

Forest Management in Java 1975 – 1999
Towards Collaborative Management

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Introduction

This paper provides an overview of the evolving management approach of the State Forest Company (SFC or *Perusahaan Umum Perhutani (Perum Perhutani)*), which manages Java's vast forest estate. Over the past twenty years, the SFC has launched various programs aimed at simultaneously raising national revenues from timber harvest and achieving improved economic and social welfare for the communities living within and around the state forests. On Java, approximately six thousand villages with a total population of 30 million people are located in the vicinity of forest land and about 20-30% of them are classified as poor. The objective of examining the progress and shortcomings of the ongoing management approaches in Java's state forestry sector is to stage a discussion on the future direction of Java's forest management.

The paper is divided into five chapters as follows. Chapter One examines the evolution of forest management in Java by analyzing the various programs launched by the SFC from the early 1970s to the present. Chapter Two introduces the objectives and management structure of the SFC. Chapter Three describes some observation of different categories of forest village community in their experience with social forestry programs launched by the SFC. Some observation is also made on the effects of the 1997-1998 economic crises on the forest and forest village communities in Java, with particular attention focused on the role of forest management in times of crisis. Four village cases are presented, representing the various impacts of the crisis on rural communities. Chapter Four presents key lessons learned from the SFC's experimentation with various management approaches, while Chapter Five discusses recommendations, preconditions and policies that the SFC must put place in order for a people-oriented forest management approach to be effective.

I. Forest Management and Community Participation in Java

This chapter provides an overview and critique of the four community welfare programs launched by the SFC over the past twenty years from the "Prosperity Approach" to the Integrated Forest Village Development Program (PMDH-T), which incorporates the concept of social forestry. Before embarks to those programs a short description will be provided on the socio-economic character of the forest village communities. Those are communities that live near and inside the forest, interact continuously with the forest and become the primary subject of the SFC community welfare programs

Socio-Economic Character of Forest Village Communities in Java

While no systematic survey of the economic resources of forest village communities in Java has been conducted to date, these village communities can be categorized as belonging to the economically disadvantaged segment of the rural population. Approximately 6,000 villages are located within or on the borders of Java's state forest area, with an estimated total population of 26 million in 1979.

In densely populated Java, forest land is typically located in hilly areas with poor soil. The agricultural resources of most forest villages are dominated by dry land, which in most cases, is inadequate to support a household beyond subsistence levels. At present, many villages inside and around the state forest have no agricultural resources at all. Typically, a large portion of the forest

village's administrative territory is occupied by state forest land, the management of which lies solely in the hands of the State Forest Company (SFC).

Although comparatively poor in resources, forest village communities are not economically homogenous. Socio-economic and political processes stemming back several generations act as forces to differentiate the community into socially and economically distinct status groups, each with their own interest and strategies. The omnipotent government administration over the past 30 years has created a situation where concentration of economic and political power within a small group of village elite had free reign. It is this economic and political structure that must be taken into account when participatory forest management is discussed.

Early Community Development Programs

The Japanese occupation (1942-1945) and the short independence struggle that followed inflicted much destruction on the forests of Java. An estimated 220,000 hectares of state forest were destroyed or damaged, approximately half of which were occupied or deforested by villagers and the Independence army. One of the first tasks that the forest office of the new republic of Indonesia set for itself was to establish the state forest boundaries and targets for production of timber, charcoal and fire wood. The new government stressed the importance of the production of fuel wood for the railways. Young nationalist foresters, who were aware that increasing population density and poverty were the factors behind forest destruction, also called for more consideration to be given to forest planning and management to benefit the interests and needs of the forest village communities. New directions for the forest office mandated at a 1946 meeting in Malang, East Java, called for a shift from trade and export orientation toward fair and inexpensive distribution of wood directly to the people. This mandate also called for enlisting village leaders and the military to reforest 102,000 hectares of forest land that had been 'illegally' occupied by forest villagers (for a comprehensive account see Peluso, 1992: III/4)

In its early years, the forestry office of the newly formed republic was marked by tension and ambiguity between continuing the old extractive paradigm of forest management developed by the Dutch and developing a more people-oriented management approach. However there is no clear concept at that time of how the people-oriented approach was to be translated into actual programs.

Initially, the *tumpang-sari/taungya* system was introduced as a means to harness cheap labor for the development of forest plantations and was not intended as a poverty alleviating mechanism (For further explanation, see boxes 1 and 2 below). When the *taungya* system was introduced in the 1920s, farmers were free to choose the size and location of the forest block in accordance with their ability to manage it, which could reach to 1 ha or more. As the population grew and agricultural land came under more and more pressure, applicants for *tumpang-sari* plots grew accordingly. To absorb the growing need for agricultural land, the size of the forest *tumpang-sari* plots was decreased, first to 0.5 ha per household and later to 0.25 ha and less.

The decrease in size of the *tumpang-sari* plots marks a major shift in the role of the *tumpang-sari* system from a source of cheap labor for reforestation towards a mechanism for the alleviation of poverty (Hasanu Simon, 1993:64). Ironically, the decrease in the size of the plots led to the inability of the plots to provide a significant source of economic support to a poverty stricken household.

The growing economic pressure on the forest village population can be seen in the pattern of illegal timber cutting. The 1950s are marked by two periods of increased timber theft from state forest lands. The first occurred during the dry (*paceklik*) season - when rice reserves had already been consumed and people were still awaiting the new harvest. The second occurred during the time of the year perceived as auspicious for weddings and other celebrations that is when people needed particularly large amounts of money in a short time.

From the 1960s onward, the distinction between these two peak periods becomes blurred, and timber theft increasingly becomes practiced all year long. Hasanu Simon points to the increasing economic

pressure on village people as the chief reason for this (Hasanu Simon, 1993:67). From the 1980s onward, other reasons can be added, such as the need for raw materials for the small and medium wood working industries in Jepara and other locations, especially in Central Java.

The increased demand for *tumpang-sari* plots and the increased pressure on the forest that is reflected by the expansion of illegal logging signaled the need for a new approach to forest management. Starting in mid-1970s, the question of the village forest communities' welfare steadily gained more serious attention from the FSC.

Prosperity Program

In 1974, the SFC launched the Prosperity Program, the main objective of which was to increase the welfare of the forest village community through the development of agroforestry on state forestland and exploitation of all opportunities available to the village. The program relied on the close cooperation between the local SFC administrator (the *Mantri*) and the village head (the *Lurah*), which later the abbreviation MALU became the popular name of the program.

The program had two components, forest-based and non-forest-based activities (See boxes 1 and 2 below), both of which were seen as being integral to boosting the economy of the forest villages. However, the SFC planned and executed the Prosperity Program without engaging specially trained extension workers and facilitators. The program simply became an additional work load for SFC's personnel, especially those who were directly responsible for the implementation of forest-based management activities. Consequently, due to the limited staff and budget of the SFC, the program never outgrows its pilot project character and was always implemented on a small-scale.

Box 1: Prosperity Program– Forest-Based Component

FOREST-BASED COMPONENT	
▽	The <i>Tumpangsari</i> (<i>Taungya</i>) system was originally intended to keep the cost of forest replanting low. It was implemented to boost farmers' production and income through the provision of subsidized high quality seeds and fertilizers and extension.
▽	Silvicultural experiments to facilitate <i>tumpangsari</i> include:
§	Increasing the planting distance between forest trees and introducing new pruning methods to allow more sun to penetrate so as to facilitate the growth of seasonal plants.
§	implementing <i>taungya</i> in forest lands where teak is grown. This system provides farmers with about 1.5 to 2 years longer for teak cultivation.
§	creating a 50 meter broad buffer zone of trees for fuel wood for the villagers.
§	planting medicinal plants between the forest trees.
§	planting elephant grass on the forest margin and distributing elephant grass plantings to farmers.
▽	Ecotourism development:
§	Setting up camping grounds in the forest and mapping out routes for forest walks to create additional employment and income generating activities for villagers through ecotourism.

Additionally, in line with the paternalistic approach that the government adopted towards the village community, all the program initiatives originated from the FSC, such as the selection of the seasonal *tumpangsari* plants and the type and site selection for the placement of village infrastructure. Based on government's understanding of the concept of community participation at that time, the community was expected to accept and participate in the program's implementation.

To its credit, however, the Prosperity Approach was an attempt to break from the conventional forest management approaches of the past. The Prosperity Approach did acknowledge that a close

relationship exists between the sustainability of the forest and the welfare of the surrounding communities.

Box 2: Prosperity Approach – Non-Forest-Based Component

NON-FOREST-BASED COMPONENT

- ▽ Developing sericulture: In an attempt to create employment and a new source of income generating activities for farmers, the SFC:
 - § helped farmers plant mulberry trees to produce silk worm and built facilities to spin silk.
 - § developed and promoted modern beekeeping techniques for farmers, taking advantage of the forest as source of honey.
 - § distributed tree seedlings to farmers to be planted within the village as source of fuel wood, fodder and timber.
 - § provided clean water facilities.

Forest Village Community Development Program

In 1982, the Prosperity Program evolved into the Forest Village Community Development Program (*Pembangunan Masyarakat Desa Hutan* or PMDH), which entailed a more integrated approach to community development via closer cooperation with the regional government, which is the real custodian of the village community.

The PMDH continued to acknowledge the vital relationship between the economic welfare of the forest village community and forest productivity and sustainability that was recognized by the Prosperity Program. In addition, the PMDH did not regard forest village community welfare as an isolated problem that was the sole responsibility of the SFC, but as a broader and integrated part of regional socio-economic dynamics. As such, all socio-economic activities directed toward poverty alleviation and community development of forest village communities were to be treated as part of regional development activities carried out in coordination and cooperation with other government offices and agencies.

To facilitate this more integrated approach, the SFC formed a new subdivision called the Environmental Development Subdivision (*Bina Lingkungan*). All of the activities of the Prosperity Program were incorporated into the PMDH approach. The primary difference between the two programs is the greater scale and volume of PMDH's activities, which arose partly as a consequence of the inclusion of PMDH into the regional development program.

