

EXECUTIVE SUMMARY

A. INTRODUCTION

Background

The Philippines' forestry sector is continuously declining in terms of its bio-physical, economic and environmental aspects. Such decline is largely attributed to a number of inadequate and poorly-implemented forestry policies that led to the rapid exploitation of timber from virgin forests at prices far below real market values. The proliferation of only short duration timber licenses in the past discouraged long term investments in forest development and dampened private sector initiatives. Forest destruction rose to very alarming levels while forest recovery through natural and artificial means never coped with the forest destruction rate. Furthermore, the institutions mandated to implement forest policies to address all these problems had not been equipped to fully address the situation. Meanwhile, the social settings in the uplands and forest adjacent communities continue to exert pressure on natural resources and made the tasks of conserving the forests more difficult. The very high incidence of poverty in the uplands continues to exacerbate environmental degradation problems and the country's once rich forests continue to lose their vital functions.

In response, the Philippine Government through the assistance of Asian Development Bank (ADB) and the Finnish International Development Agency (FINNIDA), formulated a 25-year Philippine Master Plan for Forestry Development (MPFD) in 1989-1990. The master-planning work was carried out jointly by DENR and a team of specialists managed by the Jaakko Poyry Oy of Finland and MADECOR of the Philippines. The MPFD was accepted and approved by the Philippine Cabinet in June, 1990. It consists of three umbrella programs and fifteen major programs designed to revitalize the Philippine Forestry Sector back to its former significant role in national development. Formulation of Regional forestry development plans ensued, and was followed by formulation of a medium term plan for 1993-1998, all of which were completed in 1992.

A 1999 UNDP fact-finding mission on preliminary review noted successes of MPFD in selected areas like people-oriented forestry. However, several major programs did not progress as projected. The DENR struggled and failed to get the needed support for the successful implementation of the Plan. The failure of the proposed bill on "sustainable forest management" to be passed into law further kept the DENR from pursuing aggressive sustainable forest management strategies because of lack of enabling forest policy in the sector.

Finally, since the MPFD was formulated, several new developments and concerns have emerged in forestry, both in the local and international fronts. These issues now affecting forestry in the country were unforeseen at the time MPFD was formulated. Among these are the forestry and land-use implications related to climate change, adoption of criteria and indicators for sustainable forest management, and the increasing recognition of the role of forests and forestry in poverty eradication and support of sustainable livelihood, among others. The review of MPFD implementation conducted by UNDP mission also noted several weaknesses and aspects of the Plan that had become less relevant in guiding the country's forestry activities. The mission recommended the review and revision of MPFD taking into consideration the changed environment and priorities in the Philippines and other emerging trends in local and international forestry. In February, 2000, ADB hosted a forum on Philippine MPFD where an action agenda was proposed. Such agenda also called for the Government and all stakeholders to re-evaluate, revise and promote adherence to MPFD considering other emerging issues in forestry and the environment sector.

Importance of the Forestry Sector

The forestry sector is the major centerpiece of the country's natural resource base and ecosystems. Although the sector's contribution to the national economy has been declining, its continued development and that of the environmental sector is a pre-requisite to a sustained growth in agriculture and other industries. Besides, forest lands are the main watersheds of rivers which provide water for various uses. Soil erosion and hydrological deterioration of these watersheds caused losses in productivity and utility of infrastructures. The total off-site and on-site costs of forest degradation was estimated at P11.6 billion annually (MPFD, 1990). The contribution of the sector to the economy in terms of gross value added, export revenues, full-time job creations, and the provision of biomass fuels, are still significant. However, the sector continue to reel from many threats to forest resources, among which are: the tremendous pressure from an increasing population in search of land to till and forest resources to use, the loss of vital watershed function and loss of biodiversity and inadequate forest development, management, and conservation efforts.

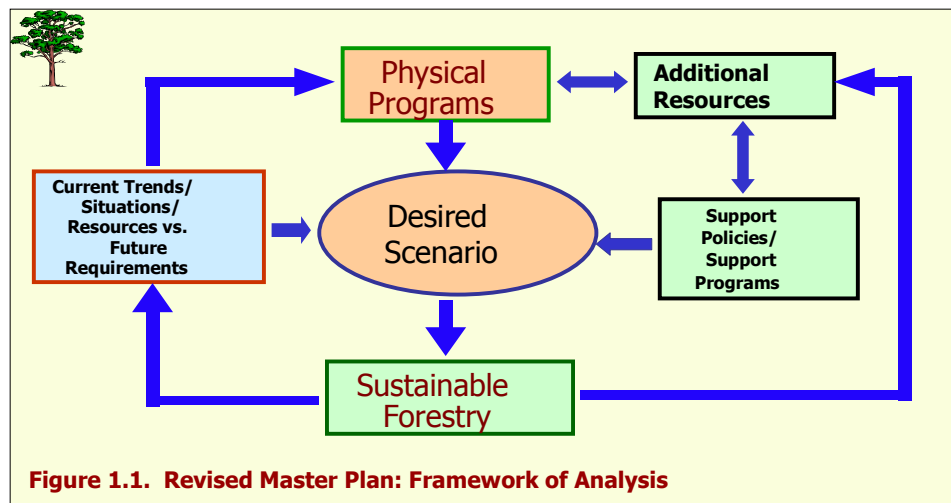
The Project

Through a proposal from the Forest Management Bureau (FMB) of the DENR, with funding support from the United Nations Development Programme, a team was formed by the Food and Agriculture Organization of the United Nations (FAO) under its Support for Policy Program Division (SPPD) to undertake review and revision of the 1990 MPFD. The Project has reviewed the MPFD implementation relative to its objectives, assessed the accomplishments along identified subsectors and identified measures to strengthen policies as well as the sector's institutions. The Project was carried-out using a five-step methodology as follows:

- Review of the objectives of the Master Plan for Forestry Development;
- Assessment of the achievements and extent of implementation of MPFD programs and effectiveness of supporting policies;
- Conduct of field programs reviews and stakeholders' consultations;
- Policy analysis and assessment; and
- Preparation of MPFD programs and policy revisions.

