

Pak Sudardi and Jl. Bung Hatta  
II/6 Mataram, NTB, Indonesia  
Tel: 62-370-27386  
Fax: 62-370-27386  
E-mail: LP3ESNTB@mataram.wasanatar.net.id

Stream: Forestry  
Discipline: Natural Resource Management

**PARTNERSHIP ASSOCIATION FOR FOREST PROTECTION AND MANAGEMENT:  
BREAKING GROUND FOR COMMUNITY-BASED MANAGEMENT  
IN THE SESAOT PROTECTED FOREST AREA**

**Introduction**

This paper documents the efforts of a Forest Protection and Management Association established by a community bordering the Sesaot Protected Forest on Lombok Island, West Nusa Tenggara province. The Partnership for Forest Protection Group (KMPH) was formed in 1995 to protect the forest from illegal fuel wood and timber extraction, mediate community disputes with the Forestry agencies, and rehabilitate degraded forest patches through joint management approaches. The formation of this group is unprecedented in Indonesia and therefore faces tremendous challenges in gaining legitimacy across institutions and neighboring communities.

Located in an area of increasing population pressure and severe landlessness the basic conflict in Sesaot focuses on forest management, and is viewed as a change in the status of the area from production to protected forest. The conflict centres around five basic issues: 1) coffee taxes levied against farmers for contract gardens located within the forest, 2) wood theft and illegal trade, 3) disagreement over selection and management of reforestation species, 4) squatters living within the forest zone, and 5) access to land within the forest use (buffer) zone for agroforestry gardens.

Among the provinces of Indonesia, West Nusa Tenggara is classified as one of the poorest provinces in the country. This is evidenced by the very low per capita income (estimated at one fourth the national average), the highest infant mortality rate in the country (110/1000), and an illiteracy rate as high as 34%. The economic basis of the rural economy is agriculture, however the amount of land owned by families is very low, especially in the island of Lombok, which is estimated at less than 0.4 ha/family. As a result it is estimated that 40% of the poorest villages of this society are dependent on remaining forest resources.

The village of Sesaot which borders the Sesaot Protected Forest located on the southwestern slopes of the Mount Rinjani National Park, has a population of more than 11,000 people. Based on survey results, 71% of the residents of this village do not own any land and therefore are dependent on the forest resources for their survival. Approximately 125 families are still

illegally squatting within the forest, and about 15% of the forest is believed to have been converted to agroforestry gardens.

The Sesaot Protected Forest is home to more than 44 water springs and three major rivers which supply irrigation and drinking water for most of the population in the West and Central Lombok Regencies. Movement into the forest area began during the Dutch colonial period (1930ís) and after independence (1950s) because of employment opportunities in the local forest industry exploiting the natural forest. Further increases in the population occurred during the 1960s when the Forestry Department provided employment in reforestation schemes. At that time the forest was classified as production forest, and as such incoming populations had access to important forest products such as timber and firewood. At the same time migrant families were establishing economically valuable agroforestry systems with coffee, coconut, and other cash crops.

In 1982, the government of Indonesia (Forestry Department) changed the status of the Sesaot forest area from production to protected forest. This change in status was based on the importance of the hydrological functions of the Sesaot forest in serving the need for large scale irrigation schemes in west and central Lombok. The impact of the change of the management status of the Sesaot forest resulted in the alienation of settled communities from their economic base (67% of the village area is now located within the forest boundary). In an effort to remedy this situation, the local government issued a local ordinance granting each family a 0.25 ha plot of land within the forest boundary to grow coffee on a sharecropping basis with the government.

Under increasing pressure from government security forces (forest guards, local police, army) and elevating encroachment of forest resources by outsiders, community residents in Sesaot formed a Partnership Association for Forest Protection and Management. The association, which is an umbrella group of farmer groups and other professional groups within the community, was set up to protect the forest from illegal poachers, and increase income generating opportunities to its members through forest management activities. The group carries out regular patrols to identify poachers and bring them to trial at the community level. In the last two years, KMPH staged 7 timber theft trials at the community level and reported 14 other cases involving outside communities and corrupt government personnel.

LP3ES, a local NGO, has played a key role in facilitating dialogue between the Sesaot community and other key stakeholders such as the Forestry Service and the local government. Building informal relationships among stakeholders has proven an effective mechanisms for opening opportunities to experimentation with community-based approaches to forest management. In 1996, a 12 ha plot of degraded forest was allocated by the Forest Service to the KMPH for forest regeneration.

Despite significant achievements over the past few years, the KMPH faces three major challenges in effectively protecting the forest: 1) government security agencies are not ready to devolve authority to the Forest Protection Association; 2) existing institutions feel threatened by the emergence of communities taking on patrolling and sanctioning roles; and 3) the lack of law enforcement in penalizing timber poachers only serves to undermine community efforts and discourage groups such as the KMPH.

This case study offers important insights and lessons on the dynamics between the changing roles of the various stakeholders and the changing boundaries of the conflicts involved.

## **Background**

Efforts to integrate natural resources conservation with community welfare improvement have become one of the major challenges of this past decade. In Indonesia, between 12 and 30 million people believed to be living adjacent to forest areas are classified as living below the poverty line. In many cases, limited community access to forest resources has resulted in protracted conflicts between government agencies and local communities. The growing number of conflicts over natural resources management has led the government (Ministry of Forestry) to shift its approach to forest development policies. The National Development Guidelines (Garis-Garis Besar Haluan Negara or GBHN) and the Sixth Five-year Planning Period (REPELITA VI) have explicitly identified decentralization, poverty alleviation and environmental stability as fundamental considerations in the management of natural resources. These changes are reflected in recent pronouncements, policy initiatives and programs in Department of Forestry (Djamaluddin, 1995; Departemen Kehutanan, 1995; Departemen Kehutanan, 1996 *in* Fisher, 1996), and include the following general principles:

1. Integration of forestry development with regional and local development agendas.
2. Devolution of decision-making from the national to the local/regional level.
3. Strengthening of community participation in the planning and implementation of forest management programs, with an emphasis on increasing self-reliance.
4. Increased access to forest resources for low income communities.
5. The development of sustainable forest management approaches.

This emphasis suggests a conceptual reorientation from a conventional technical and productivity model to more sustainable forest management approaches, which include as objectives the amelioration of poverty in forest margin communities and, increasingly, elements of conservation. In this context, social forestry approaches which increase community participation provide an alternative (Fisher, 1996).

As a new concept, the application of the community forestry policy is still in the experimental stage, operating only in production forest areas in certain provinces. The principles on which the experiments are based are:

1. the application of community forestry must be in line with the social and cultural conditions of the community living in the forest area;
2. there is no standard format for the implementation of community forestry, but rather it should be based on the active participation of the community in all stages of its development, technical, as well as its formulation of a strategy.

In the context of the development of community forestry, the government is currently cooperating with non-governmental organizations in developing various models in the areas of production and protection forest.

## **West Nusa Tenggara**

The southeastern arc of islands east of Bali and northwest of Australia is known as the Lesser Sundas, or Nusa Tenggara. Administratively, the region is divided into three provinces, Nusa Tenggara Barat (West Nusa Tenggara, or NTB), Nusa Tenggara Timur (East Nusa Tenggara, or NTT), and the former Portuguese colony of East Timor (Timor Timur, or TimTim). The total area of West Nusa Tenggara is 20,153km<sup>2</sup> and is made up two major islands: Lombok and Sumbawa. Approximately 57% of the total area is classified as forest lands (1,063,273 Ha). Protected forests constitute 30% of the forested area (420,737 Ha).

The total population of west Nusa Tenggara province is 3.5 million people with a population density of 176 persons/ km<sup>2</sup> and a population growth rate of 1.56%. The distribution of the population is uneven between the islands, with Lombok having a population density of 526 persons/ km<sup>2</sup>. Major cultural groups include: Sasak and Balinese (Lombok); and Sumbawans and Bimanese (Sumbawa).

## **Economic conditions in Nusa Tenggara**

Most assessments have concluded that Nusa Tenggara is one of the poorest and least developed regions in Indonesia, noting the combined impact of physical isolation, inadequate infrastructure, and limited natural resources. Local incomes are approximately one-half the national average; infant mortality rates and illiteracy figures are among the highest in Indonesia.

Agriculture is the foundation of the rural economy, and shifting cultivation is still practiced throughout the islands of Nusa Tenggara. While paddy rice is cultivated in selected lowland areas, less than 2% of the arable land is suitable for irrigation. Farming systems are largely based on maize and cassava as the staple crops; in drier areas, maize is replaced with sorghum and/or millet as the principal grain. With the exception of the few irrigated areas, the production of basic food crops is at best a marginal enterprise. Reasons cited include both bio-physical (limited arable land, poor soils, remoteness and aridity) as well as economic and political factors (low investment, inadequate irrigation facilities, limited access to land).

Over the last decade, the tourism sector has provided an opportunity for the economic development of NTB. In concrete terms the growth of the tourism sector has increased employment and income opportunities for the population in Lombok. On the other hand, the growth of the tourism sector has resulted in large tracts of land being converted from agricultural production to recreational uses, thus marginalizing a significant section of the poorest. This has created pressure on forest margin areas which are looked upon as the last resort to sources of income by displaced communities.

## **Rinjani National Park, West Lombok:**

The Gunung Rinjani complex on Lombok Island is one of the largest volcanic mountains in Indonesia, reaching an altitude of 3,726 meters, and covering an area estimated at 125,000 ha. (Petocz, 1991). The dramatic beauty of the volcano, which includes a shallow lake within the caldera, and its proximity to the neighboring island of Bali, are two key factors in the area's having become a major tourist attraction for the province.

The complex also has significant conservation value, containing a broad range of floral communities (tropical and semi-evergreen to upper montane rainforest types). Zoological studies are being undertaken by the Western Australian Museum and the Indonesian National Museum in Bogor, and will likely add to the number of identified species - 33 mammals and 136 bird species have been reported in the area.

In addition to these important biodiversity conservation and tourism development aspects, the volcanic complex, located in the northern part of the island, is the major watershed for irrigation in the lowlands. The forest areas surrounding Mount Rinjani also provide the basis for the economic life in the communities which lie within and adjacent to the boundaries of the protected area. Local farmers continue to clear forest patches for their mixed agroforestry gardens (main crops include coffee, candlenut, vanilla, and a variety of fruit trees), and exploit the forest for fuelwood, timber, and fodder for livestock. Since 1993, LP3ES, a national NGO with a regional branch office in Lombok, has worked in selected forest margin communities surrounding the Rinjani complex.

### **Sesaot, Narmada District:**

The village of Sesaot (population 11,000) is located along the southern boundary of the Rinjani complex, just 20 kms. from the provincial capital at Mataram. Current conflicts over forest management in Sesaot date from the change of status of the forest zone from restricted production forest (*hutan produksi terbatas*) to protection forest (*hutan lindung*) in 1983 (Suhardi and Fisher, 1996). The reclassification of the Sesaot forest area was viewed by local government as a necessary step in protecting the upper watershed for the large High Level Diversion Project, which was designed to transport irrigation water from the northern foothills of Rinjani to the marginal drylands of southern Lombok.

This change in forest classification immediately resulted in the loss of access and income for residents of Sesaot, most of whom were initially attracted to the area for employment in local logging operations. The change in forest status also engendered significant new regulations and policies restricting local access to forest resources. These changes included: 1) restriction on cultivation of agroforestry gardens within the forest zone; 2) planting of mahogany as the main forest species, resulting in a more closed canopy and loss of opportunity for the cultivation and harvest of understory species; 3) the enforcement of a 50% tax on coffee yields from gardens within an identified "buffer zone," a major disincentive to local farmers; and 4) restrictions on the collection of all forest products, including fuelwood, fodder, and construction materials.

LP3ES began working in Sesaot in April, 1993, using an initial participatory appraisal to gain a sense of priority issues and begin developing working relationships with village leaders. The PRA resulted in a number of community development activities, including an irrigation system, the formation of farmer working groups and consumer cooperatives, and subsequently, the development of a Partnership for Forest Protection (*Kelompok Mitra Pengaman Hutan*). The Partnership has worked to limit forest theft, and has also addressed issues of corruption and harassment by public officials. In addition, the Partnership has sought (unsuccessfully) to gain legitimacy for fuelwood collection (the primary source of income for the community), and to obtain access to degraded sites within the forest for community reforestation efforts. LP3ES has continued to play an important liaison role between the community and government officials

(District, Provincial, and Regional) - facilitating public meetings, village studies, training workshops, and conducting regular shuttle diplomacy among the parties in Sesaot and Mataram.

### **Development of the Community Forestry Initiative**

Since 1993, LP3ES has worked in collaboration with the Ford Foundation to implement a program entitled “*Economic development of communities in forest border areas of Nusa Tenggara Barat*”. The aim of the program is to increase the role of communities in the management of protected forest resources, integrating the ecological importance of the forest with the communities living in the area.

The implementation of this development program has three focuses:

1. to increase the economic standard of communities through the expansion of non-forest economic activities;
2. improve conservation of forest resources through reforestation activities in critical lands and legal enforcement;
3. increase the role and function of local community organizations in managing and protecting forest resources.

The three aspects of the development program noted above are being conducted in coordination with the Department of Forestry both in the form of technical consultations and directly in increasing the effectiveness of the program output at the farm level. One concrete example of the cooperation between the Department of Forestry and LP3ES is the Community Forestry program in the protected forest of Sesaot.

The specific cooperation between the Department of Forestry and LP3ES involved the following stages:

#### **a. Farmer Cross-Visits**

Farmer cross-visits were one part of the program with the purpose of providing learning opportunities between farmers regarding forestry activities, group management and small scale businesses through the exchange of knowledge and experience with farmers from other locations. The cross-visits were also used as an opportunity for dialogue between farmers and government institutions concerning village development problems. During a cross-visit to Sumbawa in 1995, the farmers from Sesaot proposed to the Department of Forestry to develop a community forestry program for the critical areas of the protected forest in Sesaot. After intensive discussions, the Department of Forestry accepted the proposal in principle and recommended that the Sesaot farmers submit their proposal in writing.

#### **b. Discussion of Farmers' Proposal**

LP3ES facilitated meetings between the Department of Forestry and the farmers to discuss the proposal. There were two types of activities used in connection with the discussion of the proposal:

- Detailed discussion of the background, problems and ideas of farmers with regard to the proposed community forestry development. This process of discussion took place in the village involving all of the members of the farmer groups.
- Implementation of a field survey of the critical forest land which was proposed as the community forestry site in order to assess the technical appropriateness of the location.

#### c. Approval of Farmers Proposal

On the basis of discussions and a field survey, the Department of Forestry agreed to the farmers' proposal. A letter of agreement was drawn up in which the community forestry plot was to be managed as an experimental plot based on farmer self-reliance. The terms of agreement between the community and the Department of Forestry were as follows:

- The area of the community forestry project was set at 25 ha;
- The composition of species was set at 70% multipurpose tree species (MPTS) and 30% timber species. Tree spacing was set at 3 m x 3 m;
- The Department of Forestry retained ownership rights over the land and trees and the farmers had the right to harvestable non-timber products;
- The community was permitted to establish food crops on land with slopes less than 20% during the first three year period.

#### d. Developing a Management Plan

With the agreement from the Department of Forestry, the farmers held a meeting to formulate a technical management plan for the community forestry site. Some issues which were discussed in the meeting formulating the community forestry management plan included:

- Identification of farmers ready and able to manage a community forestry area. Some of the criteria used to select farmers were:
  - Priority given to farmers without land
  - Participants must be members of farmer groups established by LP3ES
  - Participants must be aware of the terms of agreement with the Department of Forestry
  - The division of land and organization of working groups for each farmer. With an area of 25 ha and a total of 50 farmers, each farmer would receive rights to manage 0.43 ha. Participating farmers were organized in 4 working groups to simplify the responsibilities for managing activities.
- The formulation of the technical management of the community forest included the type and composition of species and the system and scheduling of planting. The type of species to be established by the farmers were:
  - MPTS like durian, jackfruit, candlenut (*Aleurites moluccana*) and melinjo (*Gnetum gnemon*)
  - timber species such as mahogany and albizia
- Supply of species for the community forestry (CF) and food crops were supplied by farmers. On average every farmer needed 750 seedlings which were supplied by farmers, LP3ES and the Department of Forestry. The farmers supplied all the planting materials for the food crops.
- Farmers established groups following traditional customs in order to raise awareness among farmers. Important rules included:
  - Member farmers are not allowed to sell or exchange land granted to them in the CF area;

- Farmers who don't attend farmer group meetings three months in a row will have their land use rights removed;
- Farmers must report all tree poaching to the farmer groups.

#### e. Implementation of CF activities

In accordance with the schedule which had been agreed upon, farmers implemented the CF program in the following steps:

- Each farmer cleared and managed his/her plot individually. In connection with this, farmers are not allowed to clear cut any species which are protected or which are in good condition;
- Establish MPTS and timber species seedlings, prepare planting holes and seedling supports;
- plant tree species and food crops in rows.

#### f. Monitoring the Implementation of the CF Scheme

In order to increase the effectiveness of CF activities a routine system of monitoring was established to oversee its development and the problems arising at the farmer level. Three forms of monitoring were developed:

- Internal Group Monitoring where all participating farmers observe and evaluate how far each farmer is implementing community forestry activities according to the agreement. This monitoring is conducted during monthly farmer group meetings;
- Monitoring by LP3ES over the development of all activities of farmers and at the same time for providing guidance to solve technical and social problems in the management of the CF area. This monitoring has been conducted during weekly on-site visits. LP3ES carried out this monitoring in constant consultation with the Department of Forestry primarily to resolve policy-related problems;
- Monitoring by the Department of Forestry which is conducted on a three month basis to observe the development of the CF site. In addition, the Department of Forestry also held discussions with participating farmers primarily in connection with technical problems.

### **Development of a Community Organization for Forest Protection**

Along with the CF program other efforts to increase conservation measures in the protected forest included the development of a community group known as the Partnership for Forest Protection (KMPH - Kelompok Mitra Pengamanan Hutan). This group is an umbrella organization formed by representatives of each farmer group with the purpose of mitigating the illegal exploitation of trees for timber by local farmers as well as by outsiders. The group was set up to impose social sanctions on residence cutting down trees in the protected forest area. Three types of activities of the KMPH have developed over the years:

#### a. Forest Protection Patrols

Forest patrolling activities are conducted by the leaders as well as by the members of the KMPH group. The purpose of this activity is to identify and find facts in regards to poaching by



residents. If poaching is encountered, the group is top record the time, amount of timber cut, and the person caught poaching.

### b. Legal Enforcement

Based on the findings regarding the felling or theft of timber by village residents, then the KMPH group can take measures to enforce legal regulations. Two types of legal enforcement activities have been developed by the KMPH group to resolve cases of illegal felling and theft. These are:

- Cases involving theft by members of the community group: based on evidence of timber theft provided by the KMPH the thief will be brought before the group. The meeting is attended by community leaders, Forestry staff and police with the purpose of taking a decision in the form of social sanctions which will be imposed on the timber thief. The intended result is that the offender will be shamed and will not repeat the offence.
- Provide information on timber poaching activities to appropriate government institutions, such as the police and the Department of Forestry. This is done in cases where the KMPH does not have legal authority to impose sanctions on outside thieves or those involving government personnel. In these cases the police or the Department of Forestry takes legal action against the thief.

Over the past two years, the KMPH has already staged 5 timber theft courts and reported 14 cases involving outsider or government personnel.

## **Future Prospects and Challenges**

The LP3ES community economic development program in the village of Sesaot has developed a concept of integrating the conservation of forest resources with the importance of the economic needs of the community. In cooperation with the Department of Forestry the conservation of the forest has been reasonably successful as a result of both the community forestry scheme (which was recently accorded a 90% success rate) and the Partnership for Forest Protection group (KMPH).

Based on the CF case in the Sesaot Protected forest area implemented by LP3ES, the communities, and the Department of Forestry, a number of important issues have arisen which need further study for the future development of this program:

### a. Community Forestry Project

The community forestry project with the aim of rehabilitating critical lands is an appropriate approach to integrating the importance of conserving the protected forest area with the goal of fulfilling the economic needs of the local communities. This approach is very relevant as a measure to reduce tension and conflict between the community and the government arising out of the community's economic needs, and the governments inconsistencies in implementing regulations. However, future challenges in connection with community forestry activities include:

- The procedure for expanding the reforestation or community forestry area within the proposed forest is rather long and the technical requirements are still seen as being inflexible and too dependent on central government decision-making processes;
- A clear policy concerning the form of community participation in the management of protected forest resources, primarily using reforestation and community forestry methods, has yet to be defined.

#### b. Community Participation

The reforestation activities using participatory community forest techniques to conserve the forest is very effective in terms of both tree establishment and cost. The results from the monitoring activities indicate that tree establishment reached more than 70% with a cost of about \$US110/ha. This cost is far less than normal government reforestation program costs estimated at \$US310/ha. However the participation of the community in reforestation activities is greatly influenced by the following factors:

- Preparation and organization of the farmers who will manage the community forestry project from the stage of selection, farmer group development, formulation of a management plan, and through the monitoring and enforcement of sanctions;
- Providing economic incentives to farmers to properly manage the land in a community forestry project either in the form of income generating opportunities or food crop growing opportunities as in the taungnya system of reforestation.

#### c. Development of Community Organizations

The Partnership for Forest Protection (KMPH) is one form of community organization in West Nusa Tenggara which has been empowered to enforce laws regarding the illegal felling and theft of timber species. As the Department of Forestry has limited staff to protect the forest, the KMPH is an effective partner in assisting activities to protect forest resources. The challenges of developing a Forest Protection group include:

- Security agencies are not yet willing to relinquish or share the role and responsibilities of taking legal action with the community KMPH group;
- The police and justice authorities have yet to provide legitimization of the KMPH group and the sanctions it applies to offenders.

#### d. Government and Non-Government Cooperation

Increasing community participation in the management of forest resources to conserve the environment and meet the social and economic needs of local communities requires strong cooperation between NGO's and government agencies. Effective collaboration requires the development of a culturally appropriate and informal mechanism for communication and coordination. Experience indicates that the changes in forest management practices and policies will be difficult to accommodate community needs if:

- The relationship between the government and the NGO is polarized and approached from a politicized perspective. Resolving problems involving policy requires mechanisms involving intensive consultation and the building of personal relationships;

- The concept of a program is not based on the directions and priorities of government policies.

## **Conclusion**

The development of protected forest areas in critical watersheds which aim to conserve water resources must deal with the problems of increasing population pressure resulting from natural population increases or migration caused by poverty in other areas. In the province of West Nusa Tenggara, nearly 40% of the poorest communities are situated in or near forest areas.

Improving community participation in the management of forestry resources using community forestry techniques is one small part of the effort to create community social and economic prosperity. The development of a community forestry program must be integrated with economic factors including market opportunities and programs to provide access to cheap credit.

Investment of the government in the development of protected forest areas in important parts of a watershed must equate inputs in the development of communities in the forest area with the value of water resources which are used to profit the general public for their irrigation and drinking water needs. The economic value of the profits from these water resources should be used in the development of programs for villages in forest areas.