Although the PMDH appeared to be an appropriate response to address increasing pressures on the forest, the program's outcome was far from satisfactory. Both internal and external factors associated with the SFC are responsible for the program's failure. First, the adaptation of the SFC's apparatus from a purely business interest and technical forest management approach to a more social approach was problematic. Community development programs continued to be paternalistic and top-down with no community involvement in decision-making processes regarding the content of the development programs. Second, despite PMDH's intent to integrate the involvement of other government offices in the development program, the largest part of the work, especially the financial burden, still fell on the shoulders of the SFC. Third, the first two factors mentioned above did not exist in a vacuum. That is, the government's overall approach to the question of rural development continued to be technocratic and top-down in nature, emphasizing technical solutions while neglecting or consciously suppressing socio-economic structural changes, local empowerment and autonomous local initiatives.

The PMDH was soon accompanied by a new approach to forest management, known as social forestry (*Perhutanan Sosial*), which implied a more participatory approach and the adoption of more flexible and innovative agroforestry techniques.

The Perhutanan Sosial Program

The *Perhutanan Sosial* program is derived from the Social Forestry concept first coined by Westoby in 1968 in the 9th Commonwealth Forestry Congress in New Delhi. Although the term ‘social forestry’ is frequently used as the English translation of the Indonesian concept of *Perhutanan Sosial*, the two concepts are not entirely interchangeable. According to the SFC’s official definition, *Perhutanan Sosial* is a: “forest management system through the participation of forest village communities, which are perceived as partners in forestry activities, such as planting, maintenance, harvesting, production, marketing and forest security”¹. The definition of Social Forestry by Tiwari (1983) is presented here for the sake of comparison: “Social forestry is the science and art of growing trees and/or other vegetation on all land available for the purpose, in and outside traditional forest areas, and managing the existing forest with intimate involvement of the people and more or less integrated with other operations, resulting in balanced and complementary land use with a view to provide a wide range of goods and services to the individuals as well as to the society”².

The PMDH continues to be the SFC's overall approach to forest management. However, the PMDH now has two components: 1) the *Perhutanan Sosial*, which constitutes the concept and program of forest management inside the state forest area³, and 2) the economic aid-component (*Bantuan Ekonomi*), which consists of activities lying outside the state forest area. This includes support in the realm of public services and technical aid to local economic enterprises, such as training and extension.

The launching of pilot *Perhutanan Sosial* programs received special attention and support from The Ford Foundation. The role of The Ford Foundation has been important especially in the socialization of the concept within the SFC, the research stage in cooperation with several universities in Java (the Bogor Agricultural University, the University of Gajah Mada, the University of Diponegoro and the University of Brawijaya) and in integrating NGO's as partners of the SFC in the field.

Box 3: Main Features of Perhutanan Sosial

Community Development Component

- ▼ The inclusion of universities for the first time to conduct diagnostic, monitoring and evaluation studies in the fields of socio-economics and bio-physic/forestry research.
- ▼ The inclusion of non-governmental organizations (NGOs) to help the SFC socialize its staff in participatory methods and approaches and in the role of motivators and consultants to farmers.
- ▼ The formation of forest farmer groups to organize farmers who are active in *Perhutanan Sosial* programs.
- ▼ The introduction of Rapid Rural Appraisal techniques for diagnostic studies of forest villages conducted by SFC staffs. This was later replaced by Participatory Rural Appraisal methods.

The *Perhutanan Sosial* program incorporated many more strategies and mechanisms than previous programs and approaches in an effort to ensure that effective community participation occurred in the planning as well in the implementation stages. An example of this is the innovation in agroforestry to allow the forest to become productive for the village community for the whole tree rotation period. Elements of this innovation includes: larger spacing between trees to allow more sun light and the possibility to plant seasonal crops for a longer period than before; the combination of forest tree species with multi-purpose tree species (MPTS) which products such as fuel wood, fruit, fodder belongs to the local community. The idea is to allow a continuous flow of benefit from the forest to

¹ Perum. Perhutani, 1997: Pedoman Pembinaan Masyarakat Desa Hutan Di Perum. Perhutani. PHT 54 Seri Produksi 99.

² Ibid., 1992: Pedoman Umum Pelaksanaan Perhutanan Sosial. PHT 85 Seri Produksi 62.

³ Ibid.,1997; Ibid.,1992.

the local people. This agroforestry innovations represents a big step forward in comparison with the past *tumpangsari/taungya* system, which only allowed farmers to make use of forestland for two years. However, despite the larger spacing between trees, planting seasonal crops only proved to be feasible for a maximum of four years. After that farmers have to rely on the products of the Multi-Purpose-Tree-Species. Which in spite of some success stories, in most places proves to be poor in quality (especially when it comes to fruits) and quantity?

Amidst increasing pressure on Java's forest resources due to population pressure and deteriorating socio-economic conditions, the *Perhutanan Sosial* concept was first developed and promoted in 1984 by Ir. Mulyadi Bratamihardja, who was then head of the SFC's Forest Development Division (*Divisi Pembinaan Hutan*).

The *Perhutanan Sosial* program commenced with diagnostic studies conducted by undergraduates, master and doctoral students from the University of Gajah Mada, the Bogor Agricultural Institute and the University of Pajajaran. This was followed by the selection of 13 pilot project sites, covering a total area of 246.5 ha throughout Java, and involved 702 farmers organized in 47 forest farmer groups. Program implementation in the pilot sites commenced in 1986.

Encouraged by the success of its first year, the program expanded its coverage in 1987 to 1,046 ha and included 31 forest districts. It was projected that from 1989 onward the program would scale up from the pilot level and become institutionalized as part of the SFC's routine forest management system. To achieve this, the SFC made organizational adjustments, such as facilitating collaboration between the *Perhutanan Sosial* extension workers and NGOs. The curriculum of the SFC training school was also enriched with Social Forestry concepts. Booklets were developed on technical and operational guidelines to help the SCF functionaries implement the principles of Social Forestry.

In general, the *Perhutanan Sosial* program succeeded in raising the incomes of the participants. However, according to studies from early 90th contribution of income from the *Perhutanan Sosial* program to the total household income differs greatly from place to place, ranging from 6.6% to 66.6%. Further is was observed that distribution of forest allotments tend to be biased toward the better-off participants in terms of size as well as quality of allotments (Kartasubrata cs.1995: 42). Recent evaluation reports stated that products from forest allotments comprise 26% of the household income. But decreasing from year to year and ended to give additional income after the 4th year. Beside additional income from forest land however local communities get benefit from other components of the program such as cheap credit, technological support and infrastructural development (for more detail see chapter III).

Box 4: Main Features of Perhutanan Sosial

Agroforestry component

- ▽ Innovations in agroforestry allow farmers to make use of forestland for agricultural objectives throughout the entire tree rotation period. The space between the forest trees was broadened to allow light to penetrate, allowing agricultural activities to take place between the trees.
- ▽ Agroforestry systems were adapted to the local ecosystem and socio-economic needs of the people.
- ▽ The Multi-Purpose-Tree-Species system was included into the agroforestry system, the products of which (e.g., fruit, branches, leaves) belong to the forest village people, with the exception of timber.
- ▽ The construction of terraces for soil and water conservation, using local wage labor, was a prerequisite for agroforestry. The terraces add to the value of the land for agriculture practices.
- ▽ Subsidized agricultural inputs for agricultural practices in forest land were provided under the *Perhutanan Sosial* program (e.g., fertilizers, seeds, tree seedlings).

Integrated Forest Village Development Program (PMDH-T)

After the first five years of implementation of the combined PMDH/*Perhutanan Sosial* program, two conclusions can be drawn. First, the combination of a more innovative agroforestry system and participatory approach succeeded in increasing the benefit from state forest land to the forest village community. A further positive effect is the decrease in timber theft and cattle grassing in location where the program is implemented. Second, participation in forest related activities decrease after the forest allotments cannot be planted with seasonal crops and cease to give additional income after the 4th year due to overshadowing. Third, although the benefits of *Perhutanan Sosial* program to the village community and the SFC has been demonstrated, the coverage is too limited to produce significant results beyond the pilot project scale. As of 1995, nine years after the *Perhutanan Sosial* concept was implemented, the PMDH/*Perhutanan Sosial* program only covered 42,290 ha of forest land, which represents a mere 2.3% of Java's total production forest. The program involved 21,600 households, which represents only 0.4% of the total households residing in Java's 6,100 forest villages.

Based on these conclusions in 1995, Ir. Mulyadi Bratamihardja, who was then vice chairman of the SFC Management Committee, suggested a reconceptualization of the PMDH/*Perhutanan Sosial*. His main considerations at that time were three-fold: 1) forest development cannot be separated from the overall development of natural and human resources and the whole should be considered as one ecosystem; 2) in the context of administrative jurisdictions, forest management and forest village development should be integrated into regional development; and 3) human and natural resource development is a multi-sectoral enterprise that is best be coordinated by the local government.

Based on these considerations, a renewed concept was introduced, which became known as Integrated-Forest Village Community Development (PMDH-Terpadu). Under this new concept, the coordination function was placed in the hand of the local government, while planning and implementation was to be carried out cross-sectorally with SFC in the leading role.

Under the Integrated-Forest Village Community Development concept, the Java's forest lands are divided into three systems of forest establishment:

1. Forest land without significant social and population pressure: Spacing and method of maintenance follows conventional ways. In general, the forest stand consists of a single species, narrow spacing and the implementation of *tumpangsarilitaungya* system for a maximum of two to three years.
2. Forest land with high social and population pressure: Implementation of social forestry approaches, including agroforestry systems. Mixed stands of forest trees and Multi-Purpose-Tree-Species with fruit trees as the main trees. The spacing depends on the tree species utilized and the rows should follow an east-west direction.
3. Forest with very high social and population pressure: Implementation of social forestry approaches, including agroforestry systems. The implementation of 20% buffer zone with Multi-Purpose-Tree-Species and fruit trees as the main trees. The spacing depends on the tree species utilized and the rows should follow an east-west direction.

The Integrated-Forest Village Community Development concept and program received enthusiastic support from the provincial government. The governors of Java's three provinces issued special directions for all relevant sectors and echelons of the provincial government to support the program. A special coordinating body was established to ensure cooperation between sectoral offices and the SFC. Planning for community participation in forest management and in non-forest based activities was integrated into the overall planning of the village development, and processed through the established consultation processes from the village to the district level.