The SPPD project team members worked hand-in-hand with a counterpart FMB staff. Other organizations, i.e. SEARCA and TREES, Inc., were contracted to assist and do facilitation services in the conduct of regional workshops and consultations and in the conduct of special studies related to overall assessment of forestry accomplishments under MPFD.

Below (Figure 1.1) is the overall framework for the Master Plan project implementation.



Given the situations and desired scenarios for the different forestry subsectors, revised strategic directions were formulated. This process relied significantly on the issues, comments, and suggestions raised in various papers presented during the national and regional consultations and workshops. Among the pre-identified strategic program thrusts and directions explored are as follows:

- Addressing the vicious cycle of forest degradation and upland poverty
- Enhancing watershed integrity and its capacity in sustaining supply of goods (wood, water, food, shelter, medicine, etc.) and enhancing delivery of environmental services
- Enhancing private investments, viability and economic contributions of forest-based industry
- Promoting forest science in forestry, and rationalizing forestry education and extension
- Ensuring productive participation of various stakeholders and equitable sharing of benefits
- Institutional streamlining and capacitation

The overall planning framework/strategy was anchored on the watershed and ecosystem management approach as overarching principle in forest resources management. Among the considerations emphasized under this framework is the adoption of a management planning tool which has the flexibility to incorporate unique features and other exigencies of the watershed and the institutions managing them. Basic to this is a comprehensive resource assessment at all field level offices for planning and management purposes and adoption of practical operational systems for putting every ha of forest land into definitive management system (under SDUs), each with accountable land manager, equipped with the proper knowledge and tools for effective resources management.

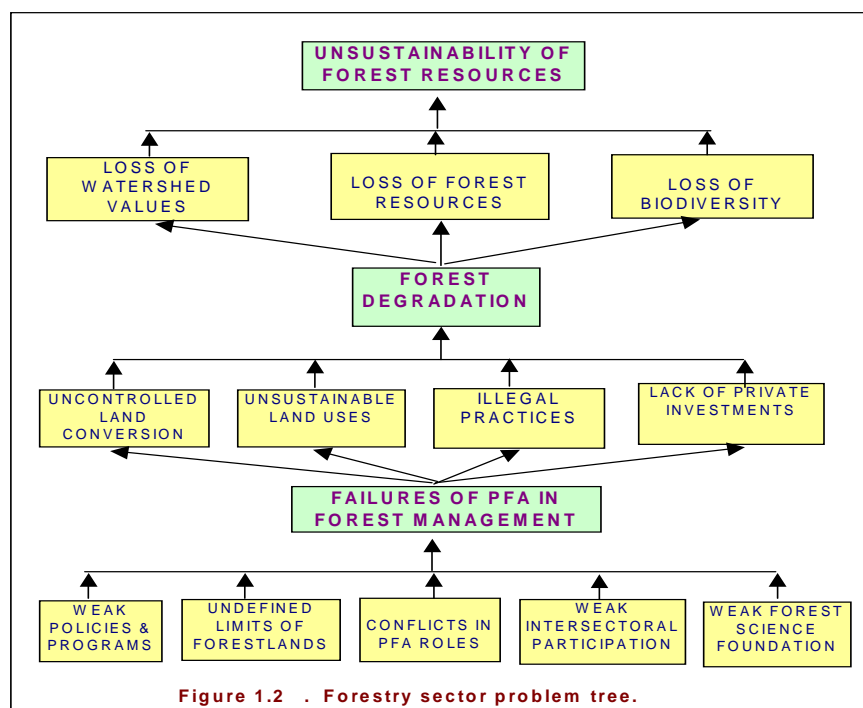
General Assessment of 1990 MPFD Implementation

Overall forestry sector condition

The Philippine forestry sector is in the decline in terms of recorded contributions to the national economy and in environmental and physical terms. The country's once rich forests are now gone or in various stage of degradation (Table 1.1). Such decline was attributed to a number of inadequate and poorly-implemented forestry policies which led to the rapid exploitation of timber from virgin forests at prices far below real market values. Under the implementation of the Revised Forestry Code of the Philippines (PD 705) which was passed in 1975, the sector continued to decline. The proliferation of only short duration timber licenses in the past discouraged long term investments in forest development and environmentally-sound forest management practices. The unstable policy environment also dampened private sector investments in forestry. Figure 1.2 shows the problem tree for the sector embodying the chain of events that leads to its decline.

Table 1.1. Change in forest land area in the Philippines (in millions of hectares).

Y E A R	FOREST COVER	% OF TOTAL AREA
1575	27.5	92.0
1863	20.9	70.0
1920	18.9	64.0
1934	17.8	57.3
1970	10.9	36.3
1980	7.4	24.7
1990	6.7	20.7
2001	5.4	18.0



Forest destruction rose to very alarming levels while forest recovery (Table 1.2) through natural and artificial means never coped with the destruction rate. DENR (2002) has estimated an average net loss of 130,000 ha of forests annually during the 1990s. Furthermore, the institutions mandated to implement forest policies to address all these problems had not been equipped to fully address the situation. The failure of the efforts over the past few decades to halt the vicious cycle of deforestation, forest degradation and upland poverty has primarily been the result of inadequacies in institutional aspects particularly in policy implementation due to weaknesses in the structure of forestry sector organizations.

Meanwhile, the social settings in the uplands and forest adjacent communities continue to exert pressure on natural resources and made the task of conserving the forests more difficult. The very high incidence of poverty in the uplands continues to exacerbate environmental degradation problems.

Table 1.2. Area reforested by the government and the private sectors (in '000 ha).

Year	Government	Non-Government	Grand Total
2001	26,524	4,920	31,444
2000	21,740	5,892	27,632
1999	31,184	10,983	42,167
1998	33,219	9,149	42,368
1997	49,301	16,936	66,237
1996	18,869	27,227	46,096
1995	21,841	43,392	65,233
1994	18,032	31,519	49,551
1993	6,347	12,864	19,211
1992	24,304	16,289	40,593
1991	73,602	19,437	93,039
1990	153,949	37,714	191,663
1989	89,452	41,952	131,404
1988	31,226	32,957	64,183
1987	28,843	10,986	39,829
Average	41,896	21,481	63,377

Source: FMB.

