

POLICY STUDY ON FINANCIAL SUSTAINABILITY OF CBFM

Prepared for the Office of the United States Agency for International Development (USAID) under Contract Number 492-0444-C-00-5073-00 USAID/ENV/MANILA

This Program Document was completed through the assistance of the United States Agency for International Development (USAID). The views expressed and opinions contained in this report are those of the authors and are not intended as statements of policy of either USAID or the author's parent company.

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December 7, 1995



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ACKNOWLEDGMENTS

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Special thanks also to Roberto Araño (NRMP II forest management specialist, Region II,) for his invaluable observations during the field visit to Region XI, to Antonio Carandang (NRMP Consultant) for his dedicated collaboration in conducting the analytical work, to Research Assistants Mary-Ann Caseles and Alona Linatoc for their patient and arduous data assembling work, and to Alex Tamayo for his assistance in the formatting of this document.

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ACRONYMS

ADB	-	Asian Development Bank
AGVA	-	A.G. Veracion & Associates, Inc.
AO	-	Assisting Organization
ASEC	-	Assistant Secretary
B/C	-	Benefit-cost ratio
CADC	-	Certificate of Ancestral Domain Claim
CBFM	-	Community-Based Forest Management
CBFMA	-	Community-Based Forest Management Agreement
CDIMCO	-	Christine-Diatagon Multipurpose Cooperative
CENRO	-	Community Environment and Natural Resources Officer
CEP	-	Coastal Environment Program
CFDTF	-	Community Forestry Development Trust Fund
CFMA	-	Community Forest Management Agreement
CFP	-	Community Forestry Program
CO	-	Community organizing
CRMDP	-	Community Resource Management and Development Plan
DAI	-	Development Alternatives, Inc.
DAO	-	Departmental Administrative Order
DENR	-	Department of Environment and Natural Resources
ENR-SECAL	-	Environment and Natural Resources – Sector Adjustment Loan
EO	-	Executive Order
FEAn	-	Financial and economic analysis
FMB	-	Forest Management Bureau
FMS	-	Forest Management Services
FSP	-	Fishery Sector Program
FSPt	-	Forestry Sector Project (ADB)
GOP	-	Government of the Philippines
IAOP	-	Integrated annual operating plan
ICC	-	Indigenous Cultural Community
IFMA	-	Industrial Forest Management Agreement
IRG	-	International Resources Group, Ltd.
IRMP	-	Integrated Rain Forest Management Project
IRR	-	Internal rate of return
ISFP	-	Integrated Social Forestry Program
LBI	-	Louis Berger, International, Inc.
LGU	-	Local Government Unit
LIUCP	-	Low Income Upland Community Project
LOI	-	Letter of Instruction
MPFD	-	Master Plan for Forestry Development
MTRP	-	Medium-term rolling plan
NGO	-	Non-Governmental Organization
NPV	-	Net present value
NRMP	-	Natural Resources Management Program
OECF	-	Overseas Economic Cooperation Fund (Japan)
PO	-	People's Organization
RBD	-	Research and development

RRMP	-	Regional Resource Management Program
SAMMILIA	-	San Agustin, Marihatag, San Miguel and Lianga
SBITS	-	Swedish Board for Investment and Technical Support
SWCF	-	Soil and Water Conservation Foundation
TA	-	Technical assistance
TLA	-	Timber License Agreement
TOPDI	-	Technologists for Optimal Programming Development, Inc.
TSI	-	Timber stand improvement
UDP	-	Upland Development Program
USAID	-	United States Agency for International Development

EXECUTIVE SUMMARY

1. With the issuance of EO No. 263, Community-Based Forest Management (CBFM) has become a central element of natural resource policy in the Philippines. In order to facilitate the implementation of these new policy orientations, this study addresses the financial sustainability of CBFM operations currently being established, and to be established in the future.
2. The Philippine forestry sector in the past two decades has been characterized by accelerated deforestation; at the same time, there have been more than two decades of social and community forestry efforts under various forms, with only mixed results.
3. The Constitution of 1987 explicitly prescribes sustainable development and social equity, thereby providing a solid legal basis for community-based forest management. However, further policy development established by specific legislation is necessary to implement these constitutional mandates. Most policies related to CBFM are being implemented via regulatory texts (DENR executive orders) while there is an insufficiency of legislative texts on the matter.
4. Policies established in the early nineties have led to an accelerated elimination of Timber License Agreements (TLAs), while CBFM efforts in one form or another have followed much more slowly. Abandoned TLAs represent a major opportunity for establishing CBFM, and a major threat in that these lands are vulnerable to encroachment until formal management is established.
5. With the support of EO 263, despite the mixed results of the past, there is every reason to continue CBFM programs, while improving their performance to

regarding plan comprehensiveness (coverage of subject areas other than residual forests, i.e., agricultural improvements/agroforestry and reforestation), and specific management information (what is to be done where, when and with what resources).

10. The financial and economic analyses conducted in association with the plans could be much improved regarding their content (inclusion of all the major variables), the visibility of the assumptions on which the calculations are based, the approach (application of the "with and without" principle), and the uniformity of presentation (different plans have very different ways of presenting results). Based on the analysis conducted, it is not possible to tell whether an operation is or is not financially or economically viable.
11. In an effort to strengthen the financial and economic analysis methodology, a detailed financial analysis was conducted using New Bataan as an example. CBFM operations of this type and scale appear reasonably viable. However, some issues arise as to the reasonableness of the Community Forestry Development Trust Fund (CFDTF) and the initial capital needs of CBFM operations that must incur major front-end investments.
12. While the principle of labor intensity should be upheld, emphasis on specific logging technologies (e.g., *carabao* logging) needs to be revised in the interest of economic efficiency and the preservation of the value added potential of raw material.
13. One necessary condition for the financial sustainability of CBFM operations is the need to view these activities as viable enterprises. They should be self-sustaining through the production and sale of goods in markets, and although they should become major sources of employment, they must not be regarded as a formula that creates jobs for everybody. These enterprises require internal managerial and technical capabilities that in most cases still need to be acquired.
14. Some banking firms are showing interest in CBFM as a new market. However, they are demanding audited financial statements. These are not yet available.
15. Some problems have been detected with the visibility of relevant policies. These need to be effectively communicated at all levels. Understanding of the policy framework, particularly what is allowed and what is not is essential to the success of CBFM.
16. Procedures for the resolution of conflicts at the local level constitute another policy matter requiring urgent attention. Unnecessary delays in approvals and operational start-up are being caused by the way some of these conflicts are being handled, among other factors.
17. The open access problem, derived to a large extent from the reduction in the number of TLAs, has motivated a generalization of irregular activities, which in some cases represent an obstacle to the establishment of CBFM.
18. In some regions, DENR has taken significant steps towards becoming an assertive facilitator of CBFM in collaboration with LGUs and AOs. In other regions, much

progress is yet to be made. An inter-regional exchange of experiences would be most beneficial.

19. Participating AOs are on the whole quite competent at community organization and social analysis. However, there is still room for improvement in technical areas such as resource inventory, land use planning, business planning and financial and economic analysis.
20. Considering the various difficulties the program is encountering, continuing foreign funding support appears necessary until a smooth process for establishment of CBFM sites is developed.
21. Social equity, from the standpoint of distribution of resources and income depends on economic efficiency as a necessary condition. While strict efficiency alone does not guarantee equity, inefficiency destroys resources and the capability of generating wealth. Therefore, while CBFM should favor labor intensive technologies where appropriate, nothing will be accomplished if enterprise viability is sacrificed in the interest of imposed labor intensive prescriptions. Additionally, CBFM must not be perceived as a guarantee of full employment in a given community.
22. Regarding the establishment of processing facilities, their creation without a thorough analysis of wood processing opportunities must be avoided. Quick calculations as those presented in some management plans are definitely insufficient to prepare such important decisions. Apart from direct processing, there are less capital intensive ways to increase value added, such as raw material merchandising, i.e., proper log preparation and grading, and log allocation.
23. While respecting the constitutional prescriptions the debate on resource tenure must be pursued, and must be supported by continued systematic study on the relative merits of various tenurial instruments.
24. The sense of urgency in moving ahead with the program must be balanced against sufficient capability (technical, managerial, commercial, organizational, social) to carry it out. Communities should not be tempted with the prospect of improved conditions until the program is ready to proceed, and the pressure to expand at the first sign of success must be avoided.
25. Coordination of the various efforts dedicated to CBFM is essential. The mandate of EO 263 is not limited to specific funding efforts or programs; it involves all Philippine forest resources. The key coordinating role should rest with the central offices at DENR. Given the importance and vastness of the program, the idea of an Assistant Secretary dedicated to this task should be considered.
26. In a given candidate management area, all possible business options need to be identified and a number of promising ones should be analyzed in-depth. Focus should be on the potential overall utilization of the forest resource, and the improvements of current forms of resource use applied by the site dwellers.

27. Since CBFM is a new form of business venture, several forms of credit will probably be needed. The interest on the part of banks is encouraging. The availability of credit for CBFM should be first be explored and encouraged, more through direct arrangements between POs and the banking sector than through special State institutions.
28. Skills such as enterprise planning, organization for effective performance, disciplined implementation of operations, and financial control, with few exceptions, seem to be generally deficient in CBFM sites; acquiring these capabilities is urgently needed.
29. Technical strengthening requires focused training efforts at the front end. In order to ensure the effectiveness and efficiency of training, a thorough training needs assessment should be given priority. Based on this assessment a training program focusing on specific targets (mainly participants in the management planning process and PO leadership) should be established.
30. In the long run, technical strengthening must be supported by applied research: key subject matter areas are natural forest management and upland agriculture/ agroforestry. In the area of natural forest management, there are major unknowns regarding growth and yield of residual natural forests, and stand response to harvesting intensity. Concerning agroforestry, more work is needed in finding inexpensive technologies and encouraging their acceptance by upland farmers.
31. Community organizations must build a consensus as to what they want to accomplish with their newly acquired resources. This should be based on a disciplined process of collecting information and creating dialogues to improve mutual understanding and generate joint management priorities.
32. In order to improve the potential viability and sustainability of CBFM, a number of actions to be taken in the areas of **planning, operations** and **policy** are suggested. Additionally, a short list of steps to be taken urgently is proposed.

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by
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**I. COMMUNITY-BASED FOREST MANAGEMENT—
AN HISTORICAL PERSPECTIVE**

On July 19, 1995, President Ramos signed Executive Order No. 263 **”Adopting Community-based Forest Management as the national strategy to ensure sustainable development of the Country’s forest land resources and providing mechanisms for its implementation.”**

While community-based forest resource management activities have been attempted in the Philippines for more than two decades, this is the first time that the nation benefits from a strategic commitment at the executive level, placing Community-Based Forest Management (CBFM) as a central element of natural resource policy.

