Evaluating Good Governance in Preserved Forests: a Comparison Between Community-based and State-based Forest Management in South Sumatera

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INFORMASI ARTIKEL

Article history:

Data Submission: 12 October 2018

First Revision: 16 November 2018

Accepted: 13 December 2018

Available online: 14 December 2018

Keywords: *good governance, deforestation, South Sumatera*

ABSTRACT

In Indonesia, the existence of preserved forest is threatened by the high rate of deforestation associated with poor quality of governance. This study aims to evaluate the applying of good governance principles in preserved forest at South Sumatera and its effect on deforestation. This study is a qualitative research. Good governance principles refer to Lockwood (2009) which consists of seven principles. This study reveals that SBFM is better than CBFM in applying good governance principles by earning the higher appraisal results compared to CBFM for all principles. Furthermore, applying good governance principles did not lead directly to lower deforestation rate.

INTISARI

Di Indonesia, keberadaan kawasan hutan lindung terancam oleh tingginya laju deforestasi yang seringkali dikaitkan dengan buruknya tata kelola hutan. Penelitian ini bertujuan untuk mengevaluasi penerapan prinsip-prinsip tata kelola yang baik pada kawasan hutan lindung di Sumatera Selatan dan pengaruhnya terhadap deforestasi. Penelitian ini adalah penelitian kualitatif. Prinsip tata kelola yang baik mengacu pada Lockwood (2009) yang terdiri dari tujuh prinsip. Penelitian ini mengungkapkan bahwa SBFM lebih baik daripada CBFM dalam menerapkan prinsip-prinsip tata kelola yang baik dengan mendapatkan hasil penilaian yang lebih tinggi dibandingkan CBFM untuk semua prinsip. Selanjutnya, menerapkan prinsip-prinsip tata kelola yang baik tidak langsung berdampak pada penurunan deforestasi.

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1. Introduction

Based on law number 41 of 1999 on forestry, preserved forests that is under the jurisdiction of regional government can be defined as forest areas that have the basic function of protecting life-support

systems. Considering its importance, preserved forest should be managed with sustainability principles so as to maintain their role in ecosystems.

However, in reality preserved forests in most parts of Indonesia are also deforested. Preserved forest with a primary forest cover is recorded remaining as

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14,572,500 hectares or 49.2% of the total preserved forest in Indonesia (Ministry of Environment and Forestry statistics, 2015). This data indicates a lack of effectiveness in the management of preserved forests.

Eklund and Cabeza (2017) explained the factors that influence the outcomes effectiveness of protected area management illustrating in figure 1. From figure 1, it can be clearly seen that high-quality governance and fitness of governance type will encourage positive outcomes despite in high pressure. Therefore, it makes sense to focus more on the quality of governance and the fitness of governance type.

Figure 1 Combination between good or bad governance and high or low pressures

Source: Eklund and Cabeza, 2016

This study focused on evaluating the quality of preserved forest governance in two types of governance namely state-based (SBFM) and community-based (CBFM). The evaluation of governance quality referred to an evaluation method developed by Lockwood in 2009. The results of the evaluation were then analyzed along with deforestation data in each type to understand the effect of good governance on management effectiveness.

South Sumatra was chosen as a research location with some considerations namely the small extent of remaining primary forest cover (14.3%), its strategic role in protecting watersheds in four provinces and high forest land conflict cases (22 cases in 2016).

2. Theory

2.1 Good Governance

According to UNDP in Khandakar Qudrat-I Elahi (2009), 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 participation, rule of law, transparency, responsiveness consensus orientation, equity, effectiveness and efficiency, accountability, and strategic vision.

2.2 Good Governance of Protected Areas

There is no ideal governance setting for protected or conserved areas, but a set of “good governance” principles can always be taken into account and it is fundamentally about power, relationships and accountability: who is influence, who decides, and how decision-makers are held accountable (Graham et al., 2003:2-3).

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 (Borrini-Feyerabend et al., 2014).

2.3 Evaluating Protected Area Governance

Borrini-Feyerabend (2014) stated that 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.

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., 2016:40). PAME has six components: context, planning, inputs, process, outputs and outcomes in which governance appears as only one of 34 headline indicators in this framework (Leverington et al., 2010).