At the same time, different forest stakeholders are clamoring for more involved participation in the planning, management and utilization of forest resources. The playing field now becomes the arena of many players, each wanting to say his piece in the proper management of forests, through participatory approaches. Such is a consequence of the lost of confidence to traditional forest managers and the increasing awareness on the importance of forests to the very survival of the nation. The importance of the roles of institutions is now becoming apparent and needs important attention and considerations in any policy, planning and program implementation activities designed to bring back the sector into more responsive and significant position.

Accomplishments under 1990 MPFD

One of the most visible accomplishments of the 1990 MPFD is the CBFM project, which is under the People Oriented Forestry Program. Based on the program targets, there is supposed to be 3.4 M ha of forest lands under tenure until the year 2000. At present, around 5.7 mil ha are under CBFM (Table 1.3). CBFM is also another program effective in closing many open access areas. Another area where the 1990 MPFD overshot its target is in the area of Protected Area and Biodiversity Conservation where around 325,000 ha were to be established under buffer zones and protected area comparing to the accomplishment of 3.2 million ha under the National Integrated Protected Area System.

Similarly, there are many positive developments under the program of Soil Conservation and Watershed Management, as there are several key accomplishments under this subsector. For example, the sector adopted the watershed and ecosystem management approach (through DAO 99-01), as the overarching principle in forest management. WEM espouses the adoption of holistic, multiple-use and sustainable management of resources within watersheds. It also involves adoption of planning tools and management strategies that promote ecology among people, resources and environment; adoption of a management system that has the flexibility to safeguard the integrity of watershed functions and system that endeavors to promote the welfare of stakeholders affected by them. Moreover, the DENR endeavored to implement several projects, e.g., FSP, ENR-Secal Project, NRMP with PSIWRM and Guidelines for Watershed Management and Development, etc., which pursue soil conservation and watershed management in the purview of participatory and multisectoral involvement of different watershed stakeholders.

However, in terms of other program targets, all other programs were under-achieved in terms of physical targets. For example, there was a plan to establish 1.3 million ha of forest plantations between 1991-2000. The sector achieved around 0.68 million ha during the period for a 50% accomplishment. However, the quality of these reported plantations is far from satisfactory because of the low survival rate of government initiated plantations. Another target under institutional development is the reduction of forestry schools offering forestry and allied courses from then 27 schools to 14 strategically located schools to arrest the declining quality of forestry graduates. Instead, there are now 52 forestry schools offering forestry resulting to low quality of turnouts. Table 1.3 shows a summary matrix of target and accomplishments under the 1990 MPFD implementation.

Table 1.3. Summary of targets and accomplishments under the 1990 MPFD.

TARGET (1990-2000)	ACCOMPLISHMENTS	REMARKS
I. Man and Environment		
3.4 mil ha under tenure under different POFPP programs	4.4 mil ha tenured, 1.3 mil ha in process	Accomplished under CBFM program
13,000 ha ANR projects	around 14,000	developed under CBFM-JBIC
63 mini forest parks established	over 480 parks already established in MM including those inside private subd.	Includes those established before 1990.
780 km of greenbelts/roadside planting	No records except for seedlings planted (2.1 mil from 1990-2002) in MM	Many of those planted have died, or replaced, removed or destroyed due to new infrastructures like road widening
Deforestation to drop to 26,000 ha annually by 2000	The rate now is around 80,000 ha/year although there are no official estimates from FMB yet	
Reduction of brushland from 2.46 to 2.04 mil ha	2,200 brushland as of 2000	brushlands are the subject of current developments under FSP
II. Forest Management and Products Development Programs		
1, 673,000 ha of PA forest estate under dipt forest established by 1995	864,000 ha declared	declared under RA 7586, but not yet delineated
Logging banned in old growth forests	Logging ban effected	Through RA 7586
2.5 M ha of permanent production residual forest	Production forest not yet delineated	Lack of funds to implement delineation, change of priorities
1.3 M ha of forest plantations	600,000 accomplished	Mostly loan driven, no records on basic plantation information
44,000 ha of mangrove plantations	around 15,000 ha developed under FSP	12,000 developed under CBFM-JBIC
40,000 ha of pine plantations	1,700 accomplished	under CBFM-JBIC
95,000 ha of rattan plantation	11,959 ha established	under FSP I & II
80,000 ha improved range mgt	none so far recorded	No unit at regional level to handle this.
Favorable climate and policy environment for wood based industries	The industry still clamors for policy reforms, e.g., conversion of expiring/former TLAs to IFMA, full deregulation of planted trees, delineation of production and protection forest, rationalization of the industry, etc.	There is already full deregulation of planted trees in private lands in Mindanao, Rationalization studies has been started, etc.
A rationalized wood based industry	No concrete accomplishments yet	Still under study by FMB, no policy yet
Establishment of Timber Industry	Timber Industry Board not yet established	There are proposals to pursue this.
40 sawmills retooled	No records	
10 plywood mills retooled	No records	
50 community sawmills	around 15 POs with approved sawmills ?	No records at FMB
III. Institutional Development Programs		
Enactment of SFMA before 1992	Not yet enacted	
Reduction of Forestry Schools from 27 to 14	Additional 25 forestry schools established, low quality of turnouts	No standards, no regulations
13 Regl Training Centers established	11 RTC established	all needing renovation
70 Provl Training Centers established	none established	

Issues/problems/constraints

Among the major issues, problems and constraints identified by the team relative to the implementation of 1990 MPFD are as follows:

- Policies and institutional arrangements
 - inadequacies of forestry sector policies; no updated forest policy to guide the sector;
 - inadequacies of legal instruments, weaknesses of organizational structure of public forest administration and management;
 - no enabling policy to adopt the 1990 MPFD, the 1990 National MPFD and 1992 Regional MPFD are not being consulted in the conduct of regional planning and budgeting, non-implementation of DAO No. 23, Series of 1992 which is supposed to institutionalize implementation of 1990 MPFD through the National Forestry Planning Group (NPPG) with Regional and field level counterparts
 - confusions in land tenure and disorder in landuse;
 - deficiencies of human resource development;
 - lack of intersectoral co-ordination in addressing crosscutting issues.
- Program implementation problems
 - inadequacies of planning and programming system;
 - funding uncertainties, lack of funds to implement various sectoral programs including MPFD components
 - deficiencies in implementing people-oriented (participatory) forestry programmes;
- R & D, Forest Utilization and Technology problems
 - unscientific management of natural forest resource;
 - undefined areas of protection and production forests
 - wasteful forest utilization and inadequate value addition;
 - neglect of non-wood forest products (NWFPs);
 - weaknesses of R & D and forest extension;
 - serious lapses in plantation development (starting from site selection, seed procurement, nursery management, plantation establishment and management, harvesting, and even lapses in the purpose by which a forest plantation is established);
- Weak IEC and Training
- Lack of a credible system of M&E, current systems not fully utilized by decision makers;
- Cross cutting issues
 - CBFM, as a cross-cutting strategy to rehabilitate and manage all forest lands and resources, has many things to patch up and build up from;
 - lack of boundary delineation on the ground;
 - deficiencies in conservation, protection and watershed rehabilitation;
 - lack of a system of natural resources accounting;
 - lack of system for C&I and forest certification.

Underlying all the problems/constraints/issues listed above, is the absence of real awareness and commitment on the part of decision makers. Awareness creation is a matter of good information and communication, along with public education on the economic and ecological significance forestry.

Potentials of the Sector

In spite of all the constraints being faced, forestry in Philippines has considerable potentials for contributing to the development of the country – economically and ecologically. Among the major potentials identified are as follows:

- putting all forest areas under appropriate forest management systems that seek to obtain optimum economic and environmental benefits for forest communities, other stakeholders, and the society in general;

- expanding the area under forest cover through plantation establishment, enrichment planting and assisted natural regeneration;
- improving the quality of current natural forest stands through timber stand improvement and protection from man-made destructions, and pests and diseases;
- enhancing access to residual forests (through legally-allowed modalities) within production forest areas to improve wood supply position and manage the same in sustainable manner;
- tapping available private lands for forest plantations as demonstrated in CARAGA Region;
- enhancing forest productivity through multiple-use management and improved technology, minimal or waste-free harvesting/high utilization recovery and increased forest production without risking environmental/ecological values
- revitalizing the forest-based industries through rationalization and appropriate incentives, improved primary and down-stream processing, new product development
- developing of non-wood forest products (e.g., herbal products, agroforestry ventures);
- appropriate and rational management of protected areas and buffer zones;
- benefiting from forest biodiversity protection and management;
- promoting of forest-based recreation and eco-tourism;
- increasing overall direct benefits from the forest through proper planning for forest management and conservation.

Strengths of the Sector

The country also has several significant strengths which are important and relevant in supporting sustained development of forestry sector. These are significant factors which will contribute to the growth of the forestry sector, if adequately backed by appropriate policies and institutional mechanisms. Among these are:

- A tradition and history of forest management which dates back from Spanish Regime;
- Existence of executive imprimaturs and operational models for productive DENR-LGU-Other stakeholders participation (DENR-LGU Joint MC, 2003-01)
- Existence of a reasonable extent of natural forests available to support bio-diversity and environmental objectives as well as production of goods and services. Along with private land forestry and agro-forestry, these would form a forestry base of adequate size;
- Existence of sectoral institutions and a large number of well trained and committed professionals and technical personnel with experience, whose performance can considerably improve through retraining and refresher training, and under congenial conditions;
- Philippines has an array of laws, rules and regulations, which can be modified /amended to suit the chosen developmental path for forestry;
- Existence of institutions for research and education which can be strengthened suitably;
- Existence of supporting institutions outside the forestry sector, such as the universities and centres of science and technology, fruitful collaboration can be developed with them;
- Availability of a fair amount of science and technology related to forestry most of which could be made beneficially operative;
- General acceptability of private sector and community participation in forestry activities, opening new avenues for development;
- Acceptability of agro-forestry and integrated farming as viable land use alternatives; and tree consciousness on the part of millions of farmers and homestead owners who are innovative and who have made homestead forestry an important component of the forestry sector, are special strengths;
- Existence of experienced NGOs involved in supporting grass-roots organizations and people's participation through group formation, provision of training, and promoting afforestation and environmental conservation;
- Availability of traditional knowledge on the uses of NWFPS, as well as artisanal/handicraft skills, which are yet to be adequately explored and utilized; this is also an area where rural women can increasingly participate;

- Existence of hard working labor force as valuable resource for providing reasonably-priced labor. This is a strength, in the short and medium-term which can enable Philippines to compete in international markets for processed products e.g. furniture, rattan and bamboo products, consumer articles based on NWFPs and handicrafts;
- Also, the constant efforts in facing the problems/constraints/issues (irrespective of their nature and impacts) have helped to provide certain useful experiences to the sector.

B. THE REVISED FORESTRY MASTER PLAN FOR FORESTRY DEVELOPMENT

Scenarios For The Sector

The new outlook

It was necessary to formulate a new outlook for the sector. The new outlook embodied considerations for a combination of outlooks for landuse, productivity, demand, supply, human resource, policy and institutional changes. Past trends and current situation provided valuable inputs for outlook formulation relating to different subsectors of forestry.

A series of projections were made on the future production of goods and services based on projections of several interacting elements of forestry such as forestland (area), technology/productivity, human resources, demand/consumption pattern and others. An important aspect of outlook analysis in forestry is supply-demand balancing. Policies relating to several factors influence both demand and supply were projections had been made. Since supply sources will undergo considerable changes, supplies should increasingly be obtained from high-yielding forest plantations. The natural forests will then be considered mainly for their environmental/ecological values. Production of wood from natural forests shall be considered in cases when sector is assured that such activity is sustainable and appropriate management systems are in place.

