



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Forestry Sector Development Report for 2006/07(draft)

for

1st Stakeholder Consultation on FS 2020 Implementation
On Nov 14th and 15th, 2007

Ministry of Agriculture and Forestry

Department of Forestry

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Introduction

The 2006/07 forestry sector development report is prepared for the 1st Stakeholder Consultation on Implementation of the Forestry Strategy 2020 in November 2007. It aims to provide the meeting participants and other stakeholders with an overview of forestry activities and main issues and constraints with focus on implementation of the FS 2020.

The report consists of 3 major parts.

Firstly, it provides overall development framework related to the forestry sector and reviews main events and activities of the forestry sector, which took place in 2006/07.

Secondly, the report reviews forestry activities in detail to some extent and provides achievements, issues and constraints to be addressed according to the main programs of the FS 2020.

Finally, conclusions are presented on evaluation of the forestry sector performance for the past year

1 Development of the forestry sector in 2006/07

1.1 Forestry sector in the national context

In 2006 the Lao economy continued to grow steadily with real GDP rate at about 8.3% compared to 7.3% in 2005. Hydropower and mining sectors are the key drivers of growth. Other contributions to high growth are made in tourism and agriculture development.

Forestry sector's share in GDP was 3.0% in 2006 with little change from 2005. Forestry sector's GDP counts only logs and some NTFP and if wood and NTFP processing is included, it would be much higher.

According to the government policy of steady economic growth and market-based economy as well as growing demand for raw materials and power in the region, the foreign direct investment (FDI) has been rapidly increasing in recent years. Although a large share of FDI is in hydro-power and mining sectors, FDI in agriculture and forestry accounted 17% (on the registered capital base) of total FDI in 2006 including various crop and tree plantations.

Due to rapid increase of metal products export the total export grew 50% from 2005 to 2006 reaching US\$950 million. Wood and wood products export stayed at same level in value terms, but its share has declined to about 10% in 2006 from some 30% some years ago.

Forests remain the main land type in Lao PDR and provide a range of products for national economy development and maintenance and improvement of rural livelihoods. However, forest resource use has not been well managed due to limited human and financial resources to enforce laws and regulations as well as to implement sustainable resource management. The Government of Lao PDR (GOL) has taken several measures to regulate forest resource use on a sustainable basis.

Land including forest land has become an important capital for industrial use and commercial crop production and demand for land has been intensifying. In the forestry sector including forest land use investment in crop and tree plantations, esp. large scale investment in the form of state land concession, is rapidly increasing. Requested land area of investment proposals in plantations at the central level is now close to 2 million ha and various conflicts related to land use and concessions have been reported. GOL has temporarily suspended new concessions and been reviewing approval process and field activities of all existing concessions. GOL also gives priority to investment proposals, which provide benefits to local villagers including the 2+3 system.

1.2 Formulation of the Agriculture and Forestry Development Plan to 2010

The Ministry of Agriculture and Forestry (MAF) adopted the 5 year Agriculture and Forestry Development Plan (2006-2010) in Sep 2007, which features 4 targets and 13 measures. The 4 targets are 1) Food Security, 2) Commercial Production, 3) Shifting Cultivation Stabilization and 4) Sustainable Forest Management and Balance between Utilization and Conservation. Concrete targets for the Forestry sector are as follows;

- Increase of forest cover from 42%(9million ha) to 53% (12million ha) by 2010

- Continuation of forest survey and classification in detail for management in line with science/technology , policy and regulations
- Promotion of tree planting of various investment types leading to closure of natural forest areas, which are not yet classified.
- Acceleration of ground identification of Production Forests with area of around 4.2 million ha .
- Systematic establishment of management plans for 3.4 million ha of NBCAs
- Ground identification of watershed protection areas and planning for use and control for around 4 million ha of watershed area
- Environment protection for other sectors.

1.3 Forestry sector targets to 2010 and outstanding results in 2006/07

Main achievements in 2006/07 are as follows;

- Tree planted area for 05/06 and 06/07 was some 35,000 ha and 25,800 ha respectively.
- 29 Production Forests with total area of 2.6 million ha were officially established in addition to the existing 8 Production Forests.
- Establishment of management plan for NBCA has been initiated with use of the Forest Development Fund (FDF).
- Potential Protection Forest areas for protection of 51 watershed areas of main Mekong tributaries and 25 existing and proposed hydro-power dams have been preliminary identified on maps.

1.4 National Conference on Forestry in Mar 2007 and PM Decision 25 and PM Order 30

A series of meetings on forestry issues was organized by MAF and the final one, the National Forest Conference, was held on Mar 1, which was attended by all Ministers and Provincial Governors and chaired by the Deputy Prime Minister and Standing Government Member Mr. Somsavath Lengsavath. Its conclusions were endorsed by the Prime Minister Decision No. 25 dated Apr 3 07.

