interviewing 12 (twelve) informants representing and providing data of the implementation of good governance principles in preserved forest area in order to achieve forest sustainability.

Data obtained from this research was analysed through Lockwood method which consists of 7 (seven) principles namely legitimacy, accountability, transparency, inclusiveness, fairness, connectivity, resilience and adaptability. The implementation of good governance principles was described separately between CBFM and SBFM and then to be compared in order to determine which type of governance is better in managing preserved forest areas. Data analysis was done by exposing the research result from each indicator on Lockwood method and its 30 outcomes that can be seen in p. 39. Interview transcripts, together with relevant documentary evidence, were used to make judgements about the performance of the governing bodies against each outcome. In presenting these judgements, efficiency of presentation led to some outcomes being combined. From the evidence a summative judgement for each outcome was made according the following qualitative scale: "very low", "low", "moderate", "high", "very high". These judgements followed decision-rules:

- Very high, applied without note;
- High, applied with minor note in which the existing note can be ignored and only to provide more value;
- Moderate, applied with major note in which the existing note aims to improve performance;

d. Low, applied with substantial note in which the existing note contains about things that are very disruptive to performance and must be overcome;

e. Very Low, not applied.

These judgements were then aggregated for each principles according to the following decision-rules:

f. One or more “very low” or “low” outcomes = “substantial improvement desirable”;

g. Two or more “moderate” outcomes = “improvement desirable”;

h. One moderate outcome with the remaining “high” or “very high” = “high level of performance with potential for improvements”; and

i. One “high” outcome with the remaining being “very high” = “exemplary with opportunities to further advance “cutting-edge” good governance”.

Here is an analysis of research data on the evaluation of good governance principles in the management of protected areas in South Sumatera.

5.4.1. Legitimacy

Legitimacy is the acceptance and justification of shared rule by a community. The question of legitimacy concerns who is entitled to make rules and how authority itself is generated. Legitimacy is therefore a key factor in the ethical acceptability of governance arrangements. Principle of legitimacy have 6 (six) outcomes than can be seen in previous chapter (p. 39).

5.4.1.1. In SBFM

Overall achievement: High level of performance with potential for improvements.

- a. First outcomes: *The governing body is conferred with a legal or democratically mandated authority.*

Achievement: High. Evidence: Regulations and interview results.

Conferred democratic legitimacy is established mainly through law number 44/1999 regarding forestry. In addition, there are some regulation regarding the authority of regional government to manage preserved forest areas namely:

1. Law number 5/1990 regarding conservation of natural resources and its ecosystem.
2. Law number 23/2014 regarding regional government. In this regulation, there is the distribution of coherent matters between the central government and local governments. In forestry sector, regional government are authorized in forest management, conservation of natural reserves and its ecosystem, community training and education, and watershed management.
3. Presidential Decree number 32/1990 regarding Protected Area Management. This regulation describes the protected area as the whole covering definition, form of protected area, the way of management, and also the management aims.

4. Regulation of Forestry Ministry Number P.6/Menhut-II/2010 regarding norms, standards, procedures and criteria of forest management on Preserved Forest Management Unit (KPH).

In these regulation, regional government is given large authority in preserved forest management. However, such authority is deemed insufficient to achieve the objective of preserved forest management especially in permissions affairs.

“Forestry agency was not given the authority fully. For example, in permissions affairs, regional government was only in stage of issuing recommendation. To be honest, it makes the process long and costly. Central government have to consider this. (I1-3)”
“Central government should submit the licensing authority to the smallest forest management unit. It is necessary to speed up service to the stakeholders. (I1-1)”

In spite of un-full authority, the authority of forestry agency is regarded powerful enough especially in forest protecting and also forest rehabilitation that are main objective of forest management in Empat Lawang.

“Forestry agency has never had any significant problems in implementing forest protection and also forest rehabilitation which until now is still the main focus in Empat Lawang District. (I1-1)”

b. Second outcomes: Stakeholders freely accept the governing body's authority. Achievement: Moderate.

Local communities surrounding forest including forest farmers and also forestry entrepreneurs are stakeholders directly related to preserved forest area management. In general, stakeholders can accept the

authority of forestry agency in preserved forest management even by forest encroachers.

However, economic pressures and land requirements are a major boost for communities to continue illegal activities in preserved forest areas. In addition, the unclear boundaries of forest area also cause confused local communities to establish where the exact location of preserved areas. There is often conflict between forestry officer and community and also with forestry entrepreneur due to this boundary problem. After the socialization and reconstruction of boundaries of the forest area, the community can finally accept that the location of the dispute is part of the preserved forest area.

"We opened the forest area to be coffee plantation due to economic factors and no other options for us. We are aware that this is a preserved forest area. And if the forestry officers take action someday, we will accept it sincerely. Because it is indeed their authority. Although we still hope to be allowed working in this area. (I3-1)"

"During my duty since 2009, people can accept every time I am on duty. I have never encountered a condition where people question my authority. However, it would be better if the boundaries of the area could be improved. This will make the community more accept the authority of the forestry service, especially for the community of encroachers and loggers. Clear boundaries will avoid unnecessary debate with the community. (I1-3)"

Furthermore, governing body should be able to socialize more frequently with regard to the authority of forestry agency especially in term of permission procedures.

This is required by the business actor with regard to the

legality of his business. Because often they do not know to what extent the authority of forestry agency.

“In essence, we fully accept the authority of the forestry agency in supervising our business. But we hope that they can more frequently socialize regulations relating to business permit and forest product administration. (I2-1)”

c. Third outcomes: *The governing body acts in accordance with its mandate.* Achievement: Very High

A suite of regulatory and management instruments, including the Act, management plan and performance reports to Government provide a solid framework of direction and control that ensure the governing authority acts in accordance with its mandate. There is no documentary or interview evidence to suggest that the Authority's plans and activities are in any way at variance with its designated powers and responsibilities.

d. Fourth outcomes: *The governing body's powers and responsibilities enable management that is consistent with the IUCN definition of a protected area and the associated guidelines for protected area categories.*

Source: Forestry act, Main Tasks and Function, Forestry officials. Achievement: Very High. Evidence: Regulation related to protected area and Main Tasks and Functions of Forestry Agency.

IUCN defines protected area as a clearly defined geographical space, recognised, dedicated, and managed, through legal or other effective means

associated ecosystem services and cultural values.

While presidential decree number 32/1990 defines protected area as an appointed area with the primary function of protecting the sustainability of environment which includes natural resources, artificial resources and the historical and cultural value of the nation for the benefit of sustainable development. Protected area management is defined as efforts to establish, preserve, and controlling the utilization of protected area. There are 2 (two) target of protected area management. First, to maintain biodiversity, ecosystem, and the uniqueness of nature. Second, to improve protection function of soil, water, climate, plants, animals, and also a nation value of history and culture. In this regulation, there is also description of preserved forest that is a part of protected area as a forest area that have unique characteristics in protecting surrounding area and lower area as a regulator of water system, preventing floods and erosion, and maintaining soil fertility. The law number 41/1999 refers to this definition for preserved forest area.

Furthermore, law number 41/1999 explains that preserved forest area utilization is limited in the utilization of area, environmental services, and non-timber forest products. This is clearly intended to prevent changes in form and function of preserved forest area. Main tasks

and functions of forestry agency is referred to those regulation.

So, in essence, the authority granted to forestry agency permits management that is consistent with the IUCN definition of a protected area and the associated guidelines for protected area categories.

e. Fifth outcomes: *The governing body has a long-standing cultural or spiritual attachment to some or all of the lands within the protected area.* Achievement: Very High.

Preserved forest area is managed by regional government. This causes most employees are local people who have attachment to local culture. This becomes a distinct advantage in understanding and addressing the local culture within the management policy of preserved forest area.

In addition, forestry agency also has some procedural in term of addressing the local culture. First, local communities can provide suggestions related policy through regional development planning meetings. Second, filtering aspirations through PRA mechanism in which forestry counsellor play a huge role. Third, utilizing local connections to provide input on preserved forest area management.

“Often we also ask the traditional leaders for advice on the policy implementation in their area. It is important that these activities do not conflict with local cultures that may cause failure of policy implementation. While it does not

conflict with the existing regulation, we will consider their advice as much as possible in the implementation of the policy. (I1-1)"

"In forest community assistance activities, we recognize the PRA mechanism in which we seek to collect all information relating to the conditions of the local community. This is intended to provide as much detail as possible for the preparation of the work plan. (I1-3)"

f. Sixth outcomes: *Governors act with integrity and commitment. Achievement: Moderate*

Article 58 of law number 23/2014 states that the regional government in governing their regional is guided by the principle of organizing the state government consisting of legal certainty, orderly state administration, public interest, transparency, proportionality, professionalism, accountability, efficiency, effectiveness, and fairness. As a part of regional government, forestry agency has to refer to these principles in carrying out the conduct of forestry affairs. So, it is expected to ensure the integrity of governing body in preserved forest area.

However, the implementation of this regulation is still questioned. There are still many conflict of interest occurring in the management of preserved forest areas.