Lockwood provides one of the few published efforts to integrate evaluation of protected area governance with PAME evaluations placing good governance principles ‘above’ the evaluation components of context, planning, inputs, process, outputs, and outcomes (Shields et al., 2016).

2.4 Good Governance Principles in Protected Areas

IUCN formulated the principles of good governance for protected areas, includes: legitimacy and voice, direction, performance, accountability, fairness and rights (Borrini-Feyerabend et al., 2014). While, Lockwood (2009) suggested a list of seven principles, including legitimacy, transparency, accountability, inclusiveness, fairness, connectivity, and resilience in which Each of these principles was associated with a set of ‘performance outcomes’, or standards against which performance can be evaluated.

3. Research Method

3.1 Research Type

This study used qualitative method, which Lockwood (2009) evaluated to be more suitable complemented by documents analysis.

3.2 Locus and Focus

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. 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.

The selection of research sites due to several things namely adjacency and similarities between both locations, and its location at upstream area of Musi watershed.

This study focused on evaluating governance quality and governance effect in two protected areas with different governance type. Evaluating of governance quality emphasizes on assessing the application of good protected area governance principles referring Lockwood's framework.

3.3 Source of Data

There are two sources of data namely informants and documents. There were twelve informants that consist of five informants from government officer, one informant from forestry entrepreneur, and six informants from community. Documents used in this study are documents of legislations, regulations, policies, plans, reports, memorandum of understanding, statistic book, maps, satellite imagery and other documents.

Table 1 Informants Description

No.	Code	Age	Domicile	Position
1	I1-1	50s	Tebing Tinggi	Ex Forestry Section Head
2	I1-2	30s	Tebing Tinggi	Ex Sub Section Head
3	I1-3	30s	Tebing Tinggi	Forestry Counselor
4	I3-1	50s	Lintang Kanan	Forest Farmer
5	I2-1	60s	Ulu Musi	Forestry Entrepreneur
6	I3-2	40s	Lintang Kanan	Head of Forest Farmer
7	I1-4	40s	Tebing Tinggi	Staff of Regional Planning
8	I3-3	30s	Pengentaan	Head of KTH Bersama
9	I3-4	35s	Pengentaan	Forest Farmer
10	I3-5	60s	Pengentaan	Forest Farmer
11	I3-6	60s	Pengentaan	Local Community
12	I1-5	30s	Lahat	Ex Forestry Official

Source: Analytical result, 2018

3.4 Technique of Collecting Data

In this study, gathering information was conducted through interviewing and document analysing. interview used a guideline of semi structured interview developed

from 23 outcomes after Lockwood (2009). Document analysing 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.

3.5 Data Analysis

Assessing governance quality followed a procedure formulated by Lockwood (2009). The outcomes of interview analysis together with documentary evidence are used to make judgements about the performance against each outcome and then combine in order to obtain a final assessment of each principle.

A summative judgement for each outcome followed qualitative scale namely very low, low, moderate, high, and very high with particular rules. these judgements were then aggregated for each principle according to the following scale: "substantial improvement desirable", "improvement desirable", "high level of performance with potential for improvements", and "exemplary with opportunities to further advance "cutting-edge" good governance".

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.

4. Results and Discussion

4.1 Governance Evaluation Result

Assessment summary of SBFM and CBFM and also the comparison between them can be seen in table 2. From that table, it can be seen that SBFM performed better than CBFM in all principles.

In transparency and accountability, SBFM is only not good in outcomes related performance target and performance measurement 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 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 2 Assessment Summary

Principles	Overall Achievement	
	SBFM	CBFM
Transparency	High Level of Performance	Substantial Improvement Desirable

Principles	Overall Achievement	
	SBFM	CBFM
Accountability	High Level of Performance	Substantial Improvement Desirable
Fairness	High Level of Performance	Substantial Improvement Desirable
Connectivity	Exemplary	Substantial Improvement Desirable
Resilience and Adaptability	Exemplary	Substantial Improvement Desirable

Source: Analytical result, 2018

4.2 Deforestation Rate

In this study, deforestation rate was taken by GIS analysis of land cover change in different time namely in 2011 and 2015. Map of land cover issued by forestry agency is used as data source.

