The role of indigenous peoples (LMA) in the control of forest and land fires in Merauke

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Abstract. Environmental damage resulting from forest fires and land becomes a national central issue for most regions in Indonesia. Forest fires and land carries with it the smoke disaster impact on health, social, culture, economy and society. The purpose of the study to analyze the role of indigenous peoples in Merauke in forest fire prevention efforts and land at Merauke. This study uses qualitative methods with the descriptive approach; engineering data retrieval was observed against the actual conditions that occur in the field, and juxtaposed with the literature review. Data analysis was in the form of data reduction, data presentation, and data conclusions verification. Research results showed indigenous peoples (LMA) in Merauke hasn't run their role in controlling forest and land fires in Merauke. It could cause damage to the environment, as well as the impact as the forest is a source for life of the people, and as a ceremonial symbol for indigenous people. This fact justified for the need for local cultural wisdom Sasi interference in the process of prevention and control of forest fires and land in Merauke. Also required indigenous community such as MAPA and KASK to be more caring to the existing natural environment (forest and land) as a source of livelihood of the community.

1. Introduction

Forest fires and land is the disruption of natural resource management, the ecosystem, and biodiversity. Fire causes decline in the quality of the environment and people's lives, through forest and land degradation, disruption of social and economic activities of the community, public health, and an increase in gas emissions greenhouse. It is a major cause of forest degradation besides forest encroachment, illegal logging, and forest conversion. Forest area in Indonesia spread throughout provinces make a total of 133,300,543.98 ha including the natural sanctuary, protected forest, and yielded forest. The provinces with the largest forest area are the combined provinces of Papua and West Papua with 40.5 million ha. Followed by the province of Kalimantan (15.3 million hectares), and East Kalimantan (14.6 million ha) while provinces in Indonesia with the smallest area of forest is DKI Jakarta (475 ha).

According to Forest Watch Indonesia (FWI), an independent agency monitors Indonesia forest, 82 ha land area of Indonesia are the closed forest. It is one of the achievements given the forest is very important for the balance of nature. Forest fires and land incidents decreased in 2017 compared to previous years. Based on data up to 5 October 2017, fire incidents in all regions of Indonesia was about 124,743 Ha. While in 2016 about 438,363 ha, and 2015 it reached 2,611,411 ha. The efforts of controlling forest fires and land need involve multisector either by
government agencies or social institutions of the community to play an active role in the process of fire control (Dalkarhutla).

Dalkarhutla includes business/activities/actions of organizing, management of human resources and infrastructure as well as preventative operation, fire-fighting, handling, evacuation, and rescue support, and support management for forest and land fires control [11]. It required ministerial regulation as norms, standards, criteria, and guidelines over the planning, organizing, implementing, monitoring and evaluation. Operations in the implementation of business/activities/actions of the parties are related, hoping that it provides the effectiveness and efficiency of the Dalkarhutla range. The scope of the regulation of the minister includes: a. Dalkarhutla Organization; b. Dalkarhutla human resources; c. Dalkarhutla infrastructure; d. Dalkarhutla Operation; e. Dalkarhutla innovation development; f. community empowerment and cooperation partnership; g. Reporting, monitoring, and evaluation; h. Sanctions and rewards; and i. financing.

The main causes of forest and land fires are negligence or natural factors and human activity [1]. According to research [2] 95% of fire occurrence is always triggered by the initial combustion in human activity. Massive forest fires occurred in the year 1997 to 1998 claiming approximately 11.7 million ha of land. Also in 2002 when Indonesia suffered the world's largest fire events (PNPB,2015). In 2005-2009, extensive forests in Papua claimed 42 million ha of land area. Three years later (2011) forest area of Papua left 30.07 million hectares. Based on the local government, every year the average deforestation in Papua amounting to 143,680 ha. While the rate of deforestation for the province of West Papua by 25% per year or 293 thousand ha. Saving the forests of Papua's natural wealth means saving the invaluable and also Papua cultural roots. More broadly, the forest of Papua has an important role to stabilize the climate crisis that is happening at the moment.