There are many examples of case related to it. First, if there is a violation in the administration of the circulating of forest products involving police officer or soldier, usually the process will not proceed to the investigation process. In the administration of forest product circulation, there is also the simplification of the

requirements that should be met by reason of proximity to the applicant. Second, the appointment of farmer groups that carry out rehabilitation activities is often undertaken without established mechanism. This is to accommodate the interests of relations or family.

"We often have difficulty in handling cases of violations involving authorities. In addition, sometimes there are also families of who underestimate the procedure. To be honest we are sometimes difficult to resist. (I1-2)"

The forestry officials clearly have a strong commitment to work, but for integrity is still highly questionable.

5.4.1.2. In CBFM

In general, overall achievement is high with potential for improvement.

a. First outcomes: *The governing body is conferred with a legal or democratically mandated authority.*

Achievement: Very High. Source: Forest Management Permit, Regulation, and Interview result.

There is one regulation regarding community-based forest management namely Regulation of Environmental and Forestry Ministry Number P.83/MENLHK/SETJEN/KUM.1/10/2016 regarding Social Forestry that is change and also simplification of some previous regulations. In this regulation, all provisions relating to the management of CBFM covering the process of applying permits, rights and obligations, and also removal permits. Moreover, CBFM is also

supported by regional government through issuance of regent/mayor/governor's decree regarding the granting of forest area management permit. In term of CBFM of Pengentaan, it is granted management permit through Forestry Minister Permit number 540/Menhut-II/2013 and also Decree of Lahat Regent number 522/08/KEP/DISHUTBUN/2015. Thus, CBFM has legitimacy that is strong legally.

It is also admitted by governing body of CBFM of Pengentaan. After the issuing of permits for forest area management, forest farmer feels much calmer in their activities in preserved forest area.

"With the issuing of management permit we feel much calmer without any feeling of fear anymore because now we are given the authority to manage this area (I3-3)". These regulations are considered sufficient to support CBFM in achieving sustainable forest management.

b. Second outcomes: *Stakeholders freely accept the governing body's authority.* Achievement: Very High.

Evidence: Interview

In CBFM of Pengentaan, stakeholders involved are not as much as in SBFM namely government official and local community. Government officials clearly recognize the authority given to CBFM of Pengentaan considering that the authority is given by government therefore it is strong enough in terms of legality and legitimacy. Local communities, even though who are not member of KTH,

also recognize the authority for preserved forest area management granted to KTH “Bersama”.

“We recognize the authority given to KTH “Bersama”. And we hope this will have a positive impact not only on them but also for forest’s sustainability (I3-6)”.

c. Third outcomes: *The governing body acts in accordance with its mandate.* Achievement: Very High.

Similar with SBFM, the existing regulations are strong enough to ensure absence of abuse of authority. All of authority given to KTH “Bersama” as the governing body of CBFM of Pengentaan has been granted in detail so that matters beyond such provision can be categorized as an offense which may result in the revocation of management permit. Since the issuance of permits in 2013, there has been no evidence of abuse of authority committed by KTH “Bersama”.

d. Fourth outcomes: *The governing body’s powers and responsibilities enable management that is consistent with the IUCN definition of a protected area and the associated guidelines for protected area categories.*

Achievement: Very High. Evidence: Regulation related to CBFM, and Management Permit.

Regulations relating to CBFM are drawn up in accordance with Law No. 41/1999 and also Presidential Decree No. 32/1990. As mentioned earlier, these rules are in accordance with the definitions provided by IUCN.

KTH “Bersama” is only permitted to utilize preserved forest area with a form of utilization which is considered not to change the shape and function of the forest area.

Any management that ignores the principles of sustainable forest management will be subject to sanctions in the form of revocation of permits.

e. Fifth outcomes: *The governing body has a long-standing cultural or spiritual attachment to some or all of the lands within the protected area.* Achievement: Very High.

Evidence: Interview result.

CBFM of Pengentaan is managed by local community. It means that governing body has a long-standing cultural or spiritual attachment to preserved forest area. Forest management is also done based on the patterns and habits of local communities that have long existed.

However, patterns and habits that are not legitimized by rules should clearly be eliminated.

“There has not been much change in the way we work in preserved forest area as our forefathers have done. But now, we are gradually no longer burning land that we used to do to clear land. These include restrictions on management permit (I3-3)”.

f. Sixth outcomes: *Governors act with integrity and commitment.* Achievement: Low

As mentioned before, the rules and also the management permit has determined some provisions regarding forest management followed by clear

sanctions for every offense. It should be strong enough to ensure the integrity of governing body.

Unfortunately, the dominant conflict of interest is related to the forest rehabilitation. Member of KTH "Bersama" seem to refuse to plant wooden species for fear of killing their coffee plants. There is the impression that management permit is only used as a shield for the forest encroachment that they have done. Governing body failed to fulfil this matter. They give a large space for the offense done by their member. This is also compounded by the lack of supervision by the government.

"Many of our members do not run rehabilitation programs implemented in our permit areas. Even the distributed seedlings are not treated and even deliberately turned off for fear of killing their coffee plants. To be honest, we are difficult to overcome it (I3-3)".

Therefore, the integrity of governing body can be categorized in low level.

5.4.2. Transparency

Transparency is a requirement, grounded in ethics, of stakeholders' right to know about matters that affect them. In general, all decisions about protected areas should be accessible to stakeholders.

Transparency is required in who has made a decision, the means by which it has been reached, and its justification.

5.4.2.1. In SBFM

In general, overall achievement is high with potential for improvement.

a. First outcomes: Governance and decision-making is open to scrutiny by stakeholders, and the reasoning behind decisions is evident. Achievement: High.

In general, forestry agency is open enough to the stakeholders regarding policies and information related preserved forest management. Stakeholders are given sufficient information by forestry agency. While data or information can be provided by forestry agency, it will be delivered to stakeholders. And if data/information cannot be provided, forestry agency will direct the stakeholders to the agency that owns data/information.

However, there is a fundamental weakness regarding providing data/information in forestry agency namely absence of official website to access data and information. This causes all parties who looking for data/information must come directly to the office.

"So far we always provide data/information relating to the management of the preserved forest area. However, applicants should come to our office because we do not have an official website. And if data/information requested is not available, usually the applicant will be suggested to the institution that has data/information (11-1)".

Data/information provided by forestry agency are limited.

Limitation of funds are the main contributing factors to the limitation of data/information. However, for

availability of data/information related to the implementations of work program is quite complete. In the last two years, the forest agency has sought to provide spatial data on preserved forest area that are very useful not only for the preparation of work plans but also for policy formulating.

"We admit that we have limited data/information. But, we have provided spatial data for forest areas since 2014 that is very useful for forest management (I1-1)".

Formulating of preserved forest management plan prepared based on supporting data/information. Analysis of the areal condition generated through GIS analysis is the main basis in establishing management plans especially related to the forest rehabilitation plans. The site of rehabilitation programs will be determined on the basis of the critically of the land. In addition, the preparation of management plans is also aligned with the agenda of central and local government and also the results of community proposals through deliberations of regional development planning. It can prove that forest area management plan can be explained based on facts and supporting data.

"There are several things that we consider in the preparation of work plan that is the result of technical analysis, alignment with central and local government programs, as well as the results of community proposals (I1-1)".

b. Second outcomes: *Achievements and failures are evident.* Achievement: Moderate. Evidence: Forestry Agency Reports.

One tool that can be used to measure the achievement or failure in the implementation of the policy is a report on the implementation of activities. Forestry agency of Empat Lawang reports on the management of preserved forest area periodically in relation to the implementation of work programs especially in forest rehabilitation, forest protection, and forest product administration.

"We have to prepare reports on forest product circulation every month. In addition, the implementation of activities funded by the state budget must also be reported periodically. (11-2)"

Despite periodic reports, informants from the forestry agency have not been able to clearly identify performance targets. Performance targets that can be displayed are performance targets based on budget.

While the performance targets listed in the strategic plan and work plan are not clearly understood. The measurement of the performance that should be measured based on the targets of the work plan is even measured based on the targets stated in the activity and budget plan. This results in a biased performance appraisal. Performance targets that are not provided by the budget will be omitted in performance appraisal.

"Our performance targets are listed in our activity and budget plans and the measurement of our performance based on those targets. (I1-1)"

c. Third outcome: Information is presented in forms appropriate to stakeholders' needs. Achievement: Very High. Evidence: Official report and interview.

In general, preserved forest management reports is prepared based on technical guidelines set forth in the rules. Each agency concerned with the report has its own report format. And often the forest agency reports in the different formats for the same activities. Therefore, management reports are easy to be understood by the stakeholders because it is reported in format requested.

"We report forest management partially based on guidelines determined by the rules or institution request (I1-1)"

5.4.2.2. In CBFM

In general, overall achievement is very low with substantial improvement desirable.

a. First outcomes: *Governance and decision-making is open to scrutiny by stakeholders, and the reasoning behind decisions is evident.* Achievement: Low. Evidence: Management plan and interview results.

Basically, governing body of CBFM of Pengentaan is very open with all the stakeholders coming. They are willing to provide data/information to all parties to the extent of their knowledge. Unfortunately,

data/information is delivered verbally without any written document.

In addition, the management plan that should be a guideline has not yet been formulated. Whereas this one of the obligations that must be fulfilled in relation to the issuance of management permit. Lack of knowledge and assistance is a major contributing factor to this problem.

