'THE TRAGEDY OF THE COMMONS': PROPERTY RIGHTS AND ORANG ASLI MARGINALIZATION

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ABSTRACT

Based on an empirical research in Jambi-Sumatera, this paper presents an analysis of 'orang asli' (native settlers) marginalization due to their dependency to common resources. In Sungai Aur and Sungai Rambut village, Jambi, the social structure of the local community consists of 'orang asli' (native settlers) and 'pendatang' (migrants). In both villages, there are three types of landownership: private, village and state land. For local people and migrants, village land is transferrable into individual property under the village head's consent. However, native settlers control the transferability of the village land. Both communities are also entitle to access the village land/agrarian resources under village property right, as long as it is not yet individually owned. But, the state-owned land, such as Berbak National Park, is inaccessible, including the land that has already handed over to private company' s control (based on concession right).

The village-owned land status, although it presents inclusive common resources where the community has a right to use and access it, does not automatically bring responsibilities to sustain its condition. In the case of state owned-land, the community does not hold any property right over the Berbak National Park area. The Park is 'yours', and therefore, any rehabilitation act will not be seen as a benefit since there is no resource withdrawal assurance is in the hands of the community. Hitherto, granting a shared property right to the local community is actually transforming 'yours' to 'ours'; the gap is eliminated.

Because of an unclear property right institution, the community is not only marginalized vertically by the state, but horizontally, 'orang asli' community suffers from a double marginalization. Discriminative aids, which concern only to private farmland, have ignored 'orang asli' dependency to common resources.

Key words: native settlers, migrants, land, property right

INTRODUCTION

The interrelation between peat management and global climate change indicates the importance of sustainable management to mitigate or even adapt to the global climate change. Peat is one of the most potential natural resource that has significantly contributed to the global environment sustainability, in term of maintaining global climate at the most adaptable level to humanity and the whole

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ecosystem. However, the degradation rate of this ecosystem tend to increase every year.

Considering its raising threat in many forms on one hand, and the need to implement an effective rehabilitation program on the other hand, the issue of land tenure, control and access toward agrarian resource are becoming important. An unclear agrarian system may result into a further degradation of peatland forest that will affect the overall global capability in carbon sequestration mechanism. Hitherto, this study focuses on the evaluation of implemented peatland rehabilitation model on site and analyse the relevance of agrarian structure to the success or failure of the program. In this case, the community participation and involvement in the rehabilitation program will be an important indicator of the existing agrarian structure.

Research Questions and Objectives

Depart from the above condition, the need to identify the relevance of agrarian issues with peat ecosystem management is important, especially in term of resulting the best management practice where the community is involved and then in charge of the ecosystem. Such approach is considered important to address the problem of forest fire on one hand, and in managing the benefit of carbon trade on the other hand. Therefore, the study will explore findings related to questions on :

- What kind of agrarian structure exists in the rehabilitated peatland forest, how it is formed, what kind of relations are consisted in the structure, and what kind of agrarian issues are resulted from such structure
- How the process of community participation in rehabilitated peat land is or was conducted, how it is related to the conservation and income generation issues, and where agrarian issues take place in this frame
- 3. To what extent that agrarian issues affected the pattern of peat swamp forest management

Based on the above problems and the need to explore findings in an attemp to find solutions, this study is aimed to:

- 1. Analyze the existing agrarian structure in the rehabilitated peatland forest to reveal its form, its interconnecting social relations, and its salient agrarian issues
- 2. Analyze the process of community participation that is or was being conducted in rehabilitated peatland management, its relation to the conservation and income generation issues, and the position of agrarian issues in this context

3. Uncover the impact of agrarian issues to the pattern of peat swamp forest rehabilitation and management

The output of this study will take form as a social analysis that will inform to a more socially just and sustainable implementation of peat land forest management and rehabilitation, which is sensitive to the social and political change embedded to the environment management from local to the global level.

Theoretical Framework

Considering the ecological as well as social economic value of peat swamp forest, this resource can be perceived as a limited resource that tend to be degraded, where economic, social and ecological forces are pulling each other into different directions. Three main issues are tying them together, i.e.: (1) the social structure of the communities which dialectically shape (2) the structure of access to and control of land/agrarian resources technical and social economic issues, and (3) the level of people's ecological awareness. These three aspects may affect and be affected by the processes of people participation in peat rehabilitation activity, as well as by the degree of land/agrarian resource depletion due to human activity. In the meantime, both participation and resource depletion have a dialectical relation which indicate whether sustainability of the peat land as well as the people livelihood is attainable based on present condition. The following diagram visualizes the above concept.