The Prime Minister issued PM Order No. 30 on Aug 17 2007 with clearer and stricter measures to control logging and wood business than the PM Decision No. 25. MAF sent senior forestry staff to all Provinces to ensure proper implementation of the Order No. 30.

1.5 Review and revision of the Forestry Law

According to the instruction by the National Assembly in Dec 06 MAF has reviewed the Forestry Law in view of reflecting current forestry situation and addressing outstanding issues for a major revision. Main changes proposed in the latest draft are as follows;

- Forest types; from 5 to 3 (Protection, Conservation and Production)
- Authorization of establishment of 3 forest types; from MAF to Government (Prime Minister)
- Area of natural forest conversion for NA approval; from 10,000 ha to 1,000 ha
- Area of degraded forest use (mostly for plantation) at local levels;
 - District; from 3 ha to 10 ha for each project
 - Province; from 3 – 100 ha to 10 – 500 ha for each project
- Inclusion of principles/conditions concerning land concession for tree plantations;

- Socio-economic study including situation of land use rights
- Techno-economic study (feasibility study)
- Socio-environmental impact assessment
- Prohibition of log and lumber export
- Clear responsibilities and mandates of Forest Inspection Organizations

The final draft Forest Law will be sent to the NA's December session through public consultations with main stakeholders and government approval.

1.6 Drafting of the Wildlife Law

In view of continuing depletion of wildlife species and their habitat, MAF decided to draft the Wildlife Law in order to protect wildlife and their habitat in a comprehensive way by consolidating existing regulations and adding new provisions. The latest draft consists of main sections as follows;

- Wildlife classification into three categories
- Rules on wildlife raising, hunting, transport and trade
- Rules on wildlife business including farms, zoos and exhibitions
- Prohibitions
- Duties and responsibilities of Wildlife Management and Inspection Organizations

The final draft Wildlife Law will be sent to the NA's December session through public consultations with main stakeholders and government approval.

1.7 The GOL-Donor Sub-working Group on Forestry (FSWG)

FSWG was established at the Joint WG on Agriculture, Rural Development and Natural Resources Management in Feb 2006 in order to enhance coordination between GOL and donors as well as between donors in the forestry sector. Department of Forestry (DOF) and Sida were selected as co-facilitators. Its two main roles are;

- 1) Reference group for important planning and review process of FS 2020 implementation
- 2) Discussion on thematic issues

Because of a wide range of forestry stakeholders, FSWG invites NGOs and private sector. FSWG has so far organized 5 meetings on various topics.

1.8 Establishment of Forest Management Information System (FOMIS) and Development of Forestry Sector Indicators

In line with the IT development policy of MAF, DOF has been establishing FOMIS containing forestry related data and information and in the future linking DOF and Provinces. Designing has been completed and installation of hardware including upgrading of DOF library has been started.

In order to monitor socio-economic and environmental impacts of the forestry sector and to reflect monitoring results to policy and programs, a preliminary set of Forestry Sector Indicators has been developed. These indicators will be updated and refined annually and findings will be carefully

reviewed for possible reflection into policy and programs. These indicators will be included in FOMIS when it becomes operational.

1.9 Participation in the Forest Carbon Partnership Facility (FCPF) of the World Bank

Lao PDR is one of the twenty countries participating in FCPF, which is a pilot program to refine the Reduced Emissions from Deforestation and Forest Degradation (REDD). REDD is considered to be one of key schemes under discussion to be applied in the second commitment period from 2012 after the Kyoto Protocol for reduction of green house gasses. FCPF will establish reference scenarios of forest biomass reduction and a strategy and programs to reduce biomass reduction rate above the reference scenarios for each country. Some selected countries will enter into purchase agreement of reduced biomass reduction through implementation of reduction programs.

2. Implementation of the Forestry Strategy 2020 in 2006/07

2.1 Land and Forest Use

Establishment of the National Land Management Authority (NLMA) in 2006 was very timely when land use in Lao PDR is at a turning point from small scale subsistent to larger scale commercial uses. It has organized a series of meetings on various land issues esp. land concessions and contributed to the GOL decision of temporary concession suspension and review. It is expected that NLMA in cooperation with other land related Ministries, esp. with MAF will prepare and propose overall land use policy and implementing legislation including ones on concession soon.

In order to use land for agriculture and forest production in a productive way with due consideration of local society and environment, MAF has been conducting the agriculture and forestry production area zoning at District level with the National Agriculture and Forestry Research Institute (NAFRI) playing a leading role. Department of Forestry (DOF) also commissioned a study to develop a methodology to identify potential degraded forest land for conversion to plantations with use of high resolution satellite images at village level.

MAF through the National Agriculture and Forestry Extension Services (NAFES) also initiated improvement of the land and forest use planning and allocation method to be more participatory and related directly to production activities. Field test has been conducted with participation of NLMA staff in one village development cluster in each Region.

