IGES-NUOL WORKSHOP ON FOREST CONSERAVATION
Lesson from Lao P.D.R. and Vietnam
Vientiane, 2-3 August 2000.

Faculty of Forestry
National University of Lao P.D.R
Ministry of Education
Vientiane, Lao P.D.R.

Organized by:

National University of Laos (NUOL)
Institute for Global Environmental Strategies (IGES)

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FOREWORD

Institute for Global Environmental Strategies (IGES) was founded for practical strategic research aiming at sustainable development of the world. Its main role is to conduct research on strategies and policies for global environmental issues, taking into consideration social and scientific aspects and human dimensions, specifically targeting the Asia-Pacific Region. Another role is to present the results of its research to organizations such as national governments, UN organizations, and NGOs in order to realize and implement them. The third role is to collect and disseminate information on environmental strategic research. The following five themes were designed as IGES research projects in its first stage (1998-2000): Climate Change, Urban Environmental Management, Forest Conservation, Environmental Education, and Environmental Governance.

Forest Conservation Project has conducted researches in four domains: timber trade, deforestation and forest degradation, legal analysis, and participatory forest management. These researches cover several Southeast Asian countries (Indonesia, Lao P.D.R., Malaysia, the Philippines, Thailand, Vietnam, and Cambodia) as well as East Asian countries (Japan, South Korea, China, and Russian Far East). The research procedure are: reveal the actual state and the problems of forest management in each country; identify common features/patterns of deforestation in the region concerned; and extract and present some principles to be included in a possible international instrument so that such an instrument can sufficiently incorporate the local perspectives.

This workshop was organized jointly by NUOL (Department of Forestry, National University of Laos) and IGES. The main objectives were: 1) for the IGES forest conservation project to share its research results on Lao P.D.R. and Vietnam respectively; 2) for the participating experts and stakeholders to comment on and discuss the research results; and 3) to discuss what principles, element or suggestions are to be included in a possible international instrument on forest conservation in Asia and the Pacific region.

As can be seen, this draft of report contains a very interesting and useful presentation of research results from IGES's researchers, country experience from Lao P.D.R., Vietnam and Cambodia, discussion and comments on presentation, results from group discussion, plenary and conclusive discussion.

It is hoped that this draft of report will be useful reference for IGES forest conservation project in order to meet objectives as mentioned above, as well as others related organizations for further consideration and adaptation this idea/information for implementing forest conservation/management, especially it may be useful for both Lao P.D.R and Vietnam.

ACKNOWLEDGMENT

This workshop can not be held and succeed without a close cooperation between two institutes, IGES and NUOL, as well as two governments, Lao P.D.R. and Japan. On behalf of workshop organizing committee we would like to express our sincere thanks to the NUOL and IGES conservation project, especially, to Prof. Hiroji Isozaki, project's leader, and all members of his project, for financial support and all favors in conducting workshop on forest conservation in Dongdok Forestry Department.

We are deeply grateful to Dr. Sayamang Vongsak, vice rector of NUOL, Mr. Soukkongseng Sayaleuth, vice dean Faculty of Agriculture and Forestry, and Dr. Somsy Gnophanxay, Director Dongdok Forestry Department, for their support throughout the workshop.

Thank you very much for invaluable and useful comments or contributions from all participants, especially, participants from Vietnam and Cambodia.

Finally, we acknowledge to all Laos' participants and workshop organizing committee members for contributions and help.

INTRODUCTION

Mr. Khamvieng Xayabouth

Mr. Khamvieng introduced all guests and participants participated to this workshop.

Mr. Kimihiko Hyakumura

Mr. Kimihiko Hyakumura, research associate of IGES, introduced briefly activities of the IGES Forest Conservation Project in organizing meeting and workshop in different places/ regions in order to extract ideas, comments, and then compile it in order to meet the project objectives. He said that the first, second, and third workshop were respectively held in Shonan International Village, Singapore and Tokyo.

Since the research that have been conducted are limited, the project need to collect more ideas and comments from experts, NGOs, government, and local peoples in each country, a series of workshop is necessary. Four workshops are being planned and some of this are implemented: Internal workshop in Tokyo, Jakarta workshop to cover Indonesia and the Philippines, Vientiane workshop to cover Lao P.D.R and Vietnam, and a workshop for Far East Russia. After this series of workshop the Fourth IGES International Workshop on Forest Conservation will be held in Tokyo in January 2001.

OPENING REMAEKS

Dr. Sayamang Vongsak

Distinguished guests, ladies and gentlemen. On behalf of NUOL, I would like to express my warm well come to all participants especially participants from Vietnam, Cambodia, as well as related experts and stakeholders, to the Dongdok Forestry Department (DFD), NUOL. As you know that the main objectives of this workshop is to share experiences on forest conservation/management as well as identify the common features/patterns of deforestation in the concerned region, especially in Laos and Vietnam. This workshop is organized jointly by NUOL (DFD, NUOL) and the Institute for Global Environmental Strategies (IGES), and this workshop can not be opened without a close cooperation and financial support from IGES.

I would like to express my grateful and sincere thanks to all members of IGES for cooperation in organizing this useful workshop. It is necessary to have participation and contributions from you to meet our objectives of this workshop. On this bright occasion I declare that the workshop now is officially opened.

Prof. Hiroji Isozaki

The chairman of NOUL, Dr. Sayamang Vongsak and staffs, and my colleagues in this forest conservation workshop, especially those from Vietnam and Cambodia.

On behalf of the IGES president, I would like to say thank you to all here for attending.

You may find information concerning IGES in your workshop kit. This is a very brief outline of IGES. As you can see, IGES is a very young institute, just formed 2 years ago. We endeavor to conduct global environment strategic studies, especially from the Asian and Pacific perspectives.

There are four main functions of IGES, the most predominant being that of carrying out research. Strategic research is the current objective, with 7 main activities: climate change, as one of the most important global issues in the world at the moment; urban environment management, which is of course an important issue, not only for the world in general, but especially here in Asian countries with large urban populations; our project, namely forest conservation; environmental education; environmental governance; new development patterns and lastly applying results to policy decisions and actions. IGES is also trying to run capacity building training programs and promote awareness in the general public of environmental protection and sustainable management issues.

Based on these strategic research areas, the main purpose of IGES is to apply these results in actual policy decisions or viable actions for protection of the environment or to ensure sustainable development throughout the world.

As you know, forest issues are very important in the world, particularly in Asian countries. Because of this, for the past two years we have researched protection and conservation of forest issues. We are now in the third year of the first phase of the IGES project, proceeding to summarize and identify the basic principles to be included in possible international instruments such as the World Forest Convention. The World Forest Convention has been discussed in UN forums such as the IPF (Inter-governmental Panel on Forests), its successor organization, the IFF (The Inter-governmental Forum on Forests) and the newly established UN Forum on Forests. The issues raised in the World Forest Convention are still under discussion. However, we think it is better to identify the basic principles to be included in international instruments, especially as there is concern from other regions such as Europe and America that very few ideas are derived from the Asian and Pacific perspectives. Therefore, we would like our activities to contribute to the Asia-Pacific perspective.

This workshop shall run today and tomorrow and it is our hope that very important experiences and lessons learnt in this region will be exposed, especially from Lao P.D.R. and Vietnam. These explanations will take place in group discussions from this afternoon until tomorrow morning. I hope these experiences will also be useful for each of the local forest experts to learn about the activities or experiences of other local areas.

At this point I would like to make one request: that all participants please keep in mind

the concept of participatory forest management, even though participatory management activities are not new. Although participatory forest management has been emphasized for the last ten to fifteen years, we are still seeking to attain a strong participatory management system, so please keep in mind the problems with efforts, experiences or methods used in the past ten years and consider how to improve upon these in order to realize effective, actual forest management policies at the local level.

I hope based on such considerations, fruitful and successful discussions will occur throughout today and tomorrow. Thank you for your attention.

CLOSING REMARKS

Prof. Hiroji Isozaki*

At the end of this workshop I would like to say thank you to all for your very enthusiastic discussions and reports. We obtained very useful suggestions, opinions, comments and questions. Based on these suggestions and opinions, we are going to revise our drafts and also compile our elements. As you know, our project is composed of four units: the structure analysis unit; timber trade analysis unit; participatory forest management unit and legal and administrative measures unit. We understand that to compile the results of these four units is essential, and we will compile our results, based on your comments, for the next four months.

We also held a similar workshop at the beginning of July in Jakarta, Indonesia, where we discussed the experiences, lessons and actions for Indonesia and the Phillipines. In addition to these countries, we will also discuss the experience of Thailand at Bangkok after this workshop. Once we have collected all these lessons, we will finalize our drafts around September, October this year. So, during the entire refinement and compilation of draft recommendations process, we would like to ask you for further comments and opinions concerning our revised draft strategies.

At the end of this workshop, on the behalf of all members of IGES, I would like to extend our heartfelt thanks to our colleagues, especially our collaborators, Mr. Khamvieng Xayabouth, other members of the National University of Laos and Director Vongsak. Without your help we would not have been able to hold this kind of workshop here. I would also like to extend our heartfelt thanks to participants from Vietnam and Cambodia for your reports and discussions as well as members from Laos. So, to all of these members I would like to say thank you and, as both Dr. Vonsak and I said before, forestry activities shall continue to be an issue, so I'd like to say, see you again soon, hopefully in the Asian region, for more discussions on the problems and hopefully successes in forest conservation.

Thank you and see you again. Goodbye.

Mr. Khamvieng Xayabouth

I, on behalf of workshop organizing committee, would like to emphasize my sincere thanks to Prof. Hiroji Isozaki and all members of IGES for your kind helps and support to this workshop, as well as to all participants for your valuable and useful presentations, suggestions, and comments during workshop procedure. At this time, I would like to announce that the workshop is officially closed from now. Thank you.

Part 1:Executive Summary

SESSION 1: Presentation of IGES's Research Findings and each Country Experience.

Chair and reporter: Mr. Bounmy Phonesavanh

Presentation of IGES's Research Findings

1. Dr. Masanobu YAMANE, sub team leader/ research fellow of IGES, presented causes of forest loss in the Asia-Pacific Region. He stated that the " Structural Analysis of forest loss", focussed mainly on the underlying causes of recent deforestation and forest degradation in the Asia-Pacific region was conducted by his research team. Through this procedure clear pictures of structural context of recent forest loss in the Asia and Pacific region are grasped.

Forest loss in his three different target groups were presented. First group includes the Philippines, Thailand and Vietnam. Forests in the Philippines and Thailand were first exploited for commercial logging and after that deforestation was caused by forest conversion projects for agriculture and commercial ranching and forest degradation due to industrial tree plantations. In Vietnam, at least 2 million hectares were deforested quickly due to the direct and indirect impacts of the Second Indochina War. After 1975, deforestation has continued at a high peak from land clearing in accordance with their policy of rice self-sufficiency, in-country migration, coffee plantations, shifting cultivation and logging as a financial source of the military. Second group includes Indonesia, Lao P.D.R. and Cambodia. The proximate causes of forest loss vary from country to country. In Indonesia, mainly commercial logging and forest conversion projects have caused deforestation, and recently, frequent large-scale forest fires have accelerated forest loss. In Lao P.D.R., large forests were destroyed during the Second Indochina War and then cleared in compliance with a rice self-sufficiency policy, hydropower development and other forest exploitation with industrial emphasis. Cambodia, a rapid deforestation caused by land clearing for crops and chaotic logging under the protection of powerful people and the military. And the third group includes southern part of the Russian Far East, with boreal forest cover. In the area, forest degradation, not deforestation, mainly has occurred because of unsustainable forest exploitation for log-export and frequent large-scale forest fires.

He also indicated the impacts of forest loss within these target areas in term of environment, economic, livelihood, land conflicts, and land alienation, and then summarized roads to forest loss. Not only this he also identified different agents/ actors effecting to forest loss. Root causes of forest loss were also classified as: market forces, economic or forest development policies, legal/ administrative base of forest management, and social and economic conditions.

Finally, to overcome forest loss in the Asia-Pacific region, he suggested that effective measures to prevent or stop the major proximate causes of recent forest loss should be clarified. In addition, the members of the sub-team have proposed strategic solutions grouped into six headings: government responsibilities, forest development, forest fire control, community forestry and participatory forest management, sustainable trade, and international responsibilities.

2. Prof. Philip Hirsch presented underlying causes of deforestation in the Mekong River Basin. He briefly presented the proportion of forest cover in the Mekong River Basin area, as well as the remaining total forest cover in Lower Mekong Basin countries (Thailand, Vietnam, Lao P.D.R, and Cambodia). The regional issues were that Thailand's logging ban led to an immediate shift of interest among Thai timber traders to neighboring countries, and the post-1989 pattern of exports from Burma, Laos and Cambodia reflects this clearly. Hence, illegal cross-border timber sales are known to inflate these figures considerably. The accessibility afforded by the expanded regional road network can be expected to increase the rate of log extraction and, more generally, encourage settlement and clearance of land for cash cropping in hitherto isolated parts of Laos and Cambodia in particular. Hydropower projects promoted under the same program also involve forest clearance and increased access to hitherto remote forest areas. The market development promoted by the program also puts pressure on non-timber forest products.