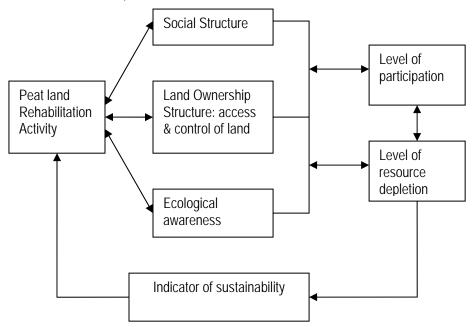


Figure 1. The interrelation between Agrarian Elements and Peat Rehabilitation Activity

Methodology

This is a qualitative study that stands in a critical interpretative paradigm (Agger 2003). A case study is chosen as a research strategy (Yin,1997). Participative observation, group discussions, and in-depth interviews are the main methods for data collection. Types of data and information being explored and collected focus on: the land tenure system of the rehabilitated areas, the agrarian structure that includes the social mapping of actors/institutions with their interests (the subject) involved in the peat land forest management (the object), the process of rehabilitation programs implemented in the areas. Secondary data was gathered through collecting documents and literature related to peatland rehabilitation, people participation, and specific information of physical and social economic characteristics of the research site. The source of data is the internet websites, Wetlands International-Indonesia Program, and CIFOR/ICRAF library.

Qualitative data analysis, in brief, includes data reduction, and breaking down the data into classifications based on concepts that is made to classify the data, then making connections between concepts (Dey 1993). Research field notes that consist of facts reported from interviews and observations was taken in a daily basis and treated as a primary data collecting and analysis tool.

'ORANG ASLI' & 'PENDATANG': THE SOCIAL STRUCTURE OF FOREST MARGIN COMMUNITIES

Historical and Cultural Background

Sungai Aur village is located in Swakandis Sub-District, Muaro Jambi Regency and only 10 km apart from Sungai Rambut village (see **Figure 2**). Both villages can be reached through water and land transport from Jambi within 4 hours. Physically, both villages resemble many similarities, as both are located along the riverbank of Batanghari River.

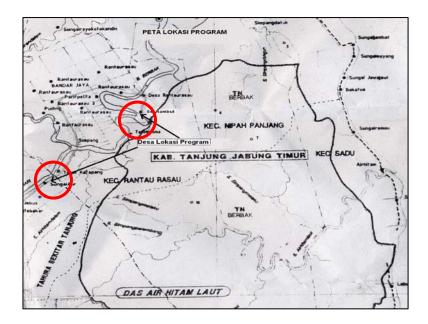


Figure 2. Research locations

The total population of Sungai Aur is 2.129 persons in 578 households, with 974 persons are male and 1155 female (Demografi Desa Sungai Aur, 2005). Sungai Rambut is inhabited by 692 residents, with 378 persons are male and 314 are female (Demografi Desa Sungai Rambut, 2005). The ethnic composition of Sungai Aur community is 75 % Melayu (native settlers) and 20 % are migrants (Javanese, Sundanese, and Bugis), while in Sungai Rambut 80 % of the population is Melayu ethnic and 20 % are migrants. From the total number of indigenous community living in Sungai Aur and Sungai Rambut, almost 95 % are residing along the riverbank of Batanghari River.

In 1924, Sungai Aur village is named as Teluk Ketapang. Later on, the name of Sungai Aur took after a type of bamboo called *aur*, which grew along the riverbank. Then, in 1965, Sungai Aur became an independent village that administratively put under Swakandis sub-district. Sungai Aur has been inhabited by indigenous community of Melayu ethnic or usually called as **'orang asli'**.

The name of Sungai Rambut took after a river which lots of human hair was often found in its water. It was said that those hairs were coming from humans who were caught by crocodiles in Batanghari River and these crocodiles usually ate their preys in Sungai Rambut. Therefore, local people named the river Sungai Rambut, and then it is taken for the name of the village: Sungai Rambut village. In 1983, Sungai Rambut was officially designated as an autonomous village.

'Orang asli'

'Orang asli' who live in Sungai Aur and Sungai Rambut village own a distinctive ecological culture compare to 'pendatang'. They build their houses concentrated along the riverbank, such as along Batanghari River and live as fishermen. A direct distance between the house and the river enables them to access their economic sources, which are fish and other type of catch (shrimp, crustacean, etc.). The catch from the river is partly consumed, but most of it is for selling. They sell it to local buyers called *tengkulak* and use the earning to provide their daily needs. Then, the *tengkulak* transport the fish to Jambi for selling. Since 1999 the catch volume started to decrease, because of the increasing transportation activities and numbers of fishermen on the river. Such condition finally disturbed the river ecosystem status, including the fish availability.