It is expected that in 2007/08 these land use planning/zoning trials will be reviewed in a comprehensive manner together with similar project level activities in order to come up with a standard method of new participatory land and forest use planning and land and forest allocation, which can be followed by land registration/titling to ensure ownership, to reduce land conflicts and to secure investment. The standard method is expected to be officially endorsed and disseminated for use by land and forest related agencies and projects.

NLMA issued Ministerial Instruction No. 564 dated Aug 6 2007 on Adjudication Pertaining to Land Use

and Occupation for Land Registration and Titling, which provides steps and measures of land registration and titling as well as defines the three types of land ownership. They are individual, collective and state ownership. Examples of collective land are village use forest, collectively used agriculture land and so on. The new method of land and forest use planning and allocation under development needs to be closely linked with land registration and titling both technically and administratively.

Limited data and resources both human and finance is one of main constraints to conduct accurate land and forest survey, to formulate land and forest use policy and to implement planning activities in a smooth and timely manner. Another constraint is weak coordination between concerned Ministries in sharing information/data, consultation of land related legislation, conducting cross-Ministerial activities including review of existing concessions and development of a land use planning method. In order to make maximum and efficient use of limited resources including donor support establishment of a cross-Ministerial coordination mechanism on land and forest use needs to be considered.

2.2 Production Forest

Out of 51 potential Production Forests with total area of 4.2 million ha, 37 PF are already officially established and the remaining 14 PF are under survey for proposal of official establishment by PM Order. The first 8 PF have now a complete set of management plans for 21 Forest Management Areas (FMA) and 65 Sub-FMAs. Logging quota of 150,000 m³ for 07/08 excluding logging in infrastructure development areas is only for PF with management plans or pre-management plans.

Benefit sharing of log sales surplus has been started in several PF. For example in the two FSC certified PF the total logging volume for 06/07 was 3,270 m³ and there was surplus of US\$49,110 after royalty payment to government through a competitive bidding. This surplus was distributed as follows; 50% to the Forest Development Fund, 25% for management operations and 25% to village development funds.

In the two FSC certified PF a pilot of multi-year logging plan and log sales is planned for 07/08 in order to promote investment in finished products production and to attract higher prices for logs than a single year system by reducing transaction costs. If this proves success, a new system will be expanded to other PF gradually. At the same time FSC certification of other PF will be considered under the scheme of group certification in collaboration with organizations with expertise in certification and marketing of certified wood.

Although official establishment of PF is going on according to the MAF plan, local staff and participating villagers esp. those of newly established PF are lack of knowledge and equipments for appropriate management of PF to meet various requirements of regulations and standards. Continued support from international society for staff/villager training and provision of equipments is indispensable to manage all 51 PF on a sustainable basis and to provide benefits to local villages.

2.3 Non-Timber Forest Products (NTFP)

A number of activities towards sustainable management of NTFP resources have been taken by many

stakeholders. Among others publishing of “NTFP in the Lao PDR” (NAFRI/NOUL/SNV) is a land mark event summarizing information and knowledge gained so far and at the same time laying the foundation for further development of NTFP sector through education, research and field management. It is expected the Lao version will be printed and widely distributed soon.

Some projects initiated sustainable management of NTFP based on resource assessment and local management including the Sustainable Forestry and Rural Development Project (SUFORD; MAF/WB/FINNIDA) combining NTFP and tree management in Production Forests and the Rattan Project (Forest Research Center (NAFRI)/IKEA/WWF) focusing on sustainable Rattan management in village forest. Another action being taken by FRC/WWF/SNV is certification of rattan and bamboo managed by local people linked with local processors to attract premium prices through sales of certified products in high-end markets.

DOF initiated a study on quota and sales of NTFP at local level in cooperation with FRC in selected Provinces in order to understand how NTFP quota are distributed, actual NTFP collection is done and village level resource assessment or management is carried out. The results will be made public soon and a pilot activity of village quota is planned in view of transition from the current central quota setting to local resource based one.

In spite of these activities it is widely believed that NTFP resources esp. those of high value and non-reproductive character are being rapidly depleted due to over harvesting, deforestation and conversion to large scale plantations. Export of NTFP is not well documented partly due to cross-border trade by local traders, but it is said most of NTFP export are still in the form of raw materials despite ban on export of raw or semi-processed products of some NTFPs.

2.4 Tree Plantation Development

Lao PDR is now experiencing the 3rd tree plantation boom while the 1st boom was in mid 90s with mainly teak planted by small farmers and 2nd in early 2000s with mostly Eucalyptus led by the ADB's loan project. However, this 3rd boom is much larger in scale and more diverse in species than the past two booms. Not only large investors both foreign and domestic but also farmers are converting their fallow land to rubber, Agarwood and teak plantations. Trans-national companies are establishing and/or looking for land for fast-growing mostly Eucalyptus plantations to feed their mills in China and elsewhere.