Then, he summarized major proximate causes of deforestation in the Mekong River Basin are as follow: Thailand- logging, forest clearance for cash crops, shifting cultivation, rubber plantation, shrimp farming, and zoning of land and expansion of protected area; Laos- direct and indirect impacts of the Second Indochina War, land clearing for rice self-sufficiency, spontaneous and government-promoted migration, shifting cultivation, hydropower development, and industrial

emphasis; Vietnam- direct and indirect impacts of the Second Indochina War, land clearing for rice self-sufficiency, planned in-country migration, coffee plantation, shifting cultivation, and financial source of the military from logging; and Cambodia- land clearing for crops and logging under the protection of powerful people and the military. And underlying causes of deforestation are: military-controlled logging, political instability, foreign exchange, logging concession process, in-country migration policy, regional timber trade, industrial emphasis, and discursive contestation.

Finally, he proposed seven recommendations for desirable directions, land tenure system to ensure community based forest management, participatory and transparent logging concession process, careful intervention of international donor communities into non-forest development projects, learning from the experiences in Thailand, regional coordination on the impacts of deforestation, education on forest-related issues for journalists, and consumers' awareness building in Thailand and Vietnam.

3. Prof. INOUE Makoto presented policy recommendation for participatory forest management. He explained the framework used to elaborate policy recommendation. First, he identified the "external constraints" on local participation and "customary land rights and forest/land management by local people". Second, he identified "internal constraints" immanent in the local communities in terms of economic, social, and cultural aspects. And third, he clarified "possible main actors" by means of evaluating the local realities and national forest policies. He also identified the lessons learned from public participation in developed countries and elaborated policy recommendations to overcome the internal and external constraints.

Then he briefly presented his research results that Southeast Asia countries could not manage their forest sustainable under the principles of conventional and industrial forestry, whereby the local people have been considered to be obstacles or constraints on forest management. "Social forestry" was recognized as an important norm or principles to produce successful sustainable forest management, even though industrial forestry has been dominant in practice. He placed activities of forest management into four categories: tree planting, harvesting, conservation, and protection. Legal status of land and main actors of forest management was used as analytical framework. Also seven points of lessons learned from policies in the United States of America, New Zealand, and Japan were raised. Finally, he proposed 11 principles to elaborate policy recommendation in order to facilitate the participatory forest management in each country.

4. Prof. Hiroji ISOZAKI, IGES forest conservation project leader, presented legal and administrative supporting measures: draft principles on local people's participation. From his research he found that many international instruments relevant to forest conservation already exist, but consensus has not yet been reached on adopting a "Convention on Forest". Several countries thought that existing international instrument dealing with forest management is already enough, while others need to establish a new international legal instrument.

Through characteristic of measures dealing with nature conservation issues, he pointed that there are many instruments relate to forest and most of them require contracting parties to take account of the environmental values in the decision making, implementation and evaluation process relating to governmental policies. He proposed that due do complex and diverse Eco-systems, the processes of nature conservation should make use of the "Precautionary Principle" in order to avoid irreversible changes to Eco-systems. In using the "Precautionary Principle" the environmental, economic and social aspects should also be considered. Public participation, especially the participation from local people, is also important principle.

Through the measurement of public participation in international treaties he assumed that two major elements should be considered. First, the composition of participants can be an important element. The term "public" includes general public, the public affected or concerned, the local community or local people, and indigenous people, and second element is the level of participation which include access to information, participation in decision-making, involvement in implementation and access to means of redress. Other elements include the accountability of local and indigenous communities, the demarcation of rights and responsibilities of local and indigenous communities and people, the costs and benefits of public participation, and stable funding for public participation.

Three points of experiences gained from target countries were: a meaningful consultation process with local people and ensuring benefits for them, cooperation among the

central government, local government and local people, and recognizing the rights of local people and a dispute settlement mechanism, are important. Finally, he recommended that it is necessary to consider measures on forest conservation at the international level by enhancing existing compliance mechanisms and its coordination. Four points of important principles of public participation were revealed and proposed to be considered: the participation of local and indigenous peoples should be respected and ensured, forest management systems should adopt the "Subsidiary Principle", guidelines from Ramsar Convention on wetlands are useful, and based on learned experience, several actions are necessary to ensure local people's participation.

Finally, concerning dispute settlement, he proposed that it is important to clarify and guarantee basic rights of indigenous people by law. In addition, the introduction of a system of environmental impact assessments will be a useful method to improve the participation of local people, as well as a neutral and independent mediator with no vested interest in the case or the parties should be involved in the conflict solution mechanism. The rights of people should be clearly defined and reliable in court.

Presentation of each country experience

1. Mr. Bun Hom Oun: Many summarized the deforestation in Cambodia focussing on Ratanakiri province, Northeast Cambodia. He explained briefly the location of Cambodia especially the Ratanakiri province. Then, he presented the root causes of deforestation, deforestation in Ratanakiri, and recommendations for Royal Government responsibilities. The root causes of deforestation was poverty, population growth and the demand of arable land and fuelwood, charcoal to supply the urban population, were increased. And other causes were civil war, political rivalries, corruption, military control, investment, regional dynamics, over allocation of land, limited institutional capacity, and inadequate development and administration funds. Beside this, the specific causes of deforestation in Ratanakiri province were exploitation forest for finance reconstruction and basic infrastructure between 1980-1993, political revelries, economic liberalization policies, logging operations controlled by local police and military and illegally export during 1997-98, exploitation without management plan by HERO Taiwan company, agriculture land concessions for oil palm and coffee plantation and small scale speculators, promotion of individual land titles and cash crop, and swidden cultivators.

Finally, he recommended that the Royal Government of Cambodia (RGC) should continue regulating and monitoring forest situation in order to balance state, business, and local community interests with an appropriate master plan, sustainable and equitable development. And transparency and participation in different levels from stakeholders especially local community are important. .

2. Mr. Bounthene Phasiboriboun presented participation of farmers in agro-forestry systems for improving land use and sustainable development in the Training and Model Forest (TMF). He stated that this presentation was based on analysis of existing agro-forestry systems in Sangthong district (1999) and micro project plan of the year 2000. In details, he introduced an area of about 20,000 hectare in Sangthong district, which is allocated to the Department of Forestry, Faculty of Agriculture and Forestry, NUOL, to be used as Training and Model Forest (TMF). In this area, 4,800 hectares of land covering four villages, was selected as an intervention area. A management plan was elaborated to raise the living standards of people and their awareness of biodiversity, as well as to prevent the degradation of existing natural resources. TMF will also serve as experiment, demonstration and teaching field for internal and external students and researchers.

His research on farmers' participation in agro-forestry systems was one of many researches done in the TMF. The main objectives are to increase farmers' profit and income, improve agro-forestry system and conserve natural resources, improve local marketing, develop agro-forestry education and mechanisms for sustainability and spread of Promotion of Forestry Education Project benefits after phase out. The research was conducted in four villages, Ban Nongboua, Ban Kouay, Ban Napo and Ban Houaytom. Agro-forestry analysis was based on the comparison between four villages and a famous model farmer in Vientiane. From this research he found that there were very few farmers practicing agro-forestry by mix-planting of indigenous species such as mango with pineapple, banana or plant coconut/tamarind/pineapple/orange with banana while others practiced in taunya systems, plant teak with rice, in four villages. He also found that main problems in this practice were teak plantation was not good enough due to late planting and destroy by ants and lack of plantation technical knowledge, lack of extension workers in agro-forestry, and lack of water during the dry season, especially for banana plantation, and marketing are still not developed. While Sihachak Agro-forestry Farm seemed to be successful in terms of egg chickens raised above fish pond.

Finally, he proposed that providing loan to 4 representatives in 4 villages for research experiment, lesson learned from Sihachack Agro-forestry Farm, marketing information support, and products processing development, should be considered.

3. Mr. Le Quang Trung presented forest management systems and participatory forest management in Vietnam. He presented that an abundant and diverse forest resources have long been an important role through their daily life and national construction and defense. 19.3 million hectares of land is used for forest development and this land is divided into 3 categories: special use forest land, protection forest land, and production forest land. End of 1999, Vietnam has 10.885 million hectares of forest, of which 9.495 million hectares is natural forest. Forest cover in

the whole country is 33.3%.

He stated that in facing demands of country's industrialization and modernization as well as economic development on the basis of sustainable development, forestry sectors has heavier task to better manage and protect the existing forests, strive to limit and finally stop forest loss, ensure a safe ecological environment for the country and for agricultural production development while meeting increasing needs of timber and forest products. Therefore, 5 million hectares of tree planting project during 1998-2010 was set up in order to increase an existing forest cover into 43%, supply wood for paper production, wood-based panels, satisfy the demand of timber, firewood and other wood, Through forest management system, he stated that in implementing the multi-sectoral economic mechanism, the forestry sector has allocated land contracted out forests to households, individuals and collectives to be used in forestry production and business. Types of forest ownership now are: state forest enterprise, protection forest/special use forest managing board, special use forest management board system, system of protection forest management board, households and individuals, agriculture and forest cooperatives, community, company, and group of other forest masters school, army units, mass organizations and etc. Beside this great experiences drawn from the success of forest production and development programs are: households are as motive force of the project, self-mastering economic units, treat well the relationship between the benefits of state and the rights and obligation of the people are needed, and participation of local people in all activities in the production process especially in forest planting, tending, managing, and protection are also important. He also explained benefits earned from their participation in different activities.

Finally, six points of difficulties and remaining problems affecting the people participation were raised. These are policy system on encouraging people participation is still limited, lack of suitable forest management, the implementation of policies on land and forest allocation by localities has not been done strictly with the provisions and in the spirits of policies promulgated by the state, the majority of people living in forested areas is at low economic conditions with limited knowledge and educational standard, and the traditional uses of forest products are very wasteful.

Discussion and Comments

1. Causes of Forest Loss in the Asia-Pacific Region

Mr. Martinus Nanang, research fellow of IGES, commented that commercial logging may not be only one cause of forest loss, it may have other causes beside this, so, from this point we should clearly identify logging activities effecting to forest loss from different logging groups. While participant from Vietnam recommended that causes of forest loss in each country is different, therefore, without the inner-discussion this will never come to conclusion. Mr. Kitamura, senior expert of JICA Project, asked the areas of commercial logging in Lao P.D.R. as a base of research finding but Dr. Yamane pointed the difficulties to indicate actual figures because of the lack of survey and the complicated process of deforestation.

2. Underlying Causes of Deforestation in the Mekong River Basin

A participant from Vietnam proposed that this presentation should cover the expectation of the project and then he refused that military activities in Vietnam was not the main cause of forest loss, not economic unit, and that now Vietnam does not export timber/log, whilst imports only.

3. Policy Recommendations for Participatory Forest Management in Lao P.D.R. and Vietnam

A participant from Vietnam questioned that who is the representative of group in "function of group is main actor and forest manager" and the answer was local community. Mr. Sangthong from Laos commented that policy recommendations, action 1-3, have been done already, but not finished yet, and action 2-1 may not be suitable for Laos, because forest conservation is the responsibility of the whole community. And finally he insisted that to save forest we have to support forest.

4. A Summary of Deforestation in Cambodia, a focus on Ratanakiri province, Northeast Cambodia

A participant from Vietnam asked, what is the future policy on timber export in Cambodia? The answer was that now we don't have timber/log for export except few concession forest agencies deal with timber exploitation.

A participant from Vietnam asked, Did you find some evidence of illegal logging between Laos and Vietnam border and how can you know? The answer was that for this matter we have not studied yet and we hope for future study.

Mr. Sangthong from Laos asked, what kinds of forest law do you have now? He replied that they have only forest policy signed by Prime Minister to conserve forest and for the old forest law now is in procedure of development.

5. Forest Management System and Participatory Forest Management in Vietnam

Prof. Philip asked about the reasons of signifi cant increase of forest cover.The answer was that forest cover increased due to activities of rehabilitation, natural forest regeneration and other activities. An additional answer given byDr. Do Dinh Sam from Vietnam was that the increased forest cover may due to different methods and procedures of forest classification.

Prof. INOUE asked whether the forest cover increased in the national land area or natural forest area, and if that bareland is included in what type of areas. He replied that forest cover increased in the natural forest area and bareland is not included in it.

SESSION 2: Group Discussion on Country Experience and Direction of Forest Conservation.

Group A: **Lao P.D.R.**
Moderator: Bounmy Phonesavanh
Topic : Determining policy recommendation for participatory forest management and principles on local people's participation, as well as identifying causes of forest loss in Lao P.D.R.

1. Policy recommendation for participatory forest management

1.1 Policy

- To develop forestry law especially article 28.
- To clearly define the responsibilities and beneficiaries between communities and government.
- Awareness building of environment and forest management to local peoples.
- To determine forest management plan for each forest type.
- To continue and finish land and forest allocation.
- To improve existing village forest committee.
- To stop shifting cultivation by dealing with stabilization one.
- Extension of forest plantation especially in the degraded/ shifting cultivation areas.
- To define policy on utilization wood in plantation and natural forest areas.
- To allow sustainable logging for direct profit of local people.
- To develop land use planning for communities.