The integrated wood balance model

A substudy on the integrated wood balance model was conducted primarily to augment outlook analysis. A complementary effort was also made under the section on forest-based industries basically to analyze demand of wood and other raw materials by the housing and furniture industry. Among the findings in this substudy are as follows:

- **Sustainable management of natural forests allowing sustainable access to harvest timber from residual forests would help attain self-sufficiency in wood.**

Statistics show that even without legal logging from natural forests, forest destruction continue to happen. Total area of natural forests subjected to legal harvests by legitimate TLAs average only around 5,000 ha annually during the last 10 years. Yet, forest destruction is still estimated at around a hundred thousand hectares or so annually. Thus, most forest conversions/destructions happen outside legitimate logging areas. Putting all residual forests into sustainable management would reap tremendous benefits for the society, both in economic and environmental terms.

This national wood balance study shows that with enough safeguards, a sustainable harvest from residual forests (within production forest zones) can be afforded providing enough wood that would eliminate a major bulk of importation. One of the key safeguards would be the strict protection of residual forests (and all forest stands for that matter) to prevent their conversion into non-sustainable non-forest uses. Even without legal logging, residual forests are still being lost due to population pressure.

- **Developing forest disposition models and implementation of JV, CP, PS is necessary in the sustainable management of residual forests**

As the traditional forest licensing system has been outmoded and/or outlawed under the 1987 Philippine Constitution, other modes of forest resources utilization like direct production by the State, joint venture (JV), co-production (CP), and production sharing (PS) must be developed and implemented along the idea of improving legal access to forest resources. It is foreseen that with the active facilitation of the government in the development and management of forest resources, all open access areas will be developed and the rate of forest loss would be significantly diminished.

- **More focused plantation development and plantation renewal would greatly help in realizing wood sufficiency**

There is a world of difference between plantation development for purposes of forest rehabilitation and plantation development for commercial timber production. The former requires management regimes which would enhance the protective and ecological values of plantations and of the forests over time, while the latter would require management regimes which would enhance the commercial value of the product over a specific rotation. Nevertheless, both require careful planning and execution starting from choice of species, seed selections, nursery operations, site preparations, outplanting, silvicultural treatments and subsequent management interventions; in order to attain optimum benefits for intended beneficiaries. Thus, plantation managers must be aware and equipped with the necessary skills in tending the plantations to attain its desired outcome.

Based on the analysis, the country need not plant vast areas of land for timber plantation in order to satisfy plantation wood demand. Over the next twelve years, it would need only around 460,000 hectares to satisfy plantation wood demand with plenty to spare for the export demand. Many regions of the country has comparative advantage with regards to attaining high plantation yield. The government must concentrate on these regions to attain economic efficiency. Some simple requirements, however, are needed to sustain positive wood balance. These are protection and improvement of existing plantations; improve efficiency in plantation wood utilization; and aggressive renewal of harvested plantation areas.

- **Rationalization of wood processing plants, an important component on Forest Based Industries rationalization**

Many wood processing plants in the country are not appropriate anymore, efficiency or location-wise. There is proliferation of some plants in some areas while wood producers in other areas need to transport their logs over long distances in order to market or process them. Processing equipment are becoming obsolete due to the changing dimensions of raw materials and the environmental demand to be efficient is becoming louder. Thus, there is a need to rationalize the wood processing plants in the country.

- **Research and Development has a great role to play**

The quest for improvement in production efficiency and product quality must be a continuing concern of the sector. One of the major concerns of forest based industries is how can plantation timber fit in the many raw material needs of the industry. Apparently, one of the most common plantation woods being produced in the country, which is gmelina, does not pass the basic standards of the of high-end furniture industry, for example, in terms wood quality, and seasoning and grain properties. Moreover, many management prescriptions in the natural forests (e.g., AAC, cutting cycle, silvicultural treatments, etc.) are ought to be re-examined in view of the changing

dimensions of raw materials, the social settings in which they are located and environmental demands of the larger society which affect many forest policy decisions.

The Forestry Sector Vision and Objectives

A synthesis of the various subsectoral visions revealed some common aspirations among the stakeholders. Among these are the common desire to sustainably manage the watershed and forest resources in a participatory manner for the benefit of the society. There is also the desire to be globally competitive in the forest-based industries particularly in the aspects of forest plantations and forest utilization. Another common vision is the provision of sustainable supply of goods and services to industries (whether corporate or community-based) for the upliftment of the economic welfare of upland communities. From the above visions, a common vision for the sector has been drawn as follows:

Forestry Sector Vision: A sustainably managed watershed and forest resources providing environmental and economic benefits to society with globally competitive industries contributing to the national economy and upliftment of upland communities' welfare.

Among the general objectives formulated to pursue this vision are as follows:

- To sustainably manage the watershed/forest by capable institutions with active participation of empowered stakeholders living in harmony with nature
- To rationalize forest based industries with sustainable sources of raw materials, producing competitive-market products, and actively promoting the well being of workers and people in affected communities
- To provide globally competitive and excellent forestry education and training in forestry;
- To enhance protective and biodiversity values of forests;
- To Improve the quality of life of upland communities actively participating in sustainable forest management thru CBFM.
- To enhance and improve decision making processes through adoption of improved MIS, a fully relevant M & E, continuing forest resources assessment, forest resources accounting, criteria and indicator and forest certification, etc.
- To enhance forestry institutions effectiveness, efficiency and competence in forest administration forest conservation and management, forest protection, forestry research and forestry extension ;
- To enhance policy situation that would endeavor to provide the right environment for sustainable forest management.