Commercial crop/tree plantations is one of GOL's priority areas for promotion of foreign investments, but concerned Ministries and Provinces are not well prepared or equipped to manage and control investment in plantations. Rules and regulations concerning investment appraisal, selection of land for concessions including consultation with local villages, monitoring of actual investment and so on are not fully developed or enforced. Consequently there are many cases of conversion of rich forest or village forest/land, no planting activities after logging/clearing, not unified and very low concession fees and so on.

GOL is in the process of concession review and it is expected a more detailed and comprehensive legal framework concerning crop/tree plantations will be established by concerned Ministries. GOL is

also promoting and studying investment forms, which benefit local people including the 2+3 system and will be incorporated in the new regulatory framework.

MAF is preparing Ministerial regulations on management of tree plantations and Code of practice on plantation forestry to form a part of the comprehensive legal framework. These regulations will be finalized and issued through public consultations. DOF developed a land and forest zoning method with focus on degraded forest land for conversion with use of high-resolution satellite images. It is expected that this method is going to be further refined for use at village/village cluster level land use planning.

Harvesting of planted trees is increasing year by year, although still a small amount. Especially, teak in the northern Provinces is selectively harvested and bringing cash income to small holders. In view of strong demand for certified teak products in the US and Europe and maturing resources in Provinces, FSC group certification of small holder teak plantation is started on a pilot basis in collaboration with buyer side.

Trees are planted by various private entities i.e. farmers, individuals, domestic companies and multi-national companies. Presently, the Lao Tree Plantation and Cash Crop Owners Association is formed and it is expected this association play key roles for technical/market information exchange and promotion of good management practice through internal rules and dissemination of GOL laws and regulations. Multi-national companies are expected to demonstrate technical, social and environmental performances of international standard to be models for other investors.

2.5 Harvest/Logging Plans and Royalties

Logging quota setting based on management plans and pre-harvesting inventory of Production Forests and infrastructure development areas has been introduced. As more PF are established and management plans formulated, a sustainable level of log harvest volume from all PF will be set. However, due to continuing and planned construction of hydro-power dams with various sizes, total annual harvesting level may fluctuate in the coming years.

A total harvesting volume in recent years estimated based on processing capacity and operation ratio is around 860,000 m³, which is approx. double the official quota in recent years. Moreover, mirror data (import value data reported to UN by countries that import wood from Lao PDR) also indicate actual wood export value is more than double the Lao customs data. Mirror data also indicate most of wood export are rough or rough sawn timber contrary to the Lao customs data. These suggest a large amount of logs are illegally harvested and exported with little processing to neighboring countries.

GOL has been intensifying efforts to control logging and wood export through a series of PM Orders, which prohibit logging outside of official plans and export of logs and semi-finished products, dissemination of PM Orders to Provinces and inspections at various points. GOL is also establishing the Department of Forest Inspection with authority to arrest offenders and file charges to the Prosecutor's Office.

2.6 Wood Processing Industry

Wood processing industry, which used to be under supervision of both MAF and Ministry of Industry and Commerce (MOIC), is now under MOIC control. Clear division of responsibilities between these Ministries and Ministry of Finance has also been made paving the way to simpler and more transparent administration of log harvesting, sales, transport and processing.

GOL has also embarked on an ambitious reform of wood industry with the aims of closure of inefficient factories and promotion of final products processing and export. As of Aug 2007 out of 587 sawmills and secondary processing factories, 326 are to be closed permanently, 185 are to be improved within one year and only 76 are allowed to continue operations. Moreover, out of 1,528 furniture factories, 1,118 are to be closed permanently, 806 are to be improved within one year and only 128 are allowed to continue operations.

There is an action on the private sector side, too, which is formation of the Lao Wood Processing Industry Association. Association members are only those processing finished products. It is expected that the association will play key roles of technology/skill improvement, cooperation in marketing, processing of only legally harvested logs and so on among members. They are also collecting information of the Chain of Custody (COC) certification in order to process and export certified wood.

2.7 Bio-diversity Conservation

GOL is committed to protect NBCAs and bio-diversity as seen in recent PM Orders and preparation of the Wildlife Law. With much less international support for NBCA management than several years ago, GOL established two important funds to continue NBCA management. They are the Forest Development Fund (FDF), main source of which is logging related fees, and the Environmental Protection Fund (EPF) with ADB and World Bank finance. FDF has started disbursement of fund to selected Provinces for management of NBCAs. EPF focuses on the NBCAs surrounding Nakay Nam Theun areas.

Hin Nam Nor NBCA has been proposed as a Trans-boundary World Heritage together with Phonya-Kebang National Park of Vietnam and a dialogue for cross-border cooperation in management of the two areas is initiated.

