

STRATEGIES FOR SUSTAINABLE DEVELOPMENT PLANNING FOR LAWFUL PROTECTION OF FOREST AREAS BASED ON COMMUNITY SELF-REGULATION (CASE STUDY: MURIA, CENTRAL JAVA)

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ABSTRACT

One of the dilemmatic problems in sustainable development is unlawful shifting of forest areas into economic zones (farming and/or industry) for the community. A good example of this is in Muria area in Central Java. Forests here are pretty damaged due to illegal logging and plundering that a conservation effort is now urgent. Data from Muria Research Center Indonesia (MRI) show that the appalling damage accounts up to 50 percent of the forests. This research is aimed at devising a strategy for sustainable development using community self-regulation based on local wisdom. The result will be a model of development planning policy based on the local wisdom of Muria forest area community. Proper development formulation and plans will be devised using descriptive analysis, SWOT, and the Exponential Comparison Method (ECM). It is expected that the outcome of this research is a formula of integrated policies that eventually leads to sustainable welfare for the community.

Key words: Self-regulation, local wisdom, planning, SWOT, ECM, descriptive analysis

1. Introduction

The global community now has to deal with the problem of environmental damage. This is caused by industrial activities that lead to pollution and also the massive scale of shifting of conservation lands into economic areas for farming, industry, housing, mining, and the infrastructure required supporting those economic entities. Natural phenomena have shown us that environmental damage significantly lower our quality of life with natural disasters and dwindling resources as good examples.

One of the dilemmatic problems in sustainable development is unlawful shifting of forest areas into economic zones (farming and/or industry) for the community. The modern era with its technological development bring real impact on our social life. The latest development in a community is immediately relayed to the others in other territories. People’s way of life also changes. They are more individualistic in their pursuit of fulfilling needs, that sometimes they break the law, hence the term “homo homini lupus” – meaning that people will do anything to meet their needs. Even if it means they have to sacrifice others.

One of the forests areas in Central Java is Muria. This area now suffers considerable damage. Muria Research Center Indonesia (MRI) claims that 50 percent of the forest here is damaged that it requires urgent conservation efforts.

Acreage of Muria Forest

	Overall Forest Acreage (Ha)	Damaged Areas (Ha)
Jepara regency	20,096.51	13,252
Pati regency	47,338	23,807
Kudus regency	2,377.57	1,249

Source: Forest Area Stabilization Bureau (BPKH) Region XI Java Madura

Muria Forest Area consists of highlands, plateau, and coastal areas spread in three regencies of Jepara, Kudus, and Pati. This forest area serves as both conservation and production forest. Some parts of the forest are also used for plantation, community forest, farm land, and settlement. Its riches – as documented by Pati Perhutani Forest Functionary Unit (KPH) - include 80 species of trees, palms, and grasses. Early plantation trees include mahogany (1942), pine (1944), and interchanging lanes of Albizzia falcate, eucalyptus deglupa and coffee (1942). In terms of fauna, endemic species include five subspecies of Javanese cobra, green sanca, millipede, monkey, porcupine, squirrel, scaly anteater, hedgehog, hog, small antelope, leopard, and a large number of bird species that in local names are known as *trucuk*, *kutilang*, *kacer kembang*, *lutung*, *cucak hijau*, *cucak kembang*,

ledekan, elang, rangkong, plontang, tekukur, gelatik, kuntul, prenjak, perkutut, ciblek, burung madu, truntung, pelatuk bawang, branjangan, burung hantu, and brubut. (Muria Study Center, 2010; <http://muriastudies.umk.ac.id>).

Sustainable development requires a paradigm of integrated environmental management that takes all complex aspects of modern community into account, especially within its role as the economic driving force. Hence, there is the need for a model of sustainable development that puts environmental concerns forward by enforcing regulation based on local wisdom. Most common people with their complex characteristics and needs do not realize that the forest is not the source of life only for today. Many researches conclude that people's awareness for the forest as future source of life lags behind concern for today's urgent needs. This happens to most parts of the world and it makes the forest as the foundation for quality life gradually reduced in acreage.

Therefore, there must be an in-depth study on the strategies for sustainable development based on community self-regulation within the frame of law in order to conserve forest areas. This study applies a planning concept founded on local wisdom in the environmental management of Muria Forest Area in Central Java.

2. Method

The data used in this research are both primary and secondary data. They are both taken from Focused Discussion Group (FGD) held with some key persons from Central Java Perhutani (Indonesian Forest Agency), and representatives from Jepara, Kudus, and Pati Perhutani, Central Java Environmental Protection and Conservation Bureau (KDSA), Regional Bappeda (Land Management Agency), and also regional functionaries, including heads of sub districts and villages around Muria, as well as other related parties.