"We have not a management plan yet to date. It will be discussed to member forum and also be communicated to our forestry counsellor (I3-3)"

b. Second outcomes: *Achievements and failures are evident.* Achievement: Very low. Evidence: Management report.

One of obligations regulated in Regulation of Environmental and Forestry Ministry Number P.83/2016 is annual management report delivered to regional government and technical unit of environmental and forestry ministry. In case of CBFM of Pengentaan, governing body claimed to have not compiled a management report to date. This causes governing body is not able to explain performance and failure of their forest management.

"We have never compiled a management report yet. Our knowledge and administration skill is very limited. If we are assisted in preparing report, we will surely fulfil the obligation (I3-3)"

c. Third outcome: *Information is presented in forms appropriate to stakeholders' needs.* Achievement: Very Low. Evidence: Official report and interview.

As mentioned before, there is no management reports that have ever been compiled by the governing body to date.

5.4.3. Accountability

Accountability can be defined as an instrumental condition for effective accountability and good protected area governance are that: first, the roles and responsibilities of governing bodies and their personnel are precisely identified; and second, governing bodies have demonstrated acceptance of these responsibilities, for example through their plans and activities.

5.4.3.1. In SBFM

In general, overall achievement is high with potential for improvement.

a. First outcome: The governing body and personnel have clearly defined roles and responsibilities, and have demonstrated acceptance of these responsibilities.

Achievement: Moderate. Evidence: Document of Main Task and Function, Employee Performance Appraisal, and Interview Result.

Forestry agency is one of government institutions assigned to manage forest area. Personnel in the forestry agency are predominantly civil servants who have certain competencies that are considered appropriate to work in forestry sector. The roles and responsibilities of civil servants are embedded in their

position and clearly described on the document of main tasks and functions that are legalized through governments regulations. In term of Forestry Agency of Empat Lawang, it can be found in Regulation of Empat Lawang District Number 17/2011 on chapter 3 article 13-17.

Every official of the forestry agency knows and understands their respective roles and responsibilities.

This is triggered by the obligation to formulate the performance appraisal indicator which becomes the benchmark in their performance appraisal referring to the Government Regulation Number 46/2011.

“Our roles and responsibilities have been clearly defined in the document of main task and function. Our performance appraisal also refers to it (11-1)”

Normatively, the implementation of personnel duties and responsibilities is measured through mechanism of employee performance target as translation to Sasaran Kinerja Pegawai (SKP) and implemented annually by their respective supervisors. However, in the implementation of SKP was not able to reflect the performance of employees. SKP tends to be a routine whose function is only to complete the personnel administration where the assessment is often carried out by personnel itself without reference to actual performance achievement.

"Our performance appraisal is measured through SKP mechanism. However, we must adjust the actual performance achievement to a predetermined minimum grade. And this assessment is done by ourselves while our supervisor just validates without doing further inspection (I1-2)"

b. The governing body is answerable to its constituency ('downward' accountability) and also has 'upward' accountability. Achievement: Very High. Evidence: Performance Report, Finance Report, and Interview Results.

Forestry Agency of Empat Lawang has a fairly clear mechanism in responding to questions or complaints relating to the management of preserved forest area. Every form of questions and complaints will first go to the secretary of the agency and then be classified by type of affairs. Furthermore, secretariat of agency will dispose the questions/complaints to the relevant section or subsection. Responses to questions or complaints will be accompanied by supporting information in the form of regulations, technical data, or reports. This applies to applicants corresponding by mail or coming directly to the office.

"We are always willing to respond to all questions or complaints regarding forest management without exception. We have clear procedures regarding this (I1-1)"

Forestry agency also has clear procedures related to performance and financial reporting to both vertical agencies and other agencies within the scope of local

government. That procedure refers to regulation related to performance and financial report namely Law Number 23/2014, Government Regulation Number 8/2006, Regulation of Empowerment of State Apparatus and Bureaucratic Reform Ministry Number 53/2014, etc. Financial performance accountability is also always audited by the financial auditing body (BPK) from pre-implementation of work program to post-implementation.

"Our performance and finances are always reported in accordance with the rules. In addition, we are also always audited by BPK and Inspectorate on financial accountability (I1-2)"

5.4.3.2. In CBFM

In general, overall achievements is low with substantial improvement desirable.

a. First outcome: The governing body and personnel have clearly defined roles and responsibilities, and have demonstrated acceptance of these responsibilities.

Achievement: Moderate. Evidence: The document of farmer group establishment and Interview Result.

KTH "Bersama" as the governing body of CBFM of Pengentaan is a simple institution with a simple organizational structure consisting chairman, secretary, treasurer, work unit and ordinary member. The roles and responsibilities are described in the articles of association and bylaws. It is a very simple description of roles and responsibilities and less reflect forest area

management. Everyone who is a member of the group management has understood their respective duties and responsibilities.

"Distribution of roles and responsibilities is regulated in our articles of association and bylaws. All members should understand that (I3-3)"

However, it is unfortunate that there is no performance measurement procedure of the implementation of these tasks and responsibilities so that performance measurement is also never done.

"We do not know how to measure performance. So that, we have never done it until now (I3-3)"

- b. The governing body is answerable to its constituency ('downward' accountability) and also has 'upward' accountability. Achievement: Very Low. Evidence: Interview Results.

All complaints and questions relating to forest area management are often addressed directly to the chairman of the farmer group without any special mechanism. Responses is also not supported by supporting data.

"Usually if anyone asks about the management of preserved forest area will meet me directly (I1-1)"

In addition, KTH "Bersama" does not have performance and financial reporting procedures therefore there are no performance reports that can be used to assess KTH Bersama in managing forest areas to date whereas KTH

"Bersama" is required to prepare reports on the

implementation of preserved forest area management to the government every year.

5.4.4. Inclusiveness

Inclusiveness refers to the opportunities available for all stakeholders to participate in and influence decision-making processes and actions. Governance is regarded as inclusive when all those with a stake in governance processes and their outcomes can engage with them on a basis equal to that provided to all other stakeholders.

5.4.4.1. In SBFM

In general, overall outcome is high with exemplary with opportunities to further advance "cutting-edge" good governance.

a. First outcome: *All stakeholders have appropriate opportunities to participate in the governing body's processes and actions.* Achievement: Very High. Evidence: Management reports, regulations, and interview results.

Participatory management is chosen by forestry agency in managing preserved forest area. Forestry agency involved all stakeholders related to preserved forest area namely local communities, NGO, private, other government institution, university, and etc especially in rehabilitating forest area. It is also made possible by the existing regulations. There are several examples that can be found through their program implementation

report. First, in period 2013-2016, forestry agency involved local communities as working group of forest rehabilitation and military institution as supervisor of forest rehabilitation. In addition, forest counsellor is also involved as forest rehabilitation technical assistant.

Second, in 2013, forestry agency requested input from University of Bengkulu in preparing a feasibility study on the permit for the use of forest areas for road construction. Third, in 2014, Forestry agency involved schools, media, and private in the socialization of nature conservation activities. Fourth, in 2014, Forestry agency involved local communities and also technical unit of forestry ministry in reconstruction of forest area boundaries.

"We always strive to involve all stakeholders in managing preserved forest areas. This is not only due to the limitations of our personnel, but also on the experience where involving all interested parties will improve the success rate (I1-1)"

Participation of stakeholders in managing forest areas can be found at all stages of implementation of activities ranging from planning, implementation, and supervision.

This form of participation can be either advice, financial, or even directly involved in the work program. There are several mechanisms used in managing such participation, among others through cooperation agreements, proposals, hearings, development planning meetings, and others.

"Stakeholders can involve in to all stage of implementation but certainly through procedures that have been regulated in existing rules (I1-3)"

- b. Second outcome: The governing body actively seeks to engage marginalized and disadvantaged stakeholders.

Achievement: Very High.

In general, there has not been any marginalized or disadvantaged stakeholder in preserved forest management. If it is found cases like this in the future, then they will take precedence for handling such as bids for joint management, aid of non-timber productive plants, partnership program offering, etc.

"So far we have not found a case like this. If at any time there is a case like this, it will be prioritized to be handled. We have some option to handle it (I1-2)"

5.4.4.2. In CBFM

In general, overall achievement is high with exemplary with opportunities to further advance "cutting-edge" good governance.

- a. First outcome: *All stakeholders have appropriate opportunities to participate in the governing body's processes and actions.* Achievement: Very High.

Evidence: Regulations, and interview results.

KTH "Bersama" opens opportunities to all those who want to play a role in the management of their permit area. It must be in accordance with their vision and agreed upon in the deliberations of KTH's members.

There are some examples of stakeholder participation.

First, KTH "Together" involves environmental NGOs as a companion in the management of protected forest areas. Second, KTH "Bersama" involved government agencies in rehabilitation activities. Third, they open up opportunities for cooperation in marketing their agricultural production and also for developing ecotourism in their permit areas.

"We are open to cooperation as long as it is in accordance with the procedure (I3-3)

b. Second outcome: The governing body actively seeks to engage marginalized and disadvantaged stakeholders.

Achievement: Very High.