Eco-tourism in NBCA, a potential approach of Integrated Conservation and Development, has been promoted and eco-tourism development plans are formulated for 5 NBCAs including Nam Ha, Phou Khao Khuay, Phou Hin Poun, Nam Kading and Xe Pian.

DOF has started review of NBCAs with the aims of updating management situation, possible upgrading of Provincial level Conservation Forests to NBCA and boundary redrawing to exclude developed areas. DOF in collaboration with FRC also has re-initiated identification of tree seed sources (around 100 across the country) and preparation of a legal framework for protection of these sources.

In spite of all these actions cases of encroachment into NBCAs for plantation establishment and

logging have been continuously reported and illegal hunting/harvesting, consumption and trade of prohibited wildlife or rare plant species including orchids seems endless. Awareness raising, capacity building of concerned agencies including police and customs offices and strict law enforcement need to be strengthened with sufficient level of international support.

Another issue is bio-piracy. Due to its location, weak institutional capacity and unpreparedness, Lao PDR is prone to bio-piracy causing unknown loss of potential benefits from protection of forest genetic resources. Since genetic resources have potential economic values, cooperation with private sector together with public protection efforts seems a key to successful protection and use of forest genetic resources.

2.8 Protection Forest and Watershed Management

Approx. 4.3 million ha of potential Protection Forests for protection of watershed areas of hydro-power dams and important Mekong tributaries are identified on maps. Zoning and management principles are provided in the draft Forestry Law and after enactment of the new Forestry Law MAF regulations on establishment and management of Protection Forest will be prepared.

Same as other forest types participation of local people and ensuring benefits for them is one of keys to successful management of Protection Forests. Not like NBCA or bio-diversity conservation beneficiaries of watershed protection are easy to identify and there are cases of budget allocation from electricity companies operating hydro-power facilities for conservation activities of their watershed areas. It would be more efficient and equitable that these companies contribute fund according to their power scale to a specific protection window of the FDF and the FDF allocates budget to local authorities and people for their conservation activities.

2.9 Village Land and Forest Management

PM Order No. 9 dated Aug 2007 gives clear guidelines for development of villages and village clusters esp. poor villages from definition to finance and to land use planning. The latest draft Forestry Law also defines village use forest and the NLMA Instruction No. 546 provides collective ownership and land titling of village use forest, commonly used agriculture areas and so on. Together with implementation of a new land and forest use planning and allocation, there will be clearer and more secured resource base for community management of these land and forest.

DOF has initiated development of a guidebook on rights and obligations concerning land and forest use at village level and its extension materials to be used for dissemination of laws and regulations in an understandable way to local officers and villagers in cooperation with the Village Focus International. After enactment of the Forestry Law and Wildlife Law the draft guidebook and extension materials will be revised and field tested for refinement.

Participatory management of Production Forests has started bringing benefits to participating villages in addition to employment opportunities and wage income. As more PF are established and managed, more villages will benefit from participation in management thus contributing to livelihood improvement. Furthermore, sustainable management will provide them with sustainable supply of NTFP for their

consumption and income generation. In case of participatory management of Protection Forests and NBCAs, there needs to be additional financial mechanism to support villagers' conservation activities and non-destructive livelihood systems.

Problems and conflicts concerning use of village land and forests have been increasingly reported including unauthorized logging by outsiders or sometimes by villagers themselves for infrastructure development, conversion into commercial plantations without sufficient consultation and compensation, privatization of village land by powerful people, depletion of NTFP resources and hardship on poorer segment of villages and so on. In order to avoid these problems and conflicts and to contribute to the GOL top priority policy of poverty eradication, actions stated above need to be accelerated towards community based management of land and forest resources.

2.10 Legal Framework and Implementation

As stated in the previous sections, the Forestry Law is being revised and a new Wildlife Law being drafted. Various PM Orders or Instructions concerning forest use and management were issued. A legal guidebook on village land and forest use is in preparation in format understandable to local officers and villagers.

GOL organized the national conferences on land and forest issues with participation of all Provincial Governors and Ministers. Their conclusions were reflected in ensuing PM Instructions and so on. MAF sent senior forestry staff to all Provinces for dissemination and implementation of PM Orders and Instructions.

There is a clear progress in preparation and issuance of administrative orders, which are more detailed and clearer in terms of division of responsibilities between concerned authorities. However, understanding and implementation at the field level remains weak. It takes long time for copies of laws and regulations to reach Districts and villages and even when they receive copies, it is difficult for them to understand the contents or too many to read and implement.

Another problem is vertical division by sector. MAF regulations are only delivered to the agriculture and forestry section of Provinces and Districts. This is same for other Ministries. There is less coordination between sectors at local levels than central level. In many cases Provincial Governors and Districts Chiefs are unaware of sectoral instructions.