In general, there were 4 (four) types of land cover in both areas 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.

Deforestation rate of preserved forest area in sub-district of Lintang Kanan period of 2011-2015 was 847.5 hectares or 9.8%. This figure is obtained from the number of additions between land cover change in primary and secondary forest. Meanwhile, deforestation rate of preserved forest area in permit areas of KTH 'Bersama' period 2011-2015 was 19.2 hectares or 6.4%.

Table 3 Land Cover Change

Type of Land Cover	SBFM		CBFM	
	2011	2015	2011	2015
Primary Forest	573.52	526.61	-	-
Secondary Forest	8,039.67	7,239.10	301.11	281.92
Dryland Farming	4,805.42	5,503.57	-	-
Shrub	84.03	233.36	65.16	83.35

Source: Analytical result, 2018

4.3 Governance Quality in SBFM

4.3.1 Comparison to FWI

From the previous chapter, it can be seen that SBFM generally gets a pretty good level in governance quality based on the evaluation method. This result is slightly contrary to the results of the forest governance evaluation issued by FWI in 2015 stating that South Sumatera has poor quality of governance. If then the questions arise whether the results of this evaluation can represent the real conditions then needed a further discussion.

FWI, in its evaluation, stated that forest governance in South Sumatera is far from the principles of good governance. In overall, FWI gives governance index 26.4 that is the third lowest of five assessed-regions. FWI highlights transparency, community involvement, accountability, and commitment as the weak points of forest governance in South Sumatera. This highlight points are very contrary to this study in which transparency, accountability and community involvement is the strong points of SBFM while there is similar finding in commitment.

The question is whether the cause of the difference in outcomes between this study and FWI. In general, there are several basic reasons of this difference, namely:

- Difference of assessed-object. FWI assesses all type of state forest including production forest, conservation forest, and preserved forest while this study focuses on preserved forest. Production forest is dominantly managed by private sector while conservation forest is managed by central government. Furthermore, preserved forest is managed by regional government. This will obviously give different results. This can be evidenced by the negative notes given by FWI regarding forest governance such as corruption in the licensing, industrial timber concessions, mining activity, and the expansion of oil palm plantations. These notes will not be found in preserved forest considering its limitation in utilization;
- Difference of research site. FWI choose District of Musi Banyuasin (MUBA) as its research site. The selection of this research site can be understood to accommodate all type of state forest. MUBA is dominated by production forest while preserved forest is only 24.86% of total forest area. Therefore, its governance quality will be determined by production forest managed by private sector. In this study, the evaluation of SBFM is conducted in District of Empat Lawang dominated by preserved forest with percentage of 85.41%; and
- Difference of evaluation framework. FWI used Forestry Governance Indicator Version 2.0 developed by World Resources Institute (WRI). This framework is designed to evaluate the process of decision making rather than to measure the outcomes (Williams et al., 2014). Therefore, this framework more focus on law and its implementation. There are five principles in this framework namely transparency, participation, accountability, coordination, and capacity (Indrarto et al., 2013).

4.3.2 Comparison to Other PAs Under Lockwood Method

Lockwood used his framework to evaluate three PAs namely Cairngorms National Park-Scotland, Parc National Des Pyreness, and Parc Naturel Regional Du Haut-Languedoc. In general, the evaluation result in these PAs are at level high level of performance and exemplary. These results are very similar to the results of governance evaluation in this study.

Although the three case studies were conducted in locations with fundamental differences with Indonesia and were less feasible to compare, but at least Lockwood framework using good governance principles were considered capable of extracting the necessary information from informants. Not only in those locations but also in Indonesia, Informants are also able to provide adequate information and supported-evidence indicating that this framework is able to approach the practical side of PA management as well as to be well understood by practitioners of PA management. This is a positive point when compared to the IUCN framework that often causes confusion for informants because it is conceptual and rarely encountered by practitioners in their activities (Cairngorms staff member in Lockwood, 2009).

4.3.3 Comparison to other PAs in Similar Contexts

In general, Brazil has similarity to Indonesia in several things i.e. developing countries, facing high deforestation, classified as tropical rain forest, and also much influenced by political and economic interests. Therefore, Brazil deserves to be compared with Indonesia.