In order to facilitate the implementation of these new policies, this study addresses the financial sustainability of the CBFM operations currently being established, and to be established in the future. The guiding principle of the analysis is that, in order to ensure sustainable resource management (implying utilization of the forest resources while ensuring their permanence), the communities involved and their members must be able to obtain financial advantages beyond their present gains, both for their own well-being and for investing in maintaining forest resources.

This view is based on the behavior of economic agents, who tend to maximize certain magnitudes related to their well being. In very general terms, as consumers, people try to obtain the highest level of satisfaction under a given budget; as producers, they try to obtain the largest possible margin between production costs and revenues from the sale of goods and services. Apart from individual needs and pure market forces, economic behavior is affected by a number of policy and institutional factors (e.g., taxes, subsidies, land use restrictions, environmental standards, property rights). As these materialize, with their stimulating or restrictive effects, economic agents adjust their behavior, and continue to attempt to maximize their well being under the new conditions.

When establishing policies, particularly those that tend to restrict economic behavior, it is essential to assess the mechanisms of enforcement, and their costs, along with the opportunities for irregularities provided by such policy environment. Typical irregularities in the forestry sector are **overharvesting, trespassing and avoidance of forest charges payments**. It has been shown (Hyde and Sedjo, 1990; Paris and Ruzicka, 1991; Laarman, 1993; Seve, 1994) that several forms of traditional forest management agreements (e.g., TLAs) motivate these types of irregularities. Appropriate forest policies should strive for long-term economic efficiency, which is a key factor of sustainability, and avoid incentives for irregularities, which are guaranteed to be both inefficient and inequitable.

A. Historic Overview

If there is any one term to characterize the problems currently facing the forestry sector in the Philippines, this term is **deforestation**. Although records are sketchy, it is estimated that between the turn of the century and the early 1950s, Philippine forest cover decreased from over 25 million ha to approximately 12 million ha. Since the fifties, another 6 million ha have been lost, and the present area of forest cover is probably no more than 5 million ha. The present area of forest cover can be broken down into less than 1 million ha of old growth, with more than 4 million ha of secondary forests, many of which are seriously degraded.

Major factors in the recent loss of forest cover are population pressure and unsound logging practices. Philippine upland population is estimated at 18 million. Of these, indigenous cultural communities (ICCs) include about 6.3 million, all living on public forest lands. Additionally, approximately 2.4 million migrant farmers are living on public forest lands. The remaining upland population either live in small urban communities (3.7 million) or occupy alienable and disposable lands (5.8 million) (de los Angeles et al., 1993). Although some ICCs practice sustainable forms of land management, population pressure in the lowlands (due to various economic factors) results in migration and conversion of upland forests to farmland.

Logging has also been a major deforestation factor. In 1976, more than 400 licenses, including over 200 commercial Timber License Agreements (TLAs) covered two thirds of the forest area at that time. While logging was supposed to be regulated under these agreements, various factors, mostly of an institutional nature motivated a behavior on the part of logging concerns that led to substantial forest resource deterioration. Population pressure combined with logging practices and lack of enforcement capabilities on the part of the Forestry Administration have left the resource threatened and un-protected, and deforestation has continued.

Given the dramatic deterioration of forests and other natural resources, Philippine authorities have come under considerable pressure to redress the situation. This pressure comes in from several fronts including public opinion, environmentalist pressure groups, both domestic and foreign, other domestic and foreign NGOs, and funding organizations, both bilateral and multilateral. As a result, since the late eighties several solution attempts have surfaced. Most of these have come in the form of financial assistance through foreign-funded projects and programs, and in the way of legal and regulatory reforms. Foreign funded projects and programs have focused on reforestation, policy reform, forest resource inventory, natural forest management, watershed management, and social and community forestry. Since the late eighties, roughly 20 forestry- related projects have provided hundreds of millions of dollars, with mixed results, while making the Philippine forestry sector highly dependent on foreign funding.

While deterioration of forest resources in the Philippines still proceeds at an alarming rate, it is important to point out that nowhere in Southeast Asia has social forestry received as much political support, financial backing, and technical advice as in the Philippines. The Philippines was the first nation in the region to begin a land-lease program for forest dwellers (Poffenberger, 1990a). In 1971, with the Kaingin Management and Land Settlement Regulations, public programs focusing on forest occupants were introduced for

the first time in the Philippines (Gibbs, 1990). In fact, three programs were started between 1971 and 1979. None of these programs performed adequately, and by 1981 the total area covered by all three was only 33,000 ha. The creators of these programs faced considerable obstacles. While the obstacles were generally seen at the time as technical and regulatory, it slowly became apparent that social, economic, and institutional obstacles might in fact be more important (Gibbs, 1990).

The establishment of the Integrated Social Forestry Program (ISFP) in 1982 was in some ways a premature attempt to create a national program when the reasons for the lack of success in the 1970s were still unclear and the capacity and resources for a major new program were unavailable. However, the political pressure on the government for a high profile approach to upland development was considerable. There were demands from environmentalists for sustainable management of the public forest, from social workers for improved standards of living for upland peoples, from indigenous peoples seeking political autonomy, and from military analysts concerned about insurgency in the uplands. The government responded to these pressures in a conventional way by drawing up a blueprint for a national program with few details of how it was intended to operate (Gibbs, 1990). This "blueprint approach" appealed to professional development planners, but rural development projects suggested a more inductive learning approach in which actors learned to make programs respond more intimately to beneficiary needs and to build competent organizations to make the programs work. This prompted the Forest Management Bureau (FMB) to establish the **Upland Development Working Group** in 1981 to guide a learning approach to social forestry. The **Working Group's** activities influenced ISFP in three areas: site selection, introduction of the program to new communities, provision of tenure security, and agroforestry development. While the ISFP was influenced directly by the Working Group, it also grew and expanded in directions the Group could not control. The smooth evolutionary path to social learning envisioned at the outset could not be followed (Gibbs, 1990).

B. New Developments Since 1986

The restoration of democratic rule in 1986 brought about a new constitution in 1987 which explicitly prescribes sustainable development and social equity. Consequently, in recent years, and particularly since 1990, a number of policy changes have taken place with the intent of reversing forest degradation, many of them emphasizing a community-based approach to forest management. Most of these, however, have been motivated by foreign assisted efforts such as NRMP, the Master Plan for Forestry Development, SECAL, and others. Additionally, most of these reforms are being implemented as regulations in the form of administrative orders (DAO) from DENR, while very few have been enacted as legislative texts. The most active areas of policy reform in recent years have been: a) tenure security; b) forest charges; c) conservation of old growth forests and biodiversity; d) rationalization of residual forest management; e) community participation; and f) forestry sector planning and legislation.

C. Perspective of the Master Plan for Forestry Development

DENR prepared in 1990 a national level Master Plan for Forestry Development (MPFD), providing a 25-year perspective of the forestry sector's potential. With this national plan as a starting point, 15 regional plans were developed in 1991 and 1992. This process and its continuity were formalized with the issuance of DAO 23, Series of 1992

providing for the institutionalization of the MPFD within DENR. In addition, as part of the MPFD exercise, a draft Forestry Code was prepared and submitted to Congress by DENR in June 1992.

The MPFD included a total of 15 action programs, five of which deal explicitly with the interaction of the forestry sector and the population. These programs are: a) People oriented forestry, b) Soil conservation and watershed management, c) Integrated protected area system and bio-diversity conservation, d) Urban forestry, and e) Forest protection. While CBFM is related to all these action programs, it was specifically addressed in the Master Plan under the People oriented forestry program.

As proposed in the Master Plan, CBFM consists of "A system of managing the forest resources that would favor the upland communities, provide them with a continued source of livelihood that is compatible with the principles of sustainable management, and at the same time serves as a tool for forest protection.... Community-based forest management, or CBFM works on the concept of allocating a portion of the public forest for a given community to manage. The community enters into an agreement with the government through a CBFM agreement (CBFMA). A management plan for the area is prepared with the help of forest officers," (MPFD, p. 94). It is interesting to note that the CBFM ideas that are being put to work today, had already acquired a high degree of specificity more than five years ago.

D. Recent DENR Regulations and Policies Affecting CBFM

An important step in forest resource conservation was the issuance of Administrative Order No. 24, Series of 1991. This text prohibits logging in old growth forests and restricts timber harvesting to residual forests on terrain with slopes of less than 50%, elevation under 1,000 m, and more than 20 m away from stream banks.

Along with this regulation, it was the policy of DENR not to renew expiring timber license agreements, and to cancel those TLAs in which violations were detected. As a result, of the 200 TLAs existing in 1976, only 58 were left at the end of 1991, and only 32 are active today. As a result of this reduction in the number of licenses, somewhere between 2.5 and 3 million hectares of former TLAs are not benefiting from any form of rational management, and are open access resources due to the government's inadequate protection capability. These areas represent a challenge in the sense that they are a major opportunity for the establishment of CBFM, and a threat in that they are vulnerable to encroachment until formal management is established.

Perhaps the most important strides in recent years have been taken in the field of **community participation**. DAO 22, Series of 1993 was issued to provide revised guidelines for Community Forestry Programs. This regulation was followed by DAO 62, Series of 1993, enshrining community organizing as a strategy to attain the national goals of conservation, development and management of the Country's natural resources, and by DAO 65, Series of 1993, establishing the National Community Forestry Program Coordinating Office at the FMB, under the Office of the Director.

F. Executive Order No. 263 and the Future Of Community-Based Forest Management

As established by EO 263, "Community-based forest management shall be the national strategy to achieve sustainable forestry and social justice" (SEC.1). In order to implement such strategy, this text provides for organized communities to access forest land under

long-term tenurial agreements (SEC.), and for collaboration between DENR and organizations of the public and private sectors to facilitate the empowerment of communities to achieve sustainable forest resource management (SEC. 6). Additionally, DENR is instructed to ensure funding (SECs. 7, 8, 9, 11), training and planning for the implementation of CBFM.

With EO 263, the CBFM process has been established as a key component of the forestry sector development strategy of the Philippines. Additionally, a large number of CBFM activities are underway in the field, involving large numbers of households, covering hundreds of thousands of hectares, and benefitting from millions of dollars of funding. Under these circumstances, in spite of the mixed results of the past, there is every reason to continue these programs, while improving their performance to strengthen the sustainability of forest resource management.

