

# **COMMUNITY-BASED FOREST MANAGEMENT BY COOPERATIVE MOVEMENT: MANAGEMENT OF PRIVATE-COMMUNITY FORESTS IN KULON PROGO REGENCY, YOGYAKARTA SPECIAL PROVINCE**

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## **ABSTRACT**

**F**orests are strategic natural resources with essential ecological function and high economical value. Good forests management therefore is a must so that the benefit of having forests will not deteriorate and disappear. The paradigm of community based forest management (cbfm) is now becomes preferable since it gives bigger roles to community involvement and participation. But questions about the concept implementation is still abound. Not all forest owners know how to do it properly, ecologically and economically. Therefore, there was an attempt to socialize the concept by coordinating forest owners and acting collectively through cooperative movement. The cooperative is now very popular and gaining a lot of members. To understand what has happened, we designed a study that was aimed firstly, to analyze how private forests in Kulon Progo was managed under Wana Lestari Menoreh Cooperative, and second, to study any constraints to the management. To achieve those aims, focus group discussion is carried out, so is depth interviews with cooperative officers and forester members. Local officials and other important persons who has close relationship with the cooparetaive were also interviewed. The result showed that the cooperative has already been functioning although with a lot of constraints, which some may develop into problem if not handled properly. The constraints range from technical difficulties to managerial and organizational challenges, memberships misunderstandings and no less important, bureaucratic blunders and uncertainties.

## **INTRODUCTION**

Forests are strategic natural resources with important ecological and economical functions. Therefore, its management should be carried out properly to make them sustainable but optimally provide people with economic benefit. Presently, forest management is more and more linked to community-based one, a concept which stresses self-management by the community, or the “owner” of the forest.

Community’ or peoples’ forest is then introduced as the object of the model for this kind of management (Lindayati, 2002). Peoples’ forest are pieces of land owned by community members which are planted with forest trees so that the land will ecologically have the same function with general natural forest, but will economically help the owner reaping its economic benefit. People forests may also complement producing forests in providing forest-produced raw materials (Widyaningsih & Diniyati, 2010)

Physical condition of Menoreh mountain in Kulon Progo regency, Yogyakarta

Special Region province is ideal for the implementation of community based forest management (Supriyanto, 2015). Therefore with their own initiatives, the society from several districts in Kulon Progo established a management institution. Prior to the implementation, there was already a program called Community Logging, initiated by Telapak, an NGO specializes in helping forest owner. The program basically is a logging/harvesting practice done according to good and right environment and production guidelines. It was not difficult then to upgrade the program into community-based forest management. The institution selected to implement the management model was in the form of a cooperative (Koperasi Wana Lestari Menoreh, KWLM) which make it easier to empower the cooperative members as the forest owners, and to accommodate a collective ownership. A cooperative movement will also be flexible, as it has double functions, both as a social and as an economic motivator. The existing cooperative is thus expected to improve community understanding and knowledge on environmentally friendly forest management practices, as well as increase community economic resilience and welfare. Economic resilience is an aspect of national resilience. Conceptually, this aspect doesn't view economic condition of the society from its growth only, but also from its ability to stay put and recover itself during a crisis (Martin & Suley, 2013). It may also be evaluated from its ability to develop untoward condition into preferable ones by creating and utilizing available opportunities. Reviewing the potency of KWLM in managing community forest in Kulon Progo through CBFM concept and program, a study was carried out to understand and analyze community forest management done by KWLM and to study the constraints faced by the cooperative in managing its members' forest.

## **Methodology**

### **Type of Study**

This study applies qualitative methods to gain better understanding over the research object (Cresswell, 2009). Data collecting was carried out by observation, in-depth interview, and documents/references studies

### **Location of Study**

This study was done in Koperasi Wana Lestari Menoreh (KWLM) area in Kulon Progo regency, Yogyakarta Special Province. This location is chosen as almost all forest in Kulon Progo is community forests. The working area of KWLM includes Samigaluh, Nanggulan, Girimulyo dan Kalibawang districts. This cooperative is the only cooperative operated on forest management in Kulon Progo.