Based on report of Brito et al, (2009) regarding GFI, forest governance in Brazil is categorized as bad to moderate. Negative notes regarding this include unclear criteria for performance appraisal, lack of precision and accuracy of information, absence of communication between state and community, and lack of human resources. While useful format of accessible information, inclusion of community representative in forest meeting, and transparency in tender are considered as positive points.

Thus, these notes have in common with notes in this study, namely: unclear criteria for performance appraisal, lack of human resources, useful format of accessible information, and transparency. South Sumatera has advantages on communication between state and community and accuracy of information.

4.4 Governance Quality in CBFM

There is a lack of articles related to governance evaluation on CBFM. Only one journal article was found reviewing governance at CBFM by Koning et al

(2017) who evaluate collaborative governance in Hin Nam No National Park-Laos PDR that generally resembles Indonesia in terms of both geographical and socio-economic conditions. Koning et al (2017) argued that many conditions for a successful governance arrangement were not in place, namely absence of performance appraisal; lack of transparency; unclear decision making; lack of skills and capacity; ignoring of sustainable natural resources management; and lack of communication.

Those notes are also found in South Sumatera. This shows that the governance quality of CBFM in South Sumatera has similarities with Hi Nam No National Park. Therefore, it can also be assumed that Lockwood framework is sufficiently able to reveal the conditions of actual governance in CBFM.

4.5 Limitations of Lockwood Framework

There are some limitations of Lockwood framework namely less detail outcomes for basis ranking, insufficient standardized method, and not fully tested (Campese et al., 2012). The qualitative approach used by Lockwood also requires the user's ability to gather information during the interview process. Based on these considerations and also my experience in this study, Lockwood framework then is only recommended for users who have strong access to information sources and users who have a background in forest management. Furthermore, Lockwood was only testing this framework in developed countries with different characteristics from less developed countries (LDCs). Therefore, this framework is not necessarily entirely transferable.

4.6 The Effect of Applying Good Governance Principles on Deforestation

As mentioned in previous chapter, deforestation rate is taken from land cover change in which 2011 is set as baseline data. 2011 was selected as the baseline data with consideration that community-based management permits were issued in the year. Unfortunately, there is limited time series of deforestation data in South Sumatera. If any, the data is in an excel format and is global for all preserved forests in South Sumatera Province and cannot be disaggregated per-region. Therefore, this study has difficulty analysing changes in deforestation rate trends before and after the implementation of CBFM. This is one of the limitations of this study.

Quality of governance which is another term for good governance is regarded to greatly effect 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 from 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 88.2%, which increased 94.3% in 2015. It can be said that almost all communities in Lintang Kanan work in the agricultural sector. In sub-district of Mulak ulu, 77.4% of the population was employed in the agricultural sector in 2014. This substantial percentage difference helps explain the different pressure effect on protected forest areas due to forest encroachment from agriculture.

b) The Possibility of Wood Extraction

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

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 further research to measure the impact of pressure on conservation outcome in preserved forest area.

In addition, consideration should also be given to opinion proposed by Dias (2015) which states that deforestation was not significantly related to governance. Dias (2015) also added that the relationship between governance and environmental preservation is only an assumption and is not supported by adequate research. This may mean that the findings in my study may be facts supporting the Dias's opinion although it requires further research.

5. 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 parameters namely quality of governance (good governance) and deforestation. Good governance was evaluated based on Lockwood framework 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: transparency, accountability, 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.

The application of good governance principles in SBFM represented by Forestry Agency of Empat Lawang as the governing body of preserved forest area of Bukit Dingin performed well. 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 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 preserved 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 transparency, overall achievement is substantial improvement desirable. Absence of written information and management plan is a serious mistake. In accountability, overall achievement is substantial improvement desirable. Non-compliance in reporting performance which is their obligation is other fatal errors. 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 areassivity 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 five principles out of five principles.

SBFM that is better in applying good governance principles has higher deforestation rate compared to CBFM accounting for 9.8% and 6.4% 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.

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 obstacle 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 can be considered as one of fit scheme for forest management in South Sumatera (Borrini-Feyerabend et al., 2014).

There are some limitations of this paper namely limited time series of deforestation data in South Sumatera, different level of pressure between research locus, and the limitation of Lockwood Framework.

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