Besides catching river fish, other type of 'orang asli's livelihood is timber harvesting. This activity has always been done since their ancestors' time (even before 1965). 'Orang asli' in groups, usually enters the forest located inside Berbak National Park using a small boat following a river stream of Batanghari heading 30 km to the South East. A *toke* will lend them some money for their families' daily need, while they are in the forest, and also to buy supplies for staying in the forest. This arrangement ties the loggers to sell their timber only to the *toke* who gave them a lent. They bring the timber to Batanghari River where the toke will collect and pay it with a very low price. Their earnings are usually insufficient even to pay their debts to the *toke*. This 'cash in advance' system has forced them to keep entering the forest in order to survive.

'Pendatang'

'Pendatang' or migrants adapt to a hardworking habit, and responsive to exogenous change, which resulted into a better-settled economic level than 'orang asli'. They came in 1996/1997 at Sungai Aur and in 1965 at Sungai Rambut for a fertile farming land. Due to their high productivity, Sungai Rambut village is even one of the main rice and peanut producer for Kota Jambi.

Forming a farmer group has already become a routine activity with an aim to: "foster togetherness, a habit to discuss and exchange information, but without a preconception to receive aids". Berkat Usaha, then, is followed by a formation of many other groups in a hamlet of Ketapang, such as: Rukun Damai (in 2002), Karya Budi (in 1999), Koto Jaya (in 1999). According to women group of PKK in Sungai Aur, these groups emerged after 'orang asli' saw farmers groups are formed by migrants from Java. These women even said that:" 'orang asli' learned about agriculture from migrants".

Because agriculture has been successfully developed by migrants, as proven by Sungai Aur and Sungai Rambut status as a main producer of rice in the area, almost all aids that were given by the government were received and enjoyed only by migrant community.

Social Structure : the Social Status, Positions and Actor

In Sungai Aur and Sungai Rambut, based on actors' status, role and position, different social stratification is resulted between 'orang asli' and migrants ('pendatang') community, especially for those who sit in the highest social strata. The comparison of social stratification between these two communities is shown below.

Social Stratification	'orang asli' community	'pendatang' community	
Upper	Village head, Toke, <i>dukun</i> ,	Rich farmer, village	
	hamlet head, religious	head('orang asli'), <i>dukun</i> ,	
	leaders, farmer group head	hamlet head, religious	
	(migrant)	leaders	
Middle	Sellers, teachers Huller owner, sellers,		
		teachers	
Lower	loggers (<i>pembalok</i>)	Peasant or small farmer	

Table 1. Social Stratification of 'Orang asli' and 'Pendatang' Communities

In 'orang asli' community, the most respect is paid to a leadership position and power of authority. In 'pendatang' community, economic status is the main variable to determine the individual position. The first pioneers who opened farm lands hold a key to success of becoming a rich farmer, because they accumulate lands through time.

Land Ownership Structure

Based on social structure that maps power relations within the community, the access and control of land construct a land ownership structure as shown in the matrix below:

Social stratification		Land holding	
Upper	Up	More than 20 ha: village head, because he possesses the greatest access to claim land, so he can own land at the most strategic location with the most fertile condition.	

Table 2. Stratification based on Land Ownership

	middle	Between 18-20 ha: first pioneers who opened	
		farm land in 1960's (migrants).	
	up	More than 10 ha: hamlet heads, religious	
		leaders, dukun, customary leaders or penghuk	
		adat (native settlers or 'orang asli')	
Middle	middle	More than 5 ha: loggers (<i>pembalok</i>) who owns	
		motor boat (native settlers or 'orang asli'),	
		successful farmer (migrants)	
	low	4-5 ha: farmers (migrants)	
Low		2 ha or less: peasant or small farmers(migrants)	

The form of property right and the easiness to gain the right is largely dependent to the degree of influence of each actor in the social stratification. The higher influence, the easier access is gained for land right. This is evidenced by the village head position and his possession of extensive land.

Moreover, claim of originality affects the easiness to access land holding and ownership status, as shown by a higher position of 'orang asli' than 'pendatang' in almost every stratum.

Social Landscape : the territorial map of 'orang asli' and 'pendatang'

The settlement pattern of 'orang asli' emphasizes a utilitarian function to access social and economic resources. Their dependency on river resources creates a decision to settle as close as possible to the river. This utilitarian basis for settlement area has created a high land demand along the riverbank. When the land resources along the river become scarce, a possible conflict over land could be triggered in the future.

As migrant community livelihood is independent of river resources, they settle within their farm land in order to protect their crops from pest's disturbance, such as: wild boar. Their farm land is located 1 km inland from Batanghari River, but never closer than such distance. This is due to a need of obtaining the driest land available, so the crops will be better survive from flood. Therefore, they actually avoid riverbanks, because besides rice, they also cultivate dry land vegetables and fruits, such as: lime and orange fruit.