### **Sampling**

This study was done by using purposive sampling in selecting samples to confirm and collect specific data source or sources which were under certain criteria. These data would be based on a preset evaluation values and significancy level.

### **Data Collection**

Data collection in this study would be done by observation, in-depth interview and references study. Those designated as informants were cooperative officials, cooperative members and ones who had direct connection with the cooperative. Observation would be done by using observation guide in an observation sheet as the instrument in helping the interviewers record the

data needed and collected from the cooperative officials and members. In-depth interviews was carried out under a thematic interview guides written as such to gain open answers so the information could be developed into deeper truth but still inside the study's context. References reviews were done to find secondary data which is important to the study. Secondary data sources are all kinds of references such as book, reports, articles, online news other form of literary references which may be meaningful to the study, including documents from related institutions.

#### Data Performance

Data would be presented in a descriptive-narrative manner. The data would be shown in a narrative text completed with tables and secondary data compilation which will complement the observation and interview results.

## RESULT AND DISCUSSION

### *Land Use in Kulon Progo Regency*

Data of 2014 showed that non-agricultural land in Kulon Progo consists of areas of 13.999 Ha, of which there are paddy land of 10.297 Ha, dry-land 15.241 Ha, estate crop land 590 Ha, forested land 7.196,49 Ha and water body 11.303,51 Ha. Most of the forest in Kulon Progo is not state forest, but private, or community, forest. Forested land consists of 185 Ha natural reservation area, 255,61 Ha protected forest, 605,9 Ha producing forest and non forest or private/community forest land as large as 20.392,3 Ha. These community forest tend to increase by years, and most of them located at the northern and central parts of Kulon Progo with mountainous and intermediate topographic features. The main woods and trees planted in community forest of Kulon Progo were teakwood (*Tectona*), local Sonokeling, swietenia, accacia and allbizzia. In 2014, these trees numbered 3.368.513; 948.739; 2.844.391; 1.395.273 and 3.185.542, respectively (Anonim, 2015).

Table 1. Community Forest Area in Kulon Progo 2013 - 2014

Districts	Forest Area (Ha)		
	2013	2014	Change (%)
Temon	810,50	811,50	0,12
Wates	190,00	191,89	0,99
Panjatan	688,40	690,57	0,32
Galur	317,50	319,76	0,71
Lendah	594,40	597,75	0,56
Sentolo	1.013,00	1.017,68	0,46
Pengasih	1.688,50	1.707,67	1,14
Kokap	4.742,10	4.801,29	1,25
Nanggulan	477,00	480,45	1,19
Girimulyo	3.407,00	3.447,44	0,42
Samigaluh	4.090,00	4.108,23	2,42
Kalibawang	2.159,29	2.218,07	0,45
Kulon Progo	20.177,69	20.392,30	1,06

Source : Dinas Pertanian dan Kehutanan Kabupaten Kulon Progo

*An Overview of Koperasi Wana Lestari Menoreh*

This cooperative institution in Kulon Progo was initiated through *community logging* program developed by an NGO called Telapak to encourage community forest management with not only economic profit as its goal, but also sustainability. In April 2007, Telapak joined hand with Yayasan Bina Insan Mandiri (YABIMA) and Credit Union (CU) Kharisma socializing *community logging* in some Kulon Progo hamlets and villages and asked local officials involvement. The follow ups were the accomplishment of a facilitator training in Boro village, Kalibawang in the form of simulating training materials, and the establishment of socialization sites in Kalibawang and Samigaluh districts involving 11 villages.

On 12-19 June 2008, meeting and discussion among village recruits decided to establish a sustainability institution called Wana Lestari Menoreh cooperative. According to one of the founding person, cooperative movement was chosen to legalize the institution and makes it easier to obtain certification from *FSC (Forest Stewardship Council)*. The institution would also be owned by all members, something that reflected the forest ownership in the region. The social and economic characteristic of cooperative movement were also very fitting with the need of the community.