1.2 Research

- To improve forestry research institutes.
- To organize appropriate technology training for improving land use and income generation.

1.3 Participatory activities

- To involve representation of all levels of households or villagers on forest management activities, planning, making decision and etc.
- To encourage and motivate government staffs to provide more support and strategies on how to get more production and sustainable from swidden agriculture rather than to blame local communities.
- Medicinal producers should play more roles in natural forest management since most of their raw materials come from natural forest.

1.4 Income generation

- To improve natural tourism for state and community income generation.
- Extension and support to social/local community to find sources of income generation.
- Local community should benefit from their participation in forest management activities.

2. Principles on local people's participation

2.1 Decentralization

- To organize village forestry groups.
- To support reasonable marketing system to farmers.
- Planning for more participation of local people in forest management.
- Close cooperation with local people in drafting forest management regulation.
- Monitoring, evaluation and report activities, as well as plan adjustment are needed.

2.2 Resource ownership

- Mutual benefit
- Transparency
- Frequent collaboration and discussion on forest situation
- Social welfare

- Award and punish
- Promote credit system for villages

2.3 Information and extension

- To provide enough information and education on forest management to local people.
- To establish model group or family for extension.
- To provide study tour / visit to related stakeholders.

3. Causes of forest loss

Key causes of Lao P.D.R. forest loss:

3.1 Livelihood:

- Shifting cultivation
- Slash and burn
- Over non-timber forest products collection
- Population increasing
- Demand for fuel wood
- Overgrazing and
- Traditional hunting

3.2 Development

- Dam construction
- Land expansion for agriculture
- Road construction and mining
- Infrastructure establishment

3.3 Law and regulation

- Inadequate legal framework
- Monitoring and penalty in forest control not stick
- Some gaps in forestry law

3.4 Trade and logging

- Timber export
- Promotion of wood processing for export
- Unsustainable and illegal logging
- Over quota logging

3.5 Management

- Inappropriate land use planning
- Improper wood utilization
- Forest encroachment
- Unsound management of production forest

3.6 Institutional constraint

- Education, qualification as well as techniques are limited
- Lack of funds

3.7 Others

- Indochina war and forest fire

Discussion and comments

Chair and Presenter: Bounmy Phonesavanh

1. Mr. Bounmy presented results of group discussion.

2. A participant from Vietnam questioned, How big forest and land areas allocated for one household by the Laos policy? The answer was that it depend on the purpose of using, for example, land for settlement 800 square meter/ household, for horticulture 3 hectares/household, for rice production 1 hectare/household and etc. The participant from Vietnam continued asking, How can you stop shifting cultivation and what is the result? Mr. Bounmy explained that building awareness to forest and environment, setting up policy on land and forest allocation, providing extension programs on stable agriculture (rotation cropping/agriculture for example 3 years rotation), and others input from government and NGOs, are tools to stop shifting cultivation. But up to now we can not say that we can stop shifting cultivation, but at least we can reduce it step by step. A participant from Vietnam questioned about what have been done with regard to credit investment. Mr. Bounmy answered that local people will be provided credit from bank or related projects. However, we found that credit system implementation are still limited.

Mr. Vongxay, from Laos, gave additional comments that in land and forest allocation, any person 18 years or above will get not more than 3 hectares. However, he informed that now we are in procedures of discussing human rights, summarizing target areas for extension and pilot project. Finally, he reported that now we have a draft of ideas on extension service in order to provide credit to agro-forestry and farming activities. Credit provision will be lower than bank's credits.

Prof. Philip questioned whether or not the 3year rotation of agriculture by the policy can ensure for long-term sustainable. Mr. Bounmy answered that it is only traditional understanding, not from study/research, therefore, through this question we have to have study/research on it. Mr. Soukkongseng commented that policy on land and forest allocation is the key for forest protection and we have the organizations in all levels to respond.

3. A participant from Vietnam questioned about the benefit sharing mechanisms used in Laos. Mr. Sukkongseng replied that 3 main benefit sharing mechanisms are used in Laos such as state, community, and individual benefit, and we have forestry law promulgated in 1996 to ensure this mechanism implementation. An additional experience from Mr. Khampha's project, FORCAP, on benefit sharing mechanisms was that the project allow people to plant trees in barren areas and they will get money depending on government and project input, and after that the production will be shared for government, project and people depending on signed agreement. Mr. Sangthong, participant from Laos, gave an additional comment that the mechanisms to get income or benefit sharing may also be from tourism development, especially in Phou Xang Hae National Park, but we have to clearly consider the mechanisms before implementation.

4. A participant from Vietnam asked about the main causes of forest loss in Laos. Mr. Bounmy said that shifting cultivation was the main causes while Dr. Somsy, participant from Laos, commented that the increase of population and demand of wood may be the main cause of forest loss.

Mr. Sang, Cambodia, gave his experience that people do not prefer doing shifting cultivation due to waste of time but they have no choice. Therefore, we should not blame them and should try to help them to stop shifting cultivation. With this point, Mr. Sangthong, from Laos, agreed on his comment but in the field of implementation Laos do not blame people whilst we are trying to help them.

Mr. Bounthene, from Laos, reported that condition of forest loss are similar between Laos and Cambodia base on his experience from Hom district, special region of Laos.

Group B: **Vietnam**
Moderator: Dr. Do Dinh Sam
Topic : Determining policy recommendation for participatory forest management and principles on local people's participation, as well as identifying causes of forest loss in Vietnam.

Vietnam's group discussion mainly based on paper presented by Prof. INOUE Makoto, "policy recommendation for participatory forest management", especially, policy recommendation and principles on local people's participation. And the results were as below:

1. Policy recommendation for participatory forest management

- In objective 1: agreed action 1-1, 1-2, 1-3. Deleted action 1-4 and 1-5. Added action 1-6 with "Strengthening extension and training activities, especially at the local level."
- In objective 2: Deleted content in action 2-3 and replaced by " Customary rights of recognized.
- In objective 3: Deleted action 3-3 and 3-5. Deleted content 3-4 and replaced by "Encourage the use of genetically improved planting stock produced by research." Action 3-7 should be focused on protected areas.

2. Principles on local people's participation

- The group agreed all principles proposed by Prof. INOUE Makoto, except that principle 2 should be treated more carefully, because local people are mostly small producers.

3. Causes of forest loss

- Government: poor planning, immigration policy, and infrastructure development.
- Forestry enterprises: poor management and uncontrolled logging.
- Agricultural encroachment due to population growth.
- All kinds of forest violators: serious rate of illegal cutting.
- Local people: illegal cutting and shifting cultivation and
- Indochina War.

Discussion and comments

Chair: Bounmy Phonesavanh
Presenter: Dr. Pham Hoai Duc

1. Dr. Pham Hoai Duc presented results of group discussion.
2. After the presentation, Dr. Do Dinh Sam gave an additional reason on why we have to present administration system. This is to let participants know the activities of Vietnam in forest conservation, community forestry, public and local participation. He also informed that Vietnam now are facing many problems due to the encroachment of many ethnic groups that destroyed the forests, especially in the highland areas, despite having a policy to move them down.

Prof. INOUE, from IGES, questioned why the group did not agree on action 2-3 in objective 2. He replied that it was because we need our own rights to harvest and replanting forest. For production forest people will get benefit from thinning while in protecting forest they will get protection fee. He also added that Vietnam also has indirect policy, policy on land allocation to people for rubber plantation. Mr. Sangthong, from Laos, observed that offering customary rights to people in high land areas might initiate conflict with the policy on moving them down to lowland. Then he replied that we have no choice because we can not control people's migration.

3. Mr. Bounthene, from Laos, asked him to explain the activities and results from terracing practice in Vietnam.He answered that by doing these activities we are supported with input from government and some organizations such as SIDA, JICA, GTZ, etc., and people will get benefit from their participation in different levels depending on the signed contract.

4. Mr. Sukkonseng questioned about whom is responsible for forest control in Vietnam. He replied that protection department has the rights for this, but we have to improve more our staffs' knowledge and experience on forest protection, as well as their income. Finally, he informed that now forest police unit is proposed to be established in order to control the existing forest.

SESSION 3: Conclusive discussion

1. Prof. Philip asked IGES about the audience of this workshop or IGES' s research results. Prof. ISOZAKI, IGES forest conservation project leader, explained that the audience of IGES varies depending on related organizations, for example, audience can be government, local people or others who need to use this results as references for forest conservation or management. He also mentioned that some found/ proposed principles might need to apply in different places. He added more that IGES acting at international level in order to report publish results for all needed levels (government, NGOs, as well as local people and etc.). Finally, he informed that this activity is only the first phase and in the second phase IGES will have pilot or experimental projects, policy dialog, and feedback in order to modify the first phase of implementation.

2. Mr. Sang, from Cambodia, commented on policy feedback mentioned by Prof. ISOZAKI that this is very important and useful ideas/activities, especially, details of degrees and sub-degrees. He commented that in drafting law/policy should involve people participation. He also observed that this workshop is very useful for Cambodia and it will be better if in the second phase IGES could have some activities in his country, because we will have chance to share experiences and common causes, and will be the best if the discussion include Lao P.D.R, Vietnam, Cambodia, and Thailand. Finally, he was satisfied with getting experience on decentralization policy from Lao P.D.R. and he asked for forest policy and forestry law drafts from Lao P.D.R. to be used as references in developing his country's forest policy and law.

3. Participant from Vietnam commented that this workshop is good in order to share our experiences, however, workshop/meeting for future cooperation as well as establishing common programs is needed. Prof. Do Dinh Sam from Vietnam added that he, on behalf of participants, expressed his sincere thanks for all favors from IGES forest conservation project as well as IGES staffs, and finally, he asked for all report of IGES's activities for Lao P.D.R, Vietnam and Cambodia.

Conclusive discussion in Lao language

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Part 2: Papers

FOREST LOSS IN THE ASIA-PACIFIC REGION[1]

Masanobu YAMANE[2]

INTRODUCTION

The team conducting the "Structural Analysis (ST) of Forest Loss (or Destruction)[3]" focused mainly on the Underlying Causes (UC) of recent deforestation and forest degradation in the Asia Pacific region[4]. The Underlying Causes, in line with major Proximate Causes (PC), are sorted out by discovering common points among target regions, as well as the uniqueness of the countries and sub-regions. Through this procedure clear pictures are grasped of the structural context of recent forest loss in the Asia and Pacific Region. We will later discuss desirable directions for overcoming forest loss. (The ST sub-team provided information to other sub-teams as a basis for the integration of overall research activities of the IGES Forest Conservation project).

Two approaches were employed in the team's research activities: country studies and active collaboration in the Intergovernmental Forum on Forests (IFF) UC/NGOs Asian Process. For the first approach, country studies were conducted consisting of studies of Underlying Causes, data collection and studies of international linkages of forest resource use from the UC perspective. In the second approach, the team co-organized several meetings of the Asia regional process within the IFF-UC/NGOs initiative that were aimed at commitments to international policy dialogue.

As target study areas in the insular Southeast Asian sub-region, Indonesia and the Philippines were investigated. For the Mekong River basin region, Thailand, Lao P.D.R., Vietnam and Cambodia were selected. In Northeast Asia, studies in the southern part of the Russian Far East were mainly conducted and preliminary studies for China were carried out. For these target areas, members of four research groups for country studies collected information through available literature and workshops, as well as by carrying out field studies.

Non-governmental organizations (NGOs) and indigenous peoples' organizations (IPOs), in cooperation with governments and intergovernmental agencies, took the initiative (IFF-UC/ NGOs Process) to contribute to one of the most pressing issues – the Underlying Causes of Deforestation and Forest Degradation, and started their research project after the UN Special Session. IFF organized a global workshop on this matter in January 1999, in addition to the case studies, which were conducted by some government and international NGO research teams. Mr. Yoichi Kuroda, in charge of an Asia regional focus, collaborated with Ms. Mia Siscawati (Indonesia) and attended a series of meetings at several large conferences. IGES also co-organized a preliminary meeting for the Asia Regional Workshop and the IFF-UC/NGOs Asia Regional Meeting aimed at inputting the discussion results into the IFF process effectively (Bio Forum, 1999).

ANALYTICAL FRAMEWORK

There are many underlying causes of forest destruction. However, we should address the vital underlying causes, which strongly contribute major direct/proximate causes to forest destruction. The underlying causes close to given direct causes may often be interrelated to each other, so it is necessary to identify the root and underlying causes and immediate causes of deforestation.

In the final steps of the study, an explanatory model of forest loss proposed by Hirsch (2000) (developed based on existing studies) was employed as a main analytical framework to consider the existing discussion aimed at addressing the causes of forest loss. This model is a schematic representation of the ways and modes of explaining deforestation (Fig.2).

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[1] This paper is a draft report intended only for the IGES-NOUL Workshop on Forest Conservation Strategy on 2-3 August. Please refrain from citing it for any purpose.

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[3] "Forest loss" means deforestation (as the permanent loss of natural forests) and forest degradation (the decrease of density or the increase of disturbance). (Sunderlin & Resoudarmo, 1996)

[4] In this paper, the Asia and Pacific region means the are including continental SE Asia, North Asia , SE Asian island countries, Oceania-South Pacific and Far East Russia.