It is immediately recognized that 'orang asli' and 'pendatang' communities are separated in culture and territory. Their choice of settlement territory departs from their different dependency to natural resources. Because of such situation, there is no conflict of resources, but they also don't have a strong reason to assimilate. Such condition provides a basis for segregated communities that occupy one village.

THE AGRARIAN ISSUES OF 'ORANG ASLI' & 'PENDATANG'

Land ownership status in research locations covers three types, i.e.: privateowned land, village-owned land, and state-owned land. These statuses emerge as an implication of their distribution model.

Private property

The procedure of land holding process in both villages is almost similar. In Sungai Aur and Sungai Rambut, a land can be proposed to the village head. Land selling and buying is not recognized. They prefer to refer it as a loss replacement or *ganti rugi* which basically has a same meaning. The replacement can take form as a cattle or money.

There is a difference between 'orang asli' and 'pendatang' in term of an access to land ownership. It is quite easy for 'orang asli' to claim an ownership for a certain parcel of land. As long as planted vegetation are found on the land, such as: fruit trees or rubber trees, 'orang asli' possess an adequate justification for land ownership claim. But, for 'pendatang' or migrants, a land can only be obtained through a formal process which involves the village head's consent over the land.

Common property and Land Conflict

Village-owned land is a land that utilizes for a public use or as common resources. In Sungai Aur, the village head mentioned two types of village-owned land, i.e.: *tanah adat* or customary land, and *tanah ulayat*. *Tanah adat* is an inherited land from their ancestors, and *tanah ulayat* is a land located between *tanah adat* and other private use.

Aside of village-owned land is a state-owned land. Two land holding status are generated, i.e.: Berbak National Park (BNP) as a state holding land, and production forest or *Hutan Tanaman Industri* (HTI) as a private holding land (of PT. Diera Hutan Lestari). Both types of land holding had triggered conflicts between the land holders (BNP authority and PT. DHL) and village community in both villages.

The Claim of ownership in the private, village and state-own land

Power and authority to claim an ownership of land often do not come in a symmetrical line from one actor to another. An imbalance power relation tends to generate conflicts when resources are scarce.

Accessibility to land is a consequence of having a claim to the ownership of land. When we have a greater power to claim an ownership of land, a greater access to land control is automatically opened. In a case of 'orang asli' and 'pendatang', for example, originality became a source of power to a legitimate claim of land, so as a consequence they also have a greater access than migrants to claim a land.

Furthermore, between three agrarian subjects: the community, the village elites, and the state authority, the least fortunate position is held by the communities of Sungai Aur and Sungai Rambut. This is because the status of village-owned land and state-owned land has created a limited opportunity for the local community to access it. In the village-owned land, the local community has an access to own the land in a status of private ownership, and to use the land as common resources (fishing ground, source of timber, etc.). Therefore, in principle a village owned land is inclusive common resources. But, in reality such access is available in a different degree to 'orang asli' and 'pendatang'.

State-owned land in a form of BNP and HTI create a non-accessible area for the local community, except in the buffer zone of BNP which is allowed for limited use, but farming is certainly excluded. Therefore, both areas present exclusive resources that are non-accessible for the community.

However, in reality BNP and HTI have a different degree of accessibility. State controls BNP as a conservation area. Maintaining its resource sustainability is aimed to serve a global interest, in other words: BNP is actually public goods. But, HTI is managed by a private company with an aim for profit. Because the land became a private good, sustainability, then, is important to maintain profit generation as long as possible. Consequently, HTI is willing to invest for a strict control to its accessibility. But, BNP became an open access area, because the inability of the state to cover the cost for a strong institution to control its accessibility.

When most of the village land became inaccessible because of the 'transfer of right' from the village to the state, and form the state to the private sector, quantitatively the local community was left out with a narrowing area of common resources. On the other side, the population is increasing, and the needs become more demanding, while economic opportunity aside of land base activity is not adequately available; this creates a pressure to access resources even those are located in the 'forbidden' area. The most available alternative is BNP, since resources are still in abundance and access -though formally restricted- is available.

Because the local community has been put in a marginal position in term of resource utilization, the state claim over land with an aim for conservation faced a boomerang effect. The exclusion of local communities in resource use has uprooted

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their sense of ownership toward local resources. They perceive those resources as belong to and a responsibility of the outsiders. They were alienated from their own resources. This reflects a phenomenon of Hardin's 'the tragedy of the commons'.

VARIOUS ARTICULATIONS OF REHABILITATION PROGRAMS

Rehabilitation programs in the research locations were initiated by many institutions and manifested in various articulations of meaning. Variations also come from different backgrounds and objectives of each institutions. Eventually, various perceptions of the Sungai Aur and Sungai Rambut communities toward the programs are also generated.

Peat Land Rehabilitation Programs : Actors, Aims, Mechanisms and Relation

Formally, rehabilitation programs of Jambi's peat land were initiated by external institutions. However, if rehabilitation is articulated as merely tree planting, the local communities have already done that in nature, since they began to settle in the area. To some extent, BNP became the focus for ecological measures, and generate supports from many national and international institutions. Every institution conducts rehabilitation in a different mechanism, which implies to different characteristics of each program.

The actors of rehabilitation programs are: Japanese organization or JO (1996-2001), local government through a program called *Padat Karya* (2001), and local NGO called PS (2002-005). Each actor and their programs convey different message to deliver and received different responses from the community.

JO's program was conducted from 1996 to 2001. This Japanese aid institution delivered a program of land rehabilitation through village formal institutions, particularly the village head. The activities were tree planting with the aim to rehabilitate forest damage from over harvesting. The tree species to be planted has been determined by JO, including the volume of the seedlings. Since JO never involved the community directly in the process, but instead handing over all the process to the village head, a system of control was never developed. Consequently, this program in reality was kept under the village head and his family control in order to produce exclusive benefit for the elite's family. Since none of control systems were built by JO, and community participation was also excluded, this program is considered a failure by the local community.

Padat Karya program was initiated by the local government in 2001, with an aim to open a mass job opportunity. A particular attention toward ecological

interest was never stated. The activity focuses on the economic uplifting effort of the subject community by inducing alternative industrial crop plantation. The program initiated with a distribution of rubber tree seeds, land clearing with a wage, and a support for tree maintenance cost. The community was positioned as a paid worker with a daily wage of half market labor price in Sungai Rambut, i.e.: Rp.15.000 per person per day compare to labor market price of Rp.25.000 per person per day.

The tree is supposedly plant in each farmer's private land, and the yield is for individual farmer who participated in the program, and they are free to choose other commodity to plant. This program was also supported by a support of: (1) 6 sacks of fertilizer per hectare; (2) one sprayer for every three households; (3) pesticides: 5 bottles per ha. Unfortunately, only 6 household were involved in the program, since it is claimed as a pilot project.

PS worked in Sungai Aur and Sungai Rambut village since 2002. They develop a program with a theme of community based peatlands management. The aim of this program is to change the community perception toward the meaning of rehabilitation, which through time is always perceived as money-based project. PS tries to induce an understanding of the importance to conduct forest rehabilitation that is based on economic uplifting, and strong individual and group commitment.

To achieve such objectives, PS cooperates with an international conservation NGO or IC in the period of 2002 to 2004. IC is an international NGO that organizes a peat land rehabilitation program. PS takes a role as a field operator, which is considered as appropriate, since they have more experience and working background in the area. Both organizations are agreed to implement a conservation strategy that based on economic uplifting effort.

PS applies incentive and disincentive approach in program implementation. The incentive is a funding support for farming activity that is given as a loan. This loan has to be paid back or compensated by planting trees in degraded areas. The number of trees that should be planted is equal with the amount of fund to be received. Disincentive is given to a group or a group member who fails to met the agreement. The form is from a direct warning until a revocation of fund support.

PS directly controls the program with a strict manner. The compensation tress is controlled once every 6 or 8 weeks, sometimes 9 weeks. Dead trees should be replaced and the survived ones should be maintained. The condition of these compensation trees becomes the sole indicator of success for the groups. Failure will imply to a disbursement cancellation for the second and third one.

Program approach and participation

Peat land rehabilitation programs or other conservation-economic measures that involved Sungai Aur and Sungai Rambut communities had come with various faces. Each organization induced their own methods and approaches as presented in the following matrix:

Institution	Objectives	Programs	Activities	Approach
JO	Forest rehabilitation	Tree planting	Seed distribution Planting	Instructional: using the village head institution
Padat Karya	Provide mass job opportunity	Industrial crops planting	Seed distribution Land clearing Production facilities distribution	Personal Direct incentive: wage, seeds, production support
PS	Land rehabilitation and economic uplifting	Cash- and conservation- value tree planting	Proposal writing Planting Maintenance	Personal Consultative Control Direct incentive: funding

Table 4. Program approach

Using instructional approach through the village head's hands, clearly pictured a community's mobilization for the tree planting activity. The negative perception toward JO's program reflects that a top down and instructional approach is not popular and unacceptable for the community. A sense of ownership toward the program as well as to the planted trees is automatically non-existed. The fact that none of the trees survived in the post-program period indicates the failure to build participation.

Padat Karya program clearly has a charity aim: to provide work and wage. Planting is only used as a media to achieve the objectives. Consequently, a process to build awareness, ownership to the program, and participation is lacking. On the contrary, PS's program has a different load, i.e.: rehabilitation to represent the ecological interest of the organization, and economic uplifting to represent the community's interest. In the effort to harmonize both interests, incentive is systematized in order to be selective. It manifested as a reward for obedience of adherence to the ecological interest. Control is asserted as a disincentive for disobedience. With this type of tie, the community is put on 'the Object' position with a controlled participation level, i.e.: consultation.

In the case of PS, the use of incentive does not convey an ownershipbuilding, since the rehabilitated land is a privately owned land. With or without funding incentive, they will maintain their land's sustainability. Participation is automatically gained.

'THE TRAGEDY OF THE COMMONS': PROPERTY RIGHTS AND RESOURCE DEPLETION

Hardin's theory is often interpreted as a postulate that when many individuals utilize limited resources together, resource degradation is to be expected. As a consequence, state control is recommended by scholars to solve the problems. Others suggest that privatization will prevent resource degradation.

According to Ostrom (1990), there is no black and white solution. In reality, many institutions at the community level which are not a representation of the state or the market are capable to perform a long term management of limited natural resources. Therefore, the actual approach of natural resource management has undergone a complete change. Local institution, either the existing or newly formed one, becomes a new pillar of resource management. Decentralization, and not centralization, is the newest trend.

Private ownership, access and participation: the gap between 'orang asli' & 'pendatang'

Livelihood difference between 'orang asli' and 'pendatang' produces a cultural gap: for 'orang asli', land is for sale or a short-term investment, whereas for 'pendatang', land is for cultivation or a long-term investment. Private ownership became an important production factor. As more land is owned, more productivity is to be expected, and therefore, welfare status will be uplifted. For 'orang asli', who live from fish and timber, their daily needs are independent from private-owned land, but largely dependent on common resources. Private-owned land is functioned as a saving.

This gap is not only culturally rooted, but structural intervention has also contributed to the widened difference. In the case of government's aid, for instance, most aid is concentrated for agricultural sector. Since only 'pendatang' do farming activities, they automatically the sole receiver.

In contrast, 'orang asli' livelihood as fishermen and logger never attract any institution's attention for support and assistance. Even, timber harvesting receives pressure from BNP authority as it is considered illegal. As fishermen, 'orang asli' have also faced a decreasing catch rate. In sum, the welfare status of 'orang asli' is regressing, but they are alienated from exogenous assistance. Being only a witness of aids, transformed 'orang asli' into an apathies community, even tend to be anarchies. Clearly, a marginalization of 'orang asli' is occurring structurally, from putting a restriction to resource accessibility until private resource oriented aid.

Marginalized condition of 'orang asli' has put them in an insecure position to adapt to changes; this is a base of failure of the land rehabilitation program in 'orang asli' community. Orang asli's participation did not fill PS's expectation; the compensation trees were not planted. As they value their land for sale, they were actually reluctant to plant anything in their land. For 'orang asli', land is a short-term investment that should always be ready to sell. Then, after it is sold, they will immediately search for other land to claim, then, to sell again. This habit caused a stagnant activity of 'orang asli' group in PS's program. Eventually, PS had to cut the funding support off. Even in Sungai Aur case, only farmer groups of 'pendatang' manage to survive in the program process.

On the other hand, a positive response is received from migrant groups. They plant the compensation trees as agreed, and they also cultivate various short and long term cash crops in their farm land, using the funding support. Plant maintenance is conducted as a routine activity, including monthly meetings, and reporting. Even some groups have arranged their own meeting place. These entire 'obedience' to PS's rule of the game is a result of a smooth interface between PS's and 'pendatang's interests. 'Pendatang' need to increase their private land's productivity and PS need to rehabilitate the land, and a link is made through the incentive. But, 'orang asli' do not need to increase their private land productivity, and the incentive did not abridge a different interest.

Without using the perspective of 'orang asli' and 'pendatang', funding support for a rehabilitation program in a privately owned land only adds up to a widen cultural and structural gap between 'orang asli' and 'pendatang'. From the socially just conservation side, such program does not response to the already existing social injustice, but instead it may strengthen the 'orang asli' marginalization. The low level of 'orang asli' participation reflects their protest to the continuous injustice situation.

Common Resources & participation: the gap between 'ours & yours'

In PS's program, those who do not own a land because it is already sold or have not yet received land rights from the village official, may plant the compensation trees in the village land. However, in reality, they do not seriously conduct the planting and maintenance procedure. Most of the plant died due to the insufficient care. They actually need only to absorb the funding support.