Similar with in SBFM, marginalized and disadvantaged stakeholders is also not found in permit area of CBFM of Pengentaan. Everyone who working within the permit area come from nearby villages and have kinship ties.

This will encourage them to help each other if in the future there are members who are less fortunate even without special procedures.

"Alhamdulillah, all members of KTH "Bersama" have a fairly productive coffee plantation within our permit area. If someday there are less fortunate, we will help because we come from a nearby village and have a kinship (I3-4)"

5.4.5. Fairness will

Fairness refers to: the respect and attention given to stakeholders' views; the reciprocal respect between higher and lower level authorities; consistency and absence of personal bias in decision making; recognition of human and indigenous rights; recognition of

the intrinsic value of nature; and the consideration given to the intra- and intergenerational distribution of costs and benefits of decisions.

5.4.5.1. In SBFM

In general, overall achievement is high with high level of performance with potential for improvements.

a. First outcome: Stakeholders, office-bearers and staff are heard and treated with respect and there is reciprocal respect between governors from higher and lower level authorities. Achievement: Very High. Evidence: Interview results.

All employees interviewed give similar opinion that they are heard and treated with respect from higher level and lower level authorities. There was a strong family atmosphere among them. It facilitated coordination among employees. Small conflicts were common and it can be resolved internally. Conflict between forestry agency and stakeholders were very rarely even if there is not caused by lack of mutual respect.

"The relationship between employees went well even more towards familial relations. There was rarely conflict between employees or with stakeholder caused by unrespect behaviour (I1-1)"

"We were treated well every time we deal with forestry agency (I2-1)"

b. Second outcome: Decisions are made consistently and without bias. Achievement: Moderate. Evidence: Regulation and interview result.

Normatively, the forest service has standard procedures in the formulation of policies as well as applicable to other agencies in the regional government. Policy was formulated in section level and then was approved by agency head. Furthermore, it will be discussed in Body of Regional Development Planning before being legitimized by the mayor. Policy formulation was done by considering many things, among others: budget availability, priority problem, special direction from regional government, local community proposal, regulation, etc. Every policy formulated will be supported by technical data/information.

"The policy formulation procedure applies equally to all departments in regional government of Empat Lawang (11-4)"

Intervention is one of the main highlights in the principle of fairness. There is a difference of opinion among informants regarding intervention. Some argue that most of these mechanisms have been implemented but there were still interventions during the implementation of those policies, especially those related to the determination of the implementing parties. There is also the opinion that mechanism is run but only for the formality only. Policy formulation is more dominant to accommodated the interests of certain parties. As evidenced by the emergence of work programs that are not through the process of discussion at the section

level. However, it can be concluded that there were interventions in policy formulation and policy implementation of preserved forest management. It is potentially a conflict of interest.

"Basically, the policy formulation procedure was standardized and well executed. But sometimes interventions arise during the implementation of the policy (I1-2, I1-3)"

"Formulating policy only accommodated particular interests and not based on factual needs. There were to many interventions not only from internal but also from external (I1-1)"

There was one example of big conflict of interest namely the implementation of community nursery program in 2013. There was a conflict between the members of regional legislative which proposed his farmer group, technical unit of forestry ministry which also had the same interest, and forestry agency as the policy implementer. It was resolved by restoring procedure of farmer group determination based on rule that is rank of technical appraisal score and looking for the possibility of adding quotas to accommodate other farmer groups.

Informants agree that the best way to resolve conflicts of interest is to restore procedures according to the rule.

"The implementation of community nursery program in 2013 was a best example for intervention and how to solve it. It was a big conflict of interest and honestly it was very tiring (I1-3)"

c. Third outcome: Indigenous people, human rights and the intrinsic value of nature are respected. Achievement:

Very High. Evidence: Regulation and interview result.

In general, preserved forest area is utilized by local communities whose are indigenous people of Lintang tribe. Most of them are forest encroaching communities working as a coffee farmer in preserved forest area. They are involved actively in forest governing not only as object of policy but also as subject of policy.

As mentioned before, policy of preserved forest management refers to several regulations considering IUCN definition and also principle of protected area management. It means that ecological values have been considered in managing preserved forest area. Furthermore, local wisdom is also considered as long as in accordance with regulations.

d. Fourth outcome: The distribution (intra- and intergenerational) of the benefits and costs of decisions and actions are identified and taken into account.

Achievement: Very High. Evidence: Interview result, plan of spatial and territory, and strategic plan.

Policy formulation has considered several things including equitable treatment for all stakeholders. For example, project of forest rehabilitation involved forest encroaching community by considering their economic dependency on forest area. The selection of high value economic crops used in forest rehabilitation was also done by considering the distribution of cost and benefit

for all parties involved in the rehabilitation project.

Forestry agency chooses empowering encroaching community instead repressive actions that can actually be justified by the law. It is an evidence of consideration of intra-generational fairness in managing preserved forest area by government.

"Project of forest rehabilitation is a good example to explain that there was equitable treatment for all stakeholders. We choose empowering them instead taking repressive action because we realized that they depend economically on forest area (I1-1)"

Inter-generational fairness is stated indirectly on plan of spatial and territory period 2012-2032 and strategic plan of forestry agency period 2013-2018. In plan of spatial and territory, it is stated that the objective of regional development of Empat Lawang district is making a reliable regency based on agriculture and tourism with sustainable environment as the frame. While the first mission noted at strategic plan is increasing sustainable use of forest areas for people welfare. The use of the term sustainability in those plan is an indicator of the consideration of inter-generational fairness in managing preserved forest.

5.4.5.2. In CBFM

- a. Stakeholders, office-bearers and staff are heard and treated with respect and there is reciprocal respect between governors from higher and lower level

authorities. Achievement: Very High. Evidence: Interview results.

Mutual respect is clearly visible in the KTH "Bersama" in light of personal proximity among members either because of the proximity of the residence or the kinship relationship. This personal proximity factor also makes them treat other members with respectful and there were relatively no conflicts caused by a lack of respect between them. If there is a conflict it will be resolved with a familial approach.

"We have personal proximity to each other therefore we treated other respectfully (I3-3)"

b. Decisions are made consistently and without bias.

Achievement: Very High. Evidence: Regulation and interview result.

Policy formulating is conducted through member meeting mechanism. In that forum, all management plans will be discussed together and at that forum also the draft of policy is legalized into a group work program.

There are not too many parties involved in preserved forest management and it minimizes the chance of conflict of interest.

"Every decision will be taken in member meeting. As long as I know there is no conflict of interest to date." (I3-3)

c. Indigenous people, human rights and the intrinsic value of nature are respected. Achievement: Very Low.

Evidence: Regulation and interview result.

KTH “Bersama” as governing body of CBFM of Pengentaan is dominated by indigenous people. It means that forest management should has been considered local wisdom. However, in the interview revealed that there is a neglect of ecological values in forest management. Members of KTH “Bersama” still maintain an agricultural-cultivation-oriented pattern.

Whereas cultivation activities are prohibited in preserved forest.

“The pattern of land use remained the same as before issuance management permit ie coffee plantation.” (I3-3) Even they deliberately do not care for plants grown in rehabilitation project for fear of disturbing their coffee plants.

“The success rate of forest rehabilitation is very low with resistance of our group members for fear of disturbing their coffee plants. You can check it in to other members.” (I3-5)

- d. The distribution (intra- and intergenerational) of the benefits and costs of decisions and actions are identified and taken into account. Achievement: Very Low.

Evidence: Interview result.

The existence of equal rights and obligations among members and mechanisms of decision making through deliberations to consensus is evidence of intra-generational fairness. While a neglect of sustainable management is evidence of inter-generational

unfairness. However, the absence of a management plan makes it difficult to assess further.

“we take decisions through deliberation by listening to all opinions of all parties who will be affected by our decision.” (I3-3)

5.4.6. Connectivity

Connectivity requires: effective coordination within and between levels of governance, coherence in broad policy intent and direction within and between levels of governance, and allocation of power to those institutional levels that best match the scale of issues and values being addressed.

5.4.6.1. In SBFM

In general. Overall achievement is high with exemplary with opportunities to further advance “cutting-edge” good governance.

a. First outcome: *The governing body is effectively connected and coordinated with governing bodies at different levels of governance, and the governing body’s direction and actions are consistent with directions set by higher-level governance authorities.* Achievement: Very

High. Evidence: Regulation, implementation report, and Interview result.

The relationship between Forestry Agency of Empat Lawang with governing bodies at different levels such as Forestry Agency of South Sumatera, Technical Unit of Environment and Forestry Ministry (BPDAS Musi, BP2HP, BPTH, KSDH, and BPK) went well.

Coordination, consultation, reporting, and supervision was done mutually considering the existence of continuous work processes between levels.

"We have a good relation with all of institution related to forest management." (I1-1)

Moreover, all of actions and directions of forestry agency related to preserved forest management should be in line with direction from provincial agency and also ministry. It

considers that all of actions and direction must refer to regulations dominated from environment and forestry ministry. In most of those regulations, there is a clear allocation of role and responsibility for each level.