While the flow of government side official papers is slow and limited to concerned sectors, illegal loggers or land developers are quick to communicate and act with use of mobile phones and e-mails without any kind of border. In addition to training of local level officers and improvement of sectoral coordination, use of others means such as local station radio system rather than only papers need to be considered for quick and smooth dissemination of public side information.

2.11 Law Enforcement and Governance

Clear GOL policy of and commitment to good governance and strict law enforcement esp. in the forestry sector is reiterated in the recent PM Orders and Instructions. The latest draft of Forestry Law

has a new section and articles on strict law enforcement and punishment. Establishment of the Department of Inspection with authority to file criminal charges against offenders is another sign of this commitment. A pilot activity to detect illegal logging and land use changes in Production Forest is being started in SUFORD areas.

Because of the cultural difference and still low level of sense of governance in many segments of the Lao society, it would take its own style of governance. However, if the current situation of land and forest use continues, poor villagers will surely be the biggest losers and this is against the GOL top priority policy of poverty eradication. They need to be clearly informed not only what they can do and cannot do but what outsiders can do and cannot do in their own land and forests. In addition there needs to be legal measures for them to solve land and forest related disputes and conflicts and they need to know these measures.

2.12 Institutional Strengthening and Human Resource Development

GOL and MAF are in the process of reorganization in order to better respond to current land and resource use changes and future trend. In addition to NLMA the Water Resource and Environment Administration and the Committee for Rural Development and Poverty Eradication were recently established within the Prime Minister Office. The Committee for Planning and Investment has been upgraded to a Ministry.

DOF will have new Divisions of Protection Forests and Production Forests echoing the revision of the Forestry Law. All Provincial Agriculture and Forestry Office will have two new sections of Planning and Forestry Inspection. In order to assist Provinces establish model village clusters, many MAF staff have been re-stationed to Provinces. MAF and its Departments are introducing IT system linking each other. In addition the number of staff with high degrees is increasing steadily and adding new and additional capacity.

In spite of all these improvements and actions the gap between ever increasing and diversifying duties and responsibilities and available human resources seems widening. Drain of quality staff to international organizations/projects, private sector and NGOs mainly due to higher salaries is exacerbating this situation. Strengthening of private sector is welcome and necessary because they play increasingly bigger roles and responsibilities in sustainable use of land and forests. However, the widening gap needs to be narrowed by all means in order to ensure timely and proper policy response and program implementation esp. in the forestry sector.

2.13 Research and Extension

Research in forestry has made progress in the fields of NTFP, silviculture of fast-growing species, tree seed protection and so on in cooperation with many international institutes and projects. Number of researchers with higher degrees has been increasing steadily. However, forestry research is mostly driven by outside supporters in their interested fields and research fields, which need a long term plan and works including indigenous tree provenance and silviculture, are not properly covered due to lack of fund and facilities. Allocation of government fund and cooperation programs with international research institutes or universities on a long term basis need to be sought.

Policy of village development cluster and extension works concentrating on this is clearly stated in recent GOL instructions and in response to this MAF has re-stationed its own staff to Provinces. However, due to lack of knowledge and unique characteristics of forest use, forestry extension tends to be more control and regulation oriented than technical advice. Teak and rubber trees are main species planted by farmers and numerous NTFP are collected, consumed and sold by them. Class room type extension on management of these trees and NTFP will not work well, but linking with markets or market information concerning potential prices of their products may be a good entry point to better management.

2.14 Funding and Allocation

Establishment of the Forest Development Fund (FDF) now allows MAF/DOF to invest in strategic works without relying on short term and donor oriented projects. With FDF at the core, MAF/DOF can coordinate for efficient use of other funds and assistance including GOL fund, SUFORD, FSIP (Forestry Strategy Implementation Promotion Project; MAF/JICA/Sida) and others. However, there is still a large gap between available financial resources including external support and necessary resources to ensure sustainable forest management and benefits to local forest users.

As stated in the sections of NBCA and Protection Forests, there need to be new and additional funding sources and channels to pay for environmental services. Another necessary funding mechanism is a relatively large and flexible fund for forestry to augment FDF and FSIP. A good example is the Trust Fund for Forest in Vietnam, to which several donors have contributed more than US\$ 30 million in stead of bi-lateral projects. GOL and interested donors may start discussion on this soon.

2.15 International Cooperation

Lao PDR hosted and played a leading role in the ASEAN Forestry Conference in Vientiane in July 2007. GOL sent its delegation to COP 14 of CITES and will attend COP 13 of UNFCCC. It is expected that Lao PDR will be more and more involved in forest related international dialogues and negotiations and increase contribution to making agreements and conclusions in order to gain benefits and protect national interest from international treaties and conventions.

Establishment of GOL-Donor Sub-working Group on Forestry (FSWG) provides opportunities to enhance information flows between GOL, donors, private sector and NGOs leading to better cooperation and coordinated actions. FSWG members need to review their activities on a regular basis in order to evolve into a more action-oriented body rather than just a gathering of concerned parties.