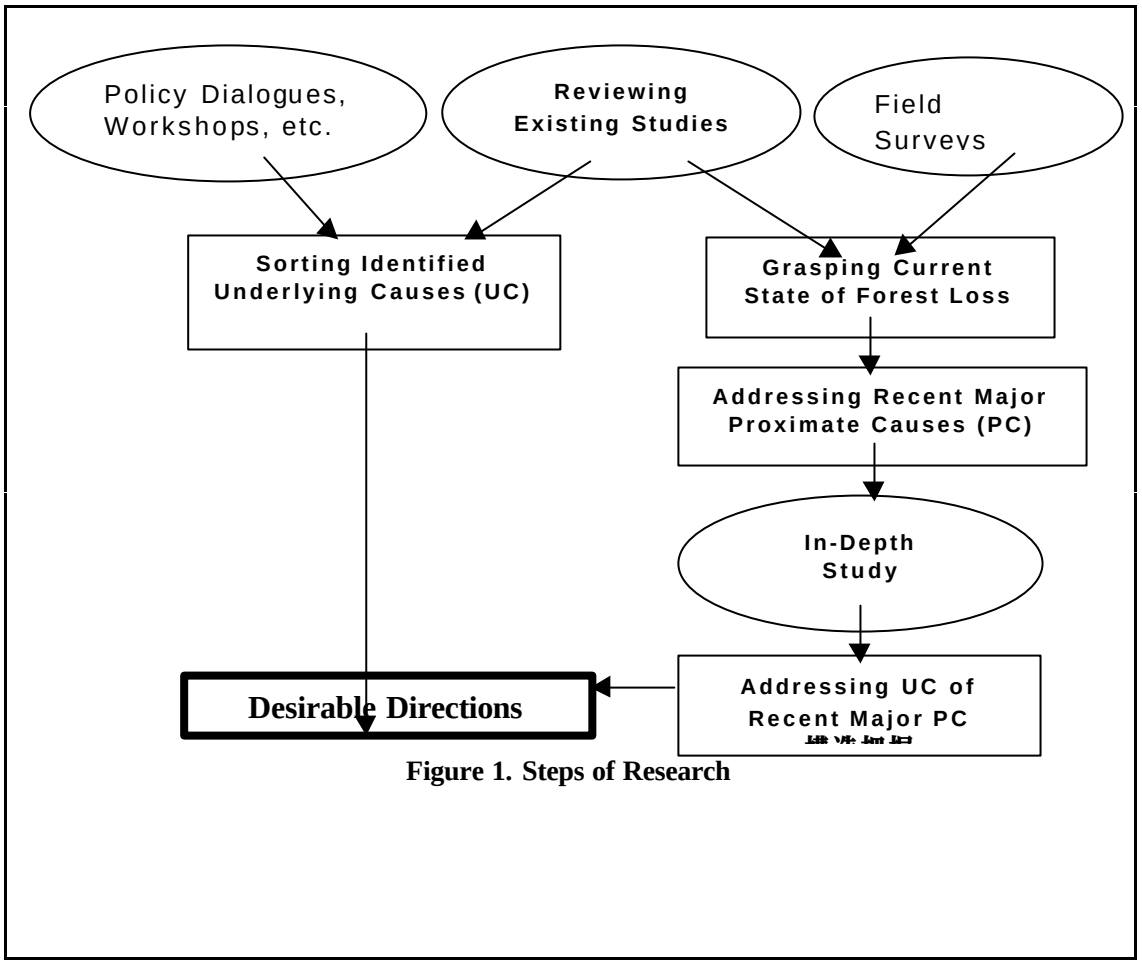
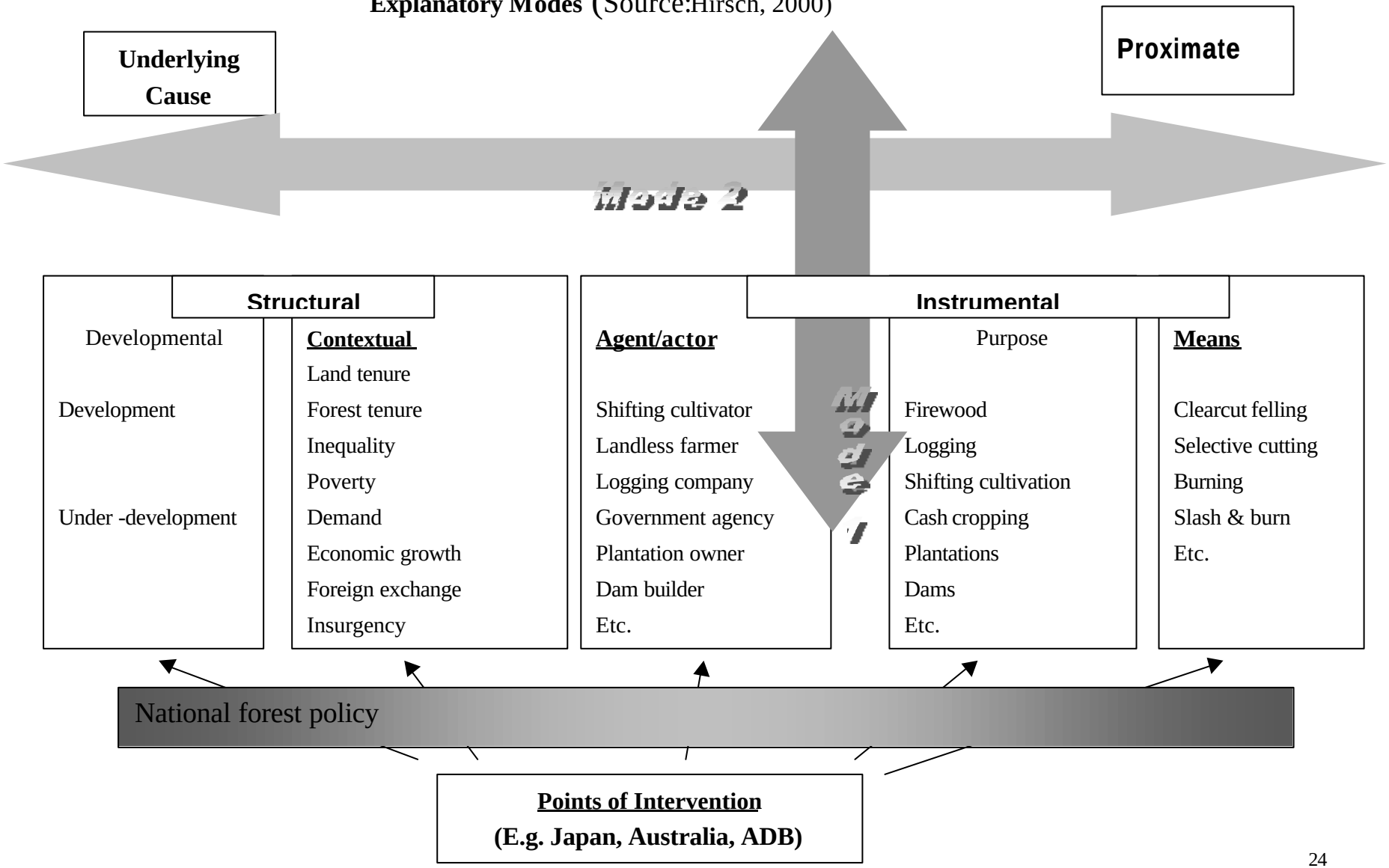


Figure 1. Steps of Research

Figure 2. Causes of Forest Loss:

Explanatory Modes (Source:Hirsch, 2000)

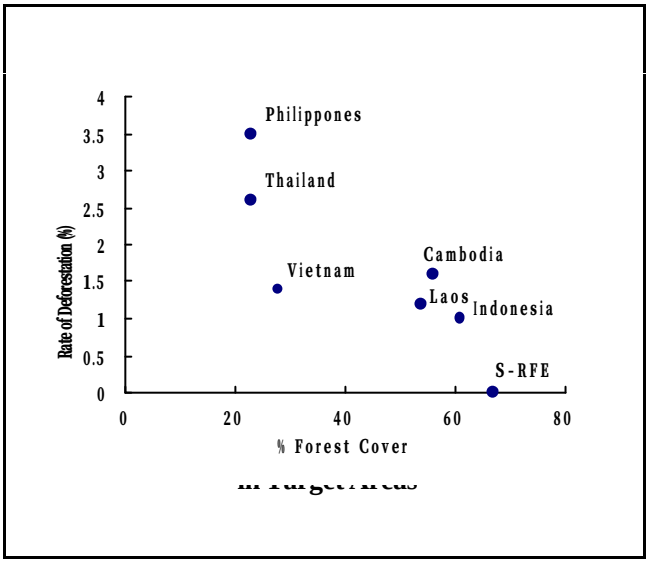


FOREST LOSS IN TARGET AREAS

The target areas of our study are categorized into three groups according to their percent of forest cover and rate of deforestation (1990-95, FAO 1999) (Fig.3).

The first group includes the Philippines, Thailand and Vietnam, which have less than 30 percent forest cover and more than a one percent annual deforestation rate. These countries have experienced serious deforestation in a rather short time after World War II. Forests in the Philippines and Thailand were first exploited for commercial logging (Seki, 2000; Hirsch, 2000). After that deforestation was caused by forest conversion projects for agriculture and commercial ranching and forest degradation due to industrial tree plantations, which still progress at a rapid pace. In Vietnam, at least two million hectares were deforested quickly due to the direct and indirect impacts of the Second Indochina War (Hirsch, 2000). After 1975, deforestation has continued at a high pace from land clearing in accordance with their policy of rice self-sufficiency, in-country migration, coffee plantations, shifting cultivation and logging as a financial source of the military (Hirsch, 2000).

The second group includes Indonesia, Lao PDR and Cambodia. While these countries have rather abundant forests, with more than 50 percent forest cover, deforestation has worsened rapidly. The proximate causes of forest loss vary from country to country. In Indonesia, mainly commercial logging and forest conversion projects have caused deforestation (Siscawati, 2000b), and recently, frequent large-scale forest fires have accelerated forest loss (Siscawati, 2000a). In Laos, large forests were destroyed during the Second Indochina War and then cleared in compliance with a rice self-sufficiency policy, hydropower development and other forest exploitation with industrial emphasis (Hirsch, 2000). Cambodia has experienced rapid deforestation caused by land clearing for crops and chaotic logging under the protection of powerful people and the military (Hirsch, 2000).



The southern part of the Russian Far East (S-RFE), with boreal forest cover, belongs to the third group. The area has large tracts of virgin forests with more than 60 percent forest cover. Deforestation is not reported in statistics (Sheingauz, 2000b). However the area has experienced the steady progress of forest degradation mainly because of unsustainable forest exploitation for log-export and frequent large-scale forest fires.

While the specific features of forest loss in each target area vary from place to place, there are shared facts. Each of these areas has met rapid forest loss in a relatively short time and strongly needs measures to overcome this problem. Countries such as the Philippines and Thailand, which have experienced serious forest loss, have actively started reforming their legal and administrative frameworks, including community-based forest management systems to ensure efficient forest conservation. In contrast, it seems that other countries with relatively abundant forest cover have not employed drastic policy reforms because of many obstacles, and unfortunately, it appears that current efforts are not enough to stop on-going forest loss.

IMPACTS OF FOREST LOSS

Environmental Impacts

In terms of environmental conservation, forests in the target areas are quite important from the

global, regional and domestic perspectives. Until the 1950s, the target study areas possessed some of the largest tracts in the world of primeval forest and areas of high biodiversity, containing many endangered species. Forest "development" and forest fires have destroyed habitat and can devastate forest areas at a very rapid pace. Forest development also has directly or indirectly encouraged other environmentally-destructive activities such as colonization, commercial hunting, and clearance for agriculture, especially in tropical countries.

Forests in the target areas play a very essential role in stabilizing climate change, both in tropical and boreal forests. Forests have a particularly important function of minimizing climate change by absorbing carbon dioxide (CO2), which scientists have identified as the major cause of global warming, and storing carbon, both in the ground and timber. Large-scale deforestation and forest fires have caused mass emissions of CO2 and brought serious impacts on the CO2 balance in the global atmosphere. Destruction of boreal forest on permafrost also brings about the release of methane gas, another greenhouse gas, which is stored in the ground layer and has a warming effect 10 to 20 times that of CO2. A significant warming of the earth could cause massive melting of the permafrost, which covers 75 percent of the Russian Far East. The changes could in turn increase global warming and the vicious cycle would then feed upon itself.

Economic Impacts

The forests in the target study areas also play important basic roles both for national and local economies. Note that timber trade is the key means of foreign exchange in all these countries. Timber and non-timber products are the basis of the domestic forest sector, and the forest sector often provides a basis for much of the local social structure and an organizational backbone for local town and village life.

The continuation of deforestation in each country has resulted in the loss of a valuable economic asset for their countries. For example, the Philippines lost its timber self-sufficiency since the 1980s and has frequently suffered disastrous floods that brought enormous economic damages and the loss of many human lives (Seki, 2000). Thus people in the countries are suffering inestimable costs from the loss of their forests, such as damage to agricultural production due to a lack of water for irrigation, and shortages of water for daily life due to dwindling groundwater resources. We can also see very similar economic impacts of serious forest loss in Thailand.

