

**Community Participation on Peat Restoration Policy for Forest Fire Rescue and
Land in Sungai Tohor Village Meranti Island Riau Province Sumatra
Indonesia**

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Abstract

Peat ecosystem is an element of peat structure, which is a whole unified that affect each other in forming balance, stability, and productivity. Hydrological Unity of Peat (HUP) is a peat ecosystem located between two rivers, between the river and sea, and or on the swamp. Peat Ecosystem is function as an element of peat that serves to protect water availability, biodiversity conservation, oxygen-producing carbon storage, climate balance divided into protected functions of peat ecosystem and peat ecosystem cultivation function. Damage to the function of peat ecosystems occurs due to mismanagement of land with the selection of business commodities that are not in accordance with the characteristics of peat lands. This is exacerbated by the draining of peat water resulting in a drought on peat that is currently the trigger for forest and land fires. Facts in the field show that fires that occur almost every year with an ever-increasing area are the fact that peat is no longer in natural conditions or has been damaged. Restoration of peat ecosystems can be done by rearranging of hydrological functions where the peat dome as long storage of water, so that peat remains wet and difficult to burn and disasters that have implications directly to the community in the region. Community participation in reducing and avoiding disaster risk is important by raising community awareness and capacity for disaster risk reduction. This research explains how the Community Participation on Peat Restoration Policy in Tohor Village, Meranti Regency. This participation results in changes to peat restoration policies. The Tohor River is a success area for peat restoration in Indonesia that can lead to forest and land fires in Sumatra.

Keywords: Public policy, Hydrological Unity Peat, peat restoration, forest fire and land

1. Introduction

Community participation plays an important role in achieving the goals and objectives of a development program. Community participation is a tool for obtaining information about the conditions, needs, and attitudes of local people, if they feel involved in the preparation and planning process and democratic rights. Communities have the power to block these activities if they are not involved in the decision-making process.

Forests are also a natural resource that provides great benefits for human welfare, tangible benefits include wood, forest products and others. While intangible benefits include arranging water, recreation, education, environmental comfort and others. Indonesia's peat lands provide many benefits for providing timber and non-timber forest products, storing and supplying water, storing carbon, and habitats for biodiversity with a variety of rare flora and fauna found only in this ecosystem (Osaki, et. al, 2016)

Participating in forest and land fire control activities means reduce the impact of fires on communities around the region, such as the smoke that interferes with their health and daily activities and the loss of their livelihoods within the region. Furthermore, the community can monitor and supervise the area in the village and in the forest prone to fire in an effort to prevent the forest fire and land in the future.

There are several reasons for an activity to include communities in environmental and resource management including forest and land fire control, it is possible to: (1) formulate issues more effectively; (2) obtaining information and understanding beyond the reach of the scientific world; (3) formulating socially acceptable solutions to the problem, and (4) establishing ownership of plans and solutions, thus facilitating implementation.

Although this participatory approach may take longer in the early stages of planning, it is further processed that this approach will reduce or avoid conflict.

One of the main factors causing forest fires is human. Forest fires caused by humans occur because of community activities inside and outside the forest area. Community activities outside forest areas during the dry season are burning for land clearing or for clearing new land for agricultural and plantation activities (Phelps, et. al, 2015)

2. Theoretical Background

Community participation plays an important role in achieving the goals and objectives of a development program. Participation is the mental and emotional unity of people in a group situation that encourages them to contribute to the group's goals and the various responsibilities for achieving that goal . According to him there are three positive ideas in the definition of participation that is involvement, distribution and responsibility (Foead, 2017).

Community participation is a tool for obtaining information about the conditions, needs, and attitudes of local communities, if they feel involved in the preparation and planning process and democratic rights. Community participation in implementing peat restoration policy for forest and land fire control starts from the planning stage of forest and land fire control, fire prevention phase, fire suppression phase and post-fire handling stage.

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According to Mitchell (2013), that there are several reasons for an activity to include communities in environmental and resource management including forest and land fire control, it is possible to: (1) formulate issues more effectively; (2) obtaining information and understanding beyond the reach of the scientific world; (3) formulating socially acceptable solutions to the problem, and (4) establishing ownership of plans and solutions, thus facilitating implementation. Although this participatory approach may be longer in the early stages of planning, it is further processed that this approach will reduce or avoid conflicts.

To see a policy, it depends on the implementation of the policy itself. Implementation concerning the action of how far the direction has been programmed it is really satisfying. Finally at the highest abstraction level of implementation as a result there are some measurable changes in the big problems that the program targets.

3. Methodology

This research type is qualitative with explorative method (Mulle and Huberman, 2011). This research activity use two data sources, there are primary data obtained directly from field, and secondary data obtained through study of documents from various sources relevant in this activity. Primary data obtained through Focus Group Discussion (FGD) in research areas, Observation on perceptions and behaviors, and interviews using questionnaires. The secondary data of this study are research reports, that is research reports using descriptive content analysis (meta-analysis) approach is a systematic review aimed at identifying and describing general trends and research results

in a particular research discipline (Çalik & Sozbilir, 2014; Palvia et al, 2015). Content analyzed in the form of research results (printed or electronic) and journals on Peat in Riau Province in the last 5 years (2013- 21 April 2017) as many as 27 documents. Search publication content using search tools: 1) research gate, 2) google scholar, 3) google.com, and 4) bookzz.org. Keywords used in the search: Riau Peat Research, Riau Peat land Research, Riau Peat land data base, Riau peat land. It is derived from a policy document on peat in Riau Province and Meranti District.

4. Result and Discussion

The Peat Restoration Agency is a non-structural institution under and responsible to the President. The goal is to realize the accelerated recovery of the area and the return of hydrological functions of peat due to forest and land fires. Activities are conducted in a special, systematic, directed, integrated, and comprehensive. And coordinate and facilitate peat restoration in Riau Province, Jambi, South Sumatera, West Kalimantan, Central Kalimantan, South Kalimantan, and Papua. The Peat Restoration Agency shall prepare a plan and implementation of five years peat ecosystem restoration with approximately 2,000,000 (two million hectares).

Since the restoration program has been rolled out, there are still many parties who do not understand what peat land restoration is. It caused inequality in the implementation of the restoration program. So far, the community thinks that restoring peat lands is limited to government tasks, and for local governments the restoration program is only a pilot project of the central government. In fact, it is incorrect, therefore the conceptualization of this restoration must be clear and submitted continuously to the government apparatus, stakeholders and the community.

Base Presidential Regulation no. 1 of 2016 on the Agency for the Restoration of Peat lands and Government Regulation no. 71 Year 2014 on the Protection and Management of the Peat Ecosystem. this peat land restoration activity certainly involves many parties to be fully realized, together with the Peat Restoration Team (PRT) for hair restoration program in Riau Province, there are activity plans which are:

1. Rewetting Program

The rewetting activity is a continuous wetting process. The rewetting activities consist of construction of artesian wells, canal development, water management development (at company), water management team building and training

2. Revegetation Program

The revegetation program is a re-greening activity especially on burnt-out land. BRG designed revegetation programs include: Peat land seedlings, Peat land seedlings, Horticulture seeds, Horticulture cultivation seeds.

3. Social Economic Revitalization Program,

Social economic revitalization covers development of land fishery business, livestock business development, honey bee development, ecotourism development of peat land, cultivation of natural plant, utilization and processing of sago pulp, peat cares village. In the case of peat land restoration programs, many stakeholders are involved from different types of interests to succeed in peat land restoration programs.

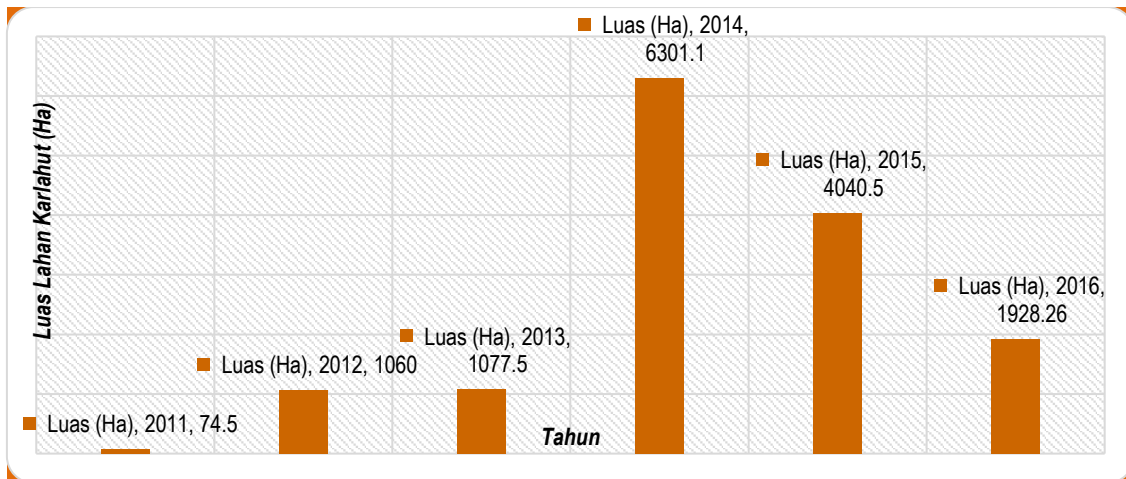
There are three main systems that suffered losses due to the disaster namely the physical environment (social environment), social demography (socio-demographic), and built environment (built environment). Characteristics of the three systems determine the degree or extent of loss of a natural disaster:

1. Physical environment: This system is related to the dynamic and dynamic physical processes of the earth, such as climate change and geological processes. Dynamism in this system has implications on the uncertain conditions in an environment.

2. Social demography: This system is concerned with the distribution and composition of the population affecting the number and characteristics of the affected population.
3. Built Environment: This system deals with the density of buildings and public facilities that determine the extent of damage that will occur in a natural event. Hyogo Framework for Action 2005-2015, reveals that disaster losses will be heightened by vulnerability caused by demographic changes, socio-economic and technological conditions, development in high hazard zones, environmental degradation, climate change, geological hazards, resource scarcity, and the impact of epidemics (SER, 2000).

Important factors of peat land for agriculture are closely related to the nature and character of soil, water, and greenhouse gas emissions. These three factors should be considered in decision-making or policy and utilization for agriculture (Osaki et al, 2016).

Riau Province is one of the biggest disasters of Karlahut province in Indonesia. The largest peak of Karutut in Riau province occurred in 2014, which reached 6,301.10 Ha (Sipongi-Karlahut Monitoring System, 2016). The point and area of Karlahut area in Riau Province spread in some regencies or cities. Among them are Siak and Pelalawan districts. Despite the decrease in the area of burned land in 2016 (to an extent of 1,928.26 ha), this indicates that Karutut is still an environmental problem that has not been resolved completely up to now.



Data Source: Sipongi-Fire Land and Forest Monitoring, 2016

In general, the causes of land and forest fires in Riau Province can be grouped into two, namely land and forest fires caused by natural factors and land and forest fires caused by human factors. Land and forest fires in Riau Province, especially in Siak and Pelalawan districts that continue to recur every year, the cause is mostly by human factors, either accidentally or intentionally.

5. Conclusion

Community participation is an important part of the implementation of the image restoration policy. The form of participation is an activity to restore the degraded peat soil back to its original function. The peat land restoration program is still a realization of the rewetting program, which is the construction of canal blocking (canal blocking). As for the revegetation program, the Peat Restoration Agency in collaboration with WALHI assisted the community to plant sago tree seedlings such as natural timber, for the revegetation program, has not been realized due to the massive implementation of peat land restoration program. The restoration of peat lands continues to be implemented in accordance with its target achievement for all priority areas throughout Indonesia.

Become a pilot project and only the interests of some people only. As an important role-playing implementer, the Peat Restoration Agency should be more coordinated with local government, since the regional government other than owning the territory also has the authority to mobilize the community to participate in peat restoration for forest and land fire prevention.

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