

Abstract No: A-097

PARTICIPATORY APPROACH IN THE PEAT SWAMP FOREST MANAGEMENT OF TWO DIFFERENT FOREST STATUSES IN CENTRAL KALIMANTAN, INDONESIA

Hesti Lestari Tata* and Agustinus P. Tampubolon

*Forest Research and Development Centre, Indonesia***Corresponding author: hl.tata@gmail.com*

SUMMARY

Sustainable forest management needs active participation from communities who live in the surroundings forest area. We assessed community participation in two different forest status areas in Central Kalimantan, e.g. Sebangau National Park (SNP) and Kalawa Village Forest. The participatory approaches of the peat swamp forest management in the two sites were assessed based on semi-structured interview to random respondents and in-depth interview to some selected key-respondents. The data were analysed by using descriptive analysis and SWOT analysis. The forest area status determines approach of community participatory management. A national park is designated based on unique characteristics and importance of the ecosystem. A village forest is determined based on a proposal of the local community who has awareness on the forest ecosystem to get access on forest utilization. Forest status has implication on decision making process. Sebangau national park has a top down approach, e.g. a framework driven by government (a high level hierarchy), while Kalawa village forest has a bottom up approach, e.g. local communities' engagement in management of the village forest. Under the management of the SNP, there are three institutional participatory peat swamp forest managements, such as Community Forum (*Forum Masyarakat, Formas*), Group of Fire Fighting (*Regu Pemadam Kebakaran, RPK*), and Public Safety Forces (*Pasukan Pengamanan Masyarakat, Pam Swakarsa*). The three institutions have been developed well; however, the community who lives in the surroundings the SNP has low participation due to lack of awareness. Community participation in the area of the SNP is characterised as consultation participatory type. On the other hand, the Kalawa village forest is characterised as functional participatory type. SWOT analysis showed that the SNP has four internal and external factors, while Kalawa village forest has five internal and external factors, which can be used to develop and improve a strategy on peat swamp forest management in both sites.

Keywords: *SWOT analysis, village forest, Sebangau national park*

INTRODUCTION

Nowadays, paradigm of forest management has been transformed into community participatory, where community is actively involved in forest landscape management. Sustainable forest management which involved people participatory in the development process aimed to end poverty, as one target of The Sustainable Development Goals (United Nations, 2015). Community participatory in forest management is one program of the Government of Indonesia (GoI) in forestry sector, which is called social forestry. Social forestry is defined as management and protection of forests and afforested of barren land with the purpose of assisting environment, social and rural development (Negi, 1986). In Indonesia, there are four types of social forestry, viz. village forest, community forest, people forest plantation and customary forest. The social forestry programme was initiated to support the success of peat swamp forest management, which needs active participation of community who live in surroundings the forest areas.

We studied participatory approach in the management of peat swamp forests in two different statuses of forest areas in Central Kalimantan province, e.g. a village forest and a national park, by looking at the top-down and bottom-up paradigm (Bell & Morse, 2001; Reed *et al.*, 2006; and level of participation. The two forest areas have different characteristics of forest management. The village forest which is a state forest which managed by a custodian of the village, while a national park is a protected area, where central government takes an important role as custodian and in managing the forest area.

METHODS

1. Study Site

The study was conducted in a village forest of Kalawa, in Pulang Pisau District, and in the Sebangau National Park (thereafter the SNP), both in Central Kalimantan Province. Three villages in surroundings SNP, namely Kereng Bangkirai of Palangkaraya, and Baun Bango and Tumbang Runen villages in Katingan District, were selected purposively as study areas of the SNP.

The SNP (total area of 569,700 ha) is located at E 113° 20' – 114° 03' and S 01° 54' – 03° 08'; it was established in 2004. SNP is a peat swamp forest ecosystem which is laid between two rivers of Sebangau and Kahayan. Previously, it was a forest concessionaire area of a production forest and the permit was end in 1990. Some channels have been established during that period to transfer logs. After its status changed into conservation forest, the canals have been blocked to reduce water drainage.

The Sebangau National Park is surrounded by 7 sub-Districts of three Districts, with total inhabitants of 72,859 people (BPS Kabupaten Katingan, 2013; BPS Kota Palangkaraya, 2013).

The Kalawa forest is a peat swamp forest which is located along Kahayan river, in Pulang Pisau District, Central Kalimantan Province. The Kalawa forest is managed by four villages, namely Buntoi, Gohong, Mentaren II and Kalawa, in a total area of 16,245 ha. The forest area that was designated under management of Kalawa village is about 4,230 ha. The community of Kalawa village is dominated by Dayaknese Ngaju, consisted of 1,316 inhabitants (BPS Kabupaten Pulang Pisau, 2013).

2. *Data Collection and Analysis*

Combination of descriptive – explorative – participative approach was used in this study. Descriptive approach is used to identify problems and current evidence. Primary data were collected by using a semi-structure interview and in-depth interview to some key persons. Participative method was used to invite people actively take parts in find out solutions into the current problems. Explorative method is used through field observation and can be used in analysis and synthesis (Dipokusumo, 2011).

The respondents were selected purposively depending on the objectives of interview. Respondents include a village leader, a customary leader, and villagers. Experts include forest service at provincial and district level, management of the national park, environmental agency, and management unit of watershed.

Geography and demography data were based on secondary data of the Statistics Bureau of the district. Survey data were then analyzed by descriptive analysis. Level of participation was identified according to Preety *et al.* (1995). The strengths, weaknesses, opportunities and threats (SWOT) analysis were used to identify and map participatory management of both sites.

RESULTS AND DISCUSSION

1. *Income Sources of the Community*

The inhabitants are dominated by Dayaknese (65%) and some migrants from Banjar and Java and others, who usually live in Kereng Bangkirai, Palangkaraya city. Tumbang Runen and Baun Bango villages were dominated by Dayaknese. Sources of income of the community in three villages in surroundings the SNP were agriculture (annual and mostly perennial crops, such as rubber and oil palm smallholder), fisheries, formal sectors (civil servant, groceries sellers and workers of plantation) and collecting non-timber forest products, such as latex, gemor bark, birds and others.

The inhabitants of Kalawa village are dominated by Dayaknese (85%), Banjar and Javanese. Income sources of Kalawa's people were agriculture, fisheries, collecting forest products and other informal sources.

2. *Participatory Approach in the Forest Management*

a. The Sebangau National Park (SNP)

The management of the SNP has three institutions on participatory forest managements, namely, Community Forum, Group of Fire Fighting, and Public Safety Forces. The three institutions are promoted by management of the national park in order to improve awareness of the importance of forest conservation, to introduce the community in the management of natural resources in a sustainable manner, and to engage with people whom are dependent on the natural resources as their livelihood. Community Forum is established as a discussion forum of villagers with different occupations, such as farmers, fishermen, collectors of forest products, etc. Through this forum, villagers who are member of the group may submit proposal of activities to improve their capacity. The management of national park would provide training and knowledge transfer to the community. Some activities, such as bird breeding, pond fisheries, fish processing and mushroom cultivation, were introduced to the communities to generate income of the communities. The management also would facilitate access to market to sell the products. Benefit of capacity building is to improve motivation of villagers on livelihood and reduce

dependency on forest resources. However, such capacity building program were not applied at all villages in surroundings the park, due to limited resources.

Group of fire fighting is established to improve awareness of people on forest fire and to protect forest area from fire. The activity is a voluntary based activity. Tools and simple equipments for fire fighting were provided by the management of national park. In an emergency of fire, they work together with fire brigade of 'Manggala Agni'.