3. Conclusions

Due to globalization, robust growth in the region and relatively rich natural resources including land of Lao PDR, foreign investors and multi-national companies are flocking to Lao PDR targeting all kinds of natural resources from trees and NTFP to genetic resources and to forest land. GOL is well aware of this and has been trying to capitalize on this to gain maximum benefits to its economy and society on a

long term basis through establishment, revision or simplification of regulatory frameworks and procedures.

In the forestry sector, GOL has issued several legislations to better control logging and wood business, organized national level meetings for dissemination and implementation of laws and regulations, has suspended new land concessions. The wood processing industry, which has too many factories and too much processing capacity to process logs supplied on a sustainable basis, is now under a drastic reform.

GOL also promotes the 2+3 system or other forms of investment in plantations for benefits of local villagers. Harvesting of fast-growing trees and tapping of rubber will gradually increase and in the very near future these activities will contribute to economic growth, employment opportunities and income generation for local small holders.

GOL is also committed to participatory management of three types of forest i.e. Protection, Conservation and Production Forests. Benefit sharing in the management of Production Forests has already started to provide additional fund to village development.

Forest related private sector is growing and their associations are formed. It is expected their associations will evolve into more self-regulatory bodies responsible for environment and society. There are many donors and NGOs supporting GOL efforts and local people. Forum for dialogues between these stakeholders are established and there will be coordinated actions taken by all of them.

The Forestry Strategy 2020 proposes 146 actions and many of them were already implemented or being implemented as stated above. Its ultimate goal is to contribute to poverty eradication. Opportunities for participatory sustainable forest management, plantation development benefiting local society and more community based resource management are many, but so are challenges as stated in each section above from development of human and financial resources and appropriate and practical regulatory frameworks to improvement in governance and corporate responsibility and to real benefits to local villagers.

Key Forestry Sector Indicators

1) Financial/human resources and private investment

- Public investment in the agriculture and forestry sector heavily relies on foreign projects (81% of the total), especially international financial institutions like ADB and WB. In addition to assistance from developed countries and international organizations, Vietnam provides large amount of assistance in this sector, mostly in irrigation projects.
- GOL have established the Forest Development Fund (FDF) and the Environmental protection Fund (EPF) in order to secure more stable funding source for sector management. Especially, FDF can play a significant role in sector management because of its size (about US\$ 1.6 million).
- Human resources in forestry sector including research institutes show improvement in terms of education level with increase of PhD and MSc holders. However, less than 5 % of Provincial and District forestry staff have BSc or higher and 95% diplomas of vocational training.
- In recent years private investment esp. foreign direct investment (FDI) in agriculture and forestry including wood processing has been on the rise partly due to GOL policy to open investment markets to foreigners. FDI in forestry sector consisting of tree planting and wood processing is largest in agriculture and forestry sector in terms of investment companies.

2) Survey and Forest Land Use Planning

- Forest cover or conditions gradually deteriorated since 1982 and deforestation was faster during 10 year period between 1992 and 2002 than that between 1982 and 1992.
- Delineation of forest categories progresses although very slow as follows ;
Production Forest Area: 37 PFAs officially established and delineated on the ground. Other 14 PFAs identified and to be officially established by 2010. 51 PFAs with total area of about 4.2 million ha.
Conservation Forest: 20 NBCAs and 2 Corridor areas officially established with total area of 3.3 million ha. Provinces and Districts established their Conservation Forest totaling 201 places and 1.4 million ha. Most of these are not delineated on the ground.
Protection Forest: Protection Forests established by Provinces and Districts with total of 75 areas and 0.5 million ha, most of which are not delineated on the ground. Potential Protection Forests totaling 4.3 million ha identified.
- In total, these forest categories add up to 13.7 million ha. Average management area per forestry official (local) is around 7,000 ha.

3) Regeneration and Development/Use of Forest Resources

- In order to achieve the forest cover target of 53% by 2010 about 2.6 million ha of existing Unstocked Forests are to be regenerated to good forests.
- Average log harvest volume approved by central and local authorities for the last five years was 412,000 m³ annually and sharply increased to 692,000 m³ in FY 2005/06 and 649,000 m³ in FY 2006/07.
- Estimated log harvest volume is approximately 860,000 m³ consisting of 11,000 m³ of log export and 847,000 m³ of log consumption at wood processing factories excluding furniture factories. However, mirror data from UN suggests much larger logging volume.

- Non-commercial household level wood consumption excluding fuelwood is estimated at 682,000 m³ (in 2004) and fuelwood consumption at 7.5 million m³ (in 2004).