Merauke has an area of 45,071 Km2 (11% of the province). Most of the Merauke consists of low and marshy land, a vast area of swamp 1,425,000 ha and mainland high in some northern parts of the subdistrict. Forest and land fires in Merauke in October 2015 had a great impact up to the Regency of Timika. Regional Disaster Relief Agency (BPBD) of Merauke claimed 93 hotspots were detected from burning forests and land activities. These data indicate that Merauke is one of the areas in Paupa that is prone to land and forest fires. The cause was mainly the element of deliberate action from the local community who did the burning forest for certain purposes such as opening agricultural land/new plantations and also hunting forest animals. The hunting tradition of the local community included burning within forest area where animals were hiding.

These incidences had an environmental impact due to the damage to forest and land ecosystems. The significant effect of the forest fire was immediately felt as forests are a source of life for the community and as a traditional ceremonial symbol for indigenous peoples. The community also experiencing a shortage of clean water during the dry season because of the forest as water storage is not functioning. Therefore it takes the role of indigenous peoples (LMA) through local wisdom approach in controlling forest fires and land at Merauke by involving the participation of the local communities who have the rights to unalienated land to preserve the environment as a source of life society.

2. Methods
This study used a descriptive qualitative approach method to examine the actual conditions in the field and then juxtaposed with various theories associated with the object. The focus of this research issue is the Role Of The Indigenous Peoples (LMA) in the control of forest fires and land at Merauke. Source of research data obtained through: (1) Observation regarding the actual conditions occur in the field (2) Literature review. Data analysis was performed by an interactive model of analysis techniques include three stages, namely the reduction of the data, the presentation of the data and the conclusion.

3. Results
3.1. Description of the role of indigenous peoples

A role defines as the expected behavior of the device is owned by people who are domiciled in the community [4]. Meanwhile, the role of social science in the mean of a function hosted by someone when reinstated, someone can play its functions because of the serving position, [5]. Indigenous institutions are patterns of behavior established indigenous peoples consisting of social interaction which has a structure in the framework of the relevant customs value. Research by [8] also set about the customs agency that organizes the functions of customs and became the order of the original village. They grew and developed on the initiative of the villagers and the village and helped the government served as a partner in the empowering, preserving, and developing the customs as a form of recognition of the customs of the villagers.

Indigenous institutions are viable institutions either deliberately formed, nor that reasonably has grown and developed in the community or society of certain customary law with jurisdiction and rights over property in the customary law. These, as well as eligible and authorized to set up, administer, and resolve various problems relating to and refers to customs and customary law in force [12]. The existence of customary institutions deemed essential in indigenous intervenes in maintaining the integrity and environmental sustainability.

3.2. Controlling forest fires and land

The forest we have is one of the natural resources, as well as key environmental sustainability and capital base of national development. In addition, the forest also the lungs of the world that need to manage sustainably in order to avoid any damage. The fire is one of the quickest factors that damage forest and thus gave a negative impact. In addition to forest resources against itself, its impact has also been disturbing human health, economic, and even political sector [15].

Forest fires and land processes reduce the ability of forest vegetation photosynthesis because obstruction of sunlight by smoke so the forest will lose production of biomass and organic matter. Forest fires and land resulted in the decimation of the source of income of people living around the forest because of nontimber forest products and agricultural/plantation they have burned. The effect of forest fires and land is the smoke often interfere with various other sectors that could hinder the development process more toward live changes on society.

Forest fires and land resulting in damage to forests and forest products that pose environmental and economic losses. In [10] about damage control and or pollution of the environment about land and forest fires or mention that the forest fires and or land are one of the causes of damage and pollution of the environment, or both come from outside or from the location the location of enterprises and activities. Forest fires and land gave the impact loss for environmental, social, cultural and economic society.

3.3. Role of indigenous peoples (LMA) in the control of forest fires and land

3.3.1. Role of LMA intervenes cultural customs as Sasi controlling forest fires and land. Various forms of environmental wisdom rules owned by indigenous peoples, such as the existence of a variety of restrictions, the customary ceremonies, folk stories, and various other traditions indeed reveal the cultural messages for the process the preservation of the environment. Local wisdom according to [16] are all forms of knowledge, beliefs, understanding or insight as well as customs or ethical demands of human behavior in the life in the ecological community. The diversity of forms of traditional wisdom it is a wealth of social capital for culture enhancement and development of quality human resources, environmental management, and mastery of knowledge and technology. Refer to [11], then the community has the right and the existence of equal opportunities and to play an active role in the protection and management of the environment, develop and maintain the cultural and local wisdom in order to the preservation of the environment.