Strategic Targets

Among the strategic targets envisioned to set the sector in the right track are as follows:

- A fully responsive and capable PFA (public forest administration) within 10 years
- Forestry and related policies harmonized within 5 years
- Poverty in the uplands minimized to half within 15 years
- All forestland boundaries defined and marked, production and protection forests identified, surveyed and segregated within 10 years
- All forest lands under sustainable management and capable managers, all open access areas closed within 12 years
- A healthy, vigorous and responsible forest-based industries within 5 years
- Productive collaboration among DENR, LGUs and other watershed stakeholders, a responsible community of forest stakeholders participating in forestry development and management within 5 years
- All Regions starting to implement sustainable forestry within 1-5 years

- Sustainable production of clean water from watersheds, 150 watersheds prioritized within 2 years, all priority watersheds with integrated plans and management body within 5 years
- 1.5 million of residual forests under sustainable management, self sufficiency in wood 10 years,
- Permanent grazing land of at least 300,000 ha intensively and sustainably managed by 2010 onwards
- 460,000 ha of commercial forest plantations established within appropriate areas including CBFM projects, maintained and renewed within 12 years

Programs and Actions

Proposed policy and legislations

- A comprehensive and legislated national forestry policy, harmonized with other relevant policies on land, water, decentralization, rights of indigenous people and so on;
- A fully harmonised set of laws, rules, and regulations in the form of a Forestry Manual; Legislation of the Revised MPFD, adoption by Philippine Cabinet and NEDA;
- Legislation of a PFA as a line agency, reorientation of its function as: firstly, a land management agency and secondly, a forest resource management agency;
- Legislation of CBFM Special Account
- Creation of a National Council on Sustainable Forestry
- Creation of Forest Industries Development Board to oversee rationalization and development of FBI,
- Separation of authority and enterprise function of PFA, creation of National Forestry Board to oversee enterprise functions in forestry

Strategic priority programs

Among the many programs recommended in the various consultations and workshops, the following programs were prioritized as follows:

- 1) Policy Reforms and Institutions Development
 - harmonization of forest other policies affecting the sector
 - retrofitting the PFA as a line agency, and as: firstly, a land management agency and secondly, a forest resources management agency, separation of the authority and enterprise functions of the PFA
 - capacitation of forestry institutions, institutional reforms
 - National Council for Sustainable Forestry (NCSF)
- 2) Prioritization/watershed integrated land use planning simultaneous with forest boundary delineation
- 3) MIS, IEC and R & D enhancement
- 4) Sustainable management of residual forests, other natural forests, arresting forest destruction
- 5) Forest area expansion through plantation development, ANR, other means
- 6) Protected area and biodiversity conservation
- 7) Forest industries rationalization and development
- 8) Sustainable management of grazing lands
- 9) Full development of M & E and C & I system for all forest types and management systems
- 10) CBFM as a cross cutting strategy in all forest management systems
 - enhancement of CBFM implementation
 - CBFM expansion, strengthening and expansion of existing sites, identification of new sites

C. STRATEGIC PROGRAMS IMPACT ANALYSIS

Business as Usual

The stakeholders in the sector are now becoming aware and vigilant about the fate of forestry in the country. There were already many assessments conducted and recommendations forwarded by many parallel efforts. The Review and Revision of the Master Plan for Forestry Development Project only validated what have been forwarded and extensively discussed in various fora and professional gatherings. Nevertheless, the Project endeavored to provide the strategic focus by which the sector could concentrate to make some successes. Without the Revised Master Plan, the sector would continuously be confronted by the same issues and problems already known to exist a long time ago.

Firstly, forestry institutions would continue to be ineffective in addressing the sector's problems. It would continue to operate under weak policies and ill-equipped human resources. Nevertheless, it will continue to move into the path of sustainable forestry with the implementation of initiatives pragmatically designed to address current problems. However, it will still be saddled by the same issues and problems identified in this Project. Some of these are:

- forestlands will continue to be encroached, forest boundaries unrespected;
- continuous decimation of residual dipterocarp forest, watersheds will continue to be degraded and forests converted to other land uses;
- private investments in forestry will continue in trickles; and
- intersectoral linkages and cooperation would be hard to achieve

Secondly, poverty in the uplands would continue to become a problem in forest conservation. Population would exert more pressure on forest resources because of lack of employment opportunities. The sector may be caught flatfooted by the irreversible impacts of exploding population in the uplands.

Thirdly, many watersheds will continue to lose their vital functions. Alarmed stakeholders will continue to find ways in solving the problems. Some groups will be commissioned to continue to evaluate and assess the situation. Sooner or later, they will find the same issues and problems, and will probably recommend the same solutions as identified elsewhere in this paper.

Lastly, with the sector's continuing decline, it would realize the need for some plans and programs and would find efforts to have one. Hence, it would resort to the previous assessments conducted and try to reconfigure earlier plans. Eventually, the government and the sector itself would have the political will and the guts to implement the plans, although at a much later period. By this time, the sector is almost hitting rock bottom, where it is more difficult to make a reversal.

With the Revised Master Plan

The priority programs of the Revised Master Plan are so designed to have a snowballing effect. Hence, it addresses the more critical problem first so that other programs may soon be facilitated. Among the expected impacts of priority programs are as follows:

Policy reforms and institutions development

Harmonization of forest and other policies affecting the sector would eliminate flashpoints that spur conflicts among government agencies dealing with the same clientele. This would also facilitate convergence of many initiatives by the different government agencies and sectors resulting to formulation of platforms for long term coordination among agencies and stakeholders. Retrofitting the PFA as a line agency, and reorienting its main function as first: a forest land management agency and second, a forest resources management authority, would respond appropriately to focusing government efforts as facilitator

of development and operationalizing the long term goal of putting every hectare of forest lands under sustainable management unit. The separation of the authority and enterprise functions of the PFA would promote efficiency in forestry operations. The capacitation of forestry institutions would be facilitated where conflict in functions can be minimized or eliminated.

On the other hand, the creation of the National Council for Sustainable Forestry (NCSF), a coordinative body, would facilitate coordination among agencies whose concerns are influenced or affected by what is happening in watersheds; e.g., Department of Agriculture with their AFMA, Department of Agrarian reform with the CARP, etc.

Prioritization/watershed integrated land use planning simultaneous with forest boundary delineation

Prioritization of watershed for integrated land use planning purposes simultaneous with forest boundary delineation would start the process on determining what are the forest areas needed for protection purposes and what are needed for other purposes. Such activities are really the critical start of sustainable forest management where the use for forest lands are determined based on criteria that would best serve the society in an optimum manner. This would allow the watershed/forest managers and other watershed/forest users realize the many and interrelated functions of watershed.