Widespread uncontrolled illegal logging and timber trade accelerate forest loss and have very negative effects on forest conservation. In Cambodia in 1997, over $185 million worth of timber was illegally felled but only $12 million reached the treasury (Bottemley et al., 2000). In the southern Russian Far East, it is estimated that the actual timber harvest is four times the harvest reported in statistics. This is why about 50 percent of the total cut was left at the logging site and the harvested timber is under-reported by 100 percent to avoid taxes in the region (Sheingauz, 2000b).

The economic impacts of large-scale forest fires, which are major proximate causes of forest loss among the target areas, are also quite serious. Damages from forest fires are inflicted not only on various forest-based resources such as timber or non-timber products, hunting and game stock, but also on human health and other activities. The 1998 large-scale forest fires in the S-RFE burned 2.2 million hectares, causing the loss of around 15 million cubic meters of timber and 207.2 million US$ worth of lost forest ecological functions (Sheinngauz, 2000c; UNDAC, 1998). It is estimated that the Indonesian forest fires in 1997 caused economic losses of between 3.5 to 7 billion US$ from ecological and economic impacts (Elfian, 1998).

Livelihood Impacts

The most severe effects of deforestation on human livelihood are shortages of fuelwood and forest products to provide subsistence. Moreover, the deterioration of the multi-functions of forests bring crucial impacts upon human activities such as agriculture and fisheries even downstream. An increase in the occurrence of floods and droughts will also affect livelihood security. In the Philippines, because of the collapse of ecosystems, disastrous floods now occur frequently and cause the loss of

many human lives every year (Seki, 2000). In Cambodia, the effects of deforestation threaten their staple foods of rice and fish due to the siltation of rivers and lakes, while soil erosion reduces the amount of productive arable land (Bottomley, 2000). In the S-RFE forest exploitation has progressed under the new market economy and has destroyed the base of livelihood of the people, while benefits from the development have returned almost nothing to the indigenous people (Taguchi, 2000; Sasaki, 2000; Startsev, 2000a, 2000b).

Land Conflicts

Rural communities have always had access to common property resources, but as these are some of the areas that the state is granting as concessions to private companies for their exclusive right to exploit, the rights of these communities to access forest areas and collect forest products becomes increasingly unclear. Our studies showed that conflicts over forest use are escalating between rural people, commercial timber operators, agricultural concessionaires, and protected area managers, both in the Philippines (Seki, 2000) and Cambodia (Bottomley, 2000). Many cases of forest fires in the Philippines were set by arson as a result of such conflicts (Seki, 2000).

Land Alienation

As local people become alienated from their lands, there appears to be increasing apathy and a limited sense of responsibility towards natural forest-areas. State appropriation of land and forest leaves little incentive for local communities to manage these resources in a sustainable manner. Moreover, forest development makes a forest poor and consequently inactivates a livelihood strategy depending on forest products (in Indonesia [Inoue, 2000a] and the S-RFE [Taguchi, 2000; Sasaki, 2000]). Then local people often have to move out from their original land to new land and turned to non-traditional swidden farming (in Indonesia [Inoue, 2000a]). Land alienation also leads to increased poverty and often forces people to degrade the land that they do have access to, or to harvest forest products illegally in the areas to which access is denied (in Cambodia [Bottomley, 2000] and the S-RFE).

ROADS TO FOREST LOSS

Processes to Forest Loss

Based on the present research outcomes, the major proximate causes of recent forest loss in the target study areas can be summarized as follows:

1) Logging (mainly for commercial purposes);
2) Forest conversion projects (mainly with industrial emphasis);
3) Forest fires caused by human activities; and
4) Non-traditional swidden farming.

While they relate mutually, these proximate causes have made the forest degrade and disappear (Figure 4).

Much of the forest loss in the target areas generally started from logging of primeval forest. The logging caused degradation of forest, but is not connected directly with the major deforestation. Often logging is only the first stage of forest loss. Most logging operations target valuable timber for commercial purposes. In the pre-stage of forest conversion in every tropical country, projects were observed such as settlement programs, agricultural farm development (in many tropical countries), hydropower development (in Lao PDR[Hirsch, 2000], mining (in Indonesia [Siscawati, 2000]), settlement (in all tropical countries), and many extensive large-scale logging operations. We recognized a shared feature that logging operations are conducted with the combination of commercial timber harvest. Such operations are often undertaken in a large-scale and extensive way in order to gain enormous profits. Moreover, our studies showed that these operations had very unclear granting procedures favoring special groups without any consultation with local people. In many cases in the Philippines, fires resulting from arson originated in land conflicts between local people and concession

holders or logging companies (in the Philippines and Thailand). We also confirmed that extensive logging had strong connections directly or indirectly with forest fires due the drop in forest humidity after logging, the careless handling of fire by logging workers and the increase of small fire started by citizens.

After logging, forestlands are degraded or deforested via three processes: no management, planting, and conversion.

When logging sites are not managed, the forest land both in the tropical and boreal zones progress into secondary forest and finally, usually more than one or two hundred years later (if allowed), climax forest with almost the same structure as the original forest. However, cut-over land in tropical forests in the target study areas quite frequently experienced an invasion of settlers who came along with the road for the logging operation. Then settlers began slash and burn agriculture or non-traditional swidden farming. Forests, where non-traditional swidden farming was conducted, often turned into unproductive lands due to natural causes such as the ecological properties of tropical forest soils, the vulnerability of soil to erosion and meteorological factors. Without careful fire control, forest fires occurred frequently, and in consequence, the forests occasionally transformed into grasslands or barren lands. In this sense, the increase of non-traditional swidden farming that originated in natural forest extraction is a key proximate cause leading to deforestation. However, as shown in the diagram, non-traditional swidden farming is a part of the major activities leading to forest loss in tropical countries. Many field researchers have already indicated that deforestation seldom occurs in the traditional manner. The blaming of deforestation solely on shifting cultivators is a simplistic approach (**discursive contestation**) which does not consider the many forces causing forest loss, thus we are requested careful examination of the type of shifting cultivation and the processes leading to deforestation.

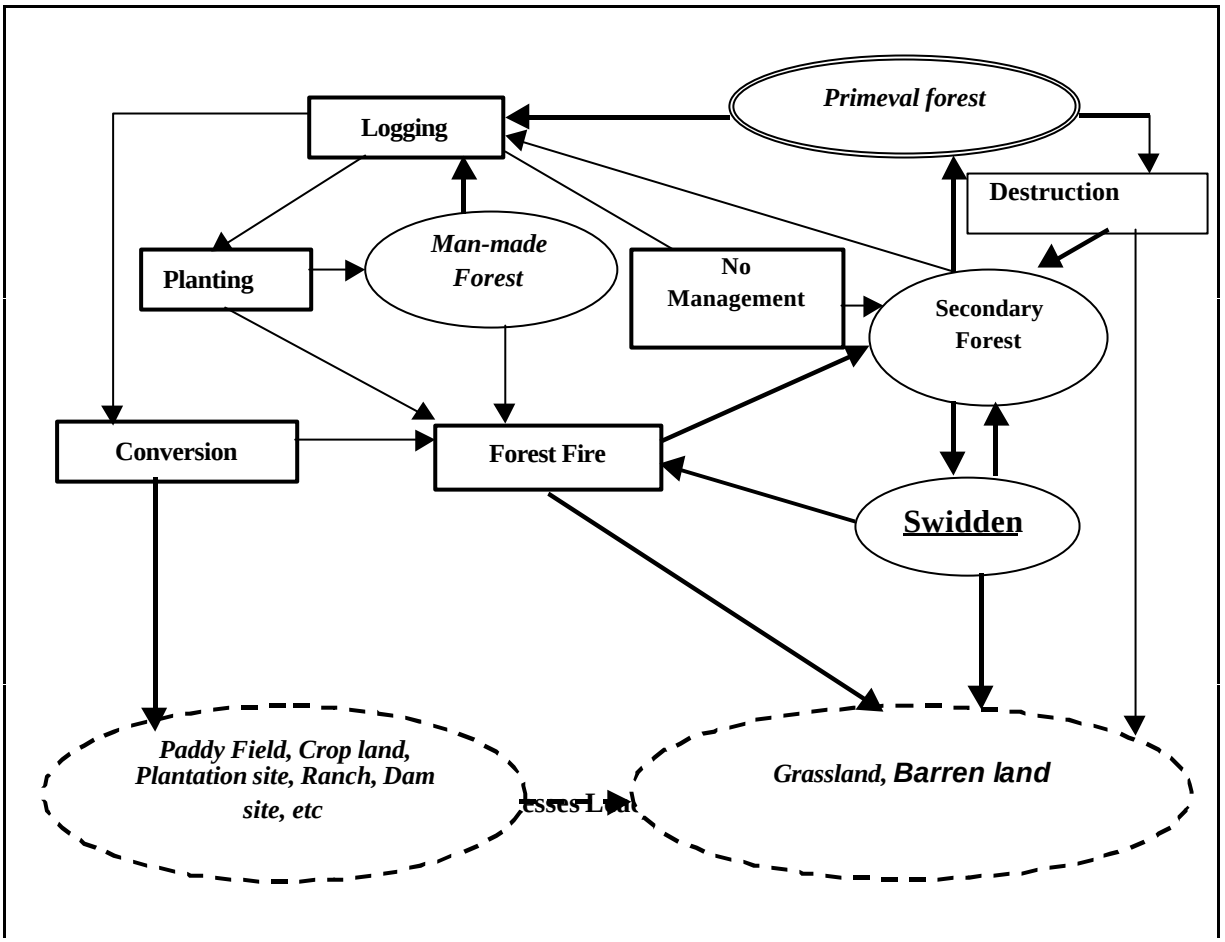
When a cut-over area was planted with seedlings followed logging, large-scale tree plantations of fast-growing species for industrial purposes were promoted in many cases. Since such forest conversion projects largely degrade the ecological and production functions of a forest, industrial tree plantations are activities that can lead to further forest degradation. Industrial tree plantations were promoted actively when natural forest resources were depleted (in the Philippines [Seki, 2000] and Indonesia [Siscawati, 2000]). By the stage when tree planting was promoted actively, in many cases, the project site was already occupied by local peoples for their own use (in the Philippines [Seki, 2000] and Indonesia [Inoue, 2000a]). Our studies in the Philippines indicate that industrial tree plantations were proceeded with forcibly by big enterprises without consultation with local people and stakeholders (Seki, 2000). As a result, forest fires started by local people due to land conflicts occurred frequently. For land clearing on project sites in Indonesia, low-cost intentional burning was employed broadly and frequently caused forest fires even after an official circular on prohibition of burning (Siscawati, 1999; Inoue, 2000b). In short, forest conversion projects become a key proximate causes leading to deforestation if the procedures and controls are inappropriate.

There are many activities that can occur when a cut-over area is converted into other land uses. The common activities among tropical countries are reclamation for paddy fields or croplands. These developments have been preceded and tightly connected with settlement policies. Moreover, plantation developments such as rubber, coffee and oil palm have also brought large-scale forest conversions. Additionally, converting forest lands to commercial ranches (in the Philippines) and shrimp farming (in Thailand) are identified as major proximate causes. Forest conversion to dam construction is also addressed in Lao PDR (Hirsch, 2000). The common feature of these forest conversions is that products from the newly developed land, including electricity from hydropower dam development, are aimed at acquiring foreign currency, supported by strong demand in consumer countries. Since land clearing in these activities often employed low-cost intentional burning, escaped fires frequently caused forest fires (Siscawati, 1999; Inoue, 2000b). As a result, vast grassland and unproductive lands appeared due to repeatedly occurring forest fires.

In short, we found the following common features amongst the major proximate causes of forest loss within the target study areas:

- Large-scale logging or timber extraction is a common major proximate causes both in tropical and boreal forests.

- In tropical countries, tree planting and forest conversion projects were identified as common major proximate causes leading to the deforestation and degradation of forest lands. Because most of these activities have an industrial emphasis, it is considered that the expansion of them has accelerated forest loss notably.
- Forest fire is also addressed as a major proximate cause, which has tight connections with all major proximate causes. In many cases, forest fires were caused repeatedly and expanded, induced by other proximate causes.



Country Experience

When the schematic diagram shown above is used to explain the processes of forest loss in the target areas, we can point out that the process of forest destruction in the S-RFE, for example, is rather simple. The forest loss in the S-RFE progressed with a combination of unsustainable commercial logging and frequent forest fires. On the contrary, tropical forest countries in the southeast region experienced more complex processes. We also confirmed that Thailand and the Philippines, which experienced serious forest loss in the past, have gone through most of processes shown in the diagram. Indonesia also has passed through almost all the processes for forest loss, excluding destruction by war. As for Lao PDR and Cambodia, the move from logging to planting has not been established in earnest but all other routes are identified.