II. OBSERVATIONS ON CBFM VIABILITY BASED ON CASE ANALYSES

In order to address the issues of CBFM viability, particularly (but not only) from an economic and financial standpoint, three specific cases of CBFM sites were reviewed. These sites are **Nagtipunan**, Quirino; PUC-C-New Bataan/Compostela, Davao del Norte, and **SAMMILIA-Lianga Bay**, Surigao del Sur. Detailed studies have been conducted in all these sites and comprehensive management plans have been prepared for all of them. Plans for all three sites were studied in detail, and the two sites in Mindanao (New Bataan and Lianga) were visited. Although the Nagtipunan site was not visited, perspective on this site was provided by Dr. Roberto Araño NRMP forest management specialist in Region II, who participated in the visits to the Mindanao sites.

A. Land Allocation and the Biophysical Resource Base

In each of the three cases analyzed, the total project area exceeds 8,000 ha, which is already more than the initial 5,000 ha area authorized by DAO 22, Series of 1993. It is also worth pointing out that nine new sites under consideration for Region II all exceed 8,000 ha and most exceed 10,000 ha. There are also a number of smaller sites (on the order of 1,000 to 3,000 ha) under consideration. While the smaller areas were not examined at this time, a number of these should be analyzed in-depth, particularly to assess whether or not the size of the operation will affect its financial viability.

In this context, a discussion was conducted with Ms. Naomi Balanan of the CFP staff. Operations under CFP are established on areas ranging between 1,000 ha and 5,000 ha. While there are some differences between NRMP and CFP in handling the establishment of CBFM operations, these differences appear to be more circumstantial than fundamental. One lesson learned from this discussion is that in general, areas of 1,000 ha are not viable as timber-based businesses, while they can be viable if emphasis is on improved agriculture. Other differences relate to the structure of management plans (much simpler under CFP than under NRMP), and the preparation period for CBFM establishment (currently three years under CFP, with the intention of reducing it to 18 months). Based on the discussion with Ms. Balanan, from a substantive standpoint, the CBFM financial viability

and sustainability issues dealt with in this report, as well as the conclusions derived, are entirely relevant to CFP activities.

Regarding the allocation of forest land to the operating communities in the areas examined, all three were originally either ex-TLA parts or ex-TLAs. None of the three Community Resource Management and Development Plans (CRMDPs) reviewed carries an explicit description of either the establishment of the People's Organization (PO) in charge of the management of the site, or of the process of allocating the area to the PO. The process of allocation seems to have started from a preliminary identification of target areas in workshops sponsored by NRMP, and eventual concentration of efforts on a number of "high priority" areas in Regions IV, V, X and XI.

Although DAO 22, Series of 1993 provides specific guidelines and establishes responsibilities for site identification, selection and approval, the formal administrative mechanisms required to match community needs with resource availability do not seem to be well established as of this date. As pointed out in a recent NRMP technical report, "The existing and ongoing CBFM sites did not emerge from grassroots initiatives. They exist because DENR took an active role in identifying and selecting sites (in canceled, abandoned, expiring TLAs) that are significantly threatened by in-migration and encroaching communities" (Guiang, 1995).

In all three cases reviewed under this study, the biophysical resource base appears adequate, with a reasonable area of harvestable residual forest, as indicated in Table 1.

Table 1. Total area and harvestable forest area of the sites reviewed.

Site	Total area [ha]	Harvestable area [ha]
Nagtipunan	8,200	2,700
New Bataan	10,010 ¹	3,900
Lianga	59,000	44,600 ²

¹Through the addition of a new barangay, total area is currently 16,000 ha.

²ncludes 1,200 ha of established plantations

Based on the inventories conducted, residual natural forests contain reasonable amounts of average harvestable volumes, with approximately 50 m³/ha for New Bataan about 55 m³/ha for Nagtipunan, and roughly 75 m³/ha for Lianga. Apart from timber, another major use of the forest is rattan collection, which is being over-harvested in all three areas. Other forms of land use include protection forests, and farming/kaingin, in all three areas, and open grassland (providing opportunities for reforestation), especially in Lianga and Nagtipunan.

From an occupational standpoint, the large majority of the population in the Nagtipunan area practices upland farming and kaingin as a source of livelihood. The same is true in New Bataan. In Lianga, the most important occupations are wage labor, farming (both upland and lowland), and commerce. Illegal logging by farmers is also prevalent, particularly in Nagtipunan and New Bataan.

B. Management Plans in General

The preparation and approval of forest management plans is a critical and most challenging area where much progress has been made, particularly in matters of community organization and participation, and in several technical aspects as well. However, more progress is still needed. A major concern relates to what should be included in such plans. The three plans reviewed, while being quite informative on the various potentialities of the respective management units, also reveal areas for improvement, regarding mainly **comprehensiveness** and **specific management information**.

From a **comprehensiveness** standpoint, the management plans analyzed, like those prepared in the early nineties, continue to have a timber focus, with some attention given to rattan. While there is no question that in the three areas examined, most of the land use potential is timber-related, it is also true that most of the participating populations are drawing their livelihood from farming, both upland and lowland. Additionally, as a result of the closing of TLAs and consequent unemployment, kaingin activities, with all their damaging impacts, appear to be expanding. This suggests, that **improved upland farming and agroforestry should be considered as full-fledged programs, just as important as timber-based activities**. Not only could these other components contribute to livelihood improvements, but they may also create new business opportunities such as cash crop marketing for surplus production. This would be particularly important in areas like New Bataan where unemployment is a serious problem.

While the Lianga management plan explores this possibility, as yet, no specific agroforestry/farm improvement program is being prepared for field implementation. The Lianga plan dedicates a small section to agroforestry. However, this is only a brief and preliminary discussion of options, although it could lead to the eventual development of a program. The Nagtipunan and New Bataan plans, while they detect the importance of various forms of farming as sources of livelihood, they do not explore the possibility of improved agriculture in the analysis of management options, although the New Bataan Plan briefly mentions the possibility of silvi-pastoral and agroforestry assistance.

Improvements in agriculture have been selected as an example in this discussion because of the importance of this form of economic activity in the three sites examined. However, this should not preclude the exploration of other types of potential activities in a CBFM context. For example, the integral utilization of mangroves should be explored in sites which contain this resource, arts and crafts could be pursued where the right raw materials and talents converge, and ecotourism can be developed under appropriate conditions.

In addition to agricultural activities, most sites being established contain open grassland areas, which provide opportunities for major reforestation activities. In general, these reforestation opportunities could also be addressed as full-fledged programs.

Regarding **specific management information**, it cannot be overemphasized that a management plan must necessarily include the organization of the production system through a logical sequencing of activities in time and space. While there have been significant improvements since the management plans sponsored by NRMP in the early nineties (e.g., San Pablo, DENR/NRMP, 1992), the three plans reviewed address only in

very general terms the activities that need to be conducted in a specific area in a given year. Regarding forest management in particular, apart from programming annual harvests by management unit and by area, the management plan must also prescribe other activities (again by location and by year) such as timber stand improvement, reforestation, road construction and maintenance, fire protection, logging site preparation for the coming year, the harvesting or gathering of non-timber forest products, and soil and water conservation/rehabilitation activities. This programming of activities will not only give a disciplined perspective of what needs to be accomplished, but will also facilitate substantially the allocation of human, material and financial requirements of tasks, and the preparation of Integrated Annual Operating Plans (IAOP). Additionally, long-term management plans must be flexible enough to allow for adaptations to new situations through the preparation of more detailed medium-term (e.g., 5 years) rolling plans (MTRPs), which allow for linking IAOPs with the long term perspective of the CRMDP by adjusting the timing of programmed actions. Linkages between CRMDPs, MTRPs and IAOPs, are supposed to provide for flexibility in the planning function: while the CRMDP must provide long-term perspective and orientations for sustainable resource management, it must not become a "straitjacket" from which no deviation is possible. In preparing the MTRP and the IAOPs, POs must be the main participants, and should be allowed to adapt to changing circumstances, while respecting the perspective and general orientations of the CRMDP. Centralized comprehensive long term planning can be too restrictive and should be avoided.

Although, some of the plans (e.g., New Bataan) provide a summary of physical targets, they do not include many of the activities listed above. The Lianga plan provides no programming indicating what activities will take place in what location and at what point in time. The Nagtipunan plans (one for Landigan and one for Wasid) propose a programming of annual harvests by management unit, indicating both volume and area. However, no other activities are programmed over time.

CRMDPs could be substantially improved if, in addition to the large number of thematic maps, they would carry a series of management maps. These could include, overlaid on a management unit base, the present stand configuration, the expected stand configuration at the end of the planning period, the areas to be harvested in the next two five-year periods, and the "supporting activities" to be carried out (e.g., TSI, road rehabilitation, reforestation, drainage work, demarcation, agroforestry). This series of management maps can be accompanied by topographic and soil maps for basic support information. Apart from the maps, it would be helpful to have a set of worksheets, one for each year of the planning period indicating the main activities to be carried out in each management unit. These should be detailed for the first five years, and more general for the remainder of the planning period. With this kind of structure, the CRMDP ensures an overall long-term perspective and facilitates considerably the year-to-year programming of activities.

Finally, marketing considerations do not seem to have received enough attention. The financial viability of these community operations is highly sensitive to market access. In the area of forest products, while Lianga, being already an integrated operation, does not have major market access problems, things are not the same for New Bataan. New Bataan, even though it has good access roads, is not yet in a condition to sell processed products. While fitches can be sold anywhere, opportunities must be explored for selling premium raw materials that are properly prepared so as to obtain the highest recovery and value added. However, as discussed above, CBFM should not concentrate only on

traditional forest products; farm products also need marketing consideration. In this context, it appears that upland farmers have difficulty in bringing their surplus to markets even in sites like Lianga.

All these management plan issues must be discussed in-depth not only within DENR, but also with operating AOs and the POs and LGUs involved in CBFM operations, in order to ensure a continuing improvement of management plan preparation capabilities. *While nobody questions the importance of accelerating the establishment of CBFM operations, this sense of urgency must be balanced against the quality of the planning process and available management capacity required to guide and support a successful and sustainable operation.*

C. Financial and Economic Analyses Conducted

Financial and economic analyses (FEAn) have been conducted as part of the preparation of the three CRMDPs reviewed. These analyses, however, appear to have been conducted with the idea of satisfying a formal requirement, rather than as a tool for preparing management decisions. The main purpose of an analysis of this type is to determine the financial and economic viability of an investment proposition, and to assist management in choosing among alternative propositions that could lead to the attainment of a given objective. However, due to the way these analyses were structured and conducted, they do not provide the information needed to determine the financial viability of any of the three CBFM operations under review.