Merauke has its local wisdom, one of the existing in merauke is Sasi as a form of wisdom that Merauke has done local hereditary as well as maintained and preserved until today. The culture of Sasi is a customary law to govern traditional nature conservation in an attempt to maintain the
sustainability of the natural environment. The application of culture can be in various kinds of Sasi place such as: on land, at sea and swamp also in the Church. It is characterized by a wide range of materials that exist in nature in the form of leaves of reeds, palm leaves, and the high trees. Sasi this custom has the value of usability to maintain the sustainability of the natural environment to keep maintained and preserved for the sake of the survival of humanity including maintaining ecosystems that exist in nature.

Based on the results, forest and land fire in Merauke which is mostly done intentionally by humans can give impact to the society at large as well as for indigenous peoples in particular. It relates with the scarcity of the natural materials required for custom attributes in custom, and solemnize the scarcity of economic resources as a reserve food sourced from the natural environment as nature is the main source for the native society in Merauke.

There is hope as long as Sasi cultural intervention is applied in Merauke by reminding the society of the prohibition of the taking of the resources of the ecosystems that exist in the natural environment. It applies both on land and at sea or marshes, as well as a sign of the limits of the territory of the village in recognition of customary rights over cultural land intervention. However, Sasi has not been used wellSasi as a form of prohibition in the land and forest burning activity. Although it applied when woods began to bare, then Sasi meaning should not take the natural resources from the bare forests including a system of hunting. However, when the cause is the burning of land and forests, which is a regular event in Merauke there has been no prohibition in the law intervenes to the public not to burn forests and land either intentionally or unintentionally. So even though there is already a government regulation on the prohibition of the burning of forests and land and yet it still happens because it is not strengthened by customary law as customary rules which prevent the occurrence of the burning of forests and land. Under this argument, LMA must act as an instrumental body in indigenous culture Sasi intervenes as part of custom rules to control forest fires and land at Merauke.

3.3.2. Role of LMA in involving indigenous communities in the control of forest fires and land.

The involvement of indigenous peoples in the forest and land fires control aims so that indigenous peoples participate in maintaining the sustainability of the natural environment because those are the people who had the customary rights over the land. Community participation is the willingness of individuals to assist in the success of any program according to ability assets [7]. The participation of indigenous peoples plays an important role in achieving the goals and objectives of a development program. [13] the reconsideration of participation is the unity of mental and emotional people in group situations that encourage them to contribute to the objectives of the group and the various responsibilities of the achievement of that goal.

The term indigenous peoples has a broad meaning of dimensions, not just the legal aspects but rather in the indigenous communities, there are aspects of religion, culture and so on. There is a difference between the definition of indigenous peoples and indigenous customary law. According to the definition given by the UN Economic and Social Council [6] that the indigenous or traditional are the tribes and Nations, as it has the historical continuation with the community before the entry of the invaders in his area, regarded himself different from other groups of people who live in their area.

Indigenous people according to secure (the Alliance of indigenous Malay Archipelago) at the Congress I in 1999, is the living communities based on the ancestral origins of the deceased on a custom region. They have sovereignty over the land and wealth natural, socio-cultural life that is governed by customary law and indigenous institutions that manage the sustainability of life of the people. According to customary law society [11] on the protection and management of the environment, customary law community is a community group that is hereditary in a particular geographical area because of the bonds on the origin of the ancestors, the existence of a strong relationship with the environment, as well as the existence of a system of values that define the institution of economic, political, social, and law.

Based on the notion of indigenous peoples and indigenous customary law above, it can be concluded that indigenous peoples are a community whose hereditary lived in an area that is based
upon the origins of the ancestors that have the sovereignty over land and natural resources as well as the socio-cultural life that is governed by customary law and custom. The understanding described the existence of indigenous peoples has a major role in forest management activities that become natural resources subject to customary law and customs applicable and not in conflict with the law.