In conclusion, the fact that forest loss in tropical forest countries has been caused as a result of a combination of many proximate causes suggests careful analysis of their actors and underlying causes. As for the S-RFE, it may be possible to conduct more focused examination of the underlying causes. Moreover, forest fire caused by human activities and forest developments with an industrial emphasis are key proximate causes of forest loss both in tropical forest countries and the S-RFE. Thus we

believe that effective solutions and practical actions are quite essential to overcoming forest loss in the target areas.

AGENTS/ACTORS OF FOREST LOSS

We identified agents/actors of forest loss in target areas from domestic and foreign elements as shown below. Solutions from both sides are essential to overcoming forest loss in the areas.

- ✓ Domestic agents/actors: government, domestic logging companies/industry, military authority, power people and local people;
- ✓ Foreign agents/actors: import countries, foreign capital from importing countries, foreign aid institutions

The Government

The roles of the government vary among target areas but they can be classified according to their functions: planner and executor of economic development policies; planner of forest policies; and bodies responsible for forest management.

In terms of design and implementation of economic development policy, all central governments promoted timber logging as a major means of acquiring foreign exchange. At the same time, governments recognized forest land as a source to be converted into agricultural land or other land use, which then progressed to forest conversion projects. In general, the governments placed priority of development on more profitable projects like mining. Such large-scale forest development programs were done with a top-down approach and pushed forward forcibly without consultation with local people and other stakeholders, because in many cases the forests are owned by the state, and the government has quite a strong authority. Besides such forcible forest development, the governments promoted a set of policies aimed at industrialization and market economy transition. Such changes caused social and economic instability and severe impacts on rural people. Many indigenous people and local people were forced to abandon their original livelihood strategies, which strongly depended on rich forest products, and turned to non-traditional shifting cultivation or poor wage labor.

The role of the government as a planner of forest policy is also vital both in the natural forest-logging phase and the plantation phase. In the natural forest-logging phase, the first step of forest loss, natural resource policies aimed at extracting valuable wood were promoted in every area. In these policies of forest exploitation the logging operations were extensive, yet reforestation programs were not included. In this phase the governments wielded enormous power in the allocation of logging concessions. When natural forest resources became depleted, many governments aggressively promoted large-scale industrial tree plantations. These forest policies were frequently implemented forcibly under a top-down approach without environmental impact assessments (EIA), social impact assessments or consultations with affected parties, in particular the local communities and local authorities

In the "role of responsible bodies of forest management," our studies indicated that the inabilities of forest governance such as the violation of rules and corruption, and insufficiencies of management resources were common indirect causes of forest loss in target areas. Our studies confirmed the concrete influence of the inability of forest governance reputedly in logging concessions (in the Philippines, Indonesia, and others), forest conversion projects (Indonesia), and illegal logging (in Indonesia, Cambodia and the S-RFE). This inability of forest governance often originated with a shortage of finances, manpower and a lack of capacity on the part of foresters. As shown in the S-RFE (Yamane, 2000: Sheingauz, 2000a], an inability of the forest administrative body is caused by drastic transitions in social structure and consequent economic crisis. The effects led to a deterioration of fire monitoring and firefighting systems, and consequently resulted in frequently occurring large-scale

forest fires. Beside such problems, aiming to cover budget shortages in local forest bodies, various types of violations such as corruption, disregarding logging-rule and illegal logging/trade spread notably. This has made the degradation of forests more serious as well.

Domestic Logging Companies/Industry

This actor, connected tightly with the government, military authority and power people, has played a leading role in forest loss in many places. In target countries the lands and standing trees are often state property managed by the governmental authority. In many cases, a logging company conducted forest extraction through the allocation of a logging concession by paying some amount of forest-use charge to the national treasury. Large forestry concessions to companies were allocated in a very opaque way, while proper monitoring and control by forestry administrative bodies was quite limited. Thus many companies exploited the allocated forests illegally aiming to realize enormous profits. In general, many logging companies employed a "cut-irresponsibly-and-get-out" strategy, which became the most efficient way to maximize their profits. Even in the forest conversion projects such as oil palm plantation, in many cases the company's real objective was forest extraction, thus cutover areas were often abandoned after logging.

Military Authority and Power People

There are many places where these two actors have played a strong role in forest destruction in the Asia-Pacific region. Countries where military authorities played a powerful role in forest loss are Indonesia, Vietnam and Cambodia. In Indonesia, the military authority has had strong powers for the allocation of logging concessions and they promoted many natural forest extractions under tight connections with the domestic forest industry, Chinese merchant capital and foreign capital from importing countries. In Vietnam (Hirsch, 2000) and Cambodia (Bottomley et al., 2000), the forest has been exploited as a financial source for the military under both legal and illegal control. These activities were identified as the most serious causes of forest loss in the area.

On the other hand, powerful people are significant actors affecting forest loss in the Philippines, Indonesia and Cambodia. In the Philippines, in the past, members of Congress would establish forest policies and forest regulatory systems that enabled logging companies to obtain enormous profits (Seki, 2000). Many of the politicians were concession holders profiting from logging at the same time as they held political positions. In Indonesia, powerful people such as Chinese merchants, keeping close connections with the government and military authorities, proceeded with natural forest extraction and established a domestic plywood industry and oil palm plantation developments, which have led to large scale forest loss from the 1970s to the present (Araya, 1998 ; Siscawati, 2000).

Local People

We have confirmed that local people have played a very significant role in the occurrence of forest fires through not only non-traditional swidden farming but also in local conflicts and the careless handling of small fires. However, they seem to be passive actors affecting various social and economical underlying causes. In terms of the increase of the non-traditional shifting cultivator, various factors involved are identified in our studies, such as poverty and population increases in rural areas, political instability, in-country migration (internal colonization), timber extraction from land clearance of community forests, and others. Local people are the major culprits of arson, causing frequent forest fires as a result of land conflicts (in the Philippines[Seki, 2000]). In the S-RFE, citizen's/local people's careless handling of small fires (such as bonfires) and throwing away cigarettes have contributed much to causing recent large-scale fires (Yamane, 2000).

Import Countries and Foreign Capital from Importing Countries

In foreign actors, many studies indicated that "import countries" and "foreign capital from

importing countries" has played a significant role in forest destruction within a background of strong demand in the consumer countries. The extraction of teak is the most typical example. In our study, Laos Cypress forest extraction was revealed as a special case, with logs exported at very high prices only to Japan and Taiwan (Yamane & Chanthirath, 2000). Moreover, it is difficult to talk about forest development in the Philippines and Indonesia without mentioning the strong demand in import countries, in particular Japan, and the Japanese investor's contribution (Kuroda, 2000). It is well known that Japanese investors have extracted valuable timber resources, depleted them and then shifted production to another country, one after another. When the supply of tropical raw logs decreased greatly or faced import restrictions, the Japanese plywood industry shifted from tropical countries to Russia. Our studies showed that the rapid increase of demand in consumer countries has contributed greatly to recent expansion of forest conversion projects aimed at industrial plantations (in Philippines [Seki, 2000], in Indonesia [Siscawati, 2000b]). In terms of drastic increases of oil palm plantations development in Indonesia, the influence of strong demand in importing countries, boosted by corporate image strategies that vegetable oils are good for the environment and health (Okamoto, 2000).

Beside these causes, we identified that intervention in adjoining countries, such as policy changes leading to a decrease of domestic timber production under strong wood consumption (for example in China [Lu, 2000]), has accelerated forest development in supplier countries. Such effects of intervention were found in the recent increases of border timber trade from the RFE to China (Yamane & Lu, 2000) and from Lao PDR and Cambodia to China and Thailand (Hirsch, 2000). Such regional trade seems to be more active even in the near and middle-term perspectives.

Foreign Aid Institutions

Many NGOs have already pointed out that "foreign aid institutions" have been playing a negative role leading to forest loss in developing countries. Our studies also confirmed two types of causes leading forest loss: "structural adjustment programs" and "individual project support."

Both in Indonesia (Okamoto, 2000) and the S-RFE (Sheingauz, 2000a), the "structural adjustment programs" by the IMF and the World Bank forcibly pushed ahead hasty reforming of economic policies, including forest policies. Our study of oil palm plantation development indicates that the "improved" policies still contain various defects, which would bring still more forest destruction (Okamoto, 2000). Studies in the S-FER also showed that structural adjustment programs have led to a serious economic crisis and consequently deterioration of the forest sector then leading to an acceleration of forest loss (Yamane, 2000).

In terms of "individual project support," the story of international aid for industrial tree plantations in the Philippines is interesting (Seki, 2000). After the Aquino government came to power, developed countries provided "environmental aid," and the introduction of participatory forest policy was connected with this funding. On continental Southeast Asia, "The Greater Mekong Sub-regional Cooperation Program," promoted by the Asian Development Bank along with support from many bilateral and multilateral agencies, prompted large-scale infrastructure development (Hirsch, 2000). The accessibility afforded by the expanded regional road network can be expected to increase the rate of log extraction and, more generally, encourage settlement and land clearance for cash crops. Hydropower projects prompted under the same program are encouraging further forest clearance. As well, the Market Development Program promoted by the Mekong program also put pressure on forest products previously used mainly for local subsistence purposes. And in more than a few cases, foreign aid programs for natural resource extraction such as mining functioned indirectly to promote forest destruction.

ROOT CAUSES OF FOREST LOSS

The underlying causes of forest loss addressed in this analysis, which are closely related to recent major proximate causes of forest loss, were classified using the following four criteria (Table 1):

- ✓ Market Forces

- ✓ Economic or Forest Development Policies
- ✓ Legal / Administrative Base of Forest Management
- ✓ Social and Economic Conditions

Market Forces Leading To Unsustainable Resource Use

It was very often observed in our studies that the forest developments in target areas were driven in unsustainable ways that centered on monetary benefits, in particular foreign exchange, and on market forces which originated in strong consumer demand for products, especially in importing countries. Strong demand in consumer countries for forest-related products has been generated by the rise of consumption as well as a fall of domestic supply of timber, along with strong influences of economic growth and resource policies. Thus in terms of market forces, consumption and trade policy/strategy affecting forest-related products both in supplier and consumer countries can be recognized as important root causes of forest loss.

Economic / Forest Development Policies with Industrial Emphasis

Our studies indicated that the forest-use paradigms in target areas emphasized industrial uses of forests Thus there is no doubt that economic development/forest policies under such a paradigm are also root causes leading to forest loss in every target area. These policies were strongly intended to exploit the benefits from timber extraction and forest conversion as a means of obtaining foreign exchange. It was "powerful people," such as members of congress, big capitalists, military authorities, etc., who wielded the greatest influence on these policies. This situation caused very inappropriate allocations of logging concessions. In many cases logging companies employed a "cut-and-run" strategy. They ignored traditional forest uses and the rights of local people, and more generally, ignored the real value of forests including environmental functions and the livelihood base of the local community, as they aimed to maximize economic profits from the development. In the background, the lack of appropriate knowledge of forest biodiversity, ecosystem management and traditional forest use among the parties concerned seems to have encouraged narrow-minded resource use policies.

Legal and Administrative Base of Forest Management

Various kinds of underling causes of forest loss were specified from our studies, however insufficient political will and shortages of compliance to stop destructive forest development should be recognized as a root cause of ongoing forest loss in many countries. Many institutional causes, such as an incomplete legal and administrative base for sustainable forest management, incomplete public forest land policy, inadequate/corrupt forest governance, and insufficient attention to local people's right can be extracted from this root cause. In many cases, the lack of capacity or shortages of forest administrative personnel were basically brought about by the lack of sufficient finances and human resources, as well as weak political will for forest conservation. Interventions by powerful people disturbed the establishment of political will and its effective compliance. Thus, the settlement of dependable mechanisms to ensure compliance with regulations, in particular a legal and administrative base, and a strong political will for sustainable forest management, are urgently needed to halt major proximate cases of recent forest losses, especially large-scale forest fires and destructive forest development in the region.

Political / Economic Instability

Although our studies did not examine this factor in detail, it is certain that many direct or indirect causes of forest loss were strongly affected by political disorder and economic difficulties. Political and economic instability has brought about many causes of forest loss such as inability of forest governance, the expansion of rule violation and corruption, the increase of poverty and the consequent rise of non-traditional, shifting cultivators. Thus political and economic instability is a key root cause

of forest loss in the region. Moreover, various impacts of forest loss themselves have often brought on more political, social and economic instability. In this sense, the progress of forest loss itself is a root cause of forest loss. Political/economic instability was also caused by interventions from outside the country such as structural adjustment programs imposed by international financial institutions, war in neighboring countries and regional trade. Thus the lack of sufficient regional coordination on regional economic development strategies, peacekeeping activities and natural resource trade should be included as a root cause of forest loss.

RECOMMENDATIONS [5]

To overcome forest loss in the Asia-Pacific region, our research outputs suggests that effective measures to prevent or stop the following three major proximate causes of recent forest loss should be clarified:

- ✓ Unsustainable logging/extraction and forest conversion projects with industrial emphasis;
- ✓ Non-traditional swidden farming caused by social and economic problems such as population increase, poverty, inadequate forest policy, etc.; and
- ✓ Forest fires caused by human activities inducing forest development or other causes.

In addition, key elements to be incorporated into a regional forest conservation strategy should be extracted on the basis of identified underlying causes of forest loss among study target areas.