The research location is in Muria Forest Area that covers Jepara, Kudus, and Pati regencies.

This research employs both conceptual (to analyze regulations and their roles in forest protection) and quantitative (to measure people's economic role and the implementation of sustainable development planning) approaches.

The analytical technique used is the SWOT method to figure out the advantages and weaknesses, and also opportunities, as well as hindrances in the efforts to protect Muria Forest Area. The subsequent analytical technique is the Exponential Comparison Method (ECM) to pinpoint the best strategic policy for planning of Muria Forest Area sustainable development.

3. Result And Discussion

A. Condition of Muria Forest Area

Not every member of the community around Mount Muria adheres to the laws and regulations on forest conservation. The main reason is that people are only concerned about their needs today and not those in the future. Forests are regarded as limitless resources to fulfill their needs at will. People cut down trees and open new farm land. This is made worse by people from the other forest areas, and businessmen holding the license (HPH.IUPHHK) to manage the forest also commit logging outside of their designated area. Regulations on forest conservation in Mount Muria are not effectively implemented yet, as 50% of the forest acreage there is damaged. Five rehabilitation programs had been successfully conducted from 2006 through 2014 with the details as follow:

Protected Forest Rehabilitation Stages from 2006 through 2014 by Pati Forest Functionary Unit (KPH)

Trees for the Protected Forest (RHL) for 2006 – 2014

Pati KPH (Forest Functionary Agency)

1. RHL for 2006 (240.6 Ha)
 - 7 slots, 2 BKPH (Gbr and MPA) and 2 RPH (Semanding & Ternadi)
 - 2 riverbanks (Banjaran and Juwana)
2. RHL for 2007 (500.3 Ha)
 - 21 slots, 3 BKPH (Gbr, MPA & Rgl) and 4 RPH (Semanding, Ternadi, Bategede & Panganon)
 - 4 riverbanks (Banjaran, Juwana, Serang & Tayu)
3. RHL for 2008 (320.80 Ha)
 - 7 slots, 2 BKPH (Gbr & MPA), and 4 RPH (Semading & Ternadi, Bategede & Batealit)
 - 2 riverbanks (Serang & Juwana)
4. RHL for 2013 (174 Ha)
 - 7 slots, 3 BKPH (Gbr, MPA & Ngr), and 4 RPH (Semanding & Medani, Bategede & Batealit)
5. RHL for 2014 (72.5 Ha)
 - 3 slots, 1 BKPH (MPA), and 1 RPH (Bategede)

Regulations on forest conservation in Muria has not been implemented effectively as farmers and peasants still plant cassava on the shades of forest trees, despite prohibitions to do so. Cassava is considered an obstacle for conservation as it is known to be greedy for nutrients. Traditional farmers actually know this but instead they add more urea to help make the land fertile. But this addition of urea makes the soil more clayey. Continuous plantation of cassava causes the soil to lose its fertility. Hence, this type of plant is no longer allowed to be planted in forest areas, especially in teak production areas, as it hampers the growth of teak trees (source: interview with the Head of Planting and Planning of Pati KPH on 30 May 2015).

Successful forest and environmental conservation in Muria is meant to protect protected water seepage area that in turn will prevent draught. This will also alleviate the effect of climate change. The following represents this goal:

Muria Area

Muria is made up of five crisscrossing river banks and intersecting regencies. There are seven riverbanks traversing Muria; Balong, Gelis, Juwana, Serang-Lasi, Sampol, Pandansari, and Gadu. These seven riverbanks are further divided into 52 sub riverbanks (6 in Kudus, 11 in Jepara, and 35 in Pati).

Administratively, Muria spans three regencies; Kudus, Jepara, and Pati.

The areal lay out includes Conservation Area, Cultivation Area (1. National Forest – run by Perhutani, it consists of conservation forest, production forest, and protected forest, and 2. People’s Forest – outside the National Forest, it consists of settlement, plantation, farm, and infrastructure.

Many members of the community in Muria are not yet aware of the importance of environment protection and conservation. People still practice economic activities that are detrimental to the forest. The only change for proper forest conservation efforts in Muria is by enforcing a forestry reform. Perhutani took the step by improving its forest resources management system with the inauguration of the Conserving the Forest with the People (PHBM) program. This system is implemented with the spirit of Be Together, Be Empowered, and Share that includes making the most of land/space, time, and outcome by managing forest resources for the greater benefit of the community. The PHBM is meant to raise awareness among the people that they have a share in forest conservation (source: interview with Ir. Harnawa, Head of the Kudus Forestry Committee on Farming, Fishing, and Forestry on 29 May 2015).

Based on the Decision Letter of Central Java Perhutani No. 2889/KPTS/I/2013 dated 21 October 2013 on forest acreage for each KPH within Central Java, the area for conservation, limited production, and continuous production are as quoted from an interview with Nexon Hasiholan, M. S. P, Head of Jepara Forestry and Plantation Agency on 14 April 2015:

Forest Acreage in Jepara, Central Java

No.	Forest Category	Area (Ha)
1.	Conservation	2,707.81
2.	Limited Production	1,660.14
3.	Continuous Production	9,607.88
Total		13,975.83

Source: Decision Letter of Head of Perhutani No. 2889/KPTS/I/2013

According to Article 5 of Forestry Law No 41 year 1999 on forestry, there are two possible status for a forest; national forest and property forest. Subsection 1 of Article 5 also mentions that national forest can also be traditional forest that can be managed by the local community (*rechtsgemeenschap*). The name may vary, including *ulayat* forest, *marga* forest, *pertuanan* forest. The traditional forests run by local communities are essentially belong to the national government and can therefore be managed by the government as the highest order of community in the Republic of Indonesia. Despite this, the government respects the rights of local communities to manage their traditional forests as long as they are still in line with the laws and regulations. The national forest run by the local community for the greater good of their welfare is also known as the village forest. The national forest that is solely dedicated to the empowerment of the local community is known as the communal forest. The traditional forest upon which a proper license is applied to is called people’s forest. (Abdul Muis and Mohammad Taufik Makara, 2011, pp. 44-45).

The forest area in Muria is run by Pati Perhutani Forest Functionary Unit (KPH) and therefore it is categorized as a national forest. In Jepara, some land acreage also function as forests, they include: (based on an interview with Nexon Hasiholan, M. S. P, Head of Jepara Forestry and Plantation Agency on 14 April 2015)

1. Tourism forest; covering an area of 69.50 Ha in Keling and Donorojo sub districts.
2. Mangrove forest; covering an area of 293.69 Ha in Karimunjawa, Kedung, Tahunan, Mlonggo, Bangsri, Kembang, Keling, and Donorojo sub districts.
3. People’s forest; covering an area of 11,858.26 Ha in Keling, Donorojo, Kembang, Bangsri, Pakis Aji, Mlonggo, Jepara, Tahunan, Batealit, Kedung, Pecangaan, Mayong, Kalinyamatan, Nalumsari, Welahan, and Karimunjawa sub district.

According to Article 6 subsection 1 of Forestry Law No 41 year 1999, a forest serves 3 (three) functions; conservation, protection, and production. Subsection (2) states that the government determines the major function of forest as a) conservation forest, b) protection forest, or c) production forest. It further notes that those three functions are actually inherent in a forest despite differences in topography, flora, fauna, biodiversity, and ecosystem.

Article 4 of Forestry Law for Java and Madura year 1927 mentions two types of forests; conservation and non-conservation (Salim H. S, 2002, pp. 45). Conservation forest includes:

- a. Teak forest, with the following attributes:
 - 1) Is mostly or entirely filled with teak trees.
 - 2) Is designated as teak forest by the government, whether teak trees has been planted or not.
- b. Bushes that are mandated by the Forest Minister to be conserved.

Non conservation forest includes:

- c. Bushes and lower-branched trees forest, that also cover:
 - 1) Natural bushes that are not mandated to be conserved.
 - 2) Teak or other wooden forest that no longer belong to certain acreage to be conserved.

A forest must be conserved for the following reasons:

- a. Serves as a source for wood and other forest materials.
- b. Serves as a water retention area.
- c. Serves as a climate regulator.
- d. Serves an economic purpose.
- e. Serves to meet public needs.

Interview results found some facts identified as problems in Muria concerning its forest and the people:

1. People are not yet adhered to the laws concerning the forest.
2. Wooden tree forests are only regarded as sources of income (for plantation and logging).
3. People still plant cassava on the shades of forest trees, despite the fact that it is an obstacle to forest conservation.
4. Tree cutting is also still practiced.
5. Further funding is required to properly manage forests as they provide economic resources for the local communities. (Source: an interview with Ir. Harnawa, Head of Forestry Committee of Kudus Farming, Fishing, and Forestry Agency and Sapari, a member of Muria Patiayam BKPH).
6. Low income among local communities.
7. Altered function of the forests.
8. Lack of farming land for the local communities.
9. Land quality degradation that sometimes becomes critical.
10. Massive planting of seasonal plants such as cassava.
11. Illegal logging.

(Source: an interview with Nexson Hasiholan., S. P, Head of Jepara Forestry and Plantation Agency on 14 April 2015).