A generic methodological problem is the lack of explicitness in the **assumptions**. Apart from providing a simple indicator of financial performance (net present value (NPV); internal rate of return (IRR); benefit cost ratio (B/C)), a financial analysis, in order to assist in decision preparation, must give a clear and precise idea of how costs are expected to be incurred and how benefits are expected to be obtained. In other words, **all major variables involved in the management plans must be interpreted in terms of costs and benefits**. Since both the management plans and the FEAn require projections into the future, as well as the quantification of variables that are not known with certainty, they both require the formulation of assumptions as a basis for projections and other calculations. As plan implementation proceeds, these assumptions may need to be updated, adjusted or corrected, in light of new information. These improved assumptions will permit the updating of the analyses and plans, thus improving the information necessary for future performance. Unless the initial information is made explicit, these improvements will not be possible.

A second methodological issue is the lack of application of the "with and without" principle. Basically, what this means is that the expected performance of the new set of activities to be developed according to the management plan must be compared with the set of activities currently going on at the site. Even though no management plan is being applied, local people are using the land in a number of ways and deriving their livelihood from these various forms of land use. Additionally, from the evidence provided by the management plans, and also through visual inspection, the current forms of land use are probably not sustainable in the long run, and will lead to further resource deterioration. While the plan reports describe, sometimes in detail, the pre-plan activities on the sites, *the financial and economic analyses do not develop a scenario of the potential consequences of continuing current land use trends if no CBFM activities are undertaken. This continuing scenario is what the land users will be giving up if the CBFM operation is undertaken. The*

expected performance of the new set of activities must be compared with the status quo to determine whether or not these new activities are worth undertaking.

Other methodological aspects include:

- a) It should not be assumed that all three sites are implicitly assumed to be in full operation in the first year of activity. It is well known that any project requiring major investments will take at least the better part of a year to bring together the conditions necessary for operating at capacity. Concerning the three CBFM sites visited, although the plans were prepared several months ago, none of them is yet operating.
- b) The analyses must explicitly include investments in "enabling conditions," such as management planning studies, preparation of environmental impact assessments, community organization and development, boundary delineation and demarcation, infrastructure establishment and improvement.
- c) Investment costs and recurrent costs must be separated. This is an essential consideration, especially if it is decided to support a sub-marginal operation for reasons other than financial efficiency: an operation that cannot cover its capital costs may be able to receive an investment subsidy and be viable on a strict recurrent cost basis. On the other hand, an operation that cannot cover its recurrent costs cannot run unless it is subsidized on a continuing basis.
- d) Some major investment costs, like lumber manufacturing equipment purchases, for example, are often treated as a stream of annual continuing costs. There is no reason for this treatment, since the total cash outlay takes place at the moment of purchase.

Several practical issues are also in need of serious attention:

- a) Very little (in some cases nothing at all) regarding agroforestry and other forms of livelihood or potential businesses.
- b) No explicit treatment of the Community Forestry Development Trust Fund.
- c) No consistency of presentation across reports.

In an effort to strengthen the methodology and the explicitness of the assumptions, a set of generic outlines covering detailed cost structures and major revenue components is provided in Annexes I and II. Additionally, using New Bataan as an example, a financial analysis spreadsheet has been prepared in an effort to address the methodological and practical issues described above. The detailed calculations and assumptions are provided in Annex III.

Apart from serving as an example for the application of an analytical methodology, the calculations provide some revealing results, even though the analysis focuses only on residual forest management. In developing this model, every attempt was made to include all cost items necessary to the effective start-up and management of a CBFM operation including pre-investment studies and plan preparation, as well as community organizing

and training. The analysis has applied the "with and without" principle by including an "opportunity cost" of continued current resource use trends. Additionally, in order to make projections conservative, annual harvest volume is limited to 45 m³/year, and no revenues are expected during the first year of the operation. Based on these assumptions, the New Bataan operation gives an internal rate of return (IRR) of 21% and a net present value of ₱8.7 million at an interest rate of 14% with fully loaded costs including forest charges. Respectively, these indicators can increase to 24% and ₱10.8 million with a 25% reduction in the community organization cost, and to 30% and 20 million with a 20% increase in harvested volume. A fourth case was run assuming a 20% decrease in harvest. This case gives an IRR of 12% and a negative NPV at a 14% interest rate. Table 2 presents these results with further detail. In this analysis, while the Community Forestry Development Trust Fund (CFDTF) was calculated, it was not included as part of the cost structure; it was used only as a "memo" item so that it can be compared with the net cash flow before contribution.

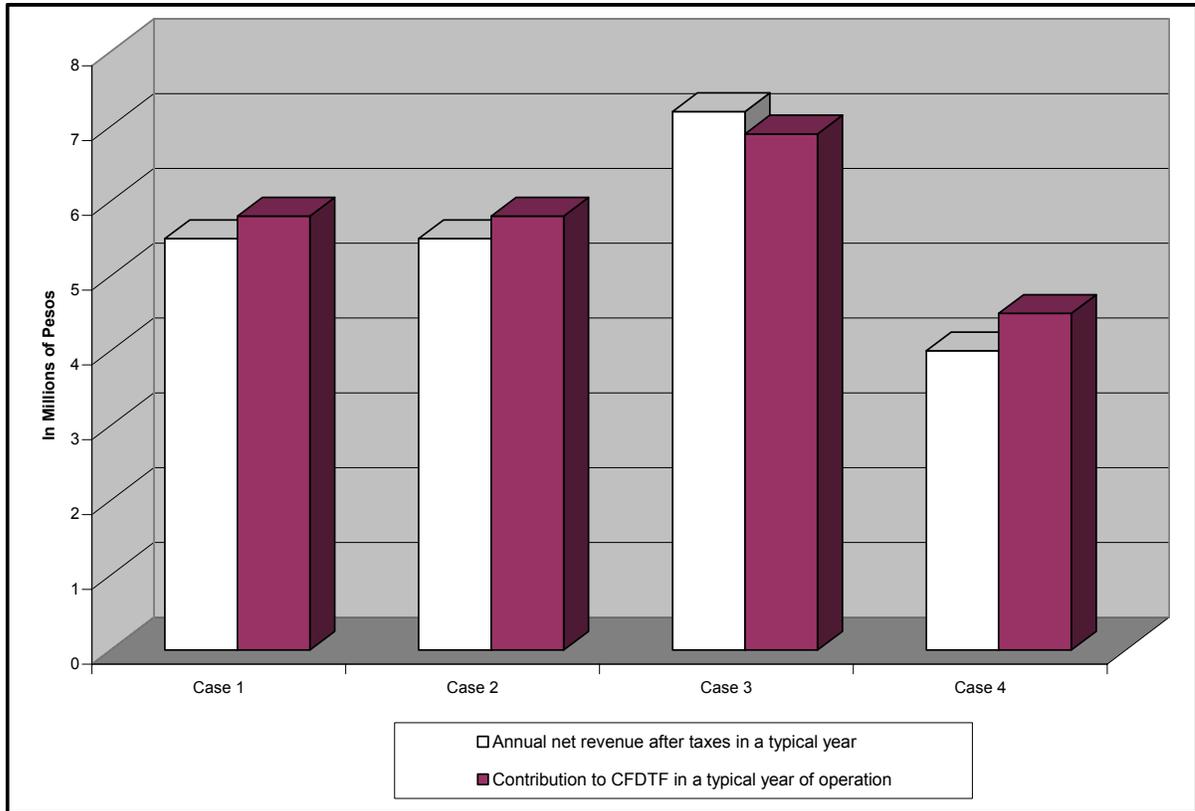
Table 2. Financial analysis indicators of CBFM using New Bataan as an example

Scenario	IRR [%]	NPV @ 10% [₱ million]	NPV @ 12% [₱ million]	NPV @ 14% [₱ million]
Case 1: Base Case	20.8	19.0	13.1	8.7
Case 2: Decrease in CO cost by 25%	23.6	21.1	15.2	10.8
Case 3: Increase in harvest by 20%	30.0	34.6	26.2	20.0
Case 4: Decrease in harvest by 20%	12.0	3.5	(0.1)	(0.3)

The analysis suggests that an operation of this type and size is viable, although not spectacularly so. However, a note of caution is necessary: for virtually all the calculation period (35 years), the required contribution to the CFDTF under the base case is higher than the net revenue. This means that **if the PO is required to make this contribution without being able to use the funds for recovering its recurrent costs, the operation will not be financially viable** (See Figure 1). In the models run, this is true for both the base case and case 2 (25% decrease in CO cost), while in case 3 (20% increase in harvest), net revenues barely cover the CFDTF contributions, which suggests that CBFM operations might have a tendency to increase harvest in order to satisfy the CFDTF requirement.

In this context, it must be pointed out that the analysis reflects an operation that is sustainable, with continued investments in stand improvements, enrichment planting, road rehabilitation and maintenance, maintenance of other infrastructure, equipment maintenance and replacement, and forest protection. If the purpose of the CFDTF is to support these expenditures, the site should be allowed to operate without having to be burdened by a contribution of 30% of gross revenue beyond management control.

Figure 1: Comparison between net revenue after taxes and charges and contribution to the Community Forestry Development Trust Fund in a CBFM operation using New Bataan as an example.



The fiscal burden on CBFM is already quite heavy with forest charges absorbing 20% of gross revenues. If in addition to this, there is a CFDTF, contribution of 30%, and the use of this trust fund is as restrictive as required by DAO 22, Series of 1993, the economic behavior discussed at the beginning of this paper would most probably encourage irregularities on the part of the PO. Attempts to avoid payment are definitely encouraged, and trespassing and overharvesting cannot be excluded.

Another word of caution is that under the assumptions used, the PO must incur an investment of ₱15 million over the first two years. Although this is an extreme case in which all structures and infrastructures, except for the opening of new roads, must be built from scratch. This suggests that financing needs for operations of the size under consideration may be quite substantial.

While some of the numbers contained in the analysis may be debatable, all the assumptions behind them are explicitly laid out and any necessary corrections can be immediately applied. Additionally, the analysis is built upon a detailed cost structure representing a specific production process and a set of revenue components representing the output and prices of specific products. As such, the model allows for analyzing changes in production alternatives that can be decided upon, and sensitivities to changes in

assumptions or major variables that may be beyond management control. With this kind of structure, a FEAn model can really serve its decision preparation purpose.