The members of the sub-team proposed strategic solutions grouped into six headings: Government Responsibilities, Forest Development, Forest Fire Control, Community Forestry and Participatory Forest Management, Sustainable Trade, and International Responsibilities.

Government Responsibilities

The central government must continue to show the **political will** to regulate and monitor the forestry situation with strong measures, allowing the balance of state interests, business interests and local community interests with a master plan for appropriate, sustainable and equitable development.

- The central and local governments must allow for transparency and consultation on all decisions regarding the forestry sector, and provide for participatory processes that actively engage a wide range of stakeholders.
- The central and local governments must ensure that they take into account all social, environmental and economic costs when considering the benefits of any land or forest development.
- The central and local governments must ensure compatibility of land use allocation with the local communities who use or need access to the same land or resources on that land.
- The central and local governments should call for an immediate reconsideration or halt to operations within concessions on indigenous lands. This is particularly urgent given the mounting evidence of widespread illegal activities within the concessions and widespread disaffection of indigenous people
- The central and local governments must recognise the rights and ability of local communities to take on management responsibilities of land and forest and to work towards institutional and policy reform to cover and safe-guard these community rights.
- The central government must recognise that provinces need to be involved in land-use planning, as mutual land-use planning cannot be done at the national level alone. The central government must play a regulatory but also a facilitative role, and should concentrate on the capacity-building of local authorities that will be better able to facilitate community resource issues. In addition, the central government should promote careful involvement of local governments because the

[5] The recommendations in this section are derive much from a paper on Cambodia (Bottemley et al., 2000).

regional elite classes even more easily manipulate local governments in some countries. The intervention into forest management of these elites seeking special concessions is likely to lead to undesirable results from the perspective of resource management by local people.

- The central and local governments must continue to work towards the prevention of illegal and unsustainable logging activities through, for example, the introduction and maintenance of the log export ban, the enriching and drafting and enactment of new forestry law, and the termination of concessions operating illegally or in contravention to their management plans. Closing down the parallel shadow economy under which illegal logging has thrived is a prerequisite to creating properly functioning judiciary and law enforcement agencies
- The central government must provide efficient coordination of inter-ministerial conflicts earlier. The central government is not monolithic. Opposition exists between different ministries related to forest management and use, as shown in the Philippines. The discrepancies among governmental authorities have occasionally caused serious conflict at the local level.

Forest Development

The improved management of forest developments such as timber concessions and forest conversion projects alone will not solve deforestation. Centrally-imposed forest developments should be reconsidered in favour of a process favouring local-level consultation and participation. Local communities need input and access to concession areas, and local alternatives to concessions should be considered. Progress should continue on community involvement in concession management. The following prerequisites should be met:

- The procedure for granting concessions must be transparent and preservative, with consultation of all affected parties, in particular the local communities and local authorities.
- All concessionaires must be required to complete an Environmental Impact Assessment (EIA) and a Social Impact Assessment which would focus on the social impacts of proposed logging.
- Detailed studies of local community use and involvement with forest areas should be conducted before forest concessions are authorised by the government in order to avoid serious impacts on local communities and ensuing conflict.
- Land with traditional social, economic and cultural significance should be delineated and excluded from the concessions. These must be given to communities located within concessions through an equitable recognition of customary rights. Such areas must be carved out and excluded from concession contracts so that the ownership and use rights of forest communities are not compromised.
- Procedural[6] and substantive[7] protections for communities located within proposed concession areas must be established. Such communities should have the right to participate in the decision as to whether to award a concession. Key to such a participatory right is the use of representative mechanisms chosen by villagers themselves rather than by outside forces.
- In existing concessions, areas of cultural, economic and social importance for local communities must be mapped out with the participation of the local communities.
- Annual examinations by the provincial forest department of the cut area and the concessionaires' sawmills should be permitted. The Forest Department should be under no obligation to inform the concessionaire of the time of the examinations. The results from these examinations must be made public.
- Long-term monitoring of logging operations, as well as log transport and export, is needed by the national government in close co-operation with the provincial authorities and the local communities. Village monitoring groups should be encouraged and provided training.

[6] Procedural protection includes the right to information concerning the environment that affects you directly and the right to a fair hearing.

[7] Substantive protection may range from co-management to usufruct rights - to outright ownership.

- Security and freedom from intimidation of village and NGO monitors needs to be addressed and ensured by the Forestry department.
- A mobile ombudsman-type system to which local people may anonymously complain about logging abuses could be devised.
- Communication between communities living within or near concession areas should be facilitated to allow for exchange of ideas and concerns.

Forest Fire Control[8]

Forest fires often caused large-scale forest loss in many places of the Asia-Pacific region and thus effective countermeasures and a legal and administrative base should be provided urgently. The economic, social, and political backgrounds, or underlying causes, of forest fires in Indonesia, the Philippines and the S-RFE mostly coincided with that of general deforestation in other Asian-Pacific countries. Forest fires may be compared to a reflection of forest health and of the economic, social and political healthiness surrounding the forest. The examination on the causes of forest fires in the target study areas must contribute to tackle forest-related issues in other Asian-Pacific countries. Our findings suggest the importance of focussing on the underlying causes and try to overcome them, both in the short and long term. The following requirements should be examined earnestly to prevent situations forest fires occur repeatedly:

- Administration of national and local forest fire control, coupled with the national fire control policy and programs, should be strengthened.
- Well-balanced forest control measures with attention to both advanced technology and practical equipment should be allocated in the system. The government tends to use expensive technology to extinguish fires through support from other countries such as by employing aircraft, helicopters, and rain-making projects. However, the effectiveness of that technology is very limited. Our observation indicates that it would be more effective to distribute a certain amount of portable fire extinguishers (hand-powered, pump-style fire extinguishers) to each village in danger of conflagration, using only a portion of the financial resources that are invested in expensive technology. Moreover, sufficient financial and human resources should be allocated to the local stations.
- Public awareness of fire prevention and environmental education on proper knowledge of the forest should be promoted, both for local people and city residents.
- Intensive efforts and effective measures to overcome contradictions between the customary land utilization based on customary laws and authorized land management systems based on legal land ownership should be, as well as the improvement of participatory forest management systems.
- The restriction of development activities, in particular, intended burning for land clearance, should be reinforced more strictly.
- International cooperation for fire control and expansion of international aid should be promoted under the full support of developed countries in the Asia-Pacific region.
- International community's monitoring of the restoration of burned sites is very important, because the areas tend to convert into plantations for economic benefit, biodiversity of the site will be deteriorated in the long-term, which will have serious adverse effects on ecological systems. Moreover, such conversions are pushed ahead without any consideration of or cooperation with local people. Disputes over land use will occur more often and more social unrest will ensue.

Community Forestry and Participatory Forest Management

The right of communities to manage land and forests should not be seen as a privilege to be granted by the state, but rather as an essential step to enable local people to provide a service for the present and future economic health of the nation. All Ministries related to forest conservation such as

[8] The recommendations in this sub section are derive much from a paper by Inoue (1999).

Agriculture and the Ministry of Environment have taken an interest in community forestry initiatives by creating their own community forestry units. It has been demonstrated that community forestry projects allow customary rights to be incorporated and recognised without major modifications of existing legal frameworks. However, such efforts will remain localised unless mainstreamed into the overall forest policy framework. In order to achieve this the following prerequisites should be met:

- Legal mechanisms should be developed for recognising traditional land-use practices and systems of customary tenure in order to protect the rights of indigenous peoples.
- Current land use must be documented and mapped. This is important evidence of possession rights of the rural poor, which can be used to prevent further eviction or encroachment. In the case of indigenous people, mapping land-use is quick, simple and cost-effective.
- The central and local governments should recognise, endorse and protect the customary rights of indigenous highland and rural communities to collect and use forest products.
- The Community Forestry legal base should include the authorisation that individuals or associations may access and use forest lands by entering into contractual agreements with the government.
- The community forestry legal base should expressly include community forestry as practised by the highland peoples, as a legitimate form of community management. Community forest status must be given to areas of old-growth forest.
- Community forestry working groups should be created at the provincial level, incorporating departments such as agriculture, environment, forestry and planning, to screen and make preliminary recommendations on proposed provincial community forestry associations.
- There is a need to maintain sufficient flexibility at the national and provincial levels to allow local institutions and knowledge to frame locally unique solutions. Rather than a single community forest policy, it is recommended that all countries develop a 'menu' of social forestry options that allows planners and communities to pick and choose the best solutions.[9]

Sustainable Trade

Our studies indicate that forest development aimed at foreign exchange on a background of strong demand of natural resources both from forests and forest-converted land has accelerated forest loss in the target countries. Illegal or uncontrolled forest extractions originated also in many cases in strong demand from consumer countries coupled with an inability of forest governance of supplier countries. To realize sustainable trade the following requisites should be examined:

- The central and local governments should require all timber to be certified by an international auditor as originating in sound environmental and social practice. The Forest Stewardship Council (FCS), established in 1993, constitutes an internationally-recognized and independent certification process.
- Major importers of illegally-cut timber must take responsibility to exert severe control over the origin of wood products that are imported, and refuse transactions of timber of illegal and non-sustainable origin. Non-certified timber should not be imported from any countries. For effective monitoring or to control illegal trade capacity-building of relevant officials should be promoted.
- Consumer countries should promote a sustainable trade of agriculture and forest products through encouraging the following principles of resource use: the reduction of resource use, promotion of recycling, and re-use. For such changes more efficient techniques of resource use should be developed and employed positively. In addition, consumer awareness and education is essential.

International Community Responsibilities

As our study shows, the role of the International Community in forest loss in the region is quite vital. Thus the following efforts can be essential to stop forest destruction:

[9] Source: Fox, J. (1997)

- The International Community should place increased emphasis on the importance of community involvement and participation in approaches to forest conservation, natural resource management and land planning.
- Pledges of loans or grants made by the international community should be carefully conditioned on the basis of respect for human rights and sustainable management of natural resources, in agreements that are informed and transparent to the public. Compliance to such written conditions should be closely monitored and the government must be held accountable for its policies.
- The International Community needs to call for an immediate halt or reconsideration to operations within concessions on indigenous land until the government has the institutional resources and political will to prevent human rights abuses and ecological abuses.
- The International Community needs careful consideration of aid from international institutions and bilateral cooperation for large-scale tree plantation projects aimed at forest carbon sequestration. Such plantation projects in the name of CO2 reductions under international "emissions trading" will prompt more evictions of local people.
- The International Community should assist governments to develop community forestry or joint-forest management systems, thus encouraging local communities to continue to value forest resources through their increased involvement in their management.
- The International Community should continue to support initiatives providing accurate information on forestry and land use issues from the local level, particularly concerning human rights, indigenous rights and forest management within a country.
- The International Community should make the best use of forest loss experiences in forest-depleted countries such as the Philippines and Thailand. In its move toward people's participation in forest management, the Philippines are on the leading-edge compared to other East Asian countries. However, the country has learned from its negative experience. In the Asia and Pacific region, there are several countries that employed similar forest policies and faced similar problems. Thus the Philippines and the international society should disseminate their experience to other countries so as not to make the same mistakes twice. International aid institutions should also examine their aid and support policies, taking into account the lessons from the Philippines. On the other hand, the Thai experience should serve as a vivid example of the costs of uncontrolled logging, but the lessons from there are subsumed by the powerful forces which sustain the timber industry, and in part, forms of upland agriculture that are more destructive. The lessons of Thailand could contribute to understanding the impacts or results of rapid deforestation on communities and a national economy.
- Regional coordination on the impacts of deforestation should be encouraged because, in many cases, a regional approach to conserve forests is warranted as the impacts of deforestation often cross national boundaries.
- The International Community should support education on forest-related issues for journalists. In order to avoid the "stereo-type" reporting on causes of deforestation, it might be effective to encourage the journalists to learn more about forest-related issues, especially the underlying causes as key subjects to be considered.