"All of our actions and directions related forest management are in line with direction of provincial agency and also ministry. In several actions, we must get their approval to execute it." (I1-1)

b. Second outcome: *The governing body is effectively connected and coordinated with governing bodies operating at the same governance level.* Achievement:

Very High. Evidence: Implementation report, Memorandum of Understanding, and interview result.

Forestry agency also has a good relation with other institution in same level such as: secretariat of regional government, regional development planning body, attorney, police, military command, inspectorate, etc.

This is related to reporting, coordination of activities, supervision, and consultation. Program of forest protection is one of examples. Forestry agency involved

police, attorney, and military institution as an integrated unit work of forest protection.

"Although their responses are sometimes slow, but in general our coordination with forestry agency went well."
(11-4)

c. Third outcome: The levels at which power is exercised matches the scale of associated rights, needs, issues and values. Achievement: Very High. Evidence: Implementation report, regulation, and interview result.

Forestry affairs is one of those matters which have strict rules and have a clear legal consequence. Usually, district government will adjust to forestry regulation/policy. In the case of an urgent regional policy colliding with forestry regulations, the forestry agency shall file a dispensation application where its mechanism has been regulated. The policy can only be executed after obtaining approval from forestry minister. For example, policy of road construction that crosses preserved forest area in sub district of Pendopo and Paiker. This road must be constructed to shorten the distance of these sub district which ultimately can facilitate the distribution of agricultural products that will impact on improving community welfare. This was essentially unworkable because road construction in a preserved area is forbidden. However, after the forestry agency submitted a dispensation request to the forestry ministry and approved, the road construction can be

implemented. But sometimes the forestry ministry/provincial agency will adjust its policy to regional policy, for example in the addition of quota of program beneficiaries.

“Usually, regional government will adjust its policy to ministry policy although we can ask dispensation through mechanism that has been regulated. Road construction in Pendopo is a good example. But sometimes, ministry adjusts its policy to regional policy. Project of community nursery is an example.” (I1-1)

Furthermore, as mentioned before, accommodating local issue in forest management plan was done through regional development planning meeting and also community proposal. It will be accommodated as long as in accordance with the regulation.

5.4.6.2. In CBFM

In general, overall outcome is moderate with improvement desirable.

a. First outcome: *The governing body is effectively connected and coordinated with governing bodies at different levels of governance, and the governing body's direction and actions are consistent with directions set by higher-level governance authorities.* Achievement:

Moderate. Evidence: Interview result.

KTH “Bersama” have to coordinate to some parties such as: Forestry Agency of Lahat, Forestry Agency of South Sumatera, Technical Unit of Forestry Ministry, etc for reporting, coordination, consultation, and also

supervision. But this relationship goes poorly where KTH

“Bersama” is passive and more waiting although they are

welcome to those institution. For example, the slow

process of preparing work plans and reports where KTH

“Bersama” reasoned that their counsellor had not yet

come to guide them.

b. Second outcome: *The governing body is effectively*

connected and coordinated with governing bodies

operating at the same governance level. Achievement:

Moderate. Evidence: Interview result.

As mentioned before, KTH “Bersama” has not effective

relationship with other governing body at same level.

“KTH “Bersama” is passive so far, we should take the initiative to contact them. We also have not received their forest management reports since the permit was issued. Although, we have also worked with them in rehabilitating the forest area where their welcome was excellent.” (11-5)

c. Third outcome: *The levels at which power is exercised*

matches the scale of associated rights, needs, issues

and values. Achievement: Very Low. Evidence: Interview

result.

KTH “Bersama” is a working unit in lowest level in forest

management. All of their actions and direction must be

accordance with policy of governing body in upper level.

Accommodating of local issue is done as long as in

accordance with regulation and they understand the

limit.

In fact, KTH “Bersama” still failed to meet direction of upper level. The resistance of group members in the rehabilitation programs is an example.

5.4.7. Resilience and Adaptability

Resilience refers to the amount of change or disturbance that can be absorbed by a system before it is reconstituted into a different set of processes and structures.

5.4.7.1. In SBFM

In general, overall overcome is high level performance with exemplary with opportunities to further advance “cutting-edge” good governance.

a. First outcome: The governing body has processes to assimilate new knowledge, learn from experience, manage risk, and enable adaptive planning and management. Achievement: High. Evidence: Implementation report, strategic plan, and interview result.

Forestry agency was concern to new knowledge. There are some examples of it namely: procurement of hi-tech equipment such as GPS since 2012 and Drone in 2015, GIS utilizing since 2011, etc. It was done to improve forest management. Learning from experience was also done by forestry agency. Rehabilitation pattern change is an example. Participative rehabilitation was a response of implementation failure in the previous time

in which rehabilitation was conducted without involving local community. Adaptive management was also enabled. Utilizing GIS in determination of rehabilitation plan is an example. GIS analyzing will result some option of rehabilitation model. It can be chosen based on the situation on the field. It was done by forestry agency through Preparation of forest and land rehabilitation management plan for the period of 2011-2016.

"We always try to adjust to the times. We always try to actualize the work equipment and the ability of employees. We recorded it in our report" (I1-1)
Employee competency was also a priority. Assignment of employees to follow education, training, and refreshing is the way used to improve employee competence. Forestry agency sent employees to training program conducted by government institution and also private training centres each year.

However, there was lack of attention in research. Forestry agency has never done research although they never inhibited research conducted by other institution. It can be understood considering lack of budget and also research was not included in the main task and function of forestry agency.

Planning changes in the current year was also enabled. It was done to accommodate changes in the field conditions or changes of budget. The mechanism was through proposing the change to the relevant agency.

b. Second outcome: The governing body has the flexibility to rearrange its internal processes and procedures in response to changing internal or external conditions.

Achievement: Very High. Evidence: Implementation report, document of budget change, and interview result.

As mentioned before, change in plan was a common thing in forestry agency. The procedure was through re-establishment supported by data/information and legalized by the relevant agencies. Implementation report also recorded change of program implementation.

"Change in plan was a common thing. There was a standard procedure to accommodate it. We noted it in our implementation report." (I1-2)

c. Third outcome: Formal instruments or mechanisms provide long-term security, tenure and purpose for the protected area. Achievement: High. Evidence: Interview result.

Forestry agency has realized that forest sustainability can be gained by collaborative management in which all stakeholders were involved. Strengthening local community institution and Establishment of an integrated work unit was a response of it.

"Collaborative management is an instrument to achieve forest sustainability considering the limitation of our resources" (I1-3)

5.4.7.2. In CBFM

In general, overall achievement is low with substantial improvement desirable.

a. First outcome: The governing body has processes to assimilate new knowledge, learn from experience, manage risk, and enable adaptive planning and management. Achievement: Low. Evidence: Interview result.

KTH "Bersama" is passive in responding new knowledge. Learning from experience should be done by them because this is a common thing. Enabling adaptive planning and management can be identified properly because of the absence of management plan and report.

"We are not very updated with new knowledge. But we always try to understand when our companion delivers new information." (I3-3)

Similar with in SBFM, there is lack attention of research. Research is still something unfamiliar to them. Although they always support any research undertaken in their permit area.

"We were asked several times to accompany the research and we always support as long as we can." (I3-6)

b. Second outcome: The governing body has the flexibility to rearrange its internal processes and procedures in response to changing internal or external conditions.

Achievement: Moderate. Evidence: Interview result.

Although formal management plans do not yet exist, but they operate according to group consensus. Changes to activities are also made possible through member deliberations.

"Each activity plan and plan change of activities will be discussed and agreed with the members." (13-3).

c. Third outcome: Formal instruments or mechanisms

provide long-term security, tenure and purpose for the protected area. Achievement: Very Low. Evidence:

Interview result.

Absence of management plan and also management report makes difficulty in analyzing. There is no formal

instrument that can guarantee the forest sustainability

considering most of the group members remain coffee as main commodity. In personal, chairman of KTH

"Bersama" stated that development of ecotourism can be an instrument to achieve forest sustainability.

Ecotourism will improve community welfare with minimize impact to forest area. He has scheduled to

discuss it with the members.

"We will develop ecotourism in our permit area considering we have potential of waterfall. It will be discussed in member meeting." (13-3).

5.4.8. Assessment Summary and Assessment Result Comparison

Assessment summary of SBFM and CBFM and also the comparison between them can be seen in table 5.10. From that table, it can be seen that SBFM performed better than CBFM in 6 (six) principles while the rest is noted similar achievement.

In Legitimacy, in fact, CBFM received very high appraisal at 3 (three) out of a total 6 (six) outcomes. However, the sixth outcome that received low appraisal resulted in overall achievement being lower

than SBFM. In transparency and accountability, SBFM is only not good in outcomes related performance target and authority acceptance while the rest were noted high results. The absence of management plan and also management report that is an obligation of KTH "Bersama" leads to poor assessment results for CBFM.

In inclusiveness, both SBFM and CBFM get the same rating. Both of them performed very well. SBFM considered incapable of carrying out the principle of inclusiveness is able to collaborate well with all stakeholders. In fairness, a neglect of ecological value is the biggest weakness in CBFM. Preserved forest management must be managed through ecological value to achieve management sustainability. SBFM performed better related to this matter. The passivity and also the informal impression of KTH "Bersama" as the governing body of CBFM of Pengentaan caused CBFM to get a lower appraisal result than SBFM in connectivity and resilience.