D. Managerial, Commercial and Technical Issues

1. Logging Technology, Efficiency and Value Added

An issue that was brought up several times during field visits and other discussions deals with favoring logging with *carabaos* in the interest of labor intensity and low environmental impact. **While labor intensity is a principle to be followed, technological recipes that sacrifice efficiency and/or value added potential should not be imposed.** *Carabao* logging is probably efficient in some types of terrain, and up to certain diameter limits. Diameters beyond the traction capacity of the animal would require a breakdown of the log at the felling site, with considerable recovery losses. This breakdown would also imply losing the value added potential of high quality logs, i.e., a large diameter sound log of a premium specie, if turned into flitches at the felling site can no longer be used for high quality plywood. Additionally, requiring *carabao* logging in major operations would pose the logistical problem of keeping and maintaining a large number of animals. Rather than requiring operations to submit to a particular logging technology, they should be required to submit, as part of the IAOP, a detailed harvesting program indicating, along with the specific areas and volumes to be harvested, the technologies utilized and their justification, along with a statement of expected environmental impacts.

2. Enterprise Perspective and Markets

Based on various discussions held both in the field and with a number of NRMP consultants, it appears that one of the necessary conditions for CBFM operations to attain financial sustainability is the need to view these activities as viable enterprises. This implies that they should be financially self-sustaining through the production and sale of products in markets. In this context, a major issue that is being widely debated is CBFM as a factor of employment. As previously discussed, while labor intensity must always be kept in mind as a basic principle, **CBFM must not be regarded as a formula for creating jobs for everybody.**

Enterprise financial viability is just as important a principle as labor intensity, and forcing the labor issue upon an operation to the point of breaking its financial equilibrium will lead to its bankruptcy, thus creating a new unemployment problem. A potential solution being discussed (particularly at New Bataan) is the rotation of temporary jobs to accommodate all workers who might be qualified. This is essentially a trade-off between full-time employment for some and temporary unemployment for all. It is worth pointing out that the performance of an enterprise requires a certain degree of stability which is based on continuity and identification of each individual with his responsibilities, which can hardly be acquired with "on-and-off" employment.

Part of the solution to the employment problem could be found through making management plans more comprehensive than they are now. While all the plans reviewed have a very strong focus on the residual forest resource and propose mostly timber-based activities, in general, there is ample room for improved farming/agroforestry and the development of forest plantations. In particular cases, there could well be even more opportunities (ecotourism, minor forest products, crafts, etc.). All these potential activities

can be important employment factors, and may lead to a number of independently operated "businesses" under one PO, which would serve as an "umbrella" organization. In fact, in the case of Lianga, while some stakeholders are concerned only with jobs, others would only like to participate if there is agricultural development and fisheries development. Another part of the solution is continuing quality management capable of detecting opportunities for business expansion and diversification.

From the standpoint of product commercialization, market accessibility is essential, and can also be a factor of employment. Apart from physical access, a clear assessment of market opportunities for all products is essential. While markets for wood products and rattan seem to be reasonably well understood, those for farm products, minor forest products and other potential businesses should be explored, in order to get the maximum advantage from a "multi- business" approach. However, this should be an identification of market opportunities at the level of the PO, rather than a sophisticated analysis of market structure and dynamics.

In spite of all these pending issues, there seems to be a general feeling among participants in the CBFM sites being established that they will be doing better under the schemes proposed than under the status-quo.

3. Managerial and Technical Capability

While community organization, viable production systems and sensitivity to markets are necessary conditions for the financial success of CBFM operations, human capabilities, particularly managerial and technical are also basic factors. Based on field visits and discussions, it appears that on the whole, CBFM leaders are learning the rudiments of the activities, but are not yet at the point of running them as viable operations. Additionally, it appears that some PO officials in senior positions, while they are respected as community leaders, they are still lacking the managerial disciplines required to run the operations with a business perspective. This is having repercussions on how POs are being managed. Community leaders must become aware of the importance of defining roles and functions in POs to ensure quality management and team effectiveness.

From a technical standpoint, both Lianga and New Bataan have capable individuals who can provide guidance to the POs, mainly in the area of forestry and wood products. In contrast, technical inputs are lacking on both sites in the field of agroforestry/farm improvement. During the discussions and field visits, it became apparent that a considerable amount of intense technical guidance is necessary, both in forestry and agriculture, particularly during the first few years, and CBFM operations should be in a condition to pay for these technical inputs.

E. Funding Issues

1. Initial Funding Needs and Potential Sources

A problem common to most CBFM sites in their initial stages is the need for start-up working capital, and a number of options for sourcing these funds are being explored. Sums required, per information obtained in the field, are in the range of ₱0.5 million to ₱1 million, although they could be much higher, as indicated in the FEAn example. Among the sources explored are some banks (especially the Land Bank of the Philippines in Region II,

and the Davao Cooperative Bank in Region XI). In general, banks seem supportive and interested in CBFM as a new market opportunity for the banking business. These banks are also expressing interest in making longer term loans for short-rotation plantations. However, banks are requiring properly prepared and audited financial statements as a condition for loans. NRMP is currently assisting a number of POs in preparing such statements, as several POs need initial capital, and the banks continue to be interested. A breakthrough into formal credit for CBFM will be most fortunate, as much of the rural credit currently available is based on traditional informal arrangements, which do not favor the viability or independence of POs.

Other avenues being explored include funding arrangements with potential wood buyers (e.g., furniture manufacturers), and the possibility of association with existing or expired TLAs needing additional sources of raw material for running their processing facilities at capacity. Southern Plywood Corporation in Isabela is an example. POs will have to explore carefully these propositions before deciding upon what kind of partnerships they wish to have with these types of parties to ensure fair deals.

F. Socio-Political Issues Affecting Financial Sustainability

As discussed above, the business and commercial aspect of CBFM operations are essential to their success. However, there are also a number of "non-business," social and political issues affecting the start-up of these operations that need to be resolved in order to ensure success, even from a business standpoint.

1. Clarification of Policies and their Instruments

CBFM represents a major shift in relations between the rural people and the utilization and conservation of forest resources in the public domain. The implementation of such change has led to a number of new policy prescriptions (mainly through regulatory texts) over recent years. As the CBFM concept continues to be tested, the issuance of new policies is also expected to continue. Since CBFM implies a key role on the part of local communities in the management of forest resources, communities must be made aware of all official policies affecting CBFM.

In this context, the fact that regulations dealing with CBFM are not being properly communicated to potential beneficiaries constitutes a major issue. A clear example of this situation is the fact that until early November, 1995, senior management at the Lianga operation was not aware of the existence of EO 263. While no judgement is being made here regarding responsibilities, it is urgent to correct this situation. Based on the field visits and on the discussions held, it is clear that on the whole, potential beneficiaries are willing to respect formal legality and collaborate with formal authorities in establishing CBFM sites. This is demonstrated by several events in Region II where people have confiscated illegally obtained wood and apprehended perpetrators (Araño). Given this good disposition on the part of the people, rather than delay information on policies, efforts should be concentrated on ample consultations for disseminating and clarifying policies as they are issued.

Even though the above example focuses on a broad-based policy text, other more specific policy issues need to be discussed and resolved. One of these is the compatibility of CADCs and CFMAs. Both types of instruments are being sought at several sites, including Lianga, New Bataan and a number of sites in Region II. In the particular case of

Liangá, this may derive from the fact that active involvement of IPs in this area is being pursued for the first time, and interest in a CADC developed after the CFMA process was underway.

Another policy matter is the need for procedures in the resolution of conflicts like the one related to the interruption of activities at New Bataan, where a problem which started as an internal matter ended up with a national-level order to cease operations. Rules must be issued and capabilities established to resolve such conflicts, clearly indicating local, regional and national roles, and minimizing the possibility of operational disruption.

Finally, constitutional constraints on tenure need to be clarified in terms of the meaning of 25-year arrangements and their renewability, and the various forms of association between the State and other parties (co-production, joint venture, production sharing) in the use of public resources. The rights and obligations of the State and the POs must be totally understood. Under conditions of high unemployment, this issue may not seem pressing. However, once critical unemployment problems are surmounted, people may demand more secure tenure than these restrictions allow as an incentive for sustainable management.

2. Delays and Disruptions in Establishing CBFM Operations

Apart from the interruption of operations at Liangá discussed above, a number of disruptive factors have appeared on various sites, creating problems such as time wasted, revenue wasted, instability, and continued unemployment. These problems are affecting the credibility of the program.

Disruptions are often derived from conflicts at the LGU level in terms of shares of the benefits, especially in a large area like Liangá, which involves several LGUs as well as several cooperatives. Conceivably, larger operations may lead to lower average costs due to economies of scale, but they can also bring about delays derived from "manageability" problems related to a large number of interested parties. Manageability at Liangá also seems to suffer from problems inherited and conflicts derived from prior control structure. Similar situations could be encountered in other large sites derived from entire former TLAs. The covenant signed on January 21, 1995 by the representatives of the four municipalities involved in the Liangá operation is a constructive first step, however, manageability issues are a long way from being resolved.

Another disruptive factor is the mixing of local politics and business, which is showing up in several sites. This problem appears when educated and well connected members of the PO authority structure try to control situations. While LGUs are inevitably stakeholders in the CBFM establishment process, and should be deliberately involved, political aspects must not overtake enterprise aspects. Regarding business operations, managerial capabilities are essential and cannot be replaced by political skills.

3. Irregular Activities and the Status-Quo

Irregular activities in the Philippine forestry sector have been going on for years. This is a well-known and well-documented fact. As most TLAs have expired or have been otherwise terminated, activities of this type have not stopped. The continuation of irregular

activities has significant effects on financial and economic viability and sustainability, and is affecting CBFM efforts in a number of ways.

Present conditions, characterized by unemployment and uncertainty with respect to land use rights continue to motivate irregular activities. Illegal logging and rattan over-harvesting seem to be generalized, and new kaingin activities are visible in many places. Apart from stimulating illegal harvesting and kaingin, the current situation is leading to the increased popularity of insurgent movements in areas like eastern Mindanao.

In several areas, there is considerable pressure from speculators, mostly outsiders, who encourage illegal logging on the part of the rural poor who are attracted by cash. This issue is compounded by the fact that these individuals are also a source of credit to upland farmers, and view the new POs as potential commercial competition. As a result, some seem to be attempting to disrupt the CBFM process in order to maintain their commercial advantage.

All these issues have been discussed at length in various CBFM sites in Region II. Although serious, these conflicts appear manageable through leadership and continued encouragement. DENR, assisted by NRMP has a major responsibility in this process.