- Table 1.Addressed Causes and Actors of Recent Forest Loss in Target Areas

Cate-Gory	Items		Philippines	Indonesia	Mekong Basin				The S-RFE	IFF-NGO／UC Process
					Thailand	Laos	Vietnam	Cambodia		
Major PCs	Forest Fires caused by Human Activities		◎	◎	?	○	?	?	◎	
	Forest Conversion Projects/Activities		◎	◎	○	○	◎	○	—	
	(Commercial) Logging		○	○	○	◎	○	◎	◎	
	Slash & Burn Agriculture		?	○	○	○	○	?	—	
	Civil War					○	○			
Key UCs	Market Forces	Strong demand in consumer countries	○	◎	○				◎	◎
		Overseas investments leading to unsustainable forest development	?	○	○					◎
		Trade supported by strong demand	○	◎	◎				◎	◎
	Develop-ment Policy	Migration policy paying less attention to resource use and rights of local people	○	○	◎				—	
		Economic Policy aimed at the acquisition of foreign currency	○	◎	○				◎	◎
		Agricultural development	○	○	◎				—	
		Subsidies & financing leading to unsustainable forest development	○	○	?					◎
		Less consideration of forest's multi-function	?	○	?				○	◎
	Institutional shortages	Incomplete land & public forest policy	◎	◎						◎
		Insufficient Forest Governance	○	◎	◎				◎	◎
		Insufficient involvement of local people	◎	○					○	◎
		Insufficient Forest Fire Control System	?	◎	?				◎	
	Social / Economic Conditions	Lack of appropriate understanding of Forest value & Functions							◎	◎
		Frequently occurring conflicts on land & resource use	◎	?	?				—	
		Increase of population pressures	○	○					—	
		Political disorder	○	○	◎				◎	
		Economic recession and crisis	○	○	○				◎	
Main Actors	Domestic	The Government	○	○	○				○	
		Forest Industry Sector / Enterprise	○	○	△				○	
		Local People	△	△	△				○	
		Military Authority/Powerful People	△	○	○				?	
	Foreign	Consumer countries/ Capital	○	○	○				○	
		International / Foreign Aid Institutions	○	○	○				—	

Note 1 :Including industrial plantation, agricultural plantation, Commercial Ranching etc.
Note 2: in the column of PCs and Ucs, ◎; Most influential now,○; influential

△ ; Occasionally influential , ? ：Unknown or Not studied

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UNDERLYING CAUSES OF FOREST LOSS IN THE MEKONG RIVER BASIN[10]

Drafted by Satoru Matsumoto[11]

1. - DEFORESTATION IN THE MEKONG RIVER BASIN

1.1 - Introduction

The amount of forest cover in the Mekong River Basin area varies over a wide range. Both Lao PDR and Cambodia retain the largest proportion of area under forests, while Vietnam and Thailand have been largely deforested. The Central Highlands region, which is one of the major Mekong River Basin areas in Vietnam, is the most heavily forested part of that country, with forests covering 60 percent of that area, representing almost half of the country's timber reserves (EIU 1994). Vietnam on the whole retains only some 20 percent of its original moist forests compared to 43 percent for Thailand, 55 percent for Lao PDR and 71 percent for Cambodia.

The figures of present forest cover show that large portions of forest have been destroyed in the Lower Basin countries and current rates of deforestation are not sustainable. The lower rate of deforestation for Thailand reflects strong efforts to reverse the rapid rates of previous years and the fact that Thailand is now obtaining large quantities of logs from neighboring countries.

Table-1 - Remaining total forest cover in Lower Mekong Basin countries

County	% Forest Cover	Year Estimated	Rate of Deforestation (%)
Thailand	26	1993	1.48
Vietnam	27	1991	3.2 *
Lao PDR	47	1989	2
Cambodia	49-62	1993	3 **

* Deforestation rate for Central Highlands region in Vietnam only.
** Some estimates of forest cover in Cambodia are as low as 30-35 percent for commercially viable forest cover. From various sources: TDRI (1995, 1996), CPAWM (1996), Miller & Thinh (1996)

1.2 - Thailand

Thailand has lost at least half of its forest cover since the early 1960s. Officially, about one-quarter of the country is still forested. However, it is widely accepted that this is an overestimate of area under forest in or close to its natural condition.

The loss of forest in Thailand has been associated largely with various development processes. Until 1989, logging concessions covered large parts of the forest area that lay outside national parks and wildlife sanctuaries. Concern over the effects of legal and illegal logging led to a logging ban in 1989, after disastrous floods in southern Thailand led to heavy losses of life. These floods were attributed in part to the clearing of land for timber. Other development pressures that have led to widespread forest clearance include clearing of land for planting cash crops such as cassava, kenaf and sugar cane. Northeastern Thailand's more open, dry dipterocarp and savanna forests, and land previously forested with dipterocarps, and the dry and moist evergreen forests on the eastern and

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This paper is a draft report intended only for the IGES-NOUL Workshop on Forest Conservation Strategy on 2-3 August. Please refrain from citing it for any purpose.

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western edges of the Central Plains have been largely cleared and are now under cash crops. Road construction that produced cheap transport of produce facilitated such clearing, while ambiguous tenure relations in forest reserve areas (Hirsch,1990) have combined with market pressures for clearance of such land, often in the wake of earlier logging operations.

In northern Thailand, shifting cultivators have received much of the blame for loss of teak and mixed deciduous forest in upland areas, and this has been a hotly contested issue for some time. The fact that most of those blamed are ethnic minorities without Thai citizenship, and that upland livelihoods have become embroiled in the politics of opium, further clouds the issue. Crop substitution programs have often exacerbated the problem, as the cabbages and other cash crops to be planted in place of opium require large areas of land, heavy chemical applications, and attract those with capital to invest – raising questions over the extent of actual substitutions involved. Debate continues over the sustainability of different shifting cultivation systems, with many NGOs and supportive academics claiming that some ethnic groups, notably the Karen and Lua, practice more sustainable cultivation than others, notably the Hmong, partly because of a lesser involvement in the market economy. Others demonize all "hill tribes" as destroyers of the forest, as non-Thai and as producers and consumers of opium, causing problems for their lowland Thai neighbors. The simplifications on either side of this highly charged debate are part of the politics of blame that have long been part of forest politics – and hence policy impetus.

Southern Thailand has seen its moister, mainly evergreen forest replaced over wide areas by rubber plantations. Additionally, peninsular southern Thailand's mangrove forests have been decimated along the eastern Gulf of Thailand shoreline, while the western Andaman shoreline now faces similar pressures on coastal intertidal forests. Shrimp farming has been the main reason for mangrove clearance, and this has been exacerbated by poor land tenure definition in mangrove forests.

Thai forest policy has involved considerable controversy between the Royal Forestry Department, NGOs, local communities and foreign consultants. Following the 1989 logging ban, a process to develop the Thai Forestry Sector Master Plan was set in motion. The foreign consultant hired to help prepare this plan was Jakko Poyry, a large Finnish international forest consultancy. The industrial focus of the Master Plan was criticized by many in Thailand's environmental movement. An important thrust of forest policy in the 1990s has been the zoning of land into different watershed classifications and the expansion of protected areas. This process has retroactively created land tenure uncertainties for many forest-dwelling communities and for those who had cleared land for cash cropping in forest reserve areas, many having had previous tacit government support for such agricultural expansion.

1.3 - Lao PDR

Lao PDR has a much higher proportion of its land under forest than Thailand or Vietnam. Officially, the country has about half its territory under forest cover, down from two-thirds in the early 1960s. Many regard this as a gross over-estimate, depending on the level of degradation required for reclassification. While there has been a steady loss of forest since the early 1960s, the underlying causes have most likely changed considerably over time.

During the Second Indochina War large areas were bombed along the *Ho Chi Minh* Trail near the border with Vietnam and in the northern central province of *Xieng Khouang*. After 1975, the socialist regime maintained a policy of rice self-sufficiency, which encouraged northern provinces in particular to clear upland forests for rice cultivation. Meanwhile, the massive internal refugee problem after 1975, when one-quarter of the country's population was displaced by US bombing, led to clearing of new land. This was – and continues to be – exacerbated by the problem of unexploded ordinance, placing otherwise fertile lowland areas out of safe cultivation and requiring further clearance. Another powerful pressure for over-exploitation of the forest has been the dependence, until the early 1990s, of provincial budgets on logging revenues, encouraging unsustainable logging practices.

Shifting cultivators are often blamed by government for deforestation. A central plank of government policy has been the resettlement of all shifting cultivators by the year 2000, though this is clearly unachievable. An increasing number of agencies within Lao PDR also now see this policy as

unrealistic and undesirable in the longer run. The impact of shifting cultivation continues to be a hotly discussed issue in the country.

Regional patterns show a much higher degree of forest loss in northern Laos than in other regions. This is in part related to the drier types of forest and poorer soils in this region, and in part to cultivation and migration patterns. While shifting cultivation is practiced in all regions, the Mon-Khmer communities of southern Laos have practiced a more stable pattern of rotational swidden farming.

Sustainability of logging is an issue in all regions. Most logging in Lao PDR is now carried out under the auspices of one of three military-owned logging companies, in the northern, central and southern regions, respectively. The most intensive logging is carried out in areas earmarked for hydropower development, most notably to clear the designated reservoir area of vegetation. However, this occurs before contracts are in place, so that it is highly likely that some areas that are clear-felled will not actually be flooded by reservoirs. The most intensive logging operation in recent years has been the clearing of the 450 square-kilometer area due to be flooded by the *Nam Theun II* Dam in central Laos, but the World Bank has yet to make a decision on loan guarantees for this build-own-operate-transfer project.

Forest policy in Lao PDR has also been influenced by external consultants, notably *Jakko Poyry*, in their role in the Forest Management and Conservation Project (FOMACOP). As in Thailand, this project received considerable criticism from NGOs as a result of the industrial emphasis. Another significant plank of Lao forest policy has been the Forest Land Allocation Project, in which village boundaries have been demarcated to provide for zoning of conservation, production and protection forest. Interest has also been shown by international investors in plantations on degraded forest land, mainly of exotic species such as eucalyptus. However, the definition of "degraded forest" is also subject to contestation.

1.4 - Vietnam

As in the case of Thailand, Vietnam has been heavily deforested over the past several decades. During the Second Indochina War, the United States Air Force had a deliberate policy of destroying forest cover for the communist forces in the South. This led to the destruction of at least two million hectares of forest in the Central Highlands and of mangrove forests along the southern coasts. After 1975, the principal forces for deforestation changed. In northwestern Vietnam, rapid loss of forest occurred in provinces such as *Son La* and *Lai Chau*, in part due to a similar policy of rice self-sufficiency described above in relation to northern Laos. The Central Highlands were the destination of several million lowland Vietnamese who moved to New Economic Zones under land settlement schemes, in part to overcome the crowding of the lowlands, in part to rebuild lives disrupted by the war over previous decades, in part as a government policy to maximize resource utilization and, in one analysis, to "colonize" a part of the country mainly inhabited by ethnic minorities.

Regional patterns of forest loss in Vietnam reflect the history of political and economic development of the country. Northwestern Vietnam, whose forest cover assisted *Ho Chi Minh* and his forces in their guerrilla war against the French, is now substantially cleared of forest. As in other countries of the region, shifting cultivators attract government censure as destroyers of the forest.

Shifting cultivators in the Central Highlands are even more vilified than those in the North, despite the fact that, like their Mon-Khmer kin in southern Laos, they practice quite stable rotational patterns of cultivation. Logging has increased dramatically in the Central Highlands, as has clearing of land for cultivation. Coffee and other cash crops are grown in plantations in areas until recently under forest.

Large swathes of mangroves that had survived, or recovered from, the wartime devastation have now been cleared again. This time, however, the destruction is mainly from shrimp farming. *Ca Mau* Province in the far south of the country has been particularly affected by mangrove clearance. The World Bank is currently embarking on a large coastal protection project in this area, which will concentrate on mangrove forests.

Forest policy in Vietnam includes a large tree planting program, particularly on the "bare hills."

Associated with this policy is a distribution of about one third of all forest land nationally to individual households under a forest land allocation scheme. Unlike Laos, where the equivalent scheme devolves management to the community level, in Vietnam the household is seen as the basic management unit.

The military plays an important part in logging in Vietnam. Increasingly the military has to find its own sources of income, and logging concessions are one of the more lucrative ways of raising revenue. Vietnam sources a large part of the timber that it exports to Japan and other northeast Asian destinations through ports such as *Qui Nhon* from its western neighbors, Cambodia and Lao PDR.

1.5 - Cambodia

Deforestation is often associated with rural poverty and population growth, which force rural people to encroach into forest areas in search of new arable land and products from the forest to supplement low incomes. In 1998, ARD[12] stated that with the current population growth rate being in excess of 3 percent, the population of Cambodia would double within the next twenty-five years, resulting in greater pressure on forest lands. The production of fuelwood and charcoal to supply urban populations is also conducive to over-logging in the forested supply areas close to roads and rivers. However, although rural poverty and the clearance of forest for agricultural purposes have traditionally been pinpointed as the main cause of deforestation in Cambodia, it is not the root cause behind the onslaught being experienced by Cambodia's forests today.

The prolonged state ownership of forest resources in Cambodia has contributed greatly to the problem of deforestation through the inability, or desire, of the state to manage this resource in a way that benefits the Cambodian population as a whole. The decisions about the forest are shaped by the priorities of the state, with whom the rural Cambodians now have to compete for the right to access and use this resource. Today, the mandate for forest management rests formally with the Department of Forestry and Wildlife (DF&W) within the Ministry of Agriculture, Forestry and Fisheries (MAFF). The Ministry of Environment (MoE) has responsibility for forest land within protected areas. However, a clear, systematic and transparent process for making and coordinating land-use allocations does not exist at the national level, and responsibilities for the enforcement of decisions are not clearly defined.

Over the last thirty years, the inability of the state to manage the forest resources for the greater good has been largely due to continuing war, political rivalries and corruption. Strong regional demand from Thailand and Vietnam, and a lack of funds, institutional capacity, and willpower on the part of the central and local-level authorities has fuelled this situation. As a result Cambodia has witnessed extensive logging and severe deforestation through the predominance of illegal harvesting, processing and export operations under the protection of powerful people and the military. Log production in 1997 reached the highest levels ever in Cambodian history with 4.3 million cubic meters being cut over 7 million hectares. