

## **The Local Wisdom to Sustainable Forest Management of Indigenous People in East Kalimantan: Local Action toward Global Solution**

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**Abstract :** *The purpose of this research is to describe how local wisdom influencing the indigenous people behavior to sustain the forest resources, what makes local wisdom able to influencing indigenous people to sustain the forest resources and what does the indigenous people in East Kalimantan province needs in order make them continue to conserve forest resources as an effort to maximize their strategic role in sustainable forest management. Based on the research result of the data shown that local wisdom can influence the behavior of indigenous people because for them, forests are the storehouses of life, the nature damage could resulting negative consequences for the people themselves. The local wisdom form is customary law and, has forcing characteristic, which is sanctions received in case of violation, so its able to makes them behaving to conserve the forest resources. Then, the indigenous people needs fully support from various parties, especially from the local governments such as infrastructure, in order to make them keep continue to conserve the forest resources.*

**Keywords:** *Local Wisdom, Indigenous People, Sustainable Forest Management*

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### **I. INTRODUCTION**

Forests are one of the most important human resources since the beginning of civilization used to fulfill the basic human needs of food, water, clean air, shelter, and so on. As a tropical country, forest resources are a potential source of foreign exchange for Indonesia's development capital. Over the last three decades Indonesia's forest resources have become the main capital of national economic development, giving a positive impact on increasing state division, employment and encouraging regional development and national economic growth.

Although forest resources in Indonesia were highly potential, in few recent years deforestation and forest degradation problems have been increasing. Forest management in Indonesia does not yet reflect compliance with the principles of good forest governance, leading to significant deforestation and forest degradation (Forest Watch Indonesia, 2014). This high deforestation and degradation of Indonesia's forests has positioned the country as one of the largest contributors to global greenhouse gas emissions. One of Indonesia's areas with high deforestation and forest degradation is East Kalimantan Province. In the year of 2015, 388 thousand hectares of forest in East Kalimantan deforested caused by forest fires, which makes it the third largest province of total burnt land area in Indonesia. Forests for the people of East Kalimantan have become the backbone of life. This is due to their very high dependence on forests, both for the provision of food, shelter, medicines and other daily living needs. The livelihoods of communities around these forests will be more difficult, if there is a consequent impact of forest loss, such as decreasing access to quality water and food, extreme flooding or drought, and then climate change (RECOFTC Indonesia, 2012). These conditions put the local community into a very important partner in forest protection and management, as well as how they use or manage forests, as it will have a significant impact on global climate change.

Local communities in these case indigenous peoples have local wisdom that is able to maintain, protecting and ability to keep environmental functions. As a community of people whose daily life behaviors are very close to the natural environment, indigenous peoples have rules on how to protect and manage the environment sustainably inherited by generations. One of the indigenous people communities in East Kalimantan is the Dayak ethnic. In the context of management of forest resources with traditional wisdom, basically among Dayak people have certain ways to treat forest area. According to Bamba (1996), the Dayak people look at the nature not as an asset or other property, but as a house together. Local wisdom concerns how to relate well to all the contents of nature. Local wisdom is a past cultural product that should be constantly used as a grip of life. Although it is local value, but this value contained in it is considered very universal. This makes the indigenous peoples become a very important and strategic partner for the sustainability of forest resources. Their role is one of the important aspects that affecting the sustainability of forest resources. Related to it, it's requires in depth study about the factors that influence the behavior of indigenous peoples in conserving forest resources in order to formulate sustainable forest management strategies as local actions for global solutions.

Therefore this study is to examine how local wisdom factors influence the behavior of indigenous peoples in conserving forest resources that are expected to contribute to human resource management strategies for sustainable forest resource management, as local action for global solutions.

## **II. LITERATURE REVIEW**

According to the Law of the Republic of Indonesia Number 32 Year 2009 on Environmental Protection and Management, it is explained that local wisdom is the noble values prevailing in the life order of the community to among others to protect and manage the environment sustainably. Furthermore, local wisdom that appears in a system of life in a society is a form of environmental wisdom.

Wisdom can be understood as a collective understanding, knowledge and sagacity that affect a decision to solve or overcome a problem of life. Wisdom in this case is a manifestation of a set of understanding and knowledge that is undergoing a process of development by a local community group or community that is compiled from the process and long experience in interacting in one system and in bonds of mutual relationship (Purba in Marfai, 2013). Local wisdom has a wider scope than just the traditional knowledge. Local wisdom is the embodiment, implementation of articulation and manifestations and forms of traditional knowledge understood by humans or communities that interact with the natural surroundings, so that local wisdom is a cultural knowledge belonging to a particular community group includes models of sustainable management of natural resources including how to maintain relationships with nature through wise and responsible utilization (Zakaria in Marfai, 2013). Thus local wisdom is a system that integrates knowledge, culture and institutions as well as the practice of managing natural resources. Andi and Syarifuddin in Marfai (2013) explained that local wisdom is a form of values, attitudes, perceptions of behavior and responses of a local community in interacting with a system of life with nature and environment in which to live wisely.

According to the theory of human ecology (Brofrenbrenner, 1979) there is a reciprocal relationship between the environment and the behavior. The environments can affecting behavior or vice versa, behaviors can also affecting the environment. The emphasis of this theory is the setting in the environment. The environment is arranged of interacting structures wherein those structures there are certain settings. One interesting point of this theory is the recognition of the set of behavior or behavioral setting, which is seen as a separate factor in a social interaction. The set of behaviors in question here is a set of group behavior (not individual behavior) that occurs as a result of certain environmental conditions or physical milieu (Ridwan, 2007: 27). The other theory of behavioral popularized by a psychologist Bandura (1986) known as the Social Cognitive Theory that defines the environment does forming the behavior and behavior forming the environment. This concept is often known as reciprocal determinism, which is the process by which the world and one's behavior influence one to another. Social cognitive theory, based on the proposition that neither social processes nor cognitive processes are central to an understanding of human motivation, emotions, and actions.

## **III. RESEARCH QUESTIONS**

1. How does local wisdom affecting the behavior of indigenous peoples to conserve forest resources in the province of East Kalimantan?
2. What makes local wisdom able to influence the behavior of indigenous peoples to conserve forest resources in the province of East Kalimantan?
3. What does indigenous people in the province of East Kalimantan needs in order to continue to conserve forest resources as an effort to maximize its strategic role in sustainable forest resources management?

## **IV. RESEARCH METHODOLOGY**

The research object is the indigenous people community living in the area surrounding the forest area in East Kalimantan Province covering three regencies, i.e. Berau Regency, East Kutai Regency and West Kutai Regency. This research uses qualitative approach type and research data collection using interview, observation and documentation study methods. Analysis of this research data using three step analyses, those are: data reduction, data presentation and conclusion. The technique of guaranteeing the validity of data has done by credibility test, such as: (1) Long-term data collection time, (2) Triangulation, (3) Negatif Case Analysis, (4) Basic conclusions, (5) Completing all field notes and refference that has been collected, (6) Member check.

## **V. RESULT AND DISCUSSION**

### **A. Local Wisdom and Its Influence To Indigenous People Behavior**

Indigenous peoples are communities with local wisdom in protecting and managing the environment sustainably in East Kalimantan. Indigenous peoples are defined as "Community groups that have traditionally settled in certain geographical areas due to ties to ancestral origins, strong relations with the environment, and a value system that determines economic, political, social and legal order" (Law Number 32 Year 2009 on the Protection and Management of the Environment, Article 1 point 31). Indigenous are closely related to the

management of natural resources and the environment (Ministry of Environment of The Republic of Indonesia, 2011).

The indigenous peoples of East Kalimantan Province referred to in this research are the Dayak ethnic community. The Dayak people are an integral part of the environment itself. This holistic insight makes the Dayaks not to sort things out between humans and the natural surroundings; instead they both have mutually supportive powers and might's to maintain the balance of the universe. Such thoughts, in everyday life, are implemented in traditional practices and customary ceremonies, as well as in their behavior towards natural resource management (Widjono, 1998).

Indigenous Peoples in East Kalimantan Province as well as the other indigenous peoples have been familiar with various forest management practices known by various terms in which the practice shows that indigenous peoples have been able to manage their forest resources for generations, where the indigenous peoples have their naturally holistic perception of the forest. For them the forest is not only economically meaningful, but also socio-cultural-religious. The indigenous people considers forest as an integral part of life due to their very high dependence on forests in the economy, whether for the provision of food, shelter, medicines and other daily living needs. The result of interviews with their leaders and public figures reveal that local wisdom on preserving forest resources as a hereditary inheritance derived from ancestors is still closely maintained as a regulator of life in the utilization of forest resources. This is also reinforced by the existence of customary law governing the use of forest products that's still prevailing in indigenous peoples communities. Customary sanctions will be accepted in case of violates the customary law. For the indigenous peoples, forests are the storehouses of life, the nature damage could resulting negative consequences for the people themselves.

The results finding of this study support the theory of human ecology (Bronfenbrenner, 1979), which gives the view that there is a reciprocal relationship between the environment and the behavior. Environment can affect behavior or vice versa, behavior can also affect the environment. This set of behaviors appears in response to the existing environmental conditions. Local wisdom manifests itself in the habits of society that share a common understanding of something. A common understanding of something is formed from the same process in which they interact in the same environment. The same understanding of something can happen because basically every environment must have certain settings about their group's ideal relationships. This setting is actually the spirit of the community's behavior (Ridwan, 2007).

The human ecological theory paradigm that environment states that the behavior of a person does not stand alone, but the impact of the interaction of people concerned with the environment outside it. In the indigenous peoples and old migrant communities that have lived for generations, seeing that they are part of the environment so that the core is the environment itself. The environment is no longer seen only as a resource but is seen as a limited environment. The values and norms prevailing in society are formed based on the experience of his life interacting with his environment. This paradigm is called Society in Self (ICRAF, 2001). The results of this study are also supported by social cognitive theory (Bandura, 1986) that defines the environment does forming the behavior and behavior forming the environment. Human is driven not by inner pressure, but by external factors. Social cognitive theory, based on the proposition that both social processes and cognitive processes are central to understanding human motivation, emotions, and actions. The results of interviews with the community leaders reveal that local wisdom on preserving forest resources as a hereditary inheritance derived from ancestors is still closely preserved as a regulator of community life behavior in the utilization of forest resources, regulated by customary law and sanction will received in case the found of violation of the customary law. It can be interpreted that the behavior of indigenous peoples to conserve forest resources is influenced by local wisdom passed down from generation to generation and still maintained to this day. So it can be concluded that local wisdom regulated in customary law can influence the behavior of indigenous peoples to conserve forest resources.

## **B. Indigenous People Needs in Order Toward Sustainable Forest Resources**

As the results of interviews with the community leaders reveal that local wisdom on preserving forest resources as a hereditary inheritance derived from ancestors is still closely preserved as a regulator of people's livelihood behavior in the utilization of forest resources, governed by customary law. It can be interpreted that the behavior of indigenous peoples to conserve forest resources is influenced by local wisdom passed down from generation to generation and still maintained to this day. Forests are respected as part of the inseparable life of their very high economic dependence, both for the provision of food, shelter, medicines and other daily living needs. However, in order to keep indigenous peoples continue to support and act to conserve forest resources, they need substantive supports. The results of in depth interviews conducted on informants revealed that indigenous peoples needs full support from all parties, especially from the local governments. As a living society with limitations due to isolated residential location, the desired supports are the proponent's facilities and infrastructure, educational and health facilities and the most important is the alternative of livelihood to improve the economic and social welfare. Through this solutions, it is hoped that the strategic role of indigenous

peoples in the management of forest resources can be maximized and the objective of obtaining sustainable forest resources through the sustainable behavior of indigenous peoples can be achieved, since their impact is not only on the life of the indigenous people community itself, but also significantly on global climate change, as a local action for a global solution.

## **VI. CONCLUSION**

Based on the findings of research results and discussion, then the researchers can be concluded as follows. Local wisdom can influence the behavior of indigenous peoples in the province of East Kalimantan because for them, forests are the storehouses of life, therefore they must be maintain so that there is no natural damage and negative consequences for the people themselves. Local wisdom on the preservation of forest resources as a hereditary inheritance derived from ancestors is still closely preserved as a regulator of people's livelihoods in the utilization of forest resources, governed by customary law and the existence of sanctions received in case of violation. This element of coercion is become the factor of controlling the behavior of indigenous peoples to conserve forest resources. Then in order to continue to conserve forest resources, indigenous peoples needs complete support from various parties, especially from the local governments. As a living society with limitations due to isolated residential location, the desired form of support need such as infrastructure, educational and health facilities and, most importantly, livelihood alternatives to improve economic and social welfare. it is hoped that the strategic role of indigenous peoples in the management of forest resources can be maximized and the objective of obtaining sustainable forest resources through the sustainable behavior of indigenous peoples can be achieved, since their impact is not only on the life of the indigenous people community itself, but also significantly on global climate change, as a local action for a global solution.

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