G. Roles of Official Institutions at Various Levels and Policy Issues

1. Role of DENR and Collaboration with LGUs

As the leading official institution in charge of the management and conservation of natural resources in the Philippines, DENR must become a deliberate facilitator and coordinator. As discussed above, the CBFM process is facing all kinds of obstacles and needs all the support it can get. As a basic principle, in order to make CBFM successful, the "new DENR" should concentrate more on process facilitation and technical guidance than on control as traditionally practiced. Additionally, **DENR must be prepared to eventually take over most (if not all) technical functions currently being carried out by teams under foreign-funded support.**

Reportedly, significant steps towards an assertive role of facilitator have been taken in some Regions. In Region II, for example, the CBFM program is now well supported at the CENRO/municipal level as a result of a serious and thorough explanation of roles, with direct DENR participation. A considerable amount of dialogue has taken place between DENR and municipalities with the purpose of seeking commitment and tapping whatever LGU experience is available for CBFM. At present, the DENR regional office is continuing this work at the provincial and legislative levels (Araño).

From a technical standpoint, DENR in Region II is shifting from a timber-driven forest management focus to a more comprehensive multiple-use land management perspective. However, while the awareness of the need for multiple use is already acquired, the technical capability for multiple use land use planning is not yet established.

The encouraging evolution in some regions should lead to an inter- regional exchange of experiences in an effort to develop a new role for DENR as a key facilitating factor in community-based forest management.

2. Role of POs/NGOs/AOs

Despite the variety of obstacles encountered, the rural populations involved, as well as their PO leadership, appear authentically interested in the success of their CBFM operations. Based on the CBFM development process, POs are assisted by AOs (normally NGOs) for purposes of community organization, resource inventory, social analysis and management plan preparation. Experience to date, based on a careful examination of the CRMDPs available and discussions on the subject, reveals that participating AOs are, on the whole, quite competent at community organization and social analysis. However, there is still room for improvement in technical areas such as resource inventory, land use planning, business planning and financial and economic analysis. Since in the interest of "transparency," AOs should continue to have a central role in CRMDP preparation, a special effort is needed in bringing about these improvements.

H. Roles of Foreign Funding Institutions

1. Temporary Need for Donor Participation: Assist in Program Establishment

At present, foreign funding institutions are providing considerable assistance in the establishment of CBFM sites, including community analysis and organization, resource inventory and CRMDP/IAOP preparation, consultations, market development and administrative support, and in some cases, credit.

Considering the various difficulties the program is encountering, continuing this support appears necessary until a smooth process for establishment of CBFM sites is developed. However, foreign funding should be sharply targeted and, more than anything, process-oriented. Rather than pursuing a given number of hectares under established CBFM sites, foreign assistance, at least in the early stages, could be much more effective if it focused on creating the enabling conditions for program success (development of technical capabilities, methods and procedures for establishing effective organizations and enterprises, policy improvements). Only when these enabling conditions are in place will it be possible to develop CBFM operations that can guarantee sustainable resource management. On the other hand, **pursuing physical targets without the necessary enabling conditions is a high-risk proposition under which many of the sites established could end up in failure.**

Conditions for successful foreign funding contributions should include negotiations between donor and government on the basis of DENR's strategic priorities, and dedicated to community-based forest management. This coordination should probably rest upon a comprehensive funding proposal, which could include some GOP "goodwill funds" to be combined with donor funds.

Foreign assistance should continue to the point where a critical number of CBFM sites, with diverse characteristics are operating independently. At that point, there should be sufficient capability for the program to expand on its own.

III. CONDITIONS NECESSARY FOR CBFM FINANCIAL SUSTAINABILITY

As previously discussed, attempts to establish community-based forest management in the Philippines have been going on for over two decades, with more or less intensity. Since the early nineties, the CBFM concept has received a new boost of energy. This new energy has come both from a number of donor-funded programs, and from a new set of policy prescriptions, mainly in the form of DENR Administrative Orders. Despite all these new inputs, of the many sites on which the CBFM process has been introduced none is yet in full operation. To a large extent, this is due to a variety of non-program difficulties encountered, as discussed in the previous section.

This section builds on the information assembled and discussed in the previous one, and attempts to define and elaborate on a number of conditions that need to be present to allow the viability of CBFM operations. These conditions are grouped under **policy**, **business**, and **managerial/technical** aspects.

A. Policy Aspects

1. Visibility of Policies and Policy Dialogue

As the national institution in charge of setting national-level policies for the utilization and conservation of natural resources, this is a key area of responsibility for DENR. DENR must take the initiative in policy dialogues. **Policies must be explained with absolute clarity** as to what they allow, what they do not allow, what they encourage, what they discourage; what are the rights and obligations of the POs, the individuals the LGUs, and the DENR itself. For example, if tenure instruments being applied involve the transfer of **usage** rights, while the **disposal** rights are not transferred, this must be totally transparent. Additionally, DENR must make all policies visible at all relevant levels, and act as the key facilitating agency in the CBFM program.

2. Balance Between Economic Efficiency and Social Equity

Social equity, from the standpoint of distribution of resources and income, depends on economic efficiency as a necessary condition. While strict efficiency alone does not guarantee equity, inefficiency destroys resources and the capability of generating wealth. Therefore, while CBFM should favor labor intensive technologies where appropriate, nothing will be accomplished if enterprise viability is sacrificed in the interest of imposed labor intensive prescriptions.

CBFM must not be perceived as a guarantee of full employment in a given community. A community enterprise characterized by specific technologies, resource availability and markets can only employ a limited number of individuals if it is to remain financially viable. Rather than force employment upon a given business, including the rotation of jobs at less than full-time, communities should explore the creation of additional businesses in an effort to utilize fully the land resources it has been allocated.

In cases where special structures are established for the management of a large CBFM unit covering several LGUs, equitable distribution of the benefits should be negotiated among the LGUs themselves. State authorities should play a role of facilitation and arbitration, but without imposing "equity formulas."

Another aspect under which economic efficiency and equity require balancing is the fiscal burden to be carried under present regulations. In Section 2, it became clear that a combination of forest charges plus restricted use of the CFDTF could lead a CBFM operation into irregularities, that would make CBFM unsustainable, thereby defeating the whole purpose of the concept. This prospect brings up the need for an urgent revision of the present fiscal structure in the forestry sector and its adaptation to ensure incentives for sustainable management under CBFM. While both forest charges and the CFDTF are, in principle, destined to support social equity (e.g., investments in social infrastructure), they should not get in the way of the long-term economic efficiency of the sources of such revenues, without which neither sustainable resource management nor investments in improved community services are possible. Perhaps, in conjunction with the revision of the forestry sector fiscal structure mentioned above, the role of LGUs as a channel to apply treasury funds to forest protection should also be explored, aiming at alleviating the CFDTF burden.

Finally, while the TLA system is widely recognized as an inequitable way of allocating forest resources, cancellations and non-renewals have created other inequities in that they have privileged illegal operators. The present state of affairs, while inequitable, is also inefficient in the sense that it motivates the destruction of resources.

3. Appropriate Technology and Value Added Options

In the interest of social equity, and as previously mentioned several times, the principle of labor intensity must be maintained, but, in the case of wood harvesting, it must be balanced against: (a) the nature of the activity (large logs versus small logs); (b) terrain characteristics (animal-based technologies are not adapted to all kinds of terrain); and (c) economic efficiency.

Regarding the establishment of processing facilities, their creation without a thorough analysis of wood processing opportunities must be avoided. The wood processing business must be able to carry a capital investment, which may be substantial. In addition, specific technical skills are needed, which are not automatically acquired. If an investment in wood processing is being considered, a complete and detailed feasibility study is essential. Quick calculations as those presented in some management plans are definitely insufficient to prepare such an important decision.

Apart from direct processing, there are less capital intensive ways to increase value added, such as raw material merchandising, i.e., proper log preparation and grading ("bucking for value"), and log allocation (each log to the highest value added manufacturing option). In any event, raw material merchandising must be performed, especially if wood processing facilities are internally available. With respect to the value-added potential of logs, if *carabao* logging is forced upon larger diameters, logs will have to be split, canted, or flitched in the woods. This will eliminate value-added options and reduce recovery. This represents important opportunity costs, against which potential benefits of such policies must be balanced.

4. Clear Tenure Instruments

Efficient tenure arrangements will incorporate four fundamental property rights:

- a) **Exclusivity:** "security" of rights. Forest land holders must be assured that they will reap the returns to (1) holding on to the growing stock until it is economically mature (taking into account both growth and price increases), and (2) making investments in forest management (e.g., logging in such a way as not to impair regeneration, stand improvements, and protection).
- b) **Transferability:** forest land holding rights can be sold at any time, allowing holdings to "migrate" to parties interested in sustainable forestry, as represented by their perceptions of return, risk and time preference. As long as rights are exclusive and transferable, the length of contract is essentially irrelevant. Additionally, transferability strengthens the credit-worthiness of forest enterprises.
- c) **Divisibility:** allows transfers to take place at their most efficient size. Ultimately, holdings can have a size consistent with economies of scale in harvesting and long-term management.
- d) **Enforceability:** assurance that exclusivity, transferability, and divisibility hold and are legally protected.

If these rights are enforced, the holder will face the correct (competitive) **implicit value of the growing stock** even if land ownership remains vested in the State, even if formal stumpage markets do not exist, and even if sites have been allocated administratively instead of competitively (Vincent and Binkley, 1992; Seve, 1994). An essential question is whether present Philippine legality allows for getting these rights established.

Clearly, the principles stated above are readily applicable in situations where land use rights are transacted on the basis of competitive markets. While this is not exactly the case in the Philippines (at least not at present), it is important to bear them in mind in elaborating tenure instruments: **beneficiaries of a given land area must have a degree of identification with the land resource that will encourage them to ensure its sustainable utilization.** Lack of tenure security is a major factor of resource degradation of which there is ample evidence.

Communities must be convinced that the tenure instruments they obtain give them real rights. How real are these rights if they are limited in time? Also, to what extent are they transferable? If they are not, then, again, how real are they? Real tenure rights can go a long way towards making forest resource use sustainable. While respecting the constitutional prescriptions on the matter (especially the 25-year renewable limit), the debate on resource tenure must be pursued, and must be supported by continued systematic study on the relative merits of various existing tenurial instruments. Additionally, research on instruments other than those currently in effect must be explored in an effort to strengthen the sustainability of CBFM. Part of this research must address the possibility of having a variety of tenure instruments on one same site, addressing the different tenure

needs of individuals, small user groups, and formal communities. The analysis must necessarily revisit such concepts as alienable and disposable land, the 25-year renewable limit, State land, and ancestral land, as well as several informal arrangements concerning land use rights.