Efforts to manage the forest in Muria have been backed up by the required regulations. They span from laws concerning general guidance of forest management to government regulations on the technicalities of running a conservation forest.

B. The Role of Law in Muria Forest Conservation

A forest serves many purposes both directly and indirectly for the greater good of the community. This wealth of advantages must properly be managed. Regulations are therefore imperative as to make forest management reaches its ultimate goal of proper welfare for all both now and in the future.

Forest management agencies are continuously working on socializing and using persuasive approaches to the local communities around forest areas in Muria. Persuasive approaches are always better to prevent damage to the forest compared to repressive measures against the will and need of the local communities who are making use of the forests' resources.

However, members of the communities who have committed crime against the forests will have to undergo punishment and later be admitted to socialization programs using the best possible cultural approach to help them better understand the proper management of forests. Local communities do actually have local wisdom in the form of self-regulation upon which they figure their place along with the forest and environment around them. Local wisdom in its relation to environment conservation is defined by Article 1 Subsection 30 of Regulation No.32/2009 on environmental protection as:

“Values within the local communities to among other things protect and manage the environmental in a sustainable way”.

Ridwan (2007, pp. 27-30) mentions that local wisdom is understood as efforts by people to use their cognition to have an attitude and act upon an object or event in certain space. Epistemologically, it is the ability of a person to behave and act accordingly to a certain object or even that unfolds before him/her. According to Keraf (2010), local wisdom encompasses all knowledge, faith, understanding, or outlook and also custom as well as ethics that guide people to behave as they live in an ecological community. Hence, local wisdom does not only concern people's relation to one another, but also on their interrelationships with the whole member of the ecological community and how to properly maintain them.

Ardhana (in Apriyanto) (2008) explains that according to the cultural perspective, local wisdom includes all values created, developed, and maintained by the community as their guide to life. This includes all mechanisms and ways of behaving and acting put into a social order. This statement implies five dimensions of local wisdom; (1) local knowledge, information on local characteristics and how people deal with problems. Local knowledge is a great measure of how a local community embarks on local initiation; (2) local culture, cultural elements that make up a local tradition, ranging from value, language, tradition, to technology; (3), local skills, the ability of people to apply and make use of the knowledge they have; (4) local resources, the

resources people have to meet their needs and carry out their main functions; and (5) local social process, how local people do their functions, how social actions are conducted, how social relations are maintained and controlled.

People have always had self-regulation to take care of the forest. They know that their lives depend on the forest. It is the responsibility of local institution to serve as a bridge between the local people's need for the forest and its very protection. Self-regulation is what constitutes local wisdom. Hence, the proper model for local institution to conserve a forest is by empowering local communities, to allow them to make use of the forest within the proper mechanism set with mutual understanding between the two parties. Only then a win-win solution, understanding, and common interests and perspective can be reached.

4. Conclusion

Results of interviews have identified problems concerning the forest area and people in Muria:

- a. People are not as yet adhered to the laws of forest conservation as they see the forest as merely a source of income (for plantation and logging). People still plant seasonal plants in the shades of forest trees that hamper conservation efforts. People still cut down trees in the forest. More fund are required to manage the forest as people still rely on it because they have to deal with low income, lack of plantation land, and low quality farm land. Other problems include changes in land function and illegal logging.
- b. Some laws and regulations are already in place to help conserve forest areas in Muria, they include; Regulation No. 23 year 2014 on Regional Government, Government Regulation No. 44 year 2004 on Forest Planning, Forestry Minister Regulation No. P.42/Menhut-II/2010 on Forest Planning System, Forestry Minister Regulation No. P.36/Menhut-II/2011 on National Forest Plan for 2011-2030, Forestry Minister Regulation No. 36/Menhut-II/2013 on Guide for Regency/Municipality Forest Planning, Central Java Governor Regulation No. 46/2012 on Central Java Forest Plan for 2011-2030, Administration No. 55/052.8/PSDH/PTI/I dated 16 January 2012 on Management of Cassava Plantation in the Forest, Regulation No.947/058.2/Kam/PTI/I dated 7 August 2014 on Cassava Plantation Management in Pati KPH, and Regulation No. 549/052.4/PSDH/PTI/I dated 29 April 2014 on Cassava Plantation Regulation in Pati KPH.

People in Muria have not fully observed laws and regulations on forest conservation because they are only concerned about their urgent needs, instead of the sustainability of the forest for the future as well. This is made worse by people from the other forest areas, and businessmen holding the license (HPH.IUPHHK) to manage the forest also commit logging outside of their designated area. The alternating tree planting system (tumpangsari) that is allowed by regulation is not implemented by people; they plant different types of plants under forest trees' shades instead.

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