In a span of 13 years (1986 - 1999), from the early implementation of *Perhutanan Sosial* to the start of the Integrated-Forest Village Community Development, the social and participatory approach to forest management has successfully reached 65,318 ha of forest (53,505 ha of terrestrial forest + 11,813 ha of mangrove forest), but which only represents 3.6 % of Java's total production forest. Around 184,723 farming households are involved, which is approximately 3.7% of the total forest

village households on Java. These figures clearly convey that the road to more socially appropriate forest management in Java is still long and difficult.

Box 5: Main Features of the Integrated-Forest Village Community Development

Agroforestry Component

- ▽ Establishment of a buffer zone covering 20% of area to be reforested under agroforestry with Multi-Purpose-Tree-Species as the main trees. It was hoped that the planting of fruit trees separately from the forest trees in the Multi-Purpose-Tree-Species system would lead to higher yields.
- ▽ Development and expansion of suitable agroforestry into private land.
- ▽ There are forest districts that already experimenting with planting timber species between the main tree species, opening the prospect of timber harvesting on forestland by local community.

Non-Forest Based Component

- ▽ Integration of forest village development into regional development with the local government as the coordinator of all sectoral agencies.
- ▽ Intersectoral planning and implementation of regional development programs.
- ▽ Empowerment of village institutions, such as Village Consultation Institution (*Lembaga Musyawarah Desa/LMD*) and the Village Community Development Institution (*Lembaga Ketahanan Masyarakat Desa/ LKMD*) and the Forest Farmer Groups.
- ▽ Inclusion of Participatory Rural Appraisal and Participatory Planning principles into regional development planning.
- ▽ Creation of employment and business opportunities by integrating local communities into every aspect of forest management.
- ▽ Promotion of home industries and local cooperatives.
- ▽ Improvement of human resources through training and other means of knowledge extension.
- ▽ Better distribution of the benefits of and responsibilities for the forest between the local government, forest village community and the SFC.

II. The State Forest Company: Production, Profit and Welfare

The State Forest Company (SFC or *Perusahaan Umum Perhutani (Perum Perhutani)*) that manages Java's vast forest estate has the dual yet contradictory task of securing profit for state coffers from the timber harvested from state forestlands while simultaneously improving the social and economic conditions of communities living within and around these same forestlands. In the three decades following the rise of the New Order, timber production and profit have become the SFC's primary objectives, superseding the goal of improving social conditions and community welfare. This chapter briefly describes the objective and structure of the SFC and its scope of work.

The Company Vision And Mission

Established by virtue of Government Regulation No. 15/1972, the SFC is charged with the responsibility of managing Java's entire production forest estate measuring 1,837,280 ha. This represents approximately 61.5% of Java's total forest area, which stands at 2,988,222 ha. Initially, the SFC's mandate only included state forestlands in Central and East Java, but in 1978, it was extended

to include West Java as well. Forest areas not included in the SFC's mandate are forest areas that function as natural protected areas, nature reserves and hunting grounds. These forest areas fall under the jurisdiction of the Directorate General of Protection and Conservation of Nature.

The SFC's primary forest management activities cover the following operations: a) planning of forest certification, forest utilization and preparation plans; b) reforestation, (e.g., replanting forest areas after exploitation or forest fire); c) forest maintenance; and d) forest extraction.

An integral part of SFC's forest management role includes the management of forest product processing industries, such as teakwood sawmills, integrated teakwood processing industries, pine resin factories, cajuput oil factories, silk yarn spinning mills and shellac factories. The SFC's integrated teakwood processing industry in Cepu, Central Java, produces plywood, parquet, wall panels, complete doors, furniture components and sawn timber. These products are sold in both national and international markets.

The SFC's objective as stated in one of its earlier publications is to "undertake productive efforts in pursuit of the government's policy in the context of improving the national income by way of conducting productive activities in the field of forestry in the form of planting, maintaining, exploiting, processing and marketing forest products". However, the SFC is burdened with the dual yet contradictory task of 1) "gaining profit on behalf of the state and accumulating corporate capital" and 2) "carrying out efforts to improve the social conditions of the people around the forests" (Perum. Perhutani, 1981).

Over the past thirty years, the goals of production and profit have superceded the goal of improving social conditions and community welfare. The promotion of personnel was and still is heavily based on performance related to the accomplishment of production objectives more than any other criteria. Furthermore, for many SFC personnel, the involvement of local people in the routine forestry-related activities is interpreted as a satisfactory effort on the part of the SFC to improve the socio-economic conditions of the local population. Local people are involved as laborers in replanting, maintaining the forest, and harvesting timber. Local people are also granted the right to plant seasonal crops using the *tumpangsari/taungya* system. *Taungya* is a combined stand of woody and food crops or agricultural species during early stages of reforestation (or establishment of plantations) (Nair, '89:56). This type of local involvement, however, has been part of the forest management system since the Dutch colonial era and does not represent any new attempt at improving social welfare.

SFC's lack of community participation and ineffectual efforts to improve community welfare only began to be challenged during the mid 1980's when more participatory approaches to forest management started to gain influence. To facilitate implementation of more participatory approaches into its programs, the SFC established cooperation with *Bina Swadaya*, a non-governmental organization specialized in community development and human resource training, and the Bogor Agricultural University (IPB) for research support. This experiment in participatory forestry management received financial support from The Ford Foundation. Social Forestry Field Workers (*Petugas Lapangan Perhutanan Sosial/PLPS*) were trained by *Bina Swadaya* for a six week period before being placed in their respective field assignments. Cooperation was also established with other local NGOs, which together with *Bina Swadaya*, assisted the SFC in community development activities. More detailed analysis on the success and failure of these programs can be found in the next chapter.

The SFC's recently renewed statement of the company vision and mission as of 1999 should give more impetus for the participation of forest village community in forest management and in sharing its profits: a) management of forest resources as an ecosystem; b) management of forest resources in an just and democratic ways; c) management of forest resources for community welfare; d) professional management of forest resources; e) emphasis on the obligation of the SFC to the people (Perum. Perhutani, 1999:13).

SFC's Organizational Structure

The SFC's total personnel in 1980 is 401,293, divided evenly between its three units in Central Java (Unit I), East Java (Unit II) and West Java (Unit III). The structure of the SFC is shown in Figure I (Himpunan Leaflet, 1974-1981)

The SFC recruits the majority of its personnel through its two forestry training centers at Cepu (Central Java) and Madiun (East Java). The teaching staff at these training centers come from within the SFC itself as well as public and private universities, such as the Bogor Agricultural University (Institut Pertanian Bogor/IPB) and Pajajaran University in West Java and Gajah Mada University in Central Java. Since the introduction of participatory approaches to forest management in the 1980's, the curriculum of these training centers have been enriched with courses such as Participatory Rural Appraisal and management concepts such as Social Forestry.

The SFC is governed by a Board of Directors and a President Director. The Board of Directors and the President Director are appointed and dismissed by the Minister of Finance based on the recommendation of the Minister of Agriculture and Forestry.

A management committee was established in 1994 to assist the SFC's Board of Directors with policy matters concerning the implementation and monitoring of the participatory approach to forestry management. Members of the management committee consisted of SFC officials, staff members of universities and NGOs. The management committee ended its task in 1998 with the termination of the financial support of The Ford Foundation.

Figure I. Structure of SFC

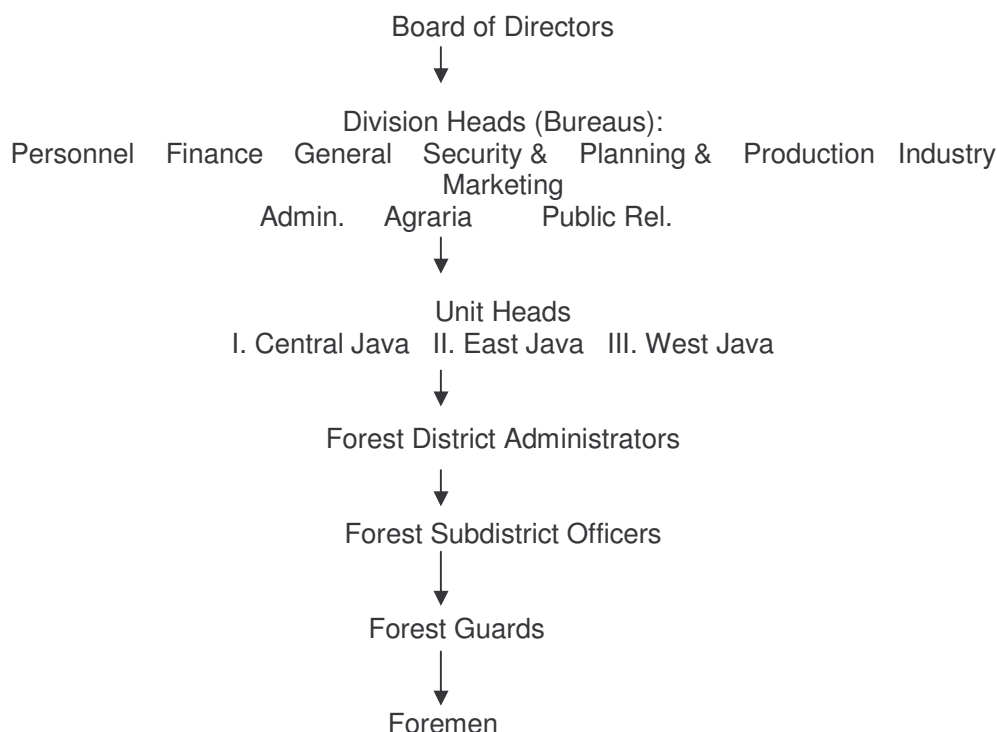


Table 1: Forest area in Java categorized as production and protection forest

Category	West Java (Ha.)	Central Java (Ha.)	East Java (Ha.)	Total (Ha.)
1. Province	4,710,942	3,450,300	4,942,583	13,103,825
2. Production Forest:				
- Teak Forest	170,570	304,562	578,580	1,053,712
- Non-Teak*	215,289	274,693	293,586	783, 568
Totals	385,859	579,255	872,166	1,837,280
3. Protection Forest:				
- Protection Forest	322,250	74,818	334,274	731,342
- Nature Sanctuary	259,991	1,608	158,001	419,600
Total	582,241	76,426	429,275	1,150,942
Forest Total	968,100	655,681	1,368,441	2,988,222
Forest in %	20.55	19	27.61	22.80

Source: **Himpunan (?)** Leaflet 1974-1980

*) Non-Teak Forest: Broadleave & Coniverous forest
Java island: 13,103,825 ha.

