



World Agroforestry Centre  
TRANSFORMING LIVES AND LANDSCAPES

## Community Based Forest Management (PHBM): What can we learn?

### HIGHLIGHTS

- Factors influencing the success of Community-Based Forest Management (PHBM)
- Transfer of right of use
- Community knowledge and understanding
- Community trust levels
- Rules in farmers' groups
- Building farmers' capacity

### RESEARCH LOCATION

Upper Konto catchment is located in Malang regency, East Java, spanning elevations of 600-2800 m. The catchment's area is 233 km<sup>2</sup>, comprising two districts—Pujon and Ngantang—of 20 villages. Downstream of the catchment lies Selorejo reservoir.

The 260 ha reservoir was built in 1970 and provides many benefits to the surrounding community. Ngantang district (147.97 km<sup>2</sup>) is situated to the west of Batu.

The district has 13 villages. Pujon district (119.45 km<sup>2</sup>), with seven villages, makes up 2.61 % of Malang regency. Malang regency itself has an area of 4576 km<sup>2</sup>.

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**Figure 1.** Mahogany trees planted in a PHBM plot in Ngantang. The tree survival rate in this successful PHB program was approximately 91%

*Before the PHBM program, I was just a labourer and didn't have land of my own. Now, through the PHBM program, I can plant vegetables on Perhutani land. Besides planting vegetables, I am obligated to plant mahogany tree seedlings provided by Perhutani. I must take good care of them so they grow well. If the seedlings die, I have to replant”.*

*“I am very grateful, because since I became a member of PHBM I am able to cultivate Perhutani land. I can earn additional income for my family.*

This comment was made by a member of the successful PHBM program in Ngantang district.

*“My husband became a member of the PHBM program, but actually I would prefer not to plant seedlings given by Perhutani and instead plant only vegetables in the Perhutani plot. So, if the seedlings die, I just let them be and don't replant. If Perhutani staff check the field, they normally ask why the seedlings died and ask me to replant. I say to them that I will replant later, but I won't do it, because less trees in the plot means I can plant more vegetables”.*

This comment was made by a wife of the less-successful PHBM member in Pujon district.



**Figure 2.** An example of an unsuccessful PHBM plot in Pujon. The tree survival rate was only 51%

## PHBM in Brief

Pengelolaan Hutan Bersama Masyarakat (Community-Based Forest Management) or PHBM is a joint forest management system between Perum Perhutani (the state-owned forestry management company) and a given rural community. The system is based on shared management so that forests are maintained. The 'sharing' principle includes shared responsibilities, work, inputs and benefits.

The aim of the PHBM program is to integrate socio-economic community development and forest management systems<sup>1</sup>.

PHBM's goals are five-fold:

1. To improve the welfare, quality of life and socio-economic capacity of the community.
2. To increase the role of Perum Perhutani, the community around the forest and other stakeholders in managing the forest's resources.
3. To increase forest productivity, to improve the quality of forest products and resources, and to strengthen forest protection.
4. To encourage balanced forest and forest resources management that corresponds well with development in the area.
5. To create job opportunities and increase community and government income.

## Success and failure of PHBM

### Transfer of right of use

One of the aims of the PHBM program is to increase the welfare and livelihoods of the community living adjacent to the forest. However, not all households receive the right to use the Perhutani land through the PHBM program. There are four categories of citizen who are eligible to obtain use rights:

1. Poor
2. Landless
3. Jobless
4. Widowed

At the start of PHBM, there were many impoverished people in Ngantang and Pujon districts who joined the program and obtained the right of use from Perhutani. Later, however, many of the rights in Pujon were transferred from the poorest to wealthier community members. The poor called the money they received *collateral damage*. Yet a PHBM rule strictly forbade the transfer of right of use. Those people who had transferred their right now no longer have land to cultivate and can no longer gain additional income.

Most farmers who bought use rights did not understand PHBM rules, for example, planting and replanting tree seedlings. Their main goal in farming was to maximize profit, thus they chose to plant vegetables such as carrots, celery, potatoes and

**Table 1.** Result of regression analysis on factors affecting the success of PHBM program

Factors	Ordinary Least Square	
	Coefficient	t value
Constant	85.62***	7.99
Land obtained by buying use rights	-7.91**	-2
Land obtained from inheritance, profit sharing	-11.46**	-2.17
Knowledge (husband fully understood the PHBM program rules but wife lacks the knowledge)	17.91***	4.44
Knowledge (both husband and wife understood the PHBM program rules)	15.44***	2.98

\*\*\* significant at  $\alpha = 1\%$ , \*\* significant at  $\alpha = 5\%$

<sup>1</sup>Keputusan Ketua Dewan Pengawas Perum Perhutani/Chairman of Perum Perhutani Governing Body Decree Number 136/KPTS/DIR/2001

cabbage. A study examining the effect of land status on the success of the PHBM program suggested that farmers who obtained land from inheritance, bought the use right or profit-shared did not support the PHBM program. This had a negative effect on the success of PHBM, indicated by a low tree survival rate in Pujon (51%) compared to Ngantang (91%).

