

Participatory Rural Appraisal Based Restoration In Support Of Restoration Of Degraded Peat Ecosystems In Tanjung Leban Village Bengkalis

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Abstract.

Restoration based on Participatory rural appraisal is applied as the main carrying capacity for the successful restoration of peat ecosystems. This program is implemented through the approach of Rewetting, Revegetation and Revitalization. The research objective analyzes PRA-based restoration efforts and how the move will proceed. The data is obtained through interviews and analyzed qualitatively descriptively. The study found that peat wetting activities were carried out through the construction of canal barriers and supporting infrastructure, while replanting was implemented in line with economic revitalization programs. Not only forest timbers, food crops including pineapples are cultivated as an alternative source of livelihood. Women's groups are encouraged to actively process economic products, namely pineapple dodol and pineapple juice. The program is successful but marketing has not been maximal. The study found that peat wetting activities were carried out through the construction of canal barriers and supporting infrastructure, while replanting was implemented in line with economic revitalization programs. Not only forest timbers, food crops including pineapples are cultivated as an alternative source of livelihood. Women's groups are encouraged to actively process economic products, namely pineapple dodol and pineapple juice. The program is successful but marketing has not been maximal.

Keywords: Peat Restoration, Participatory rural appraisal, social, economic.

I. INTRODUCTION

Drought, is the season that becomes the peak of forest and land fires [1]. In Riau Province, forest and land fires become disasters that occur almost every year and cause social or economic losses [2]. The period 2014-2015 was the culmination of a haze disaster in Riau Province that scorched hundreds of hectares of peatland due to the unwise utilization patterns of individuals, groups and companies[3]. This problem becomes one of the natural disaster phenomena that commonly occur in areas that have dry soil conditions and peat soil types. One of these areas is Tanjung Leban Village which is mostly peat soil and has experienced land fires several years ago. Based on an interview with the secretary of Tanjung Leban Village, recorded the most severe case ever occurred on June 11, 2013. About 900 hectares of community land burned and resulted in severe haze pollution and plantation owners' losses. Because of the occurrence of fires not only from the dry season and the condition of dry peat soil but also the negligence of the community itself, such as throwing cigarette butts carelessly

and managing peatlands using a combustion system. Peatland fires are a local problem, but the impact can be national to international [4]. This problem will also cause adverse effects on the education sector, environmental health, income economy due to the effects that affect forest and land impacts due to smog and also crop failure [5]. Since the land fire event in 2013, various actions were taken to overcome the same event so as not to happen again in the following year.

The action research project was carried out by stakeholders with close collaboration to realize permanent peat ecosystem restoration. The Peat and Mangrove Restoration Agency of the Republic of Indonesia is one of the participating stakeholders and encourages peat restoration initiatives through rewetting, revegetation and revitalization approaches. This institution is a form of Government initiative to restore degraded peat ecosystems using a model of collaboration on technical and social activities [6]. The Peat and Mangrove Restoration Agency is a nonstructural institution that is responsible and under the president, tasked with building facilities to accelerate the implementation of peatland restoration and also improve the welfare of people who are in 7 provinces of peat restoration areas. This paper is an effort to identify and explain the forms of participation of the people of Tanjung Leban Village in peat restoration activities, in terms of rewetting, revegetation, and revitalization. Partipasi of Tanjung Leban Village community in solving the problem of peatlands burned in which became an important point in the realization of the success of peat restoration, especially strengthening in the socioeconomic field. By identifying and explaining how the implementation of the Participatory rural appraisal model in Tanjung Leban Village in peat restoration projects is expected to be a pilot in other areas with the same problems.

II. METHODS

This article uses a qualitative approach. This method was chosen to understand the condition of an event context by directing a detailed and in-depth description of the portrait of the condition of a natural setting, about what actually happened according to field facts [7]. Interviews to public figures and formal figures are conducted to explore primary data related to research problems and the purpose of writing.

Research Location

The research site was conducted in Tanjung Leban Bengkalis Village of Riau Province. Tanjung Leban Village is the result of the expansion of the previous village, Sepahat village which was formed based on Bengkalis Regency Regional Regulation No. 09 of 2009. Tanjung Leban village has an area of 26,599.00 ha with a territorial boundary north of the Malacca Strait, south of Mandau District, east of Sepahat Village, and west of Pelintung Village in Dumai City. The livelihoods of Tanjung Leban villagers are oil palm farmers, rubber farmers, fishermen and several other independent businesses. The area is divided into three large hamlets, namely Bakti

Hamlet, Air Raja Hamlet, and Bukit Lengkung Hamlet. The majority of the residents of Tanjung Leban Village are Muslim and Malay.

Data Collection Method

This research was conducted by going through three stages towards data collection, including:

a. Getting in

The researcher traced initial information on one subject, mainly formal figures related to obtaining permits and explaining research activities.

b. Getting a long

The situation researcher has entered the research area and began to search for the subject and establish initial relationships.

c. Logging to data

In practice, data collection used three ways, namely:

1. Observation

The researchers observed daily research subjects' activities and the general public in Tanjung Leban Village. Furthermore, the researchers also observed behavior and daily habits through assimilation in their lives and recorded any information that supported research data.

2. In-depth Interview

The in-depth interview process was carried out with people and community leaders as the research subjects and the general public to provide information or data.

3. Documentation

The documentation stage was not only in the form of secondary literature but also collected portraits of the subject's activities in recordings and photos of field research.

Data Analysis

The data collection stage that had been completed was continued with data reduction, aiming to select, retrieve, and retrieve rough data obtained from turn-in in the field [8]. The reduction process was essentially continuous as long as the qualitative data research took place. In the reduction stage, the writer sorted based on more specific categories. The next stage was the presentation of the data. This process displayed the presentation of field processed data through the art of qualitative writing with valid data. Lastly, it was the conclusion drawing stage. Based on the three plots, the stage of concluding must be a reasonably tricky point because the author saw from two points of view, namely the point of view of the author himself. Conclusions were designed and written in a balanced manner without exaggerating these points of view.

III. RESULT AND DISCUSSION

In this section, field findings will be explained and conduct data analysis in the form of theoretical discussions.

Result

Peatland fires are natural disasters that harm and threaten people's lives. This event has been realized as a form of disaster that must be avoided through various efforts. Losses are the basis of an agreement to begin to pay attention to their patterns of behavior and attitude towards peatlands. A few years after the fire broke out in Tanjung Leban Village, peat restoration began to prevent and overcome peatland fire events from happening again. The Peat and Mangrove Restoration Agency of the Republic of Indonesia provides a good initiative on efforts to restore post-burning peat ecosystems in Tanjung Leban Village. This role is realized in the form of research-action based on society. In addition to the Peat and Mangrove Restoration Agency of the Republic of Indonesia, other parties such as Universities and Governments and community organizations also participated.

Rewetting

The first step in preventing peatland fires is to wet. This effort is included in the idea of the Peat and Mangrove Restoration Agency program of the Republic of Indonesia which partners with other interests including universities and community groups. Peat wetting is done through the creation of canal bulkhead projects and other supporting infrastructure. It is intended to create moist peatland conditions as well as maintain the availability of water for blackouts and various vegetation. In the efforts of peat wetting men are more dominant because this work spends more physical energy although in the realization of activities using the wage system. However, the overall technical workforce of the field is male.

Revegetation

In critical lands, typical peat vegetation and suitable on the land are planted. Not only wood plants, food crops are also planted to re-green degraded areas. Some types of planting include meranti wood, Betangor, Geronggang, Jelutung, Bananas, red kelat, and white kelat. This activity has been carried out by the community since 2009. Then received support and assistance from the Peat Restoration Agency in 2015 with the help of the seeds of forest wood plants about 3000 stems. While for food crops include plants planted such as Matoa, Jackfruit, Soursop, Jengkol, Petai, and Durian. Land, labor and production advice are sourced from self-help group members, while the seeds of forest plants and fruits are help from the government with the number of 6000 stems of seeds ready to plant. The community welcomes the efforts to replant on critical land or not, because if they have to plant themselves it will cost a lot to buy seeds. This cross-sector cooperation is an excellent model, especially in terms of technical funding and implementation.

Revitalization

This part is a very important thing. People are encouraged to cultivate land wisely based on local wisdom, including the types of activities and methods they apply. The people of Tanjung Leban Village participated in processing peatlands into nenas gardens. This participation is individual and not group. The community utilizes

peatland conditions that are suitable for the empowerment of nenas plants. This is also done to prevent fires on peatlands and of course improve the economy of the community. The harvest of nenas fruit is then sold by farmers in the village and out of the area. Not only pineapples, the community also has a cultivated ginger garden on the basis of wide market potential as well as a fairly high economic value. However, ginger grown has not developed like pineapple into a derivative product, still on a planting scale whose results are uncharted such as the products of the nenas farming business. The business products of the people of Tanjung Leban Village in the form of processed drinks from the original fruit, which is named Usaha Putra Admiral Jaya, business owner (Andrian, SE.Sy) is a community of Tanjung Leban Village that runs MSME business. Business owners utilize the main raw materials that are easy to find, namely nenas fruit sold by Tanjung Leban Village farmers. This business also produces dodol nenas and marketed the Village of Tanjung Leban itself and also to the villages in the surrounding area. This product then becomes a superior product in Tanjung Leban Village that can even be used as souvenirs typical of Tanjung Leban Village.

Discussion

Active community involvement is key to the success of peat restoration [9]. Placing society as a subject that contributes to thinking, design, and action is a form of appreciation and implementation of ideal activities. Restoration project failures often occur because the target community is not placed as a subject, but is only considered an object [10]. So that the whole thing that is done is controlled by donors or interests but not the local community. What happened in the realization of peat restoration in Tanjung Leban Village is a good example, that when people are appreciated and given the opportunity to give their thoughts and actions can voluntarily involve themselves in other activities [11]. The Peat and Mangrove Restoration Agency strongly encourages the active role of the community, this is indicated by the construction of the Deliberation House (Rumah Runding) as a place of scientific discussion and discussion with the community about the follow-up plan of the peat restoration program. The participation of the people of Tanjung Leban Village in terms of peat restoration is very enthusiastic, seen by the formation of empowerment groups, countermeasures, preservation and individual efforts of the community.

This is very important as part of maintaining peat for the life of local communities [12]. They formed social groups, established cooperation between parties [13], such as the Fire Caring Community group, the Prosperous Resource Farmers group, the Peat Forest Sustainable Community group, the Peat Caring Community group and the Putra Laksmana Jaya business. The people of Tanjung Leban Village are very concerned about disaster management in case of forest fires, as evidenced by the existence of fire-caring community groups who are ready to help deal with forest and land fires in the area of Tanjung Leban Village and as the first response before help from the fire brigade comes. Community participation in the handling of fires during forest fires is the initial response to prevent the expansion of fire fuels on flammable

peatlands. The community helped firefighters or disaster management agencies in the moments before they came because all the fire was completely extinguished. The Fire Care Community also supervises the village area if later when there is a sudden land fire so that it is easy to know and will immediately get action. The practice of action carried out by the community in Tanjung Leban Village has shown a good form of community role in peat restoration. The role is then in a crucial position determining the success of a program [14]. On the other hand, restoration that places society as a subject is capital in empowering the economy of society[15] as well as in terms of institutional, social, economic and thinking.

Field findings on the main problem of research have shown that for the success of peat restoration the Participatory Rural Appraisal method is suitable to be applied with good results such as in Tanjung Leban Village. Participatory Rural Appraisal approach in sociology becomes a model commonly used in the implementation of empowerment programs and social projects. This approach rests on the priority of formulating steps together based on the needs of the target community and encouraging all parties to contribute or participate [16]. Participatory Rural Appraisal approach emphasizes community involvement in the entire series of activities while increasing independence, so that the donor is not the main controller [17]. This is in line with the sociological perspective of seeing that people have a system of knowledge gained through learning from the social and natural environment that has important value for their lives in a region especially rural as a local wisdom of traditional communities [18]. With participation, individuals who actively involve themselves as subjects are the result of good ideas and can contribute to rural development[19]. Active participation is an absolute necessity needed in building the countryside and addressing existing problems[20] especially preventing the problem of land fires and rural development in a broad sense.

IV. CONCLUSION

The failure of peat restoration activities in degraded areas can be caused by improper implementation methods, in this case only making the community as an object of the Application of Participatory rural appraisal methods showing good success in peat restoration activities in Tanjung Leban Village. The community is used as a non-object subject is a characteristic of this method that is able to increase participation and concern for the recovery of degraded peat. Forms of community involvement in peat restoration are demonstrated through peat wetting efforts, the establishment of forest plants and food crops, as well as in economic activities such as the processing of pineapple plantations. The overall action carried out by the community is an activity based on their concern for the environment as well as the prevention of forest and land fires.

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