The Public Safety Forces institution was established in 2007 and 2008, to give opportunities to the community to protect the national park in collaboration with management of the national park. Regular patrol is conducted and under coordination with Forest Rangers. The constraint of this activity is little participation from the community, as it is not well informed to the villagers and it does not give financial benefit for them.

As the national park, where the management is controlled by central government, e.g. the Ministry of Environment and Forestry, most programmes on capacity building are approved. Improving awareness and livelihood of people surrounding forest is a major concern of management of the park management.

A problem in the participatory management of the SNP is no clear boundary of utilization zone of the national park. Although the forest area has been gazetted, however, the community is still claiming for the boundary. The biggest threat of management of the SNP is expansion of oil palm estate.

b. The Kalawa Village Forest

Management of the village forest, on the other hand, is a responsibility of the village institution. The right of village forest management is awarded by the authorities. Licence of a village forest management is given to the village institution in a period of 35 years. The area remains as a state-owned forest. Village forest management aims to preserve forest functions and improve welfare of the community. The management of a village forest is based on a business plan. A forest inventory has to be done prior to implementation of the business plan. As mandated in a regulation of the Minister of Environment and Forestry number P.101 year 2014, Forest Service at province and district level plays important roles. In the implementation, however, the Forest Service has not been taken serious action to carry on their mandates. The Kalawa communities were complaining for lack of facilitation. Limited human resources and financial capital hinder the implementation of Kalawa village forest (Tata, 2016).

3. Approach and Level of Participation

Participatory forest management links with strategic planning either top-down or bottom up approach. Top down approach is a strategic planning of central government to the lower level of management. On the contrary, bottom up approach is focused on implementation on the ground level (Bell & Morse, 2001; Reed *et al.*, 2006; Dewi, 2012). The management of the SNP is an example of top down approach. A top down approach affects positively to the collaborative-participative activities. Implementation of a work plan would achieve goals of the organization. The more active the participants, the more benefits they may get.

According to Preety *et al.* (1995), participation is classified into 7 levels, from manipulative participation up to independent movement. Participation analysis showed that level of community participation in the management of the SNP consultation participation, e.g. all programs should be under consultation between the two parties, (i.e. the national park and the communities). One party (financially) depends on another party in the program implementation.

The Kalawa village forest has a bottom up approach, where all processes are based on the community level. Stage of participation was functional participation, where all member work together in developing a business plan and its implementation. Kalawa village forest would shift to be more independent if they get capacity building to alleviate poverty. Such training and transfer practise knowledge that have been applied by the management of the SNP needs to be introduced and applied in the Kalawa village forest. The forest service and a civil society organization (CSO) should facilitate operational of the village forest.

The SWOT analysis showed that the two forest statuses have different management characteristics. Some internal and external factors of participatory management of Kalawa village forest and the SNP are listed in Table 1.

Table 1: Characteristics of participatory management of Sebangau National Park and Kalawa village forest

Internal		External	
Strengths	Weaknesses	Opportunities	Threats
Sebangau National Park (SNP):			
Three institutions, e.g. Community Forum, Group of Fire Fighting, and Public Safety Forces, are supported by the management of the national park	Manipulative participation. People have lack of responsibility	Improving capacity from training and demo-plots	Land use change to oil palm
Participation is developed according to preference of the community (or group of livelihood)	Villagers have low income	Business development and investor	Floods
Species richness and high genetic germ plasm	Lack of knowledge on tree cultivation and human resources	Demand on animals, such as birds and pangolin, and Non-timber forest products, such as gemor (<i>Alseodaphne</i> sp.) are considerably high	Limited rules and regulations on marketing non-timber products from cultivation and breeding activity that can support fair price and market
Sufficient human resources of the SNP management	False perception of the communities on the management of national park	People need to get well informed	Land conflict in the utilization zone.
Kalawa village forest:			
High motivation of villagers to protect the forest	False perception of some villagers on the management of village forest	Support and companion of the local government to implement the program	Canal establishment to the village forest
High species diversity	Lack of knowledge on tree cultivation and human resources	Demand on animals, such as birds and pangolin, and non-timber forest products, such as gemor (<i>Notaphoebe</i> spp.) are considerably high	Limited support rules and regulations on marketing non-timber products from cultivation and breeding activity
Social ethic is still appreciated	Lack of facility to implement business plan	Eco-tourism shall be developed and community needs to be well informed	Illegal logging, illegal poaching
High motivation on planting fast growing timber tree, such as <i>Albizia</i> , in burnt land to get cash income	Low income and limited resources	Open access to wood market and other forest tree product	Forest fire

To summarize, internal and external characteristics of both forest management can be used as inputs on the development and management strategy of the SNP and Kalawa village forest. Kalawa village forest needs support and facilitation from the local government in order to establish their business plan. It is as a reward mechanism for villagers who actively participate in the management of village forest. The SNP is suggested to improve their management, by doing human resources development, ensuring forest gazette management, and enhancing community collaborative and participative mechanism.

REFERENCES

1. United Nations. 2015. Draft *outcome document of the United Nations summit for the adoption of the post-2015 development agenda*. United Nations. General Assembly. 35 p.
[http://www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E.].
2. Negi SS. 1986. *A handbook of social forestry*. International Book Distributor. Dehradun, India. 178p.
3. Bell S & Morse S. 2001. Breaking through the glass ceiling: who really cares about sustainability indicators? *Local Environment*. 6(3):291-309.
4. Reed MS, Fraser EDG, Dougill AJ. 2006. An adaptive learning process for developing and sustainability indicators with local communities. *Ecological Economics*. 59:406-418.
5. BPS (Badan Pusat Statistik) Kabupaten Katingan. 2013. *Kabupaten Katingan Dalam Angka 2013*. BPS Kabupaten Katingan. Kasongan. 36p. [<http://katingankab.bps.go.id/>]
6. BPS (Badan Pusat Statistik) Kota Palangkaraya. 2013. *Kota Palangkaraya Dalam Angka 2013*. BPS Kota Palangkaraya. Palangkaraya. 324p. [<https://bappeda.palangkaraya.go.id/kota-palangka-rama-dalam-angka-tahun-2013/>]
7. BPS (Badan Pusat Statistik) Kabupaten Pulang Pisau. 2013. *Kabupaten Pulang Pisau Dalam Angka 2013*. BPS Kabupaten Pulang Pisau. Pulang Pisau. 238p. [<http://pulpiskab.bps.go.id/>]
8. Dipokusumo B. 2011. *Model Partisipatif Perhutanan Sosial Menuju Pengelolaan Hutan Berkelanjutan (Kasus Pembangunan Hutan Kemasyarakatan pada Kawasan Hutan Lindung di Pulau Lombok)*. Sekolah Pasca Sarjana. Institut Pertanian Bogor. Bogor. Dissertation. 285 p. (unpublished dissertation).
9. Dewi U. 2012. *Pendekatan top down versus bottom up: Implementasi dan evaluasi kebijakan publik*. Bahan presentasi IAN-UNY. Universitas Negeri Yogyakarta. Yogyakarta. [<http://staff.uny.ac.id/sites/default/files/pendidikan/Utami%20Dewi,%20M.PP/>].
10. Pretty JN, Guijt I, Thompson J, Scooner I. 1995. *Participatory learning and actions: a trainer's guide*. IIED Participatory Methodology Series, International Institute for Environment and Development. London. 270p.
11. Tata HL. 2016. Peat swamp forest management through community based participation: a case study of Kalawa village forest. In: Siregar C. *et al.* (eds). *Proceedings of the International Conference of Indonesia Forestry Researchers III*. Bogor 21-22 October 2015. Pp:65-72. Forestry Research and Development Agency. The Ministry of Environments and Forestry. Bogor. *In press*.