

# Local Wisdom Communities in Forest Resources Management in Mountainous of Manusela, North Seram

Thomas M. Silaya<sup>1</sup>, Ludia Siahaya<sup>1</sup>

<sup>1</sup>Forestry Department, Faculty of Agriculture, Pattimura University  
Corresponding author: t\_silaya[at]yahoo.com

**Abstract:** *Awareness of the importance of maintaining environmental balance is not a new thing for local people in the Maluku region. Their ancestors have wisdom in the preservation of the environment. In their own way in accordance with the patterns of thought and tradition that took place in their day, they have been able to create ways and media to harness and conserve forests and maintain environmental balance. The purpose of this study was to examine local wisdom forms of Manusela mountain communities, North Seram, while the benefits of this research were to generate a conceptual framework for policy-making about management of forest resource and environmental that community-based. This research used descriptive method (survey) with participant observation approach through open interview, filling questionnaire and focus group discussion. The location of the study was determined by purposive sampling, whereas the respondents were randomly selected. The results showed that the local wisdom forms of Manusela mountain communities, North Seram in management of forest and environmental were supernatural beliefs against ancestral spirits and natural spirits in protecting forests and environment, abstinence on certain places (sacred places / pamali), rules and ethics such as the rules of sasi (seli kaitahu / ana poha), techniques of land use and community traditions in preserving the sustainable of forests and the environment. Factors' influencing the application of local wisdom of Manusela mountain community, North Seram was the process of modernization that causes social change in society in the structural, cultural and interactional dimension.*

**Keywords:** Local wisdom, forest management, sasi, environment

## 1. Introduction

Indonesia with various ethnic groups has a diversity of local wisdom or culture in which ethics and moral values are contained, as well as norms that greatly promote the preservation of environmental functions. These values integrate into the life of the local community, a guide in behaving and interacting with nature, providing a strong foundation for environmental management, making the relationship between humans and nature more harmonious and harmony. This condition allows nature with various elements of its resources can be maintained and maintained its balance, and nature actually serves to support human life or the surrounding community.

Awareness of the importance of maintaining environmental balance is not a new thing for local people in the Maluku region. Their ancestors have wisdom in the preservation of the environment. In their own way in accordance with the mindset and tradition and culture that took place in their day, they have been able to create ways and media to use and conserve forests and maintain environmental balance.

The people of Maluku have various local wisdom and local knowledge which contain the values, norms, rules, arrangements used to utilize and manage natural resources for the sustainability of life. Local knowledge is the knowledge developed by a community for centuries. Local knowledge was developed on the basis of experience, has been tested for use over a long period of time, has been adapted to local culture local environment, and is dynamic and changing. (Silaya, 2004).

Local people in the Manusela mountain region, part of the indigenous people of Maluku who live on the northern island of Seram, their lives are quite isolated or isolated, so that the condition of the people only lives and depends on the availability of natural resources (forests) and cultivation. However, in the utilization of natural resources (forest and environment), they have ethical and moral values, beliefs, and norms that promote the preservation of forest functions.

## 2. Research Methods

### 1. Location and Time of Research

The study was conducted in Kanikeh, Manusela and Kaloa villages, North Seram, Central Maluku District, Maluku Province. The implementation of this research lasted for two months. The materials or objects in this study were indigenous peoples in the Manusela Mountains as well as the forest resources that they are seeking. While supporting equipment of this research was questioner or question list and camera.

### 2. Basic Method

In this study, the basic method used was descriptive research method is a method used to describe the status of a group human, a data object, or a certain condition. (Nasir, 1998). While the approach used in this study was a qualitative approach (phenomenological). A qualitative approach seeks understanding by using participant observation methods, open interviews, interviews with key informants and officials from relevant agencies.

### 3. Techniques of Data Collection and Analysis

Determination of research location in some villages in Manusela Mountains, conducted by using purposive sampling method (determined first). The location of the sample villages was chosen based on secondary data obtained from various sources such as seminar results and previous research reports. Data collection was obtained by observation involved and open and in-depth interview that was by directly follow the form of community activities in forest and environmental management. Then followed by the method of interview was by asking some questions directly or using questionnaires to respondents to obtain answers to questions given. Data analysis using descriptive method with qualitative approach according to data collected in field.

### 3. Results and Discussion

Wisdom word in wisdom according to the GDI reat Indonesian Dictionary Jakarta, 2001 interpreted as wise or wisdom. While Laksono (1995) mentioned, wisdom as a historical product of society in order to adapt to the environment, in which there are parts that have transcendental implications because of the question of life-dead that never resolved, but also the part that must be changeable and actual with the development of the situation and conditions.

The local wisdom of the people in the Manusela Mountains was formed by the relationship between them and the surrounding ecosystem. They have a system of beliefs, laws and customary institutions, knowledge and how to manage natural resources locally. As a community, they have dependence and spiritual beliefs about the local ecosystem so that its management was done with strict rules. With a deep understanding of traditional societies about the economic, cultural and spiritual dimensions of the local ecosystem, so they have a long-term interest in maintaining the sustainability of existing resources in order to remain sustainable.

#### 1. Rules / Norms in Community

People in Manusela mountainous areas were indigenous communities, so that in carrying out various activities including in the management of forest resources, they were governed by various rules or norms. The rules or norms governing the management of forests and forest products may be in the form of usage, folkways, customs or customary law. This is in line with what Lokollo (2005) points out that there were indications of indigenous peoples in the Maluku region generally including on the island of Seram, where there are use of terms related to rules or norms in community life and natural resource management. These terms include usage, folkways, behavior (mores), customs (custom) and customary law (law).

Sanctions given due to violations of the rules were weak, rather strong, strong and very strong. Sanctions that were weak and rather strong, in the current implementation have been greatly reduced or already were a common thing in

society. Rules that were considered not containing sanctions was a usage and tradition that was a habit that was done for generations and has been entrenched in everyday life. The tradition in preserving the natural environment was a living order. While the rules that contain sanctions were customs and customary law was a collection of norms that originate in the sense of community justice and always growing and includes rules of human behavior in everyday life that always adhered and respected (Muslim et al., 1994).

In people's lives in the Manusela mountain region there were a number of customary or traditional laws governing the relationships between people and the relationship between society and the natural environment. Customary law or tradition was a manifestation of the culture and wisdom of the community in maintaining harmony and harmony with the forest and its natural environment. It was also a concern and responsibility of the community to nurture and develop noble values in the communion of life between each other and with the environment.

#### 2. Techniques and Rules or Norms in the Management of Forest Resources

The techniques and rules or norms found in relation to the management of forest resources, especially in the use of forests and forest products in the Manusela mountains area as follows:

##### a. Land use techniques in the form of Dusung and land use type

###### a.1. Dusung

In the land use for cultivation, local communities in the mountains of Manusela have a land-use technique that was also owned by the people of Maluku in general i.e. the pattern of dusung. This pattern was also known by many local communities in Indonesia as well as abroad with the term Agroforestry, i.e. optimal and sustainable land use techniques, by combining forest and agricultural activities in the same land management unit, with due regard to environmental conditions as the physical, social, economic, cultural and participation of community (Prima Okky S, et al, 2005).

The patterns of traditional agroforestry dusung have long been practiced in Maluku, including by people in Manusela mountain area. The benefits of land management in the form of dusung are:

###### a.1.1. Environmental Aspects

The dusung environment in the area of Manusela Mountains has many advantages over other usage systems, especially the monoculture system. The contribution of dusung to environmental / ecological has a relatively high ecological stability because:

1. Consisting of multi-species, it means having more biodiversity or having food chain / more complete energy.

2. Consists of multi-stratum canopy that create a better microclimate and soil and water conservation.
3. The continuity of vegetation so that there was no extreme land clearance that destroys its ecological balance.

The area of dusung was overgrown with long life crops and annual crops. Longevity plants were dominated by fruits while crops were cassava, sweet potatoes, vegetables and so on which were generally the daily necessities of the owner of the dusung.

The structure and composition of plant species contained within the dusung consists of a combination of hard plants (trees) and food crops. Under these conditions, dusung can play a role in erosion control and increased productivity of soil and plants. The role in the effectiveness of erosion control due to litter of hardwood plants that have not or cannot be decayed can function as mulch, so that the soil was protected from rainwater and soil compaction during field activities.

In addition to effectively controlling erosion, dusung can also increase the productivity of soil and crops through improved soil physical properties. Improvement of physical properties was due to the addition of organic residues from the results of litter of perennials in the dusung. The litter of the perennials in the dusung can also increase the nutrients in the soil.

#### **a.1.2. Economic Aspects**

Dusung is a potential source of income for the family / community economy. Contribution dusung in the economy aspects that gives a relatively high welfare and sustainability is caused because dusung has:

1. Species grown or maintained have commercial value and are sold in the market, for example species of longevity, fruits, etc. The diversity or diversification of the species also leads to resistance to price fluctuations and the amount of market demand.
2. Types of results / outputs are diverse and sustainable, can even be set to become more evenly throughout the year.
3. Needs of inputs, management processes to the type of results / output of dusung generally already very well known and commonly used by the local community.

Dusung productivity has a high value and profitable. The production cost incurred by the owner of the skull is relatively small compared to the contribution provided by the dusung. This is caused by the individual management system where the manager of the dusung manager comes from the family members namely father, mother and child.

#### **a.1.3. Socio-Cultural Aspects**

Contribution dusung in the socio-culture aspects that is high adaptability with the condition of knowledge, skills and cultural attitudes of farmer's community because dusung has:

1. Flexible technology can be implemented from very intensive to the condition of the community that has advanced, to less intensive for the still traditional and subsistence.

2. An efficient aquaculture philosophy, which obtains relatively large results at relatively small cost or sacrifice.

Another socio-cultural value known in the management of a dusung was a form of community cooperation (gotong-royong) or usually called "masohi". In the management of dusung, masohi was usually done at the opening of new dusung, cleaning of the dusung and harvesting the result of dusung. In this masohi system the owner of the dusung did not need to pay to pay those who work at that time.

Dusung management systems by Community have different performance. There was an interesting phenomenon that the management of dusung by society's skill shows excellent performance. Performance in question was productivity, sustainability, equity and efficiency. This performance was influenced by among others the management system, business orientation, product type and diversity.

#### **a.1.4. Aspects of Management Dusung**

The management of dusung in the Manusela mountains has been conducted based on the general principles that form the basis for formulating the management of the dusung i.e. :

1. Dusung in general aims to maintain and improve its advantages, and reduce or negate its weaknesses so as to realize the sustainability of forest and environmental resources and improve the welfare of the community.
2. The formulation of management of the dusung is varied (more than one option), but still meets the criteria: (a) mix of annual crops / trees (forestry) and seasonal / food crops (agriculture), (b) more than one canopy strata, (c) have high productivity and provide significant income for the community, (d) preserved ecosystem sustainability i.e. vegetation continuity, and (e) can be adopted and implemented by the community.
3. Need to develop a network of cooperation between the community / farmers owners of the dusung, in an effort to overcome the problem on critical management elements but very strategic, which when done or arranged together will be more productive and efficient.

#### **a.2. Land use.**

Land use has been well practiced by people in the Manusela Mountains, as can be seen from the following land use types in the region:

- 1) **Amania**; namely land of settlement community including home yard which is also used to plant, coconut, betel, areca, and various plants in the form of cooking spices (lemongrass, turmeric, ginger, etc.)

- 2) **Lela**; that is land that is managed "intensive" (there are routine maintenance and cleaning activities), this land is a garden, place to do planting activities that the main plant is taro, cassava, sweet potato, vegetables, tobacco, sugar cane, and others.
- 3) **Lawa**; that is the land is managed not intensively, the land is planted with the species of banana plant as a dominant plant, and taro, and also there are plantation crops (chocolate).
- 4) **Lawa Aihua**; namely the land within which there is a mixture of longevity crops (cloves, nutmeg, durian, cempedak, langsa, etc.) and a few annual crops (food crops) and forest trees.
- 5) **Soma**; namely the land contained sago plant species (*Metroxylon* spp) containing sago starch and is a staple food for the local community.
- 6) **Lukapi**; namely the land of ex garden (lela and also lawa) which have been left for several years (fallow period) ready to be processed. Lukapi is divided into Lukapi holu that is Lukapi is still relatively young and Lukapi quality is old Lukapi (trees that are relatively large that cannot be cut by using a machete).
- 7) **Awa Harie**; namely a bamboo forest that enough large consisting of several species of bamboo and used as a craft, home ingredients, fences, firewood, etc.
- 8) **Kahupe Harie**; namely the forest area dominated by the species of resin (*Agathis damara*). This resin is used by the community to take resinnya
- 9) **Kaitahu**; namely primary forests and also secondary forests that are old, this area is used by the community to hunt and install the snares for wild animals.

#### **b). Customary Rules and Traditions in the Utilization of Forest Resources**

##### **b.1. Customary Rules**

Local people in the Manusela mountain area have customary rules in the utilization of forest resources, one of which is sasi. In this region there are several types of sasi namely:

**b.1.1. Seli kaitahu or ana poha**; sasi forest where looking (hunting and gathering), namely customary law in the form of prohibition of hunting wildlife at a certain time period, to avoid not to the number of wildlife in the forest to be reduced. With seli kaitahu / ana poha, the local community appealed to the ancestral spirits' powers to recover the existing hunter populations at that location. At that time the local community was prohibited to hunt animals until the application of seli kaitahu or ana poha closed / revoked. When the customary rule was revoked, it was believed that the spirits of the ancestors had restored the population of hunt animals. There was no specific punishment that makes seli kaitahu / ana poha obey by every member of society. Only, they believe, a violation of customary law will make the ancestral spirits angry, and anger will bring reinforcements or karma for anyone who violates.