### Farmers' Knowledge

In Malang, before farmers signed contracts to receive the right of use, the Lembaga Kemitraan Desa Pengelola Hutan (Village Forest Management Partnership Agency) or LKDPH<sup>2</sup>, a non-government organization, worked to build cooperation between villagers and Perhutani. LKDPH also served as a forum for discussion among members of PHBM, since most are members of both.

Even though both Ngantang and Pujon each had branches of LKDPH, there were differences in the performance of the PHBM program. A study conducted in both villages revealed that the level of farmers' knowledge of the PHBM program itself influenced the program's performance.

In Ngantang, the majority of farmers knew of the existence of the program and its objectives, even though they did not know its specific name. In contrast, almost all respondents in Pujon knew neither the name of the program nor its objectives, owing to lack of promotion and education initiatives.

Knowledge of the program by both husband and wife had a strong influence on success. In Ngantang, the number of wives who had a good understanding of the PHBM program was larger than in Pujon.

More information about the PHBM program, particularly its impact on increasing farmers' incomes, motivated farmers to make maximum use of the program and the LKDPH to improve their own livelihoods.

### Farmers' level of trust

The level of farmers' trust of Perhutani staff also influenced the outcome of the PHBM program. In Ngantang, PHBM groups had better interaction with Perhutani staff, which increased mutual respect and trust. Meanwhile, in Pujon, there was a lack of interaction between farmers, LKDPH and Perhutani staff, with concomitant low trust levels and information flows. Farmers and Perhutani staff had different perceptions of the objectives of the program. Ultimately, the PHBM program in the area could not meet its objectives.

### Rules in farmers' group

In addition to a contractual agreement between Perhutani and PHBM members that specified each other's obligations and rights, farmers' groups also had their own rules to anticipate problems that might arise during the agreement period (see box for an example of rules from Ngantru village).

Rules made by PHBM members of Ngantru village, Ngantang, described the penalties for farmers who destroyed, tampered with or stole trees or seedlings in Perhutani Land/Forest.

1. Stealing trees with fruit, grass etc and pruning of leaves from trees, will be fined with maximum 10 sacks of cement or 5 trucks of stones.
2. Stealing bamboo and bung will be fined with 1 bamboo or 1 bung and 1 truck of stones or 5 sacks of cement.
3. Stealing forest trees owned by Perhutani will be fined with 20 sacks of cement or 5 trucks of stones. After the second time found conducting the activity in point 3, the accused will be reported to the police.
4. Inability to pay land compensation in time will be given the following sanctions:
  - (i) warning
  - (ii) payment later than 3 months of due date, use rights will be automatically void.
5. Penalty will need to be paid 1 week after sanction was decided. Inability to pay penalty in time, the accused will be reported to the police.



Figure 3. Farmers' group meeting in Ngantru to discuss and agree upon the groups' rules

<sup>2</sup>Outside Malang this institution is called Lembaga Masyarakat Desa Hutan (Village Forest Community Agency) or LMDH.

## ***Building farmers' capacity***

Building capacity within the PHBM program focuses on disseminating information about the program throughout the community, that is, its concept, objectives, policies, institutional schemes and procedures. The purpose of this is to increase knowledge of, stimulate discussion about, and participation in, Perhutani activities. If knowledge was widespread in the community and amongst farmers it was thought that the PHBM program would continue successfully.

Research in Ngantang and Pujon revealed that the amount of PHBM members in Ngantang who engaged with the information process was greater than those in Pujon. The program in Ngantang had greater success compared to Pujon. This stressed the importance of the information dissemination process prior to any PHBM program. Information needs to target both husband and wife because wives can communicate effectively to their husbands.

## **Conclusion**

The PHBM program aims to improve the livelihood of farmers living adjacent to forest areas in Java. It also intends to reduce conflict that has often occurred over state-owned land.

Several factors influenced the success of the PHBM program in Upper Konto catchment:

1. Transfer of right of use. Obeying the PHBM rule of not transferring use rights to others will ensure achievement of the program's poverty alleviation target.
2. Full understanding of the PHBM program increases awareness of the importance of maintaining environmental health and this has a positive impact on the success of the program.
3. Extension and level of trust of PHBM members towards Perhutani staff is also important to ensure the success and continuity of the PHBM program.



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