This set of programs would also provide sustainable production of water for domestic, irrigation, power generation and other industrial uses at the same time affording the stakeholders determine and operationalize other beneficial options in the use of watersheds. The ultimate impact would be the ensurance of long term health of the watersheds.

MIS, IEC and R & D enhancement

Full support in the enhancement and development of these support programs would create an information highway where the communities and other watershed/forest managers would have easy access to information for improvement of their management decisions and adoption of mature and tested technologies by field practitioners. A good MIS would make a DENR Regional Office more investment-friendly by minimizing the cost of obtaining information for investment purposes. Availability of up-to-date technology would promote economic efficiency in forest management. This program would also afford forest managers anchor their decisions on management tools and information based on science.

Sustainable management of residual forests, other natural forests, arresting forest destruction

This program would contribute much to poverty alleviation in the uplands by creation of employment opportunities in the uplands. This strategy would minimize conversion of natural forests into other non-forest landuses. This would help restore order in the management of residual forests where currently, 36,000 ha are lost annually due to conversion. Likewise, this would help attain self sufficiency in wood and other forest products.

Forest area expansion through plantation development, ANR, other means

Establishment of forest plantations is one of the visible means of employing people. However, employment in this type of endeavor is usually intermittent. By having forest plantations at the right places and being intensively managed for commercial production would provide continuous source of employment. The process of establishing, tending, harvesting, processing, marketing and renewal of plantations would be a continuous and deliberate cycle addressing poverty, wood sufficiency, illegal practices in affected areas.

On the other hand, expansion of other forest areas for rehabilitation and restoration purposes through establishment of indigenous forest plantations would improve the health of the watersheds. This would also impact on the conservation of biodiversity.

Protected area and biodiversity conservation programs

With the current initiatives on the protected area subsector and the proposed programs under the revised Master Plan, it is envisioned to have a perpetual existence of biological and physical diversities in a system of protected areas and such other important biological components of the environment sustainably managed for the benefit of mankind. The program impacts would be a secure and healthy PA system managed by well-informed and empowered stakeholders supported by the citizenry and providing sustainable benefits and enjoyment to society.

Forest industries rationalization and development

Rationalization and development of forest industries would afford the nation to see the economic contribution of forests. This would transform the forest-based industries into globally competitive firms with environmentally-sound forest management platforms significantly contributing to the national economy and helping address poverty alleviation in their areas of operations and vicinities.

Sustainable management of grazing lands

Implementation of programs on grazing would improve benefits from such areas which are minimal at present. This program is designed to make grazing lands as sustainable source of health and wealth for the benefit of Filipinos. This will also enhance the improvement of the carrying capacity and productivity of grazing lands through improved forage and pasture grasses, improve livestock production through proper management practices and breeding technology and provide security of tenure and incentives to grazing land managers to improve their management operations over the long term.

Full development of M & E and C & I system for all forest types and management systems

Full development of M & E and communications systems as well as C & I as a management tools would improve utility of information and enhance horizontal and vertical flow of communications. This would also impact on the improvement of MIS and IEC. As a complementary tool, C & I would help prepare forest managers and users realize the impacts of management decisions on the health of the forests. C & I system would help transform local forest management systems produce globally competitive products from sustainably managed forests. This also preparatory to forest certification, a necessary tool in the full implementation of SFM.

CBFM as a cross cutting strategy in forest management systems

Enhancement of CBFM implementation would put into the right track many CBFM projects where POs became inactive due to various reasons or another. This is the bridge program where the current lack of support rendered many POs disillusioned with the program. This is expected to activate many POs and sustain interest among the members. Active participation of majority of members in livelihood and enterprise development would contribute to the poverty alleviation in the uplands.

On the other hand, CBFM expansion through strengthening and expansion of existing sites, and identification and implementation of new sites close many open access areas and likewise put them under formal management systems that would ensure sustainability of resources. Serious implementation of development activities geared towards resource generation (e.g., forest plantations, agroforestry, livelihood projects, etc.) would draw the attention of forest communities from unsustainable practices towards sustainable employment sources.

D. REVISED MASTER PLAN IMPLEMENTATION

Strategic Institutional Actions

Upon formal acceptance of the Revised Master Plan by the DENR Secretary, it would be strategic that the same Plan be formally approved by the Philippine Cabinet. This would render legitimacy to the Plan as well as encourage the sector who prepared this Plan. At this level, legal adoption of this Plan through legislative actions would shield it from political changes in the country and make it stable.

The top 10 priority programs has been identified based on their criticalness in putting order in the sector. Their immediate implementation is envisioned to catalyse positive chain reaction to important set of conditions for sustainable forestry to take place. A detailed action plan for these top 10 priority programs must ensue immediately upon formal acceptance of the Revised Master Plan. Timing is critical as important programs need to be included in the 2005 budget cycle. Among the critical activities to be included in the action programs are listed in Section 6.3. In the meantime, the PFA must conduct IEC for the plan. Presentation of the plan to donor agencies would really help.

This Plan shall be implemented by the sector. The DENR is the focal agency in helping orchestrate most of the activities in carrying out the programs. Acceptance of the plan by other sectors of society, and by different forestry subsectors and stakeholders who, by one reason or another, were not able to participate in its formulation, is also a paramount concern for its successful implementation.

The implementation of the Revised Master Plan would involve not only DENR regional offices but also require involved collaboration of different stakeholders. Thus, opportunities for productive collaboration must be explored. A key activity to follow this formulation of the forestry sector plan at the national level is the realignment of regional plans to the priority programs set at the national level. Current regional initiatives already aligned with the Plan shall be continued and enhanced. Some Regions have unique characteristics and conditions which may reinforce or impinge on the implementation of top 10 priority programs identified in the national level, hence, formulation of regional plans shall dwell on regional settings, their strength and potentials, to realize the goals of the sector in their regions.