Table 5.11. Assessment summary and its comparison

| Principle | Overall Achievement/Assessment against invidual elements | |
|------------------------------------|---|---|
| | SBFM | CBFM |
| Legitimacy | Improvement desirable | Substantial improvement desirable |
| <i>Outcome 1</i> | High | Very High |
| <i>Outcome 2</i> | Moderate | Very High |
| <i>Outcome 3</i> | Very High | Very High |
| <i>Outcome 4</i> | Very High | Very High |
| <i>Outcome 5</i> | Very High | Very High |
| <i>Outcome 6</i> | Moderate | Low |
| Transparency | High level of performance with potential for improvements | Substantial improvement desirable |
| <i>Outcome 1</i> | High | Low |
| <i>Outcome 2</i> | Moderate | Very Low |
| <i>Outcome 3</i> | Very High | Very Low |
| Accountability | High level of performance with potential for improvements | Substantial improvement desirable |
| <i>Outcome 1</i> | Moderate | Moderate |
| <i>Outcome 2</i> | Very High | Very Low |
| Inclusiveness | Exemplary with opportunities to further advance 'cutting-edge' good governance | Exemplary with opportunities to further advance 'cutting-edge' good governance |
| <i>Outcome 1</i> | Very High | Very High |
| <i>Outcome 2</i> | Very High | Very High |
| Fairness | High level of performance with potential for improvements | Substantial improvement desirable |
| <i>Outcome 1</i> | Very High | Very High |
| <i>Outcome 2</i> | Moderate | Very High |
| <i>Outcome 3</i> | Very High | Very Low |
| <i>Outcome 4</i> | Very High | Very Low |
| Connectivity | Exemplary with opportunities to further advance 'cutting-edge' good governance | Substantial improvement desirable |
| <i>Outcome 1</i> | Very High | Moderate |
| <i>Outcome 2</i> | Very High | Moderate |
| <i>Outcome 3</i> | Very High | Very Low |
| Resilience and Adaptability | Exemplary with opportunities to further advance 'cutting-edge' good governance | Substantial improvement desirable |
| <i>Outcome 1</i> | High | Low |
| <i>Outcome 2</i> | Very High | Moderate |
| <i>Outcome 3</i> | High | Very Low |

Source: Researcher, 2017

5.5. Analysis of Effect of Applying Good Governance Principles on Forest Sustainability

Effect of applying good governance principles on forest sustainability referred to a framework proposed by Eklund and Cabeza in 2016. In general, quality of governance (good governance) and suitable type of governance and also pressure will determine outcome of forest management. In this research, pressure has been tried to be minimize by selecting two adjacent forest area. And outcome referred to deforestation rate.

5.5.1. Deforestation Rate

Deforestation rate assessed was in preserved forest area of Bukit Dingin at sub-district Lintang Kanan representing SBFM and permit area of KTH 'Bersama' representing CBFM. Deforestation rate was taken by GIS analysis of land cover change in different time namely in 2011 and 2015.

In general, there were 4 (four) types of land cover in both area namely: primary forest, secondary forest, dryland farming, and shrub.

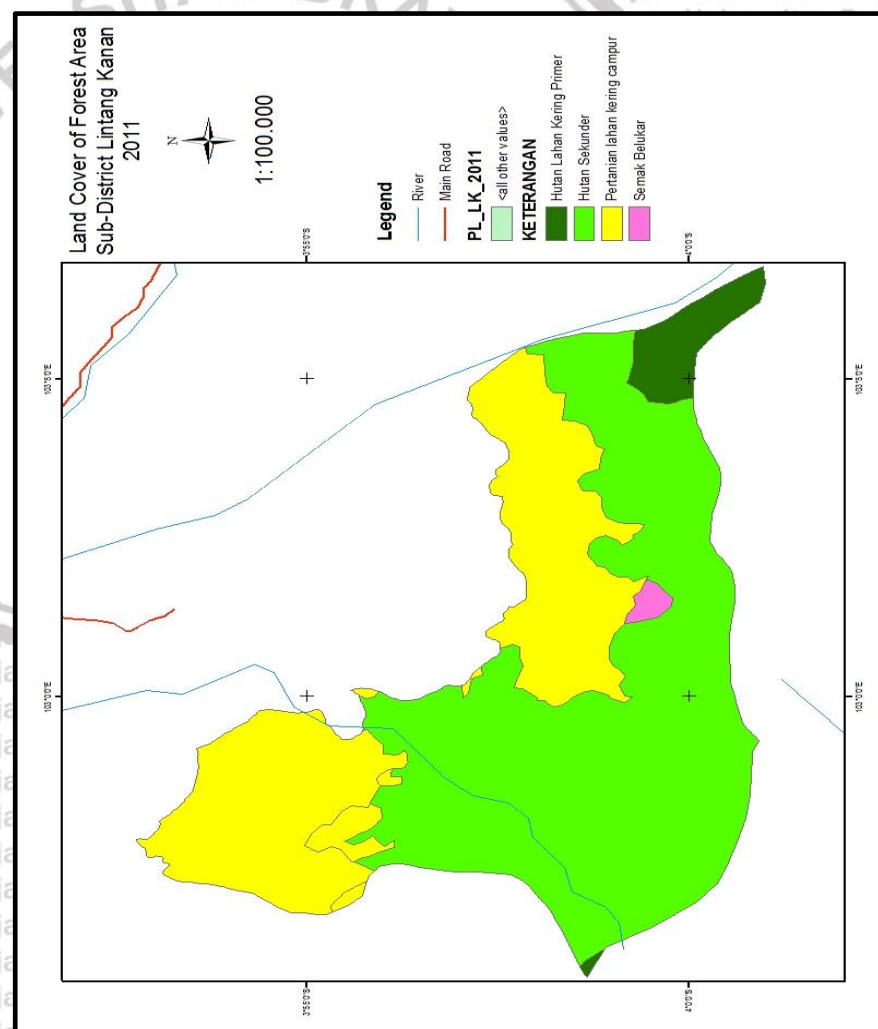
In researcher experience, shrub is a young coffee plantation.

Deforestation rate was measured by calculating decrease of primary forest area and secondary forest area.

In preserved forest area of Lintang Kanan, cover area was dominated by secondary forest and dryland farming. Primary forest is still exist in spite of small area. While there was no primary forest area in permit area of KTH 'Bersama'. Land cover is dominated by secondary forest and coffee plantation.

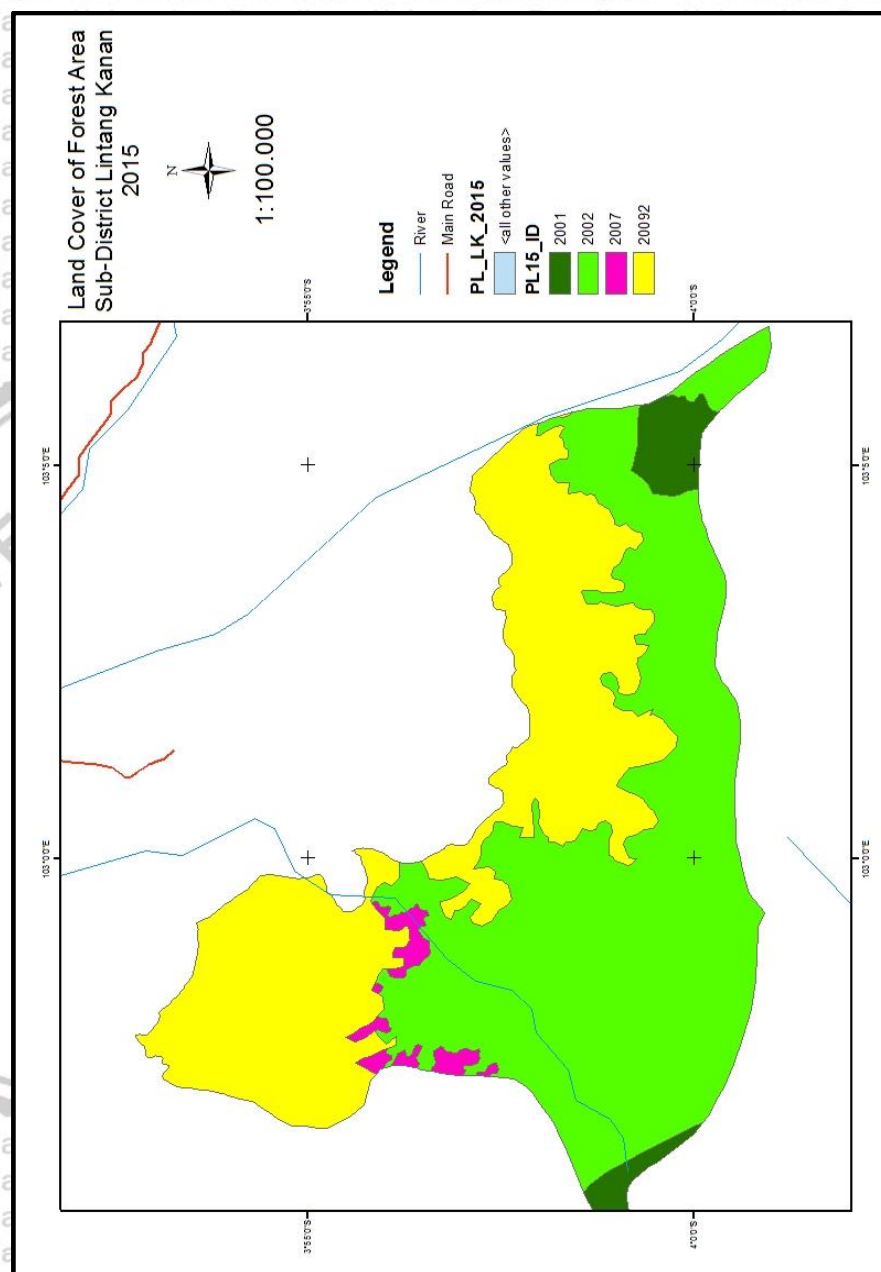
Land cover changes occur in both preserved area with a percentage change that was not much different. In Lintang Kanan, there was decrease area of primary forest and also secondary forest in 2015 compared to 2011 accounting for 46,91 hectares and 800,57 hectares respectively. While in permit area of KTH 'Bersama', there was decrease of secondary forest accounting for 19,19 hectares. Land cover change can be seen in figure below:

Figure 5.6. Land Cover of Preserved Forest Area in Sub-District of Lintang Kanan (2011)



Source: GIS Analysis by Researcher

Figure 5.7. Land Cover of Preserved Forest Area in Sub-District of Lintang Kanan (2015)

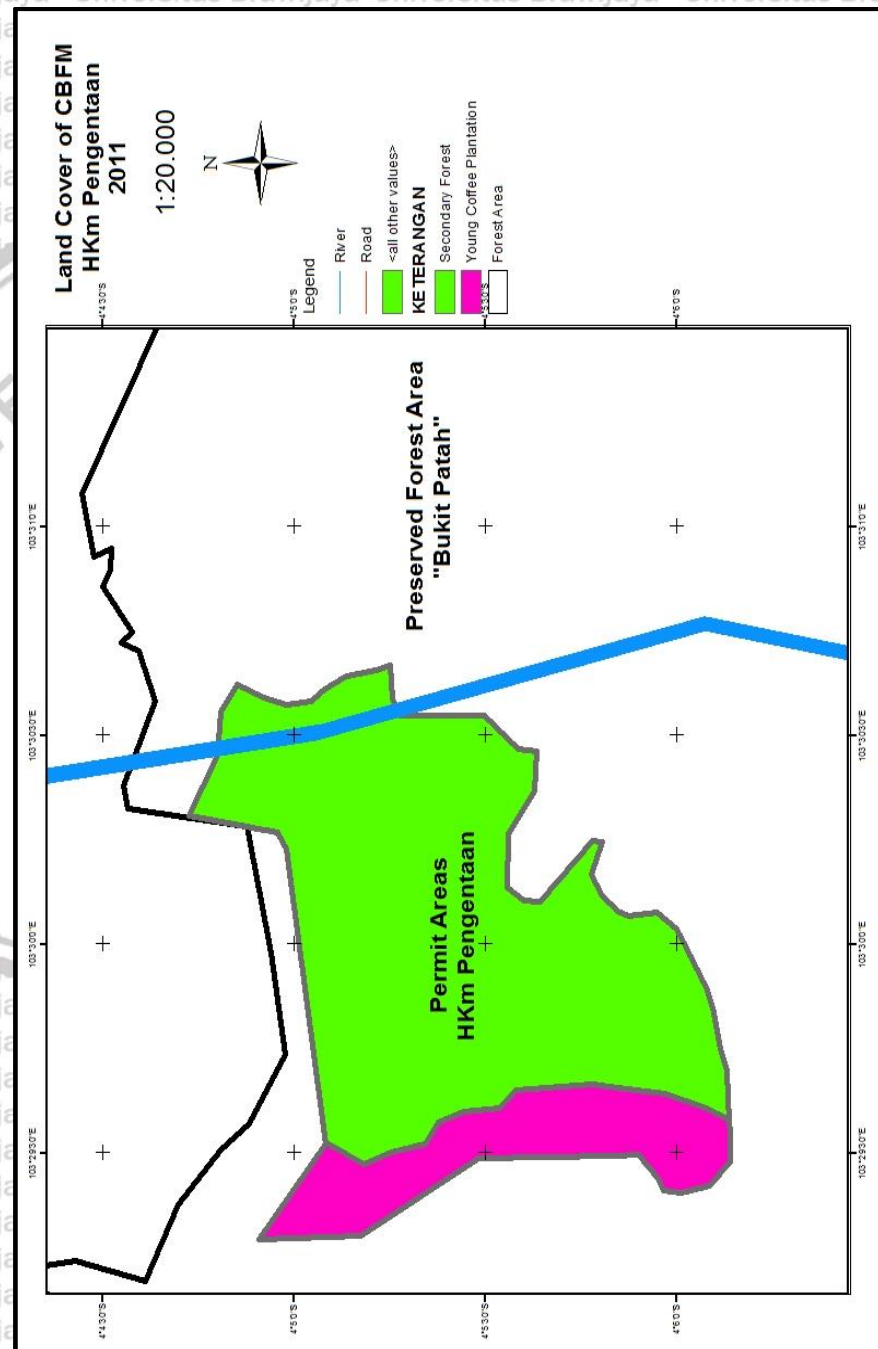


Source: GIS Analysis by Researcher

From these maps, it can be clearly seen the land cover change of preserved forest area. Dryland farming symbolized by yellow color reduced the area of secondary forest symbolized by light green color.

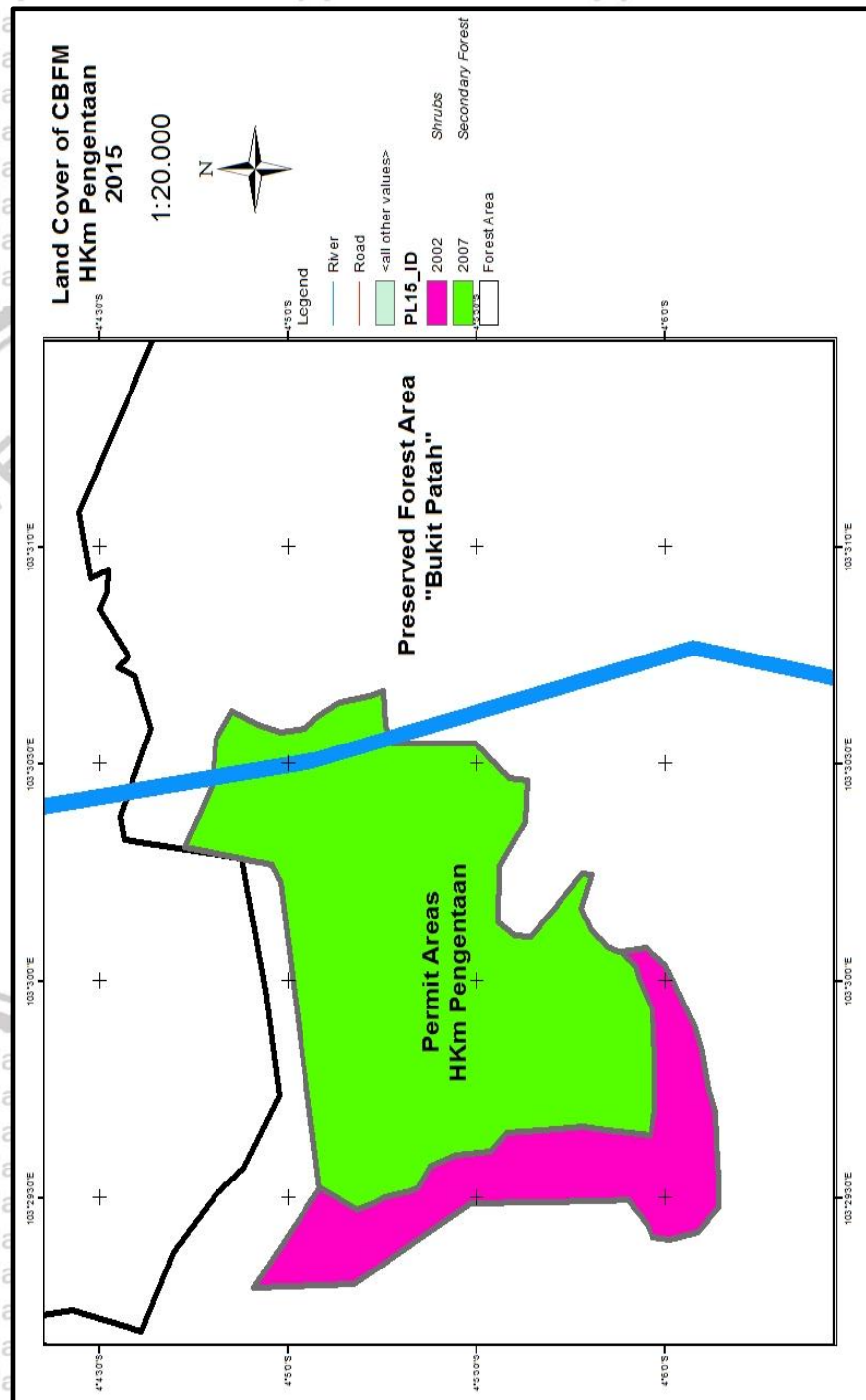
Primary forest area symbolized by dark green color also changed to secondary forest.