4) Promotion of Commercial Tree Planting

- GOL has a target of 500,000 ha for tree plantation area by 2020. Average annual planted area from FY 2000/01 to FY 2004/05 was 17,000 ha and it picked up to 35,000 ha in FY 2005/06 due to increase in rubber tree and eucalypts plantations.
- Tree plantation areas planned by foreign investors are 438,000 ha by 2010 consisting of 228,000 ha of rubber tree and 151,000 ha of industrial trees (Eucalypts, acacia, teak, etc.)
- Harvest from tree plantations is still small. Around 7,000 m³ for teak and a little more than 10,000 m³ for Eucalypts. Most of them are exported in log or squared log. Harvest from tree plantations is expected to rapidly increase in coming years.

5) Management and Processing of NTFP

- Actual harvest volume of NTFPs is not known and difficult to estimate due to lack of reliable data.
- Several household level surveys show importance of cash income from NTFP sales in rural areas.
- NTFP export value fluctuates greatly from year to year. It peaked at US\$ 11.3 million in FY 2001/02 and reduced to US\$ 4.3 million in FY 2003/04 and sharply increased to US\$ 48.6 million in FY 2005/06.
- The Lao Expenditure and Consumption Survey 3 (LECS 3 in FY 2002/03) shows very marginal amount of forest related production at household level, which is 40,000 kip/year covering timber, firewood and NTFPs for both own use and sales.

6) Conservation of Forest Resources and Bio-diversity

- Threatened species are identified in a couple of reports, but recent data are not available.
- Very limited data are available for wildlife trade.

7) Shifting cultivation and Land and Forest Allocation

- Pioneering type shifting cultivation has been decreasing in line with the GOL target and plan.
- Both upland rice harvested area and Ray area with various crops show decreasing trend, but they are much larger than the Pioneering type area.
- According to MAF data Land and Forest Allocation Program (LFA) was conducted in more than 7,000 villages (more than 70% of total villages) and in total more than 9 million ha of land and forest were allocated. However, LECS 3 shows only 42% of villages received LFA.
- LECS 3 reveals that 48% of all villages receive agriculture and forestry extension workers on average and this ratio goes down to 34% for rural villages without road.

8) Wood Processing Industry and Wood Export

- Number of wood processing factories increased from 182 in 2001 to 350-400 in 2007.
- Total processing capacity of 350-400 factories is estimated at 3.0 – 3.4 million m³.
- In 2001 wood processing industry employed more than 22,000 workers, which is about 28% of all workers in manufacturing industry including textile, garment, food processing etc.
- MOIC data show increase in furniture production and decrease in sawn wood production.
- According to MOIC, total value of wood and wood products export was around US\$ 67 ~ 75 million during FY2001/02- FY2004/05 and sharply increased to US\$ 97 million in FY 2005/06.

- According to MOF Customs data much of wood product export is still low value added products like sawn timber, but as far as changes from FY 2003/04 to FY 2004/05 are concerned proportion of finished products like doors and window frame increased from 27% to 37% of total wood and wood products export value.
- Thailand and Vietnam occupy more than 90% of wood and wood product export both in volume and value.
- According to mirror data of UN statistical division, wood and wood products export from Lao PDR is more than double the value reported by MOIC or MOF Custom Department.

9) Forestry and Macro-economy/Poverty Eradication

- Current GDP is calculated based on production data from various Ministries and forestry sector GDP consists of three production data provided by MAF, which are harvest volume of log, cardamom and rattan. Assuming forestry GDP consists of only logs, log production volume for 2005 calculated from GDP is 512,000 m³, which is relatively close to the logging volume approved by GOL.
- According to NSC GDP of wood processing is calculated and included in processing sector, but it is not made available.
- According to NSC a new GDP estimation system is going to be introduced and forestry's share will be much higher in the new system.
- Timber royalty is an important source of GOL tax revenues totaling 197 billion kips in FY 2004/05, which was 7.0% of the total tax revenues. Proportion of timber royalty in the total revenue has been gradually decreasing due to increasing tax incomes from other sources.
- Average royalty revenue per m³ log harvest approved by GOL was 810,000 kip for FY 2001/02, 477,000 kip for FY 2002/03, 686,000 kip for FY 2003/04 and 503,000 kip for FY 2004/05.
- Poverty situation has been improving as far as poverty rate is concerned. However, poverty rate is still much higher than the national figure (32.7%) in rural areas without road access (47.8%) and in highland area (56.5%).
- Forestry's contribution to improvement of poverty situation at national level is not known and impossible to estimate due to lack of data concerning reasons for improvement.
- According to a field study wealthy households earn more cash from NTFP sales than poor HH. But, proportion of NTFP sales in total cash income is higher for poor HH.
- There are cases or possibilities, where forestry, especially growing trees, can contribute to poverty reduction including teak, rubber trees, fast growing species or eco-tourism. However, in all cases wealthy people are advantageous in terms of access to land, financial resources and technical know-how. Support to poor HH is indispensable for them to benefit from growing trees or other forest related activities.