The community reluctant was more clearly expressed when it comes to plant compensation trees in the state-owned land, such as Berbak National Park (BNP).

The community considered that planting trees in BNP will not give them any direct benefit, either in a short or a long term. Besides, the BNP location is quite difficult to reach. They are willing to plant the compensation trees in BNP if only they are paid.

The village-owned land status, although it presents inclusive common resources where the community has a right to use and access it, does not automatically bring responsibilities to sustain its condition. The non-existence of a property right institution that is clearly stated the communal ownership status or 'ours', produces a lack of foundational basis to construct rules and consensus to manage and use the resources together. In the meantime, the community perceives village land as the responsibility of the village head or 'yours', because in fact, only the village head withdraws the most benefit from the land. Clearly, he does not realize the importance to build a property right institution. Therefore, the low participation level is a reflection of a non-existence of a clear property right institution that organizes rights and responsibility in managing the village land.

Whereas such inclusive common resources as the village land face that dilemma, one can imagine how participation would be generated from a rehabilitation program in a state-owned land that presents exclusive access. It is very clear that the community does not hold any property right over the BNP area. The Park is 'yours', and therefore, any rehabilitation act will not be seen as producing benefit since there is no resource withdrawal assurance is in the community's hands. Hitherto, in a case of state-owned land such as BNP, granting a shared property right to the local community is actually transforming 'yours' to 'ours'; the gap is eliminated. The access toward ownership will provide a foundational basis to build a consensus for collaborative management, since it should be admitted that the state has an institutional incapability to manage a vast land of rich resources alone.

Resource depletion and rehabilitation: property right and accessibility are threats or incentives for rehabilitation?

Land ownership status is another entry point to analyze the causes of resource degradation, and the most appropriate location for rehabilitation. The link variable is the concept of accessibility in the property right regime. Accessibility inherently presents a freedom to use, including its load of responsibility to manage the resources.

Accessibility or a freedom to withdraw a resource unit, according to Ostrom and Schlager in Hanna et al 1996, should be perceived as an incentive. Incentive is given to conservation effort, because it can not be done unless there is an insurance that the resource is being conserved today will be available for a future harvest for the conservation doers. Such assurance is only provided by a property right. In sum, without property rights, conservation of common resources is none. Open access resources with no property rights will only invite overuse, conflict and destruction.

The logical consequence from three land ownership status: private, village, and state ownership are the emergence of accessible and non-accessible land for the community's uses. Privately-owned land is surely presents full accessibility for the individual owner. Private property right automatically insures the owner right to access and harvest the resources, and bring along an automatic responsibility to maintain resource sustainability in order to gain a long term resource withdrawal. In a case of rehabilitation in the migrants' land, this situation was clearly depicted. With an insurance coming from a property right, degradation in private land is kept to a minimum level.

Land resources managed by village elites presents inclusive common resources, but some weaknesses still exist. Dualism is apparent in term of property right institution. When facing external claim toward the land, like BNP and HTI, the property right seemed to be communal. Whereas, in fact, internally only the village head holds the greatest power to access, distribute, and receive benefits from the village land. The community refuses to bare the responsibility to maintain the resources due to such unequal distribution of benefits between the village head and his community. Consequently, the village land became an open access resources without clear distribution of responsibility to manage it.

In a case of state land, according to the Sungai Aur villagers, around 1996, the timber stock was still abundant in the village land, but from 2002 up to now, the stock has been decreasing. This is because of the uncontrolled and over-harvested condition during the reformation era (1998-2002). This era was translated as a freedom to withdraw as much resources as possible from the state forest. Then, when the stock is now less available in the village land, the loggers is becoming more expansive to the state land.

Using Hardin's theory, the degradation of resources both in the village and state land shows the consequence of an unclear and weak property right institution in common resources areas. This situation has even transformed the non-accessible land to an open access area.

For 'orang asli', common resources provide greater chance to continue life, because their livelihood is based on resource harvesting, not cultivation. When access limitation is applied because the fully accessible communal land was transformed into inaccessible state land in a form of BNP and HTI, the 'orang asli' community must adapt to a decreasing resources. Facing such situation, the most logical option to cope with an ever increasing need and decreasing resources is to penetrate the non-accessible land where resources are most available. Weak control institution has made this option is more open to be explored.

It is clear that limiting the access to own common resources only produces boomerang effect in conservation effort. The initial expectation is to avoid resource exploitation by limitation of access, but this is not fulfilled. On the contrary, the land became an open access area where the greater chance for destruction is very likely to happen because of weak control institution. Closing the community accessibility to ownership institution of natural resources does not answer the problem of state institutional incapability to conduct resource management. Sungai Aur and Sungai Rambut cases show that treating accessibility as a disincentive will only bring a reverse impact toward resource conservation.