On 3-12 Juli 2008, a meeting was carried out to wrote basic and house rules of KWLM and formed the cooperative officials and selected representative from the 11 recruits invited on the last training. The draft was self-composed by those attending. The cooperative was officially constructed on August 2, 2008 and legalized on April 3, 2009 with Official Letter of the Ministry of Cooperative and Small Medium Enterprise no. 29/BH/XV.3/2009 with secretariat in Jl. Dekso-Samigaluh km.1 Jogobayan hamlet, Banjararum village, Kalibawang districts, Kulon Progo regency.

The working area of KWLM includes Kulon Progo. But the limited number of resources, both human and financial, made the area was limited only to four districts, i.e. Samigaluh, Kalibawang, Girimulyo, and Nanggulan. The members from those districts in 2015 numbered 1.484 persons, with a few from Sentolo district. The forest land managed by KWLM and has already been certified by FSC is 700.417 Ha, located in 20 separated villages. The land was owned by private owner who already had legal land certificates. The distribution of the managed community forest is shown in Table 2.

Table 2. Managed Forest and Land Area under the Management of KWLM, 2015

Districts	Unit No.	Village	Land Area (Ha)
Samigaluh	1	Kebonharjo	10,4111
	2	Banjarsari	13,5540
	3	Pagerharjo	49,1147
	4	Ngargosari	12,0646
	5	Gerbosari	14,3800
	6	Sidoharjo	129,2251
	7	Purwoharjo	11,3646
Kalibawang	8	Banjaroya	31,9653
	9	Banjarharjo	70,7563
	10	Banjarasri	50,7487
	11	Banjararum	52,2509

Girimulyo	12	Giripurwo	167,2004
	13	Jatimulyo	7,6460
	14	Purwosari	11,0135
	15	Pendoworejo	1,8250
Nanggulan	16	Banyuroto	51,2490
	17	Donomulyo	13,2230
	18	Tanjungharjo	1,0625
Sentolo	22	Tuksono	1,2000
	28	Sentolo	0,1623
Total			700,4170

Source : Koperasi Wana Lestari Menoreh (after analysis)

The membership of KWLM increasing by years. When the cooperative was started, it had 23 members. In 2015 the number is 1,484. The increase is shown in table 3.

Table 3. the Increasing Trend of KWLM membership, 2008 - 2015

Year	2008	2009	2010	2011	2012	2013	2014	2015
Member	23	225	375	809	1.088	1.149	1.206	1.484

Source : KWLM

Plan on sustainable activity was written in KWLM's Forest Management Plan document. This document helps KWLM improved its capacity through the years. According to record on logs' potential inventory of KWLM, from 2010 to 2015 the area increase to 700.41 from 100 Ha, with logs potency increased from 2.735,526 m<sup>3</sup> with JTT (Jatah Tebang Tahunan, Annual Cutting Share) of 465,544 m<sup>3</sup> in 2010 to 10.718,268 m<sup>3</sup> JTT of 2.080,988 m<sup>3</sup> in 2015. The trend of the increase is shown on Table 4.

Tabel 4. The Increasing Trend of Managed Forests, Logs Potency and Annual Cutting Share of KWLM, 2010 - 2015

Items	2010	2011	2012	2013	2014	2015
Land Area (Ha)	110,00	186,02	417,06	647,62	686,00	700,41
Logs potency (m <sup>3</sup> )						
a. Teak	826,35	1.138,190	2.806,894	3.392,629	3.721,853	4.840,644
b. Swietenia	939,84	1.077,330	2.399,373	3.240,429	3.418,859	3.404,431
c. Albizzia	307,33	388,423	653,540	1.588,590	1.646,754	1.694,371
d. Sonokeling	88,18	131,583	611,398	722,001	766,667	778,822
Total	2.161,70	2.735,526	6.471,205	8.943,649	9.554,133	10.718,26
Annual Cutting Share (m <sup>3</sup> )						
a. Teak	82,635	133,905	330,223	566,619	621,604	873,605
b. Swietenia	125,312	165,743	369,134	440,306	464,550	468,382
c. Albizzia	122,932	155,369	261,416	635,436	658,702	674,511
d. Sonokeling	5,879	10,527	48,912	57,760	61,333	64,491
Total	336,758	465,544	1.009,685	1.700,120	1.806,189	2.080,988

Source : KWLM (after analysis)

Cooperative capacity can also be seen from the sale of wood originated from community forest managed under KWLM. Several accessible markets for KWLM are PT Ploss Asia in Semarang, PT Jawa Furni Lestari dan PT Citra Jepara in Jepara for teak, PT Vincent Sheppart Indonesia in Cirebon and PT Segiwan in Semarang for swietenia, and PT Bumi Pala Persada for albizzia. The value of wood sale from KWLM's community forests from 2011 to 2015 increased by 129,3%. The fluctuation on the sale is shown in Table 5.

Tabel 5. The KWLM Wood Sale Value, 2011 - 2015

Items	Sale Value (Rp)				
	2011	2012	2013	2014	2015
FSC certified woods	454,482,850	1,214,833,154	1,755,544,425	1,573,169,819	1,230,789,688
Non FSC certified woods	132,329,920	161,762,438	98,552,240	124,993,500	114,940,000
Total	586,812,770	1,376,595,592	1,854,096,665	1,698,163,319	1,345,729,688

Source : KWLM (after analysis)

The smooth start and execution of the cooperative activities was largely depended on human resources which were available at the beginning. The cooperative asked only persons with at least high-school diploma in managing the institution, be it officials, inspectors or managers. It hired workers under tight selection process. KWLM also introduced trainings not only for the members, but also its officials and workers.

#### *Sustainable Forest Management of KWLM*

Sustainable forest management put forth sustainability so that there will be assurance for long-lasting production. As a cooperative which is also responsible for community forests products quality, KWLM has already obtained *FSC (Forest Stewardship Council)* certification on March 16, 2011. To ensure the origin of its products, cooperative members were asked to provide their land-ownership certificate or similar documents. This is important as there are many illegal products with questionable origin and process which came into the market.

To achieve sustainable forest management goal, the cooperative can establish guidelines on which wood product must be managed, makes rules on how logging had to be done, does inventory of harvested forest products, and prepares forest trees' seedlings. All these KWLM's tasks are closely related with the ability and availability of human and financial resources, which actually were very limited. KWLM also selected the kinds of trees to be managed, i.e. teak (*Tectona grandis*), swietenia (*Swietenia* sp), "sonokeling" (*Dalbergia laticifolia*), local softwood (*Paraseriantes falcataria*) dan albizzia (*Albizzia falcata*).

In harvesting the products, KWLM has the policy of setting up logging standard. Firstly, KWLM employs selective cutting, by determining minimal tree girth/diameter allowed to be cut. For teak, swietenia and sonokeling, the

minimum diameter is 25 cm, while for softwood is 20 cm. Second, cutting trees all at once over definite piece of land is not allowed. Thirdly, the cooperative reserve the right to decide Annual Cutting Share, maximum volume allowed to be cut in one year. Fourth, as there are still members who cut their trees whenever they have financial needs, KWLM set a resolve for its members who need cash but their trees were still under age, by lending credit using the immature trees as collateral. When the trees reach their cutting standard, the proceed of the sale is used as credit payment.

Information on available potential trees owned by members, KWLM carries out inventory on this potency every year. Aside from obtain information on the potency, it is also used to know the forest tree structure, observe trees development each and every year, and to provide necessary data for the construction of long range community forest management planning.

The cooperative prepares a nursery in Pagerharjo village. This 3.000 m<sup>2</sup> nursery is nurtured to fulfill members' need of good and vigorous seedlings. For its members, KWLM gives 10 free tree seedlings for every single tree cut by them. The seedlings are also distributed free for those who want to plant trees in their vacant lands.

Environmental protection is deemed necessary in a sustainable community forest management. With this concept, KWLM has identified regions with high conservation value (NKT or HCV) in the community forest it manages. From this observation KWLM classifies the forests it manages into three different regions. There are NKT-1, regions with high biodiversity; NKT-5 regions with important subsistence function for local community; and NKT-6, regions which recognizes the importance of local community traditional culture.

#### *KWLM Constraints in Managing Community Forest*

Although the community forest management until today has been executed smoothly with big potency and opportunity ahead, such as the ever-increasing membership, followed by increasing forest land areas and so on, there are still some constraints faced by the cooperative. These constraints consists of limitations on financial, human resources and on enterprises.

The financial constraints for instance, made KWLM limits its activities only on four districts out of 12 available districts in Kulon Progo regency. KWLM was unable to provide adequate and sustainable management to other districts since that would mean a great deal of financial resources is needed for certification, rule and policy socialization, members' training and enforcement, and also payment for forest products produced by KWLM members.

At the beginning, cerification from FSC in 2011 was obtained with the help of fundings from *Humanistisch Instituut Voor Ontwikkelings Samenwerking (HIVOS)* as much as EUR 44,588; which was used to build infrastructural needs, logistics, recruitment trainings, inventory and of course the certification itself. This certification expired in March 2016, so KWLM had to apply for certification renewal to FSC. To minimize certification fee, KWLM together with six other forest cooperative formed an enterprise called PT SOBI. These seven conjoined cooperatives applied their certifications as an entity as a group certification through PT SOBI.

These financial difficulties sometimes also made KWLM to postpone the payment for members who sold their log to the cooperative. This tardiness

in turn caused members to sell their logs to other parties as these parties were able to provide them with ready cash. About 20% of the members said that they had done this practice because they needed the money right away.

From human resources side, the capabilities of officials and field officers of KWLM still needs to be increased and improved. Within the managerial and administrative staffs, the capability can be said as sufficiently adequate. But field officers who deal with the real work and have to accommodate members directly, those who should handle tasks such as socializing program, carrying out trainings, empowering new members, doing inventory on logs and trees, inspecting harvest and transacting woods from members, need more person to be recruited. The cooperative managers actually has been successful in executing their works. But in term of maintaining joint ventures with companies from abroad, their abilities, especially in using foreign languages for communication and correspondence. This specific ability should be nurtured as the cooperative is not only working with in-country partners, but also those from abroad, for instance in securing FSC certification, managing sustainable forest management and also doing research on that field.

The membership and managed forest area increase seems to not being anticipated by improving field officers capabilities, which in the future may lead to less productive cooperative. The more works that had to be done with less field officers had already made some deviating practices, both by the officers or the members. According to inside information and evaluation, some field officers had been fired and replaced since what they did deviated from the rules and guidelines. There was once a cooperative field officer who supervised cutting on cooperative members' forest, but then sold the woods to other parties. The replacings presented KWLM with newer problems, because the new field officers need to be trained and they have to learn about the rules and regulations set by the cooperative.

The limited number of officers also made members loyalty to the cooperative started to shrink. The number of members who sell their forest products to others outside KWLM increases. Financial limitation of the cooperative causing this problem, while outside the management there are wood traders who are prepared to pay cooperative members with ready cash, even when the trees were still in the forests.

Most of the members were also older people, more than 50 years old. This is because the cooperative require members to show forests' certificate of ownership when signing in, of which most has not been given to their children or the younger generation. It made rules and regulations that should be known and understood by the members became difficult to be disseminated, as some of these old members have limited educational background. There are still members who did not understand well their rights and duties in the KWLM.

KWLM operates forest products trade, especially wood, based on the volume and quality of the products inspected at the agreed sites, usually in the roadside where the transporting vehicles can enter. Cutting and taking the wood to the sites have to be done by the members or by the help of the cooperative with minimal fee paid by the members. This is an effort to make products prices to be more transparent and benefited both parties. The prices paid by KWLM usually 15 – 20% higher compared to prices paid by traders.



With these traders, however, owners might not get their products worths. They may even suffer a loss.

KWLM actually still sustains insufficient stocks of albizzia woods to fulfill large market demand. The monthly demand comes from PT Bumi Pala Persada in Central Java about 80 to 100 m<sup>2</sup> since July, 2015 and this monthly demand increases this year by 1,500 m<sup>2</sup> from an exportir in Surakarta. These demands are far larger than KWLM's albizzia annual cutting share of 674.5 m<sup>2</sup> in 2015 and 1,255 m<sup>2</sup> in 2016. KWLM also has no production unit to process logs, so its activity is limited to logs and woods trade only, and the cooperative is not able to gain added value from its production activities.

## CONCLUDING REMARKS AND SUGGESTIONS

1. Community forest management in Kulon Progo regency through KWLM (Koperasi Wana Lestari Menoreh) is done by implementing good managerial practices to develop the enterprise, and strives to achieve cooperative goal in improving its members welfare. The cooperative has also applied sustainable forest management to ensure the right and environmentally-friendly practices, so that the community forests will be simultaneously preserved and productive.
2. There are constraints in realizing and executing KWLM's tasks, involving the financial hindrances in securing funds for community forest and capital, lack of human resources especially for field officers, which in turn will affect membership, and the low ability of the cooperative to develop its producing units.
3. All constraints aside, this cooperative has a good track record in maintaining eco-friendly environmental management, without sacrificing its economic function. It helps member to have economic resilience, however limited. KWLM may become a model for other community forest management efforts done by similar group of people with forest ownership. Combining forest management with cooperative movement may benefit the society and encourage economic improvements
4. The government should act as facilitators and help society driven initiatives by adjusting their policy to ease the bureaucratic and administrative hindrances. These hindrances, if not solved, constrain the initiatives development in managing society welfare through sustainable forest management.

## REFERENCES

- Anonim, 2015, *Buku Data Status Lingkungan Hidup Daerah Kabupaten Kulon Progo (Environmental Status Databook of Kulon Progo Regency)*. Dinas Lingkungan Hidup Kabupaten Kulon Progo
- Creswell, John W., 2009, *Research Design Qualitative, Quantitative And Mixed Methods Approaches*, Thousand Oaks: SAGE Publications, Inc.
- Lindayati, Rita, 2002, "Ideas and Insitutions in social forestry policy" dalam *Which Way Forward? People, Forest, and Policymaking in Indonesia*, diedit oleh Coffey dan Ida Ayu, Bogor: Centre for International Forestry Research.
- Martin, R., and Sunley, P., 2013, On the Notion of Regional Economic Resilience: Conceptualisation and Explanation, *Papers in Evolutionary*

*Economic Geography (PEEG) 1320*, Utrecht University, revised Oct 2013.

Supriyanto, 2005, *Pola Pengelolaan Hutan Rakyat di Kawasan Perbukitan Menoreh Kabupaten Kulon Progo* (Community Forest Management Pattern in Menoreh Mountain, Kulon Progo Regency), Tesis: Universitas Gajah Mada.

Widyaningsih, T. S., and Diniyati, D., 2010, Kontribusi Ekonomi Dan Sistem Pemasaran Hasil Hutan Rakyat Pola Wanafarma di Majenang Cilacap (*Economic Contribution and Wanafarma Forest Product Marketing System in Majenang, Cilacap*) , *Jurnal Penelitian Sosial dan Ekonomi Kehutanan*, Vol. 7, No. 1, pp. 55-71.