Figure 5.8. Land Cover of Preserved Forest Area in Permit Area of KTH 'Bersama' (2011)



Source: GIS Analysis by Researcher

Figure 5.9. Land Cover of Preserved Forest Area in Permit Area of KTH "Bersama" (2015)



Source: GIS Analysis by Researcher

In general, it can be seen that there was change in land cover of permit areas of KTH 'Bersama'. Young coffee plantation symbolized by purple color decreased secondary forest symbolized by light green color.

Table 5.12. Land Cover Change of SBFM period 2011-2015

| NO. | TYPE OF LAND COVER | 2011 | 2015 | CHANGE |
|-----|--------------------|-----------|-----------|--------|
| 1 | Primary Forest | 573,52 | 526,61 | 46,91 |
| 2 | Secondary Forest | 8.039,67 | 7.239,10 | 800,57 |
| 3 | Dryland Farming | 4.805,42 | 5.503,57 | 698,15 |
| 4 | Shrub | 84,03 | 233,36 | 149,33 |
| | TOTAL | 13.502,64 | 13.502,64 | |

Source: GIS Analysis by Researcher (2017)

From table 5.11, deforestation rate of preserved forest area in sub-district of Lintang Kanan period of 2011-2015 was 847.48 hectares or 9.84%. This figure is obtained from the number of additions between land cover change in primary and secondary forest.

Table 5.13. Land Cover Change of CBFM period 2011-2015

| NO. | TYPE OF LAND COVER | 2011 | 2015 | CHANGE |
|-----|--------------------|--------|--------|--------|
| 1 | Primary Forest | - | - | - |
| 2 | Secondary Forest | 301,11 | 281,92 | 19,19 |
| 3 | Dryland Farming | - | - | - |
| 4 | Shrub | 65,16 | 84,35 | 19,19 |
| | TOTAL | 366,27 | 366,27 | |

Source: GIS Analysis by Researcher (2017)

From table 5.12, deforestation rate of preserved forest area in permit areas of KTH 'Bersama' period 2011-2015 was 19,19 hectares or 6.37%.

5.5.2. The effect of applying good governance principles on deforestation

Quality of governance which is another term for good governance is regarded to greatly affect of conservation outcome in preserved forest area. High quality of governance is assumed a positive impact on outcome and vice versa.

In fact, this research revealed that the opposite fact to the theory proposed by Eklund and Cabeza (2016). SBFM performing better in applying good governance principles than CBFM has a higher deforestation rate in spite of a small margin of difference. What is the cause of this phenomenon?

Eklund and Cabeza stated that pressure other aspect affecting outcome of conservation in preserved forest area. Pressure can be defined as deforestation trigger such as agricultural expansion, wood extraction, accessibility, etc. In spite of adjacent areas, in fact, village of Pengentaan and village of Umo Jati has different level of pressure namely:

a. The Possibility of Agricultural Expansion

In sub-district of Lintang Kanan, the percentage of the population working in the agricultural sector in 2014 was 88.24%, which increased 94.28% in 2015. It can be said that almost all communities in Lintang Kanan work in the agricultural sector. In sub-district of Mulak ulu, 77.41% of the population is employed in the agricultural sector in 2014. This substantial percentage

difference will have a different pressure effect on protected forest areas.

b. The Possibility of Wood Extraction

Lintang Kanan is located adjacent to the locations known as wood processing center in the regency of Empat Lawang namely sub-district of Ulu Musi. There are 3 (three) active sawmills that process local wood. While at Lintang Kanan, there were 8 wood carpentry processing industries with a smaller capacity compared to sawmills. In Mulak Ulu, there were 8 (eight) wood carpentry processing industries and no sawmills in the surrounding sub-districts. This also causes pressure on preserved forest areas in Lintang Kanan is far greater than in the Mulak Ulu.

From the explanation above, larger deforestation at Lintang Kanan becomes plausible. There is a far greater possibility of deforestation if Forestry Agency of Empat Lawang has a lower value of governance quality. However, It needs futher research to measure the impact of pressure on conservation outcome in preserved forest area.



CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

This research compared two type of governance that are state-based management and community-based management in managing preserved forest areas. The comparison was done on two parameter namely quality of governance (good governance) and forest sustainability. Good governance was evaluated based on Lockwood method and also a framework proposed by Eklund and Cabeza. Lockwood proposed a method of evaluating good governance through assessing the application of good governance principles namely: legitimacy, transparency, accountability, inclusiveness, fairness, connectivity, resilience and adaptability. While Eklund and Cabeza proposed a framework to describe the effect of governance quality on forest sustainability of preserved forest area.

In general, SBFM performed better than CBFM in applying good governance principles according to Lockwood method. In term of forest sustainability, CBFM noted a lower deforestation rate than SBFM in spite of small margin of difference. In detail the conclusions of each research questions is as follows:

1. In general, the principles of good governance have been applied well in SBFM but there are still some deficiencies found. The application of good governance principles in SBFM can be summarized as follow. In legitimacy, overall achievement is improvements desirable. Expansion of authority,

boundaries, and integrity are outcomes that must be improved. In transparency, overall achievement is high level performance with potential for improvements. Providing internet-based information is suggested to improve transparency in SBFM. Performance target is the weakest aspect. Forestry official is failed to identify performance target clearly. In accountability, overall achievement is high level performance with potential for improvements. But, the appraisal of employee performance cannot really reflect the real performance. The improvement of appraisal procedure is needed. In Inclusiveness, overall achievement is exemplary with opportunities to further advance 'cutting edge' good governance. Forestry agency of Empat Lawang as the governing body of preserved forest area of Bukit Dingin succed to involve all of stakeholders in managing forest area. In fairness, overall achievement is high level performance with potential for improvements. Intervention is a big problem. Intervention results in conflict of interest that is considered to be very disturbing the implementation of perserved forest management policy. In connectivity and also resilience and adaptability, overall achievement is exemplary with opportunities to further advance 'cutting edge' good governance. CBFM is represented by KTH 'Bersama' as governing body of CBFM of Pengentaan. In legitimacy, overall achievement is substantial improvement desirable. Although getting a very high rating of 5 (five) outcomes out of 6 (six) outcome, the low rate on integrity causes its total judgement to be unfavorable. In transparency, overall achievement is substantial improvement desirable. Absence of written information and management plan is a fatal mistake. In accountability, overall achievement

is substantial improvement desirable. Non-compliance in reporting performance which is their obligation is other fatal errors. In inclusiveness, overall achievement is exemplary with opportunities to further advance 'cutting edge' good governance. KTH 'Bersama' has opened opportunity for all stakeholders to involve in managing forest area. In fairness, overall achievement is substantial improvement desirable. A neglect of ecological values through resistance in forest rehabilitation is a weak point. In connectivity, The preserved forest area of governing body is an aspect that must be improved. In resilience and adaptability, absence of management plan and also the pattern of land management cause CBFM get rating of substantial improvement desirable.

From comparison between SBFM and CBFM in applying good governance principles, it can be concluded that SBFM is better than CBFM in which SBFM is superior in 6 (six) principles out of 7 (seven) principles while the rest get the same rating.

2. SBFM that is better in applying good governance principles has higher deforestation rate compared to CBFM accounting for 9.84% and 6.37% respectively. Higher pressure from agricultural expansion and also logging activities could be the cause. However, the further research regarding the effect of pressure factor to deforestation is needed to prove it.
3. Both type of governance has advantages and disadvantages. SBFM is good enough in applying good governance principles. However, lack of human resources will be a big obstacles in managing preserved forest areas. While CBFM has a promising future. The availability of abundant human resources as well as their stronger attachment to forest areas are a

distinct advantage for CBFM. Lack of administrative capability and ecological knowledge is a fundamental weakness in CBFM. Therefore, collaborative management will be better scheme for forest management in South Sumatera.

6.2. Recommendations

Based on the emperical result, discussion, and data of the research there are several recommendations as follows:

1. There are some recommendations to improve the applying good governance principles in SBFM namely:
 - a. Expansion of authority in smallest forest management unit especially in the case of licensing;
 - b. The need to affirm the boundaries of forest area;
 - c. The need to more serious attention with regard to employee integrity;
 - d. Provision of internet-based information;
 - e. Performance target must be formulated based on the clear benchmarks. The formulation of performance targets should also be in line with the strategic plan and work plan;
 - f. The improvement of employee performance appraisal. A tiered assessment system should be applied. So, the performance appraisal results really reflect the real conditions;
 - g. Work procedures are restored to existing regulations to minimize interventions.
2. There are some recommendations to improve the applying good governance principles in CBFM namely:

a. Improving administrative capacity through institutional strengthening and also intensification of mentoring and counseling;

b. There is a need to encourage people to change their cropping pattern from pure coffee plantations to agroforestry-based. Non-timber forest products commodities with high value should be introduced. Preparation to marketing is needed.

3. Collaborative management is regarded as the best scheme in managing perserved forest areas in South Sumatera.



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