Rehabilitation and its paradox: where is the ecological awareness?

The rehabilitation programs conducted by three organizations in Sungai Aur and Sungai Rambut use private land as a program target. In the program perspective, determining a correct program target: the location and the owner of the location, is very important. When the ownership status is clear, the benefit receiver, and responsibility barer will also be clear.

For a privately owned land, rehabilitation is automatically give benefits to the owner, because the ownership institution is quite apparent. But, in the state and village-owned land, 'the owner' is not always clear either because of their non-existence or their incapability. In the village land, the owner is supposed to be the community under the coordination of the village head, but in reality this arrangement does not exist. In the state land, the owner is the state that is represented by an institution that is responsible to manage the area. However, although the ownership is clear, the institution is incapable to conduct a control. As a consequence of both situations, the village and state-owned land (Berbak National Park) transform into open access areas. The open access character caused a higher degree of degradation in village and state-owned land compare to private property.

The paradox of rehabilitation program is rehabilitation is done in more frequent and effective in private property where minimum degradation occurred,

while in the village and state land where common resources suffer from overharvested, none of rehabilitation program is deployed.

The main problem in common resources area is an unclear property right institution; as a result, the distribution of benefit is also unclear. There isn't any insurance that the benefit of rehabilitation will be received by the doer. Anyone can harvest the timber, sap, or fruits from the planted trees. Therefore, without caring to build a strong and clear property right institution in the common resources areas, rehabilitation program that only relies on private property will immediately become a 'quasi-rehabilitation program'.

Tragedy of the commons as stated by Hardin is often produced not from an inherent failure of common property, but the institutional failure in controlling access to the resources, and internal decision making, along with its inconsistency in implementing the decision within a frame of collective use (Berkes&Folke 1998). If we use this line of thinking, ecological awareness is a derivation from ownership right of natural resources.

In contrast to many anthropological findings that indigenous people traditionally own a local wisdom on resource management, in a case of Sungai Aur and Sungai Rambut, there isn't any trace in local history shows such fact. The activity of timber and fish harvesting is a livelihood strategy that has already been practiced since generations.

Tracing back the local history, the year of 1924 and 1893 was the time when these two communities first settled in both villages. It implies that both communities have been practicing resource harvesting long before national park and production forest existed. Berbak received a status as a nature reserve in 1954, without people realizing of future consequences that might derive from such status. They suddenly have to face a fact that the forest that they thought still available to access, does not belong to them anymore. Another pressure is coming from aids 'discrimination', whereas agricultural bias of aids benefited the migrants only. This asserts that 'orang asli's type of livelihood is not approved by the state, not only because it is unsuitable to the government's plan of development, but it is also labeled as 'illegal'.

The community of 'orang asli' may not have an opportunity to 'properly develop' local ecological wisdom along the period of their settlers, because they have been systematically victimized by a structural development policy. From the elimination of traditional village governance called *penghulu*, access restriction to resources, until 'discrimination' of aids either intentionally or not; 'orang asli' community has been undergoing 'a process of disowning' toward local resources.

So, we are not confronting a question merely about ecological awareness, but it ought to be put down as part of the process of eliminating ownership.

Departing from such understanding, there are not many options available to break the chain of 'orang asli' marginalization, except to return the property right of local common resources to them. It may invite a rejection from the state authority, but devolution can always start with a small portion. A property right is an incentive that might truly be needed by the 'orang asli' community in order to construct their ecological awareness, particularly in rehabilitating the overuse natural resources.

CONCLUSIONS AND RECOMMENDATION

The agrarian issue in the case of peatland resource rehabilitation lays on the absence of clear property right and strong institutions to apply it. Having a property right is an insurance that the community entitle to harvest the resource that they responsible to manage.

In the case of participation, despite of clear dependency of 'orang asli' to common resources, this program is unsuccessfully involved 'orang asli' community in the activity because of aid's preference toward farming and private ownership focus. Such preferences topped off structural marginalization of 'orang asli' that comes from access restriction toward local resources and aids 'discrimination'. Moreover, the use of funding incentive to motivate participation only creates dependency but not sustainable activity. Involvement is gained but full level of participation is still in question.

Based on the above conclusion, the rehabilitation activities need to involve the community of 'orang asli' in order to apply a socially just resource management. Without 'orang asli's' involvement, the problem of illegal logging may continue to occur.

The community's full participation and involvement -including orang asli- will only be gained if a property right is given as an incentive, which should be followed by the establishment of institutions who will develop 'the rules of the game'. In other words: the management of common resources around the village area should involve the local communities as an equal partner. Collaborative management may provide such opportunity to manifest the shared rights and responsibilities.

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