The results of the analysis of the field of the role of the LMA in involved indigenous communities in the control of forest fires and land is still very less so forest fires and land still occur in Merauke. Forest fires and land are continuously carried out by the community for a variety of activities as well as done deliberately by the people will be bad for people's lives due to the scarcity of natural resources, and pollution of air at any time it could cause illness. The presence of the LMA has the role to involve indigenous communities to take part in the management of forest as well as maintain the sustainability of the natural environment. The role of the LMA in involving indigenous communities in the control of forest fires and land can be done through the establishment of the Indigenous Communities Concerned (MAPA), the formation of Customary Hometown Fire Alert (KASK).

The role of the community with regard to the control of forest fires and land organized in [10] "everyone has the right to act in order to damage control and or pollution of the environment with regard to the forest fires and land or in accordance with the legislation in force. Community participation in forest and land fires control starting from the planning stages of forest and land fire control, fire occurrence prevention phase, the phase of a fire and the fire occurred after the handling stage.

4. Conclusion
The role of indigenous peoples (LMA) in Merauke has not run its role in controlling forest fires and land at Merauke, hence the incidents still occur. It resulted in damage to forest and land ecosystems which affect the source of life and society as well as the ceremonial symbol for the indigenous people. It requires the role of indigenous peoples (LMA) for cultural interventions Sasi in the process of prevention and control of forest fires and land at Merauke. Also to form a community indigenous peoples in the form of the Indigenous Peoples Concerned Fire (MAPA) and the formation of Customary Hometown Fire Alert (KASK) to be more caring to the existence of the natural environment (forest and land) as the source of life. It is to build a new relationship between the indigenous peoples (LMA) with indigenous customary rights holders as to be equally responsible for the control of forest fires and land so that natural environmental sustainability remains awake in supporting the survival of the human race.

References
[1] Armanto, M.E. and Elisa Wildayana. 1998. An analysis of the problems of forest fires and land in agricultural development in the broad sense J. Env. and Dev. 18 (4): 304-318. ISSN. 0216-2717.
[2] Akbar. A. 2015. Study of Local Wisdom Api Use Land Preparation. Case studies on Forest Mawas, Central Kalimantan J. Soc. and Econ. Res. of Forest. 8 (3); 211-223.
[3] Wildayana, Elisa. 2006. The impact of forest fires and land Against socio-economic communities in South Sumatra Province HABITAT XVII 218-227
[4] Harahap E et al. 2007. A large Indonesian Language Dictionary (Bandung: Balai Pustaka)
[5] Suhardono E 1994 The Theory of the Role of the Concept of Derivation and Its Implications (Jakarta: PT. Gramedia Pustaka Utama)
[6] Keraf, A.S. 2010 Environmental Ethics (Jakarta: The Kompas Book Publishers)
[7] Mubyarto 1984 Rural Development Strategy. Rural development in Indonesia (Yogyakarta (ID): P3PK)
[8] Undang-Undang Nomor 6 Tahun 2014 Tentang Desa
[9] Undang-Undang Nomor.32 Tahun 2009 Tentang Perlindungan dan Pengelolaan Lingkungan Hidup
[10] Peraturan Pemerintah Republik Indonesia Nomor 4 Tahun 2001 Tentang Pengendalian Kerusakan dan atau Pencemaran Lingkungan Hidup
[11] Peraturan Menteri Lingkungan Hidup Dan Kehutanan Republik Indonesia Nomor 32 Tahun 2016 Tentang Pengendalian Kebakaran Hutan Dan Lahan
[12] Peraturan Menteri Dalam Negeri Republik Indonesia Nomor 5 Tahun 2007 Tentang Pedoman Penataan Lembaga Kemasyarakatan
[13] Davis K and Newstrom J W 1996 Human Behavior At Work: Organizational Behavior 7th Ed. (USA: McGraw-Hill Inc.)
[14] Brown A A and Davis K P 1973 Forest Fire Control and Use (New York: Mc. Grow Hill and Book Co.)
[15] Barber, C.V. and Schweithelm J 2000. Trial by Fire. Forest Fire and Forestry Policy in Indonesia’s Era of Crisis and Reform (Jakarta: World Resources Institute (Forest Frontiers Initiative) in collaboration with WWF-Indonesia and Telapak Indonesia Foundation)
[16] Keraf A S 2002 Environmental Ethics (Jakarta: The Kompas Book Publishers)