**b.1.2. Sasi Gereja (Church Sasi)**; people in Manusela mountain areas also impose a church sasi system to protect

their crops, such as coconut, sago, betel nut, and other food crops. Sasi is the customary system in managing the natural resources of the local people. Sasi is also a set of prohibitions that cover space and time to harvest crops, cut timber, and extract forest products, coastal areas, or marine products. Sasi Gereja is one form of sasi when the church plays an important role in applying the ban. In Sasi Gereja, the pastor plays the role of praying and announcing the opening and closing of a sasi or ban that applies in certain areas.

##### **b.2. Tradition or Habit**

Some traditions or habits carried out by communities in the Manusela mountain range in relation to the utilization of forest resources are:

1. There is a habit of community to do the rejuvenation of plants / trees in the forest, especially trees in the owner petuanan location that became his.
2. The existence of rules on taking leaf and sago midrib (gaba-gaba) for the manufacture of houses, namely from sago tree can only be taken 3 leaf midrib.
3. Habits of people not to burn the forest at random in the dry season.
4. The habit of taking firewood only from the trees that have been dried / dead.
5. Community activity to hunt animals in the forest only at certain times.
6. The habit of not logging trees indiscriminately.
7. Various activities undertaken by the community above are categorized as a habit or tradition because for those who do not perform activities or habits are not subject to any sanctions.

##### **c). Protection and Conservation of Specific Areas**

Local people in the Manusela Mountains have some kind of belief that at certain locations within their customary territory they dwell in the spirits of their ancestors who possess supernatural powers. Therefore, these locations should not be disturbed (may not engage in any activity), so these locations are sacred places or pamali.

The sacred place / pamali in Manusela mountain area was based on clan, meaning that certain clan can go to that location, but must first make a traditional ceremony (sirih-pinang). Some sacred places in the mountains of Manusela include "Amalia, Tomosiae, Sikanala" (in the land of Manusela). In the land of Kanikeh there was a sacred mountain or mountain pamali. This mountain can only be entered by men, while women, especially women who are "getting menstruated" should not go to that location because it was considered impure / being dirty. Since their ancestors the place was considered sacred, because it was a place of worship of their ancestors. The name of the sacred mountain cannot be mentioned. The place / location that were also considered sacred by the people of Negeri Kanikeh was Mount of Murkele. While in the land of Kaloa, especially in Elemata Hamlet there were some sacred places / pamali that was Patolo, Hatukina, and Toma makahala.



With these sacred places, the local people will not do any activities, especially the opening of the land in that location, because if they violate it, they will experience the unfortunate such as possession, illness, disaster, and even death. For those who are possessed or sick can ask the elders of the clan who have the sacred congregation to heal them.

As a result of the absence of community activity at the site of the sacred cause the location is protected from logging, fire and other damage. The species of vegetation (flora) and fauna present in the area are preserved, even the species of animals can breed without human disturbance, so the protection and preservation of natural resources is guaranteed.

#### 4. Conclusions

Local wisdom community in the Manusela mountain area in the management and utilization of forest and environmental resources was applied in the form of:

1. Land use techniques such as Dusung and land use types were very useful from ecological (environmental), economic (production), socio-cultural, and management aspects.
2. Customary rules of forest sasi (place of seeking) called seli kaitahu or ana poha and sasi of churches for crops / plantations, and traditions in the utilization of forest resources aimed at ensuring the protection and preservation of forest resources.
3. Protection and preservation of certain areas of sacred places or pamali.

#### References

- [1] GDI, 2001. Great Indonesian Dictionary. 3<sup>rd</sup> edition, Department of National Education. Balai Pustaka, Jakarta.
- [2] Laksono, P.M. 1995 Traditional Wisdom and Environmental Preservation at Indonesia. Journal of CSIS Analysis: Culture, Traditional Wisdom & Environmental Preservation. Year of XXIV No. 8 of 1995.
- [3] Lokollo, J. 2005; Rules or norms in Community Life and Natural Resource Management; Matter of Community Ulayat Rights Research in Central Maluku Region.
- [4] Muslim.A.I, S.Jacobus, E.Frans, S.Djuweng. 1994. Actualizing Dayak Culture and Transformation, Grasindo Jakarta.
- [5] Nasir, M. 1998. Research Methods. Graha. Jakarta.
- [6] Prima Okky S, Sambas. S and Priyono. S, 2005. Agroforestry and Landslide. In: Journal of Community Forest, Center for People's Forest Studies, Faculty of Forestry UGM, Yogyakarta.
- [7] Silaya, Th. 2004. Local Community Wisdom in the Management of Forest and Environmental Resources in Taniwel Sub-district, West Seram District. Thesis of the Forest Science Study Program, Postgraduate of Gadjah Mada University, Yogyakarta. Not published.

- [8] Simon, H. 2001. Forest Management with People, Theory and Application in Teak Forests in Java. Printing II Bigraf Publishing, Yogyakarta