Associated with tenure rights are the constitutionally required forms of resource utilization on public lands, i.e., **joint venture, production sharing, and co-production**. A key question is whether or not CBFM operations qualify as any of these. If not, what policy decisions need to be made to render CBFM operations constitutionally qualified? It is important to bear in mind that **Industrial Forest Management Agreements (IFMAs) have been challenged on constitutional grounds, as they may not fit any of the three required forms of utilization, and CBFM activities could, perhaps, be challenged on the same grounds.**

5. Credibility of Programs and Sustainability

As brought up in Section 2, a number of start-up difficulties are being encountered, which are creating feelings of insecurity, frustrations and discomfort with the CBFM program. The CBFM establishment process must be clear and show continuous progress towards achieving a self-sustaining operation. **Delays and interruptions continue to result in irregular activities, which are simply an expression of normal economic behavior in a situation where the right incentives are taking too long to materialize.** Perhaps a lesson that can be learned from current experiences is that the preparation phase must be sufficiently thorough to ensure that once the process is in motion it will be able to overcome difficulties without interruption. Regulatory mechanisms must be developed so that conflicts can be resolved without interrupting operations.

Another problem with delays and interruptions is that banks may be receiving negative signals regarding the stability of CBFM operations. While some banks are beginning to see CBFM as a new market for the banking business, it may come to be regarded as a high-risk proposition.

If efforts are underway to create a CBFM operation, all community members must be made aware and have the option of participating in its structuring. New ideas like CBFM require assertive and extensive popularization campaigns, involving the visibility of policies, the dissemination of information on program content and the encouragement to participate in the design and development of the new activities.

6. Trade-off Between Urgency to Expand CBFM and Capability to Establish Stable Operations

The sense of urgency in moving ahead with the program must be balanced against sufficient capability (technical, managerial, commercial, organizational, social) to carry it out. A key aspect regarding timing trade-offs is the "capitalization of experiences": a critical mass of individuals involved in the process, whether as stakeholders, supporters or official authorities, must acquire a thorough understanding of the problems arising and their solutions, so that past errors can be avoided and difficulties can be anticipated in the development of new sites. This will require an intense exchange of experiences between the various participants, involving disciplined workshops (once or twice a year) and a formal program of structured field visits. Additionally, **in planning the expansion of pilot**

activities, it is important to coordinate the rate of policy change with the capacity to implement it (Poffenberger, 1990d). This is a basic manageability aspect. Communities should not be tempted with the prospect of improved conditions until the program is ready to proceed, and the pressure to expand at the first sign of success must be avoided.

Important questions that must be addressed in this context are: What is DENR's capacity to proceed with the CBFM process? How many sites can it handle at a time? What would be the drawbacks of going too slow (continued kaingin, illegal logging, "erosion" of donor patience)? What would be the drawbacks of going too fast (creation of a large number of unsustainable operations)? How fast is lowland development proceeding (to keep successful CBFM operations from becoming attractive to lowlanders)?

Based on discussions held in the field, it is apparent that the speed at which the CBFM program is being conducted requires substantially more people than those available at present. A critical number of strong AOs constitute a key manpower factor. Under present circumstances, there is too much pressure on the technical assistance (TA) staff having to fill in for the AOs on technical matters. The TA staff can only handle a few sites at a time, thus compounding the delay problem.

Project planners are often under pressure to design and implement projects with little or no time to reflect or study prior experiences. Because projects require years to mature, each stage of planning, implementation, and expansion usually involves different individuals. Staff turnover and time constraints make it difficult for administrators to draw from past activities to improve project effectiveness (Poffenberger, 1990a). Staff rotation should pay careful attention to sufficient permanence and institutional memory.

In sorting out urgencies and priorities, strategic thinking must be applied, i.e., **What are the essential actions that need to be undertaken and accelerated? These actions, once accomplished, will considerably facilitate the other actions that must follow.**

7. Supporting Roles at Various Institutional Levels

Coordination of the various efforts dedicated to CBFM is essential. The mandate of EO 263 is not limited to specific funding efforts or programs, it involves all Philippine forest resources. The key coordinating role should rest with the central offices at DENR. Given the importance and vastness of the program, a reorganization of FMS, focusing on CBFM, or the idea of an Assistant Secretary dedicated to this task should be considered. While the emphasis should be on actions and results at the local level, national level coordination is essential to ensure constant progress, along with proper policy implementation. In defining supporting roles at various levels, DENR policies must clearly establish the rights and obligations of all major parties involved, i.e., POs, local populations, LGUs, DENR, central, regional and local levels, and AOs/NGOs.

DENR's coordinating action must be concentrated at provincial and local levels, and collaboration with LGUs must be strengthened. Regarding this collaboration, there is a special role for DENR, jointly with LGUs, in identifying opportunities for matching communities with resources **and** exploring the integration of communities, while allowing the communities themselves to make their choices and advance their proposals.

At the LGU and PO levels, acceptable procedures for resolving disputes and distributing benefits will need to be formulated. Additionally, community members will require a greater knowledge of their rights and obligations and how to protect them through the judicial system (Poffenberger, 1990e). This is particularly important in cases like Lianga, where a number of LGUs are involved, and where the management will depend on a federated cooperative bringing together a number of smaller cooperatives. LGUs can also assist in farm products marketing and agricultural improvement. This is already happening in Region II.

Regarding linkages between policies and institutional support, it must be remembered that policy decisions are no guarantee that changes will be implemented. Policy change may have little or no effect on staff attitudes, or in the development of more effective procedures and new management capacity. These are developed through learning, a process that must be created within the agency (Poffenberger, 1990b).

Policy change turns out to be a necessary condition for change, but not a sufficient one; another necessary condition is the "capitalization of experiences," previously discussed in relation to the urgency of CBFM expansion. In the interest of the continued improvement of CBFM, it is essential to establish an environment that supports experimentation and learning, both within and without DENR. Learning, correcting, adjusting are essential elements in any process that attempts to develop new ways of managing resources. A formal framework for the exchange of lessons of experience among the various programs involved in CBFM would be most helpful for improving policy implementation resolving issues, and maintaining the direction mandated by EO 263 across the various programs .

Concerning support by foreign donors, **NRMP may consider preparing a study on the overall de-programming of foreign assistance for CBFM, indicating the conditions under which it should be de-programmed, laying out some indicators and proposing some priorities.**

B. Business Aspects

1. Enterprise Perspective

As brought up in Section 2, an enterprise perspective is essential to any kind of activity where people utilize resources to improve their living conditions. In a given candidate management area, all possible business options need to be identified and a number of promising ones should be analyzed in-depth. Focus should be on the potential overall utilization of the forest resource, and the improvements of current forms of resource use applied by the site dwellers.

The income and employment generation potential of agroforestry and improved agriculture will need considerably more emphasis, especially since these types of activity constitute a major (if not the main) source of livelihood for most forest-based populations. Historically, agroforestry aspects have been a weak point in community forestry development in the Philippines (Gibbs, 1990). Earlier experience in the Philippines (Borlagdan, 1990) demonstrates that while overall farmer's groups are useful as umbrella organizations for administering land allocation and use, smaller sectoral groups are more effective mechanisms for administering larger production systems. This, again, supports

the idea of "various businesses under one PO." Several individuals contacted in the field appear quite comfortable with this concept. Developing an enterprise perspective including market opportunities, product quality, cost control and financial management can considerably facilitate a PO's ability to find the right mix of business ventures, as well as the right combination of equipment and labor for each production system, and the highest viable level of employment.

Regarding forms of social organization, the cooperative structure seems to be favored. Is this because it has genuine advantages, or is it being imposed? Reportedly, the cooperative structure would facilitate financing by banks. It will be interesting to explore other forms of social organization and present the POs with a number of options from which they could decide by analyzing the merits of each form.

Concerning scale of operation, this should be examined on a case by case basis. In this context, it is worth noting that many of the new cases being considered (especially in Region II) are in the 10,000 ha range (see Table 3). The financial analysis discussed in Section 2 using New Bataan as an example, suggests that this is basically a viable scale. However, although a comprehensive financial and economic analysis conducted as part of an initial site appraisal could assist in approximating the proper scale of operation from an average cost standpoint, a number of other factors must be taken into account, namely: employment, biophysical resources, administrative boundaries (including the possibility of mutual understanding across boundaries), and size of markets with respect to goods produced (plywood can travel to Europe; fitches can probably only travel to the next town).

Table 3. New CBFM sites proposed for Region II under NRMP as of November, 1995.

Municipalities	Province	Area (hectares)	No. of Barangays
Sanchez-Mira	Cagayan	12,000	4
Pamplona	Cagayan	10,000	3
Sta. Ana/Teresita	Cagayan	15,000	8
Maconacon	Isabela	15,000	3
Dinapigue	Isabela	15,000	4
San Pablo	Isabela	19,000	4
San Guillermo	Isabela	8,000	3
San Mariano	Isabela	10,000	3

Source: R. Araño

2. Access to Markets

Access to markets needs to be identified for all potential products, and examined in-depth for those most promising, normally (but not exclusively) wood, rattan and farm products. While it is clear, both from the studies reviewed and from visual inspection, that these markets exist, it was not evident that markets and their potentials have been explored with enough depth to settle on an optimal starting product mix, and on the best possible set of marketing arrangements. This is especially the case for marketing options concerning farm products.

As discussed earlier, physical access to markets is a problem in some sites. Not only is rehabilitation of old roads a basic requirement, but there is also need for creation and/or improvement of trails for the passage of farm animals to facilitate the movement of upland agricultural crops. Regarding market access, there is an urgent need for collaboration with the agricultural sector, much of which can take place at the LGU level, as it is already happening in Region II (Araño). This collaboration should begin early on, i.e., at the time of management plan preparation.

It is worth noting that the need for marketing efforts and market access improvements does not mean that these activities must be undertaken by DENR or other State institutions; rather, the POs should take these initiatives and seek assistance as necessary.

3. Financing Requirements and Access to Funds

A number of financial issues were discussed in Section 2. The discussion dealt mainly with initial working capital, which is an urgent issue in a number of sites. Credit is, of course, a key component of any business, and is by no means limited to initial working capital. Since CBFM is a new form of business venture, several forms of credit (long-term, short-term, different lines for different types of activity) perhaps implying different credit sources will probably be needed. For example, an important item to be examined with the banks would be the issuance of renewable lines of credit that would allow businesses to incur investments and operate while ensuring smoothness of cash flow through market fluctuations.

The interest, on the part of banks, as discussed in Section 2, is encouraging. Based on this interest, it appears that **the availability of credit for CBFM should be explored and encouraged more through direct arrangements between POs and the banking sector than through special State institutions** (i.e., CBFM Special Account, or National Forest Management Fund). These special institutions could be explored eventually as new funding needs arise. Other potential funding arrangements, as previously discussed, involve special arrangements with clients, which should be left at the discretion of POs.

Other financial aspects of CBFM have to do with: (a) how the operations will be affected by forest charges (both as charges for POs and as revenue for LGUs); (b) what will be the impact of the Community Forestry Development Trust Fund (CFDTF), i.e., what is allowed and what is not under current regulations, and how this might affect financial performance; (c) how CBFM will be affected financially by the constitutional requirements of co-production, production sharing and joint-venture; and (d) what CBFM operations will do with their retained earnings (distribution, capital fund or both), i.e., what is allowed and what is not under the cooperative structure. These are issues that remain under study and need to be carefully examined in the light of expected economic reactions on the part of CBFM beneficiaries.

C. Managerial and Technical Aspects

1. Managerial and Financial Discipline

Managerial and financial discipline are both essential to ensure the successful functioning of a business operation. From a financial management standpoint, three basic

elements are: (a) the ability to use funds effectively; (b) financial reporting systems (statements); and (c) financial strength (Sison). As discussed earlier, financial statements are being required by the banking sector as a condition for loans. However, the use of financial statements for internal management of the operation are perhaps even more important, as they reflect the financial position of the firm, and an understanding of the cost structure. This information allows the manager to guide the operation towards maximum efficiency. Therefore, accounting and financial control systems must be kept up rigorously and consistently so that they can serve their management function.

Apart from the accounting aspects, management must be based on clear enterprise objectives regarding goods to be produced and marketed, production systems, and team effectiveness. Skills such as enterprise planning, organization for effective performance, and disciplined implementation of operations, with few exceptions, seem to be generally deficient in CBFM sites, and management training programs are urgently needed. One option being examined is the temporary hiring of business managers for training local leaders on the job. Permanent hiring of business managers should also be considered along with a limited training program on business skills for PO leaders, so that they can interact effectively with their professional managers.

2. Technical Capabilities (Including Technical Assistance)

In order to ensure the sustainability of CBFM, strengthening of technical capabilities is needed in a number of disciplines and at various levels, namely: DENR (financial and economic analysis, training and extension capabilities, refreshers in technical forestry, multiple land use, upland agriculture), POs (managerial capabilities, low impact logging, raw material merchandising, upland farming, marketing; eventually wood products manufacturing), AOs (technical forestry aspects, financial and economic analysis, planning capabilities, training capabilities, upland agriculture), LGUs (planning capabilities, financial and economic analysis).

Technical strengthening requires some training efforts at the front end, but it should also be a continuing process supported by applied research activities. In order to ensure the effectiveness and efficiency of training, a thorough training needs assessment should be given priority. Based on this assessment a sharply focused training program should be urgently established. Apart from the business skills for PO leaders discussed above, training is also needed urgently for participants in the management planning process (AOs, LGUs, POs, DENR local).

Concerning applied research, key subject matter areas are natural forest management and upland agriculture/agroforestry. In the area of natural forest management, there are major unknowns regarding growth and yield of residual natural forests, and stand response to harvesting intensity. At present, harvest prescriptions are based on highly unreliable formulas, which if applied blindly, may lead to continued resource degradation. Additionally, experimentation is urgently needed in low impact harvesting. Work conducted in Australia, Indonesia and Sabah has shown that logging damage depends more on the way the operations are laid out and conducted than on the type of equipment used. A study on comparative economic efficiencies and environmental impact of various logging technologies needs to be conducted in order to determine the best logging methods for CBFM under various stand, terrain and labor intensity conditions. The results of such study could be most beneficial in developing alternative harvesting

methods that will enhance raw material yield, facilitate natural regeneration, and reduce soil erosion.

In the area of agroforestry, both the literature reviewed and the site visits clearly reveal know-how deficiencies. Upland farmers in the Philippines can be characterized by the diversity of the lands they use, their limited access to resources, including credit and marketing infrastructure, and their attitude to risk. Under these circumstances, agroforestry extension agents must be able to offer inexpensive agroforestry techniques that are either viable under an array of conditions or are specifically tailored and produce predictable results relatively quickly (Gibbs, 1990). Given the high dependence of upland populations on farming, research on improved inexpensive agroforestry production systems and their acceptability should be given high priority.

Another set of technical capabilities to be improved deals with the quality and rigor of planning processes. Based on the discussions contained in earlier sections, the process of preparing CRMDPs should be strengthened. Comprehensive management and development plans must be really comprehensive overall land use plans and offer business orientations. These plans should include in most cases three generic "businesses": residual forest management, reforestation and farm improvement/agro-forestry, and additional businesses in particular cases (e.g., mangroves). Additionally, the financial and economic analyses associated with the CRMDP should cover all the major business components including all the relevant cost and revenue variables, so that a clear appraisal of the financial and economic viability of each CBFM site can be made.

3. Cohesiveness of Community Organizations

Under CBFM, by definition, forest resource management responsibilities rest with the community. In order to manage their operation effectively, community members must develop a unified and coherent understanding of goals and objectives. Community organizations must build a consensus as to what they want to accomplish with their newly acquired resources, and stick to it. This should be based on a disciplined process of collecting information and creating dialogues to improve mutual understanding and generate joint management priorities. They must also evolve strategies to meet business management and technical guidance needs for their PO forest resource management enterprises. The PO members must unite in their thinking: even if in the beginning they work together, splits may occur unless this "unity of thinking" is acquired.

IV. CONCLUSIONS AND OPTIONS FOR FUTURE ACTION

Based on the previous discussions on historical perspective, observations based on specific cases, and conditions necessary for CBFM financial sustainability, this section attempts to offer conclusions and some options for future action. The focus is on strategic actions that must be undertaken first, in order to facilitate the expedient establishment of a program with lasting results. These are organized under the subject areas of **planning**, **operations**, and **policy**, followed by a suggested list of high priority actions to be performed urgently.

A. At the *Planning* Level

1. Expand the comprehensiveness of management plans; focus on three "businesses": residual forest management; upland agriculture; reforestation; and others (including wood processing) as necessary.
2. Strengthen the specificity of management plans: they should be real "roadmaps" of specific activities indicating the means to accomplish them **in time and space**.

B. At the *Operational* Level

1. Develop enterprise capability and orientation; while CBFM should be a major factor of rural employment, it should not be a "factory of jobs;" also it should not be used as a political springboard.
2. The development of financial discipline is essential to the success of CBFM: funds must be properly managed to ensure internal efficiency and facilitate external financing.
3. Develop commonality of PO perspective: POs must internally define the "business" areas in which they can be most successful, and remain committed to them in the long run.
4. Develop technical skills focusing on "businesses" to be pursued: once a commitment is made to specific business areas, the necessary technical capabilities must be acquired, either by internal learning or by hiring.

C. At the *Policy* Level

1. Policy visibility: as the role of public policies is to orient the actions of individuals and groups in the best interest of society, major efforts are needed to communicate all CBFM-related policy instruments to stakeholders at all levels.
2. Clarification of rights and obligations of all parties involved in CBFM: this involves the communities themselves, the LGUs, the POs, and especially the DENR as to what is allowed, what is not allowed and what is required from organizations, institutions, communities and individuals.
3. Sharpening of tenure instruments: this involves an ongoing evaluation of present forms of tenure under CBFM as to whether or not they encourage sustainable use of the resource. Debate and research must continue on the extent to which communities identify with the forest lands they use, and how secure they feel under the forms of tenure provided by CBFM.
4. Ensure that the formal establishment of CBFM operations satisfies the constitutionally required forms of resource utilization on public lands (co-production, production sharing, joint venture).

5. Delegate authority to settle disputes to a more local level: a matter of decentralization. Policies should be clear on levels of authority at which issues and conflicts must be resolved.
6. Expedite the CFMA approval process. Deadlines and procedures for various steps should be formally established.
7. Avoid the imposition of specific technologies: use judgement regarding equity and labor intensity. POs should also be allowed to exercise judgement on this matter by submitting harvesting programs indicating technologies to be utilized and their justification.
8. Emphasize "incremental learning;" programs should not be "fast-tracked" at the first sign of success. The urgency in accelerating the program must be consistent with the ability to carry it out, including a coordination of the rate of policy change with the capacity to implement it. CBFM looks very promising and has strong policy support; however, the program should continue at a speed that allows for strengthening the CBFM model to ensure its viability as an instrument of sustainable resource management.
9. Give DENR a role commensurate with the vastness of the task: either a reorganization of FMS focusing on CBFM as its main responsibility; an ASEC position in charge of facilitating and coordinating the program could also be considered. These changes are proposed in anticipation of a considerable increase in manpower that will be required as the CBFM program expands.
10. Bring all CBFM-related programs under strong DENR coordination and direction, under well-established policies and strategies that allow for Philippine leadership in establishing agreements with foreign funding agencies. Foreign assistance, in the short-run, should focus on creating the enabling conditions for program success, i.e., technical capabilities, establishment of enterprises, and policy improvements. In the longer run, there should be a negotiated de-programming of foreign assistance.
11. Given the good disposition of certain banks with respect to CBFM, concentrate first on the banking sector to explore availability of credit under various forms for the financial support of CBFM.
12. Ensure that the fiscal burden represented by the combination of forest charges plus the CFDTF, which is very heavy under present conditions, will not impair CBFM financial viability or motivate unsustainable resource management.
13. Develop R8 D programs focusing primarily on residual forest management and upland agriculture to provide continuing technical support to CBFM.

D. Actions to be Performed Urgently

1. Training needs assessment focusing on management planning skills (AOs, POs, LGUs, DENR-local) and develop a training program accordingly, targeting participants in the management planning process.
2. Begin a strong enterprise development program targeting POs, focusing on the acquisition and application of business and financial skills.
3. Complete existing management plans to include a multiple-use/multi-business perspective, and thorough financial and economic analyses.
4. Coach AOs in ensuring that all new management plans will have a multiple-use/multi-business approach with a detailed perspective and thorough and coherent financial and economic analyses.
5. Start a formal inter-regional and inter-program cycle of meetings and field visits for exchange of experiences. Begin with a facilitative workshop to sort out issues needing urgent attention.
6. Continue discussions with banks to develop formal financing arrangements for CBFM.
7. Accelerate legislative agenda favoring and strengthening CBFM, using the proposed Forestry Code as a focal point.
8. Revise legislation and regulations on forest charges adapting them to CBFM, focusing on incentives for sustainable forest resource management

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