Socio-Economic Character of Forest Village Communities in Java

While no systematic survey of the economic resources of forest village communities in Java has been conducted to date, these village communities can be categorized as belonging to the economically disadvantaged segment of the rural population. Approximately 6,100 villages are located within or on the borders of Java's state forest area, with an estimated total population of 26 million.

In densely populated Java, forest land is typically located in hilly areas with poor soil. The agricultural resources of most forest villages are dominated by dry land, which in most cases, is inadequate to support a household beyond subsistence levels. At present, many villages inside and around the state forest have no agricultural resources at all.

Although comparatively poor in resources, forest village communities are not economically homogenous. Socio-economic and political processes stemming back several generations act as forces to differentiate the community into socially and economically distinct status groups, each with their own interest and strategies. The omnipotent government administration over the past 30 years has created a situation where concentration of economic and political power within a small group of village elite had free reign. It is this economic and political structure that must be taken into account when participatory forest management is discussed.

Typically, a large portion of the forest village's administrative territory is occupied by state forest land, the management of which lies solely in the hands of the State Forest Company (SFC).

III. THE FOREST VILLAGE COMMUNITY: A RECENT OBSERVATION

The Impact of Indonesia's Economic Crisis on the Forest

The effect of Indonesia's economic crisis (1997 to the present) on the rural population and the agrarian sector can be seen from the following statistic: during the period of 1997 – 1998, 4.2 million people above the age of 15 years lost their job, but during the same period the work force in the agricultural sector rose by 4.6 million! Obviously a greater part of the unemployed went back to their villages in the rural area. That is way the agricultural sector was hailed as the savior of the Indonesian work force (Kompas 3/4/99). However, this increase in the agricultural workforce in Java increases the pressure of an already overburdened sector.

The economic crisis that brought the down fall of Suharto and the political crisis there after, led to economic hardship and the erosion of law and law enforcement in almost every aspect of life. One of the victims of this dual crisis has been the forests of Java, which prior to the crisis were already under severe pressure from increasing population and overproduction. Legal and illegal logging rates are already higher than the standing stock increment, which clearly endangers the sustainability of the forest. The effect of the crisis on Java's forest is more significant than just the quantitative indicators of increasing human-generated forest destruction. More importantly is the change in the pattern of forest destruction following the crisis:

- The illegal expropriation of timber from state forests has become more organized. It is openly practiced in day light with trucks ready to transport the logs. In many cases, the forest rangers or other SFC functionaries can no longer perform their duties because they are overpowered and justifiably terrified by powerful bands of organized thieves. The SFC avoids confrontation with them to prevent fatal casualties on the part of its employees. Military and police involvement in timber theft is acknowledged by the SFC.
- More and more people are becoming involved in the action, including woman and children. Food is prepared and brought to the location inside the forest subject to illegal cutting.
- There is an increase in forest land occupations by local farmers.
- For a short period in 1998 and 1999, SFC property (e.g., offices, houses, motorcycles) and personnel become the targets of peoples' anger. During this period, 21 cars and motorcycles and 78 structures (e.g., guard-posts, offices and SFC personnel houses) were burned down, four SFC personnel were killed, 34 were severely wounded and 42 lightly wounded.

The table below demonstrates the sharp increase and magnitude of the timber theft that swept over Java's forest from 1998 to 1999.

Data on Tree Theft and Timber Theft 1993 - 1999 in the State Forest Company's Jurisdiction (Java)

Category	Item	Average 1993-1997	Absolute Numbers	
			1998	1999
Tree theft	No. of trees	200,610	1,099,827	3,179,973
Timber Theft	M3	2,960,537*	23,370,188	56,406,782

Source: Perum. Perhutani, Jakarta, January 2000

*) Figure for 1997 only

The forest destruction that faced the forest sub-region (BKPH) of Ngarengan in the Pati forest region (KPH) of Central Java demonstrates the magnitude of the problem for a local forest management unit:

Data on Lost Forest Cover and Lost Timber 1998-1999 in Ngarengan (Pati)

Category of Lost	1998	1999
Forest Cover (in ha)	1,600 (33% of total)	1,035 (21% of total)
Volume of timber (in m ³)	55,214	33,814
Ngarengan sub-region's total forest cover: 4,843 ha		

Source: Personal interview with the head of Ngarengan forest sub-region.

The SFC reacted to this forest disturbance by deploying joint campaigns involving the SFC's forest rangers and police personnel to retrieve stolen timber and bring the organizers behind the theft before the law. This large-scale security campaign involved 600 to 1,000 personnel who investigated suspected villages, set up road blocks and searched suspected buyers of illegal timber. This campaign was followed by a mass law suit against the defendants. The legal basis of such security campaigns is joint agreements between the director of the SFC and the provincial police headquarters, and sometimes even with the military district headquarters. In 1999, six such campaigns were conducted in Central Java, three in East Java and one in West Java.

The forest areas most prone to timber theft are border areas between provinces (*Propinsi*), regencies (*kabupaten*), and forest management areas (*Kesatuan Pemangkuan Hutan/KPH*). These border areas represent grey areas in term of law enforcement jurisdictions. The fact that a consistent pattern of logging theft occurs in these border areas is suggestive of a professional behind the thefts, possibly conducted by groups which understand the legal enforcement problem in these areas.

Other sources of forest disturbance which have accelerated during the economic crisis are attributable to economic pressures and inadequate land resources on the part of the forest village communities. An even more significant forest disturbance comes from the uncontrolled growth of the large-scale furniture sector and other wood based industries in Central and East Java. A functionary of the SFC Unit in Central Java stated that the wood-based industry in Central Java requires a total of two million m³ of timber per year. The wood furniture industry centered in Jepara, Central Java, requires an additional 900,000 m³ timber per year. Against this huge appetite for raw material, the total production of SFC's Central Java Unit is only around 600,000 m³ per year. The large gap between supply and demand is a primary motive behind timber theft. The SFC regrets the lack of coordination between local government agencies, which issue permit to establish wood-based industries, and the SFC as the main supplier of timber supplier on Java.

Forest Village Community In Time Of Economic Crisis

The current economic and political crisis is exerting a differing impact on rural populations in various locations. The form of the impact is very dependent on factors such as the quality and character of the agricultural resources available to the village, the availability of local non-agricultural sources of income, and access to employment in urban areas. Four village cases are presented below, each of which represents the various impacts of the crisis on rural communities.

1. Village with minimum agriculture land: Alang-Alang Ombo (Central Java)

Alang-Alang Ombo is a hamlet that is part of a larger nearby village, in the Japara district, Central-Java. The hamlet is located between a state forest and a large rubber plantation, more than 30 minutes walking distance from the nearest road. The distance to the district capital (*kabupaten*) is 60 km and 30 km to the sub-district (*kecamatan*), making it the most isolated village in the district. Four hundred households reside in the hamlet.

The village has limited dry land available for agriculture and no irrigated or rain fed rice fields. Most of the inhabitants are landless. School facilities are provided in the village, a primary and a junior high school. Some 25 household from Alang-Alang Ombo send their children to the junior high school. The nearest health facilities is in the sub-district capital some 20 Km. from the village. There is electricity in the hamlet, but there is no household that owns a TV.

Income generating activities are comprised of: 1) agricultural labor through the whole year with an average wage of Rp.10,000/day + breakfast (for men), Rp 6,000/day + breakfast (for women); 2) brick maker with an average wage Rp 25,000/1000 pieces. One worker can produce a maximum of 400 bricks/day; 3) labor in foreign country (Malaysia and Saudi Arabia). Ten people from the hamlet are employed this way; 4) income from forest allotment - 1/4 - 1/8 ha/person - as part of the Social Forestry Program of the SFC; 5) some people work as labor in Jakarta.

Although there is a large rubber plantation nearby, Alang-Alang Ombo residents do not consider this to be an employment opportunity as the rubber plantation is perceived to be outside their locality and they do not consider themselves qualified or knowledgeable about how to extract rubber.

The village Alang-Alang Ombo is covered by the Perhutanan Sosial program of the SFC. The program provided the village with a water reservoir as part of a clean water program and of the Perhutanan Sosial (Social Forestry) program provide forest allotment to the people, 1/4-1/8 ha./household. These forest allotments are planted with rice, ground nuts, maize in a *taungya* system. This season, rice production on the 1/8 ha forest allotment is failing, which mean a lost of at least Rp. 35,000,- for fertilizers and insecticide (the rice seeds is from the previous harvest). Hence ground nuts grown after rice on the same allotment is the only crop generating any money and the whole harvest of between 2-3 quintal (1 quintal = 100 kg.) were sold at Rp.400.000. Maize is planted on the edges of the allotment and the product is for home consumption.

Following the onset of the crisis, cash has become increasingly difficult to obtain. The high price of rice following the crisis has resulted in increased occurrence of people mixing rice (their staple food) with maize and cassava. School attendance, especially the primary school, has not been affected by the crisis.

The forest in Alang-Alang Ombo has been the target of large-scale timber theft, involving men and women, children, locals and outsiders. The office and residence of the forest ranger were stoned and burned, directly after Suharto was brought down. Villagers from Alang-Alang Ombo have denied any involvement in the event, blaming outsiders for the incidence.

2. Former forest labor camp: the hamlet Sukorejo (East-Java):

The hamlet of Sukorejo was formerly a temporary forest labor camp (*magersaren*) erected inside the forest for laborers and their family who periodically moved to new locations following the forest production cycle. It was established during the Japanese occupation in 1942 to provide labor for forest exploitation. Fifty eight years later, the 'temporary' houses have become permanent structures now inhabited by the original inhabitants and/or their descendants. However, the inhabitants do not hold legal rights to the land they occupy. This is one category forest village characterized by its location inside the state forest land and (therefore) the lack of agriculture land, except small allotments that are provided by the SFC. As such, a *magersaren* hamlet is not part of the local government, but under the jurisdiction of the SFC.

Recently, a process started to change the *magersaren* status to a permanent hamlet/*dusun*. If this status is granted, the settlement would be taken out of the state forestland, and become an enclave inside the forest land but part of the administration unit of the local government. The inhabitants will receive legal right for the land of 25 m. x 25 m where the house is located. Although the *magersaren* status is terminated, the village which is situated inside the forest land will still lack enough land-resources that could enables it become independent of the forest.

Sukorejo is comprised of 231 households. In the near future it will be part of the larger village of Pondok Agung. At present, Sukorejo does not officially exist and is not included on the village map, in contrast with the other hamlets of Pondok Agung.

All public facilities, such as health centers and schools, are located in Pondok Agung. No data is available on school attendance in Sukorejo. Teachers, who are the key informants about school attendance rates, only refer to combined data from Pondok Agung, and never specifically mention Sukorejo attendance rates.

The main income generating activity for the villagers of Sukorejo is working as agriculture labor in surrounding villages. Many are also employed as laborers in urban areas, such as Surabaya. Sukorejo has the highest migrant labor source in the Pondok Agung area. Several people have even gone overseas.

The SFC provides Sukorejo's 231 households with only eleven hectares of forestland for inclusion in the *Perhutanan Sosial* program. If each forest allotment will measure as small as 1/8 hectares, still there will be only 88 household that receive a forest allotment. In itself not enough to produce a subsistence income for a household.

The forest surrounding the village Pondok Agung is known for its high incidence of timber theft, which is organized on a large-scale.

3. Village with Diversified Economic Resources: Donomulyo (East Java)

The village of Donomulyo is located on the East Java coast and is popular area for local tourism, especially during its annual festivities and ceremonies dedicated to the goddess of the south sea. The total village land measures 11,435 ha, divided among four hamlets, three of which are located near state forest land.

The village has three kindergartens, one primary school and one secondary school. A technical school has been closed due to managerial and financial problems. Around 50% of the villagers will continue their high school education in a nearby town.

Agriculture land is predominantly dry land. Eighty percent of the villagers are dry land farmers, 10% of whom are landless and work on land owned by others. Average land holdings measure between 0.5 to 2 ha of dry land. In addition to dry land, villagers maintain gardens where a combination of trees for timber, fuel wood and fruit are planted. The main agricultural crops are dry-land rice (for home consumption), cassava and maize.

Twenty percent of the population is a mixture of small entrepreneurs, government employees, migrant workers and teachers. A couple of young women work as overseas laborers. Newly constructed houses can be observed along the road that past the village, which according to key informants were financed from money earned overseas. Other income generating activities include: 1) small scale carpenters (who use all kinds of timber); 2) producers of kitchen utensils from bamboo; 3) laborers in limestone quarry and lime burning and 4) producers of crackers from *melinjo* nuts (*Gnetum*). This last activity is supported by the SFC as part of its Social Forestry program and by the district branch of the Department of Industry and Trade. In the past, the *melinjo* leaves and nuts were sold directly in the market, without processing beforehand. 5) Shell handicraft makers for the local tourist market. In the recent past, villagers used to make mats from plants that grow in the swamps, however, this market has been overtaken by plastic mats.

The village Donomulyo came under the Social Forestry program (*Perhutanan Sosial*) in 1994. In 1996 the Social Forestry program were upgraded into the Integrated Forest Village Community Development Program (*Pembangunan Masyarakat Desa Hutan Terpadu/ PMDH-T*). The various components of the PMDH-T program, the forest based component and non-forest base component are described hereunder.

The Forest Based Component comprises of the distribution of forest allotments and innovation in agroforestry. The distribution and use right of forest land through the *tumpang Sari/taungya* system has long been practiced. Besides the *tumpang Sari* of seasonal crops, villagers are allowed to plant fruit trees on their forest plots, such as *melinjo*, bread fruit, string beans, sour sop and *kayu-putih*. Total forest land under the SFC social forestry program is 580 ha. The average forest allotment is 1/4 ha per household. Some households have two plots of forest land. Priority is given to landless villagers living near forest who are still able to work. It is possible for women to obtain a forest plot under contract with the SFC. Two thousand farmers own plots of forest land. These farmers are divided into eight Forest Farmer Groups (*Kelompok Tani Hutan/KTH*).

A typical forest plot is 1/4 hectares. The forest plot is planted with dry land rice, maize and cassava in a system of mixed farming on an annual basis for a maximum of four years. Annual production of a 1/4 hectare forest allotment is six *quintal* (1 quintal=100 kg.) of unused rice and three *quintal* of maize. The volume of cassava is difficult to calculate because farmers harvest it bit by bit according to their needs and seldom weighed, especially when it is for own consumption. In addition to seasonal crops, that can be planted for a maximum of four years, each forest allotments will also contain eight *melinjo* trees, seven bread fruit trees and six sting bean(*Petai/Parkia speciosa*) trees. *Melinjo* trees bear fruit only after the fourth year, while bread fruit and sting bean trees are fruit bearing after 6 to 8 years.

Some social forestry blocks have already reached their fourth year and seasonal crops cannot be planted due to lack of sunlight. However, villagers still have to wait for additional one or two years for their fruit trees to bear fruit. To pass the time and lengthen the productivity of the forest plots, villagers plant ginger and *garut*. The villagers and local SFC staff have been discussing marketing ideas for these agroforestry products. They are also considering to increase the value of the *tumpanghari/taungya* commodity by replacing cassava with sesame (*wijen*).

The Non-Forest Base Component conducted outside the forest comprises support of household industry, technological support and marketing. Supporting furniture production for the local market with tools and capital. Supporting the development and production of *melinjo*-crackers in cooperation with the local office of Ministry of Industry and Trade. Since 1996, women's groups have formed with the main activity being the production of crackers. The product range includes *melinjo* crackers, cassava crackers with different flavors (e.g., cassava crackers with *melinjo* taste). The development of cassava crackers with *melinjo* taste is a novelty and has solved the problem of undersupply of *melinjo* nuts in certain seasons. The products are packed in plastic and have an official trademark. Supporting a tire vulcanizing shop organized by a group of villagers. Establishing and supporting the development of a small scale facility for the production of cajuput oil. The product is sold on the local market. Enriching a nearby swamp with fish for consumption and sale at the local market.

Donomulyo's landless population is suffering the most from the crisis. This category of villagers does not produce food for their own consumption and must purchase it. Handicraft producers for the local tourist market are also included in this category and their total household incomes have been hard hit with the decline in local tourism following the onset of the crisis. The villagers of Donomulyo are hopeful that a timber-sharing arrangement will someday be enacted with the SFC.

4. Village With Good Urban Employment: Badog (West Java):

The village of Badog is part of the sub district of Cibingbin. The village has a population of 2,600 who are predominantly small farmers. Around 60% of the villagers own land, which includes a combination of rain fed fields and dry land gardens. The average rain fed land holdings is 0.4 ha per household. The landless work as agricultural laborers and/or as laborers in Jakarta. Most of the young people and many of the elders also derive their income from laboring in Jakarta. Residents of Badog are known to be good construction workers at the high rise construction sites in Jakarta. Many of them have become construction supervisors. Another source of non-agricultural work is as migrant workers in Saudi Arabia and Malaysia. At present, 40 women from the village were known to be employed overseas as migrant workers.

In the rainy season, the urban-employed villagers return to the village to plant rice, which can be only be done once a year as the fields are not irrigated. The construction supervisors invest their earnings from Jakarta in their agricultural activities. Villagers also work on their forest allotment distributed each year by the SFC. At present, 104 farmers are participating in the routine *tumpanghari/taungya*, where farmers receive 0.25 ha of forest allotment for a period of two to three years to plant food crops as part of the forest replanting process. Some farmers have received more than one allotment, which have a range of different ages, spread over different forest administrative units.

When the economic crisis hit, many villagers of Badog lost their jobs in Jakarta. After several months back in the village, they had exhausted their savings from Jakarta, which forced many, especially the

youth, to turn to the forest for illegal timber cutting. In one forest block, after all the trees had been stolen, the land was ploughed and planted.

Forest Related Activities: In 1994, several village youth organized an informal loan scheme (*simpan pinjam*) where members can borrow money at a low interest rate. In most cases, the money is used to cover the cost of transportation to Jakarta to look for work. Prior to the availability of this informal low interest loan scheme, villagers had to borrow from money lenders who charged interest rates of 50%. The low interest loan scheme was established by twelve members with a capital of Rp. 70,000 (US \$8.00). By 1998, the membership has reached 60 people and now has an operating capital of Rp. 6 million (US \$700.00). In May 2000, this informal group officially became a cooperative with a membership of 136 people and a capital of Rp.35 million (US \$4,000). The cooperative now also has a general store where dry goods are sold.

This rapid growth has been achieved in part with support from the SFC in the form of training in management and low interest credit. This development of village economic activity is part of SFC's attempts to halt the illegal timber cutting. The SFC further supports the village economy, especially the unemployed but skilled youth, by contracting the cooperative for constructing houses for SFC staff and building village roads and forest access roads.

The managers and other youth involved in the cooperative are now active involved in sponsoring their own environmental education activities for the entire village, raising awareness about the importance of their forest for their own livelihoods. These educational activities are carried out through speeches and discussions in various events sponsored by local organization, such as the many Qur'an recital groups in the village. The good reputation that these youth have developed among the villagers for their pioneering activity in developing the cooperative has a positive impact that transfers over to their environmental educational activities.

Another effort employed by the SFC to reduce illegal logging is to integrate village youth into the enforcement of security measures in the forest. Village youth are trained and deployed to patrol the forest.

Conclusion

Lack of access to agricultural land is still a primary cause of poverty, which leads to forest destruction. Ironically, in many cases, the lack of agricultural land is juxtaposed by the presence of large-scale plantations and forest lands. From these two options, forest land is the most prone to be exploited. In the case of Sukorejo above, the land distribution process is starting to take place, but regrettably this still does not include agricultural land. This lack of land reform continues to marginalize the rural population. In many instances, the SFC's policies and programs to supporting village communities are not reaching their desired objective because they are not addressing the issue of land reform and economic marginalization.

Villages with a more diversified source of income, such as the case of Donomulyo, had a stronger defense against the economic crisis. In Donomulyo, exploitation of the forest resources was only seen as a last resort, which ultimately did not occur in this particular village. The case of Badog demonstrates the fragility of overdependence on a single source of income external to the village (e.g., Jakarta labor in the real estate industry).

IV. PROBLEMS AND LESSONS LEARNED

This chapter analyzes the Social Forestry programs launched by the SFC and extracts factors that contribute to the existing condition. With this analysis it is hoped that some lesson can be learned and become a guide for alternative ideas to develop a forest management system based on the acknowledgement of local community rights.

Program Coordination

Evaluations of the three SFC units in West, Central and East Java indicate that to date local government agencies are still not seriously involved in an integrated way in the PMDH-T program⁴.

The launching of the Integrated Forest Village Community Development Program (PMDH-T) was largely motivated by the limited authority and outreach of the SFC in relation to the issue of community welfare, which has been the primary domain of the local government. Since the implementation of the Prosperity Program, cooperation between SFC field staff and village administration has been recognized as essential. The informal name of the Prosperity Program, MALU, which is short for *mantri-lurah*/forest ranger – village head) precisely reflects this cooperation. Under the PMDH-T, cooperation between the SFC head office and the provincial government has risen to its highest level to date. The provincial government, as the highest governing body, acts as the umbrella of the PMDH-T program. The implementation of the PMDH-T pilot project is legally sanctioned by the decree of the governor, where it is stipulated that government offices have to support the program actively.

The evaluation report on SFC's East Java unit however uses the term "one-man-show" to characterize the dominance of the SFC and the lack of involvement of the local government. In West Java, the preparation of the Social Forestry Five-Year Plan (*Rencana Lima Tahun Perhutanan Sosial*/RLPS) is done entirely by the SFC. However, the subsequent plans, the Social Forestry One-Year Work Plan (*Rencana Kerja Tahunan PS/RKTPS*) and the Operational Plan (*Rencana Operasi*/RO), are developed in consultation with the local communities and relevant government offices. The above-mentioned community consultation process is carried out in stages, beginning with workshops at the sub-district level (*kecamatan*) up to the district level (*kabupaten*). However, even in this process it is observed that the SFC representatives can still be quite dominant over both technical government offices and local village administrations. Which frustrate the process of free discussion and the free flow of aspiration from the bottom-up.

When it comes to development activities on the field each government office fulfills its individual program without any consultation with other offices or relevant stakeholders. The extension work is dominantly done by the SFC extension officers from the Social-Forestry Field Extension (*Penyuluh Lapang Perhutanan Sosial*/PLPS) with scant involvement from local government extension officers. Given the wide range of activities in the PMDH-T program, covering home industry, agroforestry, agriculture, animal husbandry and management, it is virtually impossible for the SFC extension services to be effective on its own without active involvement of local government.

⁴ Tim Fakultas Kehutanan - IPB, 1997: Penelitian Uji Coba Model PMDA-T; Fakultas Pertanian UNIBRAW, 1996: Laporan Penelitian Evaluasi Program Pembinaan Masyarakat Desa Hutan Di Jawa Timur.

The lack of coordination and cooperation between the SFC and the government offices in planning and execution can be traced among others to the lack of funds and good human resources in the part of local government offices. Most forest areas are the more backward or marginal areas in terms of economic resources and infrastructure of the communities living there. It seems that parallel with this socio-economic condition, the local government in these generally marginal areas to be ill equipped with the needed funds and human resources. A work relation on an equal basis between the SFC and the offices of the local government at subdistrict and village level - that is where the action is - is practically impossible. Being the most powerful authority the SFC still play the dominant role in the local forest management and community development.

SFC Internal Organization And Perception

SFC decision makers in the Forest District (KPH) and Forest Sub-District (BKPH) level lacks autonomy to adapt the SFC's policies and programs to local biophysical and socio-economic condition.

The Forest District (*Kesatuan Pemangkuan Hutan/KPH*) and Forest Sub-District (*Bagian Kesatuan Pemangkuan Hutan/BKPH*) offices of the SFC lack the authority to adapt SFC's policies and program or create their own program according to the local condition. This lack of autonomy inhibits the more creative and independent minds within the SFC. In many cases, the SFC is dependent upon exactly these free minded personnel for the success of its PS and PMDH-T programs. This lack of autonomy is even more acute during this time of economic and political crisis as central agencies such as the SFC are reluctant to issue controversial changes, while local personnel are under intense pressure to implement local adaptations of central programs.

The controversial case of timber sharing with the local community offers a prime example. The head of a Forest District (KPH) in Central Java, which is experiencing a high rate of timber theft, sees timber-sharing as fundamental for increasing the local community's sense of ownership and responsibility toward the forest, and at the end in saving its forest still left. However, this particular head of the KPH does not have the authority to launch a timber-sharing scheme because he has not received authorization to do so from the top management of the SFC.

SFC's corporate culture impedes decentralize decision-making.

While there is a general acceptance of the need for decentralization and autonomy, the SFC's corporate culture is still dominated by strong, vertically-organized decision-making processes. With the SFC's adoption of a participatory approach to its programs, the bulk of forest management and decision-making is supposed to be conducted at the local level, while the head office is supposed to function only as a coordinating body. However, personnel appointments as low as the sub district level are still decided by the SFC central office in Jakarta.

The SFC's corporate culture evolved under a political and bureaucratic climate characterized by an undemocratic, vertically organized system. This corporate culture creates and maintains inequality across central and local offices. The management structures of the SFC's head office in Jakarta and the unit offices in the provinces are over sophisticated in comparison with the management structures of the lower level offices - the KPH (district level), the BKPH (sub-district level) and the RPH (village level).

High mobility of SFC personel has fostered cross-fertilization of ideas and experience but has also led to a lack of trust among communities and frustrate continuation of activity

After years of experimenting with social forestry, the SFC has achieved a great deal, including the socialization of its personnel in many aspects of the social forestry approach, such as participatory planning, working with farmer groups, managing credit systems, forging cooperation with other government offices and non-government organizations. The military-style tour of duty of SFC personnel has provided them with high levels of exposure to new experiences and applications of social forestry in other working areas. However, this high level of mobility has jeopardized the long-term development of relationships between the SFC and local villagers, which is essential for establishing trust and cooperation – the key ingredients of effective local community development⁵.

The dual roles of the SFC officials, as forest rangers to police the security of the forest and as facilitators to increase community welfare, are extremely difficult, if not impossible, to carry out in tandem.

Despite the adoption of a participatory approach to several of its programs, the SFC's internal personnel reward system is still based largely upon the staff's ability to realize profit for the SFC rather than staff success in creating favorable conditions for improved local welfare. In direct relation to the foregoing it is observed that the Social-Forestry approach still not evenly socialized especially among the lowest rang of the SFC apparatus. Ignoring for the moment the different interpretations on the concept Social Forestry that exist within the SFC.

It is observed for example that in forest areas bordering resource poor villages are often appointed forest rangers who employ an authoritarian management style and possess minimal knowledge of social and participatory approaches. A management style that observably goes together with forest rangers openly carrying revolvers or even sub-machineguns. Moreover, they tend to be unfamiliar with appropriate social forestry approaches that could be used to improve the village communities' household incomes and access to improve infrastructure. It must add that in those poor regions SFC personnel gets minimal support from equally poor equipped local government offices.

Participation and Equity

Participation and partnership (*kemitraan*) with the forest village communities in forest management is the buzzword of the SFC's Social Forestry (*Perhutanan Sosial/PS*) and Integrated Forest Village Development (PMDH-T) programs. Evaluation studies and field observations point to the following factors that stimulate or impede effective community participation and partnership in relation to SFC's present constellation.

Local community participation in forest management still perceived by most SFC functionaries as the integration of the local community in forest maintenance and in limited use of forest land. The idea of participation as (local communities) right on forest resources is still not shared.

Most SFC personnel, from the highest rang to the SFC personnel who are responsible for the daily implementation of the programs still perceive the social forestry concept as merely an elaboration of the forest management policy pursued by the Dutch, with the addition of modern technology and financial schemes. That is, the integration of local people into the task of forest maintenance and timber production. Hence, the SFC provides work to local communities and the use of forestland for agriculture at the start of the reforestation following the timber harvest. With the PMDH-T special attention is given to integrate local entrepreneurs in all activity of the timber production, such as the supply of plant material, transportation and other service. However, local peoples' rights or local

⁵ Majority of the statements are based on field investigation in West-, Central- and East-Java: interviews with SFC personnel and forest village communities

community rights over local natural resources - including forest - is still a very abstract concept for many inside the SFC. This dominant perception on local people's right on local natural resources and as a consequence their position in its management, creates the perception of community participation as "participation by grace". Not community participation by right. This dominant perception of community participation among others inhibits the further development and testing of the concept of "profit sharing or timber sharing". However, there is a new generation of SFC officials who are aware that social forestry must be interpreted and implemented in a radical new way for the sake of the forest and the forest village communities.

The top-down approach is still dominant within the SFC.

The top-down approach and paternalistic attitude of SFC and other local government officials still characterizes the power relationship between the government and the local community. Villagers have little experience cooperatively managing public facilities, such as establishing cooperatives for economic enterprises. These two factors reinforce each other and hamper the local community's involvement in decision-making processes within the social forestry program. The SFC and other local government officials still exert strong influence over the process of establishing farmer's organizations and in the appointment of its leaders. Consequently, participatory planning and decision-making processes easily become quasi-participatory processes.

However, according to evaluation studies of the SFC units in West, Central and East Java, there has been a marked change for the better in the relationship between the local community and the SFC officials that developed through the introduction of the PS and PMDH program. Subsequently, the wall that had previously separated the SFC officials from the community has been removed. A closer and more intensive interaction and mutual understanding between SFC officials and the community now exists. The two parties are now focused on much more positive matters, such as income generating activities, rather than its previous exclusive focus on security matters. According to the evaluation studies, this improved relationship has led to the community's greater appreciation for the ecological function of the forest and the role of the SFC in its care and management.

Decreasing economic benefits from forest management hamper farmers' continuous participation.

Recent evaluation studies of the SFC's three units in Java indicate that the level of community participation in tilling the forest plots and in Forest Farmers Group (FFG) activities is closely related to the benefits they receive from the forest. As long as the forest plots continue to produce seasonal crops, which can extend for a period of four years, farmers will invest time and labor on their forest plot. As the forest trees become larger, the canopy blocks essential sunlight and the seasonal crops can no longer be planted. Subsequently, multiple purpose tree species (MPTS) must be planted in the forest to replace the loss of the seasonal crops. In many cases, however, the MPTS do not generate as high an income as the seasonal crops. Consequently, farmers' interest in maintaining the forest plots dwindles and is superseded by other income-generating activities related to the forest. According to the evaluation study in West-Java, valuable crops planted as seasonal crops in forest plots, such as rice, tobacco, pepper and soy, only provided economic benefits to farmers for one to two years. Border plants (*salak*) and other MPTS, such as jackfruit (*nangka*) and mango (*mangga*), which were planted in 1987 between the main forest trees, did not grow well and by 1997 were no longer fruit bearing. The farmers then shifted to non-agricultural activities.

Farmers' interest in participating in Forest Farmer Groups (FFG) dramatically declines once forest trees mature and overshadow the seasonal crops.

The membership criteria and composition of Forest Farmer Groups (FFG) impedes formation of a group identity and sense of stewardship over the forest.

The Forest Farmer Group (FFG), introduced by the PS (*Perhutanan Sosial*/Social Forestry) program, has two objectives. The first is to facilitate communication and the flow of information between the SFC and farmers who participate in social forestry programs as well as to the community as a whole. The second is to facilitate communication between farmers working on forest plots within the same forest block. Farmers are assigned membership to a specific FFG based on the location of the forest plot they work on. In practice, what frequently occurs is that members of one FFG originate from different hamlets and neighborhoods. The SFC's membership criteria based on forest block location does not create an in-group feeling based on common interest and need.

The SFC intended that the FFG would propagate a positive attitude toward the forest among other members of the community. But this can only occur when members of the FFG form a strong group within a community or join the political institutions of the village. Both of these conditions were not fulfilled because the composition of the FFG does not allow it to become a solid group. An earlier study on the FFG also criticized the FFG membership criteria based on forest blocks (Suharjito, 1996).

The FFG lacks capital, management, marketing knowledge and market channels.

The membership structure described above is one cause of internal weakness of the FFG. Other causes of weakness and inactivity of the FFG are the lack of capital, management, marketing knowledge and marketing channels. This is true for FFG based on farmer's participation in the *tumpangsari/taungya* activity in the forest, as well as groups based on home-industry and other economic activities. As an example, FFG that have managed to set up loan schemes have had difficulty accumulating enough capital to lend money in sufficient amounts that would be of use to the borrowers. FFG that are active in promoting the home industries of their members tend to be stronger because of their focus on a single activity and common interests of its members. Management and marketing are the main problems for these groups.

The SFC supports FFG with cheap credit, product development and marketing and other government offices provide assistance to the FFG in accordance with their area of expertise. Because FFGs are still too weak to make use of commercial financial institutions and most financial institutions are not interested in rural-based enterprises, the SFC acts as the FFG's main financier and main consumer for certain products, such as compost and seedlings. However, the SFC is not capable of supplying the FFGs with sufficient credit to enable them to start sound businesses.

Upon the recommendation of the SFC, several FFG have participated in contract farming with agro industry or big merchants. Under these agreements, farmers plant crops on demand on their forest plots and sell the products to the contractor. Crops that have been tested include cotton, ginger and **jarak**. In almost all cases, the experience has been negative. The contractors did not fulfill their promises, especially with regard to buying the products at a profitable price for the farmers. Even the SFC acknowledges this and is now very cautious in setting up contract farming.

Unequal and inadequate forest plot distribution inevitably leads to mismanagement and theft of forest resources.

Almost 10 years ago, studies on the implementation of the PS program already detected inequalities in the distribution of forest plots for *tumpangsari* (Sunderlin, 1990; PSP, ???). Inequity was observed in such areas as the distribution of forest plots to the wrong category of people and in terms of the quality and quantity of the forest plots distributed. The more powerful members of the village got largest or best forest plots. There were also reported cases of the "selling" of the best forest plots to the highest bidder. An evaluation study of PMDH-T in East Java reported that forest plots were not distributed to those most in need. In East and West Java, it was reported that SFC financial support was given to local private businesses instead of local cooperatives as should be the case. In most

cases, these inequities were due to a lack of transparency and nepotism, conditions which still persist today.

Since the beginning of the reform era, in villages with very poor resources the SFC has come under increasing pressure to evenly distribute available forest plots to all members of the community. As a result, forest plots are now being distributed in tiny allotments of 0.1 – 0.2 ha. The accepted dimension of a forest plot is 0.25 ha, but even this is widely regarded as being too small to be profitable. Distribution of tiny allotments occurred in a former forest labor camp (magersaren) in East Java that previously had no agricultural land. The only arable land that people could get was the use rights to 11 ha of forest plots that was divided among 231 household in the hamlet, which yielded a lot size of 0.047 ha per household. The same phenomena has been observed in a resource poor hamlet in Central Java, which is located in an enclave between state forestland and a large rubber plantation. All the members of this community are dependent on the use rights to tiny forest plots as low as 0.125 ha, distributed by the SFC.

The forests surrounding the villages in these two cases have experienced massive timber theft, involving local people - men, women and children - as well as outsiders. People of both villages deny all allegations. However, it is a sad fact that due to the inadequate agricultural resources available, villagers in these two communities are left with little choice but to commit timber theft.

Shared responsibility, local initiative and access to forest products is the key to reducing timber theft.

Since the adoption of the PS program, important steps have been taken towards adopting innovative agroforestry systems that allow people to make use of forestland through the whole tree rotation period. At present, MPTS are already being planted in the forest plots. However, according to the law, the villagers are only entitled to benefit from the fruits, leaves and branches of the MPTS. All the timber from the main forest trees as well from the MPTS belong to the SFC. Pressure is mounting on the SFC to grant harvest right of the MPTS timber to the owners of the forest plots.

The increasing scale of timber theft from SFC-managed forests is leading to the promotion of the idea of shared responsibility between the SFC and the local village community, especially at the local level where the brunt of the forest destruction is most felt. Consequently, the SFC is experimenting at the forest district (KPH) level with small-scale harvesting of timber species from the agroforestry system. However, the pace of this experimentation is not keeping up with the rate of illegal logging and the SFC is still not granting adequate space to its subsidiaries for local agroforestry initiatives to develop. Aside from the vast knowledge and experience with timber species commonly planted by the SFC, such as teak (*Tectona grandis*), mahogany (*Swietenia* Sp), agathis (*Agathis* Sp), there is relatively little experience with commercial crops in agroforestry systems. Past experience in planting cotton and jarak in cooperation with private companies, for example, has not been further developed into systematic experimentation and development. The same fate happened with the success in fruit trees in one location in Surakarta regency in Central Java. Factors that impede the experiment with perennial cash crops are: 1) the emphasis on food crops and fuel-wood for local consumption. In itself a right decision on the part of SFC. The question is if this emphasis on subsistence seasonal crops has to be implemented without discrimination; 2) the fear of property right confusion between the SFC and the local community once perennial crops are planted on forest land between the main forest trees; 3) there is the burden of marketing of the products.

Lack of information dissemination and knowledge sharing within the SFC.

The SFC uses trial and error to develop agroforestry systems without adequately taking the requirements of the local ecosystem and, in many cases, local interests into account. This occurs because there is no systematic knowledge acquisition and dissemination process within the SFC. There are no research & development facilities in the field of agroforestry within SFC. There are also no systematic procedures in place to document or learn from the experience of other SFC units in

other locations to avoid repeating past failures. The only operational guidelines that SFC field staff receive is a list of trees and plants categorized by soil type and altitude requirements and a short list of food, fruit, fuel and timber crops categorized according to agroforestry functions in Java. These are serious deficiencies for a state company with the mandate to manage two million hectares of forest area in Java.

Income-Generating Activities

The table below provides a general overview of the successes and problems of two categories of income-generating activities that were fostered under the Integrated Forest Village Community Development (PMDH-T) program in Java. The two categories of activities are: 1) *Perhutanan Sosial* (PS/Social Forestry) as a forest-based agroforestry system, and 2) Economic and Technical Support, which is mainly for infrastructure, credit for productive activities and training. The information in the table is derived from the recent evaluation reports of the three SFC units in West, Central and East-Java.

Positive and Negative Aspects and Problems to be Solved In Social Forestry Programs of SFC in Java.

Positive Aspects

Perhutanan Sosial(PS) / Agroforestry

1. There is an increase in food products and food reserves.
2. Forest allotment provides additional agricultural land for farmers.
3. The forest allotments planted with food crops through taunya system produce circa 26% of the household income, but decreasing from year to year and in most cases ended making contribution after the fourth year.
4. In some cases, PS provide employment for land labor.
5. Agroforestry extension activities led to increased understanding of the forest functions on the part of the local population.
6. In some cases, PS produced fruit of marketable scale and quality. In most cases, fruit is good only for own consumption.
7. In certain cases, PS produced a substantial volume of marketable fuel wood.
8. In many cases, PS produced fodder for small and large cattle.

Economic & Technical Support

1. Village infrastructure, such as roads, village meeting place, clean water facility, was provided.
2. Home industries were developed, such as: bee-honey production; traditional palm sugar and refined palm sugar production; cassava and banana chips and other nut-based cracker production; and wood processing.
3. Animal husbandry developed.
4. Borrowing and lending activities developed.
5. Village cooperatives were formed.

Source: 1) Tim Fakultas Kehutanan IPB, 1997: Penelitian Uji Coba Model PMDH-T; 2) Fakultas Pertanian Universitas Brawijaya, 1996: Evaluasi Program PMDH Di Jawa-Timur; 3) Peran Serta Masyarakat Sekitar Hutan Terhadap Pengelolaan Dan Pemanfaatan Hutan di Wilayah Perum. Perhutani Unit I Jawa Tengah. Perum Perhutani & FISIP Univ. Diponegoro, 1996.

Problems to be Solved in forest based component:

1. The quantity of seasonal crops (mainly rice, maize) from the *tumpangsari/taungya* system is still inadequate to cover basic household needs throughout the whole year.
2. Local provision of fuel wood as alternative for fuel-wood from the forest
3. There is lack of local provision of timber. The SFC's concept of small scale timber shop for the need of village community is still not realized.
4. The short, four-year timespan for of the seasonal crops in the *tumpangsari/taungya* needs to be lengthened or replaced by shadow tolerant specieses or other agroforestry solutions.
5. In most cases, fruit trees (MPTS) failed to generate a sufficient level of alternative household income on par with the income generated by the seasonal crops. Introduction of high value commodities into the agroforestry system is still limited.
6. Local SFC initiative to introduce tree for timber along the main forest species still wait for authorization and support from the head office.
7. Contract farming with agroindustry companies has produced disappointing results for the farmers due to unfair treatment by the companies. A system must be developed to facilitated the cooperation between SFC, private sector and the forest village community.
8. The 20%:80% = buffer : forest system still needs to be perfected, especially in terms of the distribution of its use-right and benefit.

Problems to be Solved in the non-forest base component:

1. Credit facilities provided by the SFC are still too small to be productive.
1. Some irregularities in distributing financial support still exists.
2. Problems of marketing products from home-industries need to be addressed.
3. Income from non-forest-based activities only make a small contribution to household income.

Source: 1) Tim Fakultas Kehutanan IPB, 1997: Penelitian Uji Coba Model PMDH-T; 2) Fakultas Pertanian Universitas Brawijaya, 1996: Evaluasi Program PMDH Di Jawa-Timur; 3) Peran Serta Masyarakat Sekitar Hutan Terhadap Pengelolaan Dan Pemanfaatan Hutan di Wilayah Perum. Perhutani Unit I Jawa Tengah. Perum Perhutani & FISIP Univ. Diponegoro, 1996.

The above table indicates some continuities and progress in comparison with the past PMDH program. Significant progress has been made with agroforestry, such as the adoption MPTS into the agroforestry system. The SFC is even beginning to move towards allowing local communities to plant tree species for timber, previously considered a taboo subject matter even under the PS program. **The result of the 20%: 80% system is still too early to evaluate.** In the economic and technical support category, there is not much new development, except for the increased scale and the diversity of income generating activity supported by the SFC.

Some past problems still have not been overcome, such as the declining productivity of the *tumpangsari/taungya* system. The development and application of an agroforestry system that is capable of providing a continuous and stable economic benefit to the village community has not yet occurred. Local demand for fuel wood and timber has not been met. All of these unmet conditions impede the development of an enduring interest in and stewardship of the forest on the part of forest village communities.

New problems have also emerged, such as determining a method to distribute the use right and benefit of the 20%: 80% system. At the moment, there are farmers that get only forest plots from the 20% part and others only from the 80% part. Both parts give different perspective for the farmers. The 20% category will create a mix garden of productive trees in the near future. While the 80% category has a more limited benefit for the farmer, because it will stay as forest, except when timber-sharing will be introduced. It is fair to assume that for farmers, both categories will create different attitude

toward the forest. The evaluation studies reveal also that fruit trees are not always for recommendation as MPTS in an agroforestry system.

V. TOWARDS COLLABORATIVE FOREST MANAGEMENT IN JAVA

Indonesia's economic and political crisis and the subsequent forest destruction point to the urgent need to reform the management of Java's forest estate. Much needed changes have been called for by many academicians, activists, and even staff within the SFC itself, but have still not yet received serious attention from the top management of the SFC. The existing Java forests surrounded by crowded people resulted population pressure. Most of the people are uneducated with low income earning under the condition of employment scarcity.

Looking back to the introduction of the social forestry concept into the management of Java's forest estate reveals both positive and negative aspects. On the positive side:

1. The Social Forestry concept that was introduced twenty years ago as a forest management approach is now a household name within the SFC and is sufficiently known by local government agencies. Countless seminars and workshops have been conducted to socialize the concept and discuss the results of field studies; numerous booklets and field handbooks on many aspects of Social Forestry have been published to serve the field personnel of the SFC and others.
2. Although not accumulated in a systematic way, there is now a large pool of experience on the implementation of agroforestry systems in different ecosystems of Java.
3. The SFC's implementation of Social Forestry in its many forms, although still on a pilot-project scale, has given the SFC exposure to the complexity of the social and economic problems of the forest village community;
4. At least in their official documents, the SFC has granted increasing recognition to the position of the forest village community and their rights to the forest resources. In the SFC's former definition of Social Forestry, the local population is recognized as having a role in the management of the forest for the purpose of increasing people's welfare and the sustainability of the forest (Mulyadi, PMDH, 1995). The SFC's definition of Social Forestry in 1996 refers to the local population as partners (*mitra*) of the SFC in all facets of forest management (SK No. 1837/KPTS/DIR/1996). The SFC's PHBM (*Pengelolaan Hutan Bersama Masyarakat/Forest Management in Cooperation with Local Community*) even further incorporates the local community into the management of the forest by including the concept of timber sharing between the SFC and the local community, which implies the concept of sharing responsibility for forest management as well as profit (KBDH Bogor, 1979).

The negative side of the SFC's long experience in the implementation of the Social Forestry approach can be summarized as follows:

1. The SFC's implementation of the Social Forestry approach has not been expanded beyond a pilot level and still only covers 3.5% of Java's forest estate. The SFC's top management is reluctant to expand the Social Forestry approach from a pilot project level to an overall approach to forest management as this would require devolving much of the authority of Java's forest management to the provincial and lower levels of the SFC and to the local communities.
2. The incremental change within the SFC from a timber management paradigm to a more people-centered forest management paradigm occurred during an authoritarian, centralistic government. In most cases, the integration of the forest village community into forest management was merely

a quasi-participatory process, characterized by public consultation on terms strongly dictated by the SFC.

3. Decision-making processes within the SFC are still heavy centralized, a quality incongruent with the need for local adaptation capabilities.
4. The SFC's Social Forestry programs still have not succeeded in developing a sense of ownership and responsibility on the part of the forest village community towards the forest. Local successes to this are the exception, not the rule.

What are the prerequisites for a people-centered forest management approach that acknowledges certain rights of local people to the forest resources while simultaneously ensuring the sustainability of the forest? Below are several suggestions in response to this question that focus on restructuring the SFC and that combine the principles of Forest Ecosystem Management and People-Centered Forest Management:

1. Decentralize the SFC

A people-centered forest management system should have the capability to integrate local specific elements. The planning and executing body of the SFC should be as close as possible to the forest area. Therefore, decentralization of the SFC is a prerequisite, with a new structure suggested as follows:

- a. In the new management system, the directorship of the SFC should be decentralized and located at the provincial level. In other words, the SFC Units (Unit I West-Java; Unit II Central-Java, Unit III East-Java) should become the main decision-making bodies of the SFC, headed by a Director. Each unit should have the planning, coordinating, controlling and monitoring functions over the forest in its jurisdiction. Together or independently, the Units should provide supporting system needed by the planning and operational forest management units under its jurisdictions, such as training facilities, research centers and data base systems and coordination with other local government bodies.
- b. In its function the directorship is supported by the planning, monitoring and controlling unit (at present it is called the Forest Planning Section (*Seksi Perencanaan Hutan/SPH*) that has the jurisdiction over a number of Forest Management Units (*Kesatuan Pemangkuan Hutan/KPH*) that are located close or connected to each other. Important authority of the SPH should be the planning of the forest management, jointly with the forest management units under its jurisdiction.
- c. The present Forest Management Unit (*Kesatuan Pemangkuan Hutan/KPH*) should be the main operational unit, responsible for all forest management aspects in its jurisdiction, including the management of its human resources and the adaptation of the general guidelines and the forest planning to the local specific condition.
- d. The SFC's headquarters in Jakarta should be reduced to a holding company headed by a President Director with a limited supporting staff, primarily to deal with translating national laws and regulations into guidelines for the SFC and promoting the SFC in international markets.

2. Strengthen Management Capabilities

The management capabilities of the SFC's operational management units (e.g., the Forest Planning Section and the Forest Management Units) and subordinate units at the district (KPH), sub-district (BKPH) and village level (KPH) need to be strengthened in terms of staff capability to address social, economic and agroforestry aspects. This enhanced management capability is especially critical within the framework of a collaborative management system with the local community and local government.

3. Strengthen the SFC's supporting system.

- Expansion of the curriculum of the SFC's education and training centers with people-centered development concepts;
- Establishment of an agroforestry and dry/upland agricultural research center;
- Establishment of a database for forestry and agroforestry information at the directorship level.

4. Redefine of the rights of the forest village community over forest resources. Over the twenty years that the SFC has implemented the Social Forestry approach, the rights granted to local communities to use forest resources has steadily increased. It has evolved from the right to practice *taungya* in the process of reforestation to the right to benefit from the fruits and fuelwood of a complex system of agroforestry, including MPTS (multipurpose tree species). However, there is still a large gap between public's and the SFC's perception of the rights of local people toward forest products. Many forest village communities hold the perception that the forest is part of their resource base, just as rivers and lakes are part of the economic resources available to the village. In this connection many academicians, SFC personnel and field activists have been encouraging the SFC to respect the rights of local communities to a share of the timber product. Sharing timber has many positive sides: 1) it directly benefits local community welfare; 2) it could become a stimulant for the local industry and economy; 3) it could give partnership status to the local community with respect to forest management, both in terms of economic benefit and management responsibility.

5. Collaborative forest management.

People-centered forest management that ensures local communities' access to forest resources as well as their participation in managing the forest sustainably requires a management system in partnership with local communities. In other words the decentralization of the authority and the management of forest resources. A statement made in the discussion on decentralization of forest management in the outer island can be useful as a guiding principle in sharing tasks, responsibility and benefit between the local community and the SFC: "The most important issue under discussion is seldom whether it is advantageous to decentralize or not, but which elements in a sector can be more effectively managed at what level and how to develop a smooth system for these levels to work together to reach mutually desirable outcomes" (Interim Report, 1998:4).

6. A New Corporate Culture.

The SFC's authoritarian corporate culture must be transformed into a more democratic corporate culture. This will clearly entail a difficult and painful process that requires the intervention and control of higher state bodies to guarantee that the process will be executed. It will also require an internal process that has the full support of the SFC personnel and that is motivated by the SFC's understanding of the urgency for change in its management approach if Java's forest sector is to survive.

7. The Empowerment of Local Forest Village Community.

- The agricultural and economic base of the forest village communities must be strengthened. Most forest village communities are located in upland areas where dryland agriculture predominates, and animal husbandry and non-agricultural income sources also play an important role. This conditions requires land conservation activities and agroforestry.
- Local knowledge and capacity for forest management must be strengthened.
- Local organizational capacity for bargaining and conflict management must be strengthened.

The end objective is to create a management and supporting system that are capable of working in close collaboration on a level playing field with local communities and local government in creating a sustainable forest management. Where the forest as well the local community and the regional economy become the winners. A System that can best called Forest Co-management.