It would be important to note that there are many other programs identified in Section 4 of this report concerning different forestry subsectors that were not included in the national priority programs. These programs are not prioritised because they are not critical in the short term. However, they are part of the long term plan to sustain the sector. It will be useful to make careful considerations of these as some subsectors or regions may find such other programs relevant to their conditions. However, still basic to successful implementation of any plan is to capacitate the institutions mandated to implement the plans.

Financing strategies

It is necessary to dramatically increase investment in forestry and forest-based industry sectors to meet the needs of the future. In that, the non-government sectors will have an important part to play. Currently, most of the investment funds for government programmes are obtained from government revenue sources and as loans and grants from external development agencies. Mobilisation of investment funds locally is very important in meeting at least part of the future investment needs. And, in order to attract private sector participation, it is necessary to make investment profiles of suitable projects available, with relevant information and analysis.

Financing of forestry program is dependent essentially on public sources (including external assistance) whereas forest products development is mostly supported by private finance. Both public and private financing are needed in the implementation of the revised Master Plan. To support regular flow of funds, and financial autonomy, several countries have developed innovative mechanisms such as forest funds, private ledger account and special revolving funds. One positive step towards this is the establishment of the CBFM Special Account. This would partly take care of the huge investments needed

by the sector as certainly, CBFM is one of the biggest programs of the government in terms of land area coverage and number of beneficiaries.

Private sector participation is an important ingredient in financing some critical programs particularly in the area creating forest capital and enhancing the value of existing forest capital. However, the government must be facilitative in providing mobility of investment capital. Mobility implies moving from one mode of business approaches, e.g., labour-intensive to more capital-intensive ventures, requiring ever larger investments or vice versa. Mobility is, however, constrained by several factors: lack of entrepreneurship, technology, institutional support and development infrastructure. There are several cases, in developing countries, where small local undertakings evolved into large enterprises. The Village Forest Associations of Korea expanded their investment capital, through their federations at regional and national levels. In at least nine developing countries, domestic corporations developed into TNCs in forest-based sectors. This provides one of the positive notes to the issue of mobilisation of private investment in forestry.

In supporting local private sector or corporate sector investment, commercial and other banks can play a crucial role. Support for the large number of small investors whose sources of funds are their limited personal savings and loans from friends and relatives, rarely comes from any formal credit facilities. In some countries, micro-credit facilities like the Grameen Bank of Bangladesh have been developed. The credit administration should have the capacity to see that the investment does not end up as failures.

A clear awareness of the value of forest benefits and establishing a system for forest resources accounting will to some extent, help to attract investment into the forestry sector. Institutionalization of forest resources accounting would enable PFA and its regional instrumentalities to be in control of the information system. Providing the right information to potential investors would facilitate investment decisions. Thus, to attract more private investments into the sector, the DENR and its Regional Offices must start to upgrade their information system

Schedule of Implementation

Figure 6.8 shows the implementation schedule for the priority programs under the Revised Master Plan.

Budgetary Requirements

The priority programs of the Revised Master Plan has a total indicative budgetary requirement of **60,614 mil P** over its 25-year period of implementation (Table 6.57). Among the programs with the biggest requirements are forest plantations and CBFM with totals of **34,000 and 17,075 mil P**, respectively. The critical period which is the first 5 years has a total budgetary requirements of 21,115.3 mil P. The total requirement constitutes **62 %** of public investment (**37,584 mil P**) and **38 %** of private sector investment (**22,031 mil P**). Among the programs where private sector is expected to be heavily involved are the establishment of commercial forest plantations and CBFM where they are expected to collaborate with the POs for joint venture activities. Table 6.58 shows the details of the indicative budgetary requirements for the priority programs.

Table 6.57. Summary costs of priority programs under revised master plan (mil P).

PROGRAMS	Implementation Period (in years)				TOTAL	Public Sector	Private Sector
	1-5	6-10	11-15	16-25			
1. Policy Reforms and Institutions Development	60.0	10.0	10.0	20.0	100.0	100.0	
2. Prioritization/watershed integrated land use planning	3,853.0	1,271.0	-	-	5,124.0	5,124.0	
3. MIS, IEC and R & D enhancement	653.5	647.5	657.5	1,315.0	3,273.5	2,796.0	477.5
4. Sustainable management of residual/other forests	10.0	5.0			15.0	15.0	
5. Forest area expansion	6,800.0	6,800.0	6,800.0	13,600.0	34,000.0	16,600.0	17,400.0
6. Protected area and biodiversity conservation	to be determined during the action planning						
7. Forest industries development	205.0				205.0	51.2	153.8
8. Sustainable management of grazing lands	60.0	60.0	60.0	120.0	300.0	300.0	
9. Full development and implementation of M&E, C & I	110.5	125.5	95.5	191.0	522.5	522.5	
10. CBFM- cross cutting strategy	9,363.3	7,704.2	7.5	-	17,074.9	12,074.9	5,000.0
TOTAL	21,115.3	16,623.2	7,630.5	15,246.0	60,614.9	37,583.6	23,031.3
					%	62.00	38.00

Monitoring and Evaluation, and Communications

The monitoring and evaluation of the Revised Master Plan activities shall be conducted continuously. A designated office in the PFA (currently FMB) shall coordinate with the concerned sectors (e.g., LGUs, other GAs, private institutions, private sector groups, Regional Offices and other stakeholders) regarding the activities being conducted and progress made by all sectors, including problems encountered by particular sectors, subsectors and stakeholders in the implementation of the Plan. This office shall also assist field implementers in the dissemination of information available at the national level to the field implementers. Counterpart offices or units in the central, regional and other field levels and in other relevant government agencies shall also be established. Funding for the activities of these offices shall be integrated in their regular budget proposals. However, a seed funding for its operation is necessary to set up the whole system in to the bureaucracy.

Review and Revision

The review and revision of any plan is necessary basically because the relevant conditions and premises by which the plans were anchored may change through time. Likewise, future developments may render parts of the plans outdated or un-implementable. Hence, the Revised Master Plan shall be reviewed regularly. The first formal review shall be conducted in 2010 and to be repeated every 5 years thereafter. The review and revision process shall also be participatory as possible and may concentrate on the whole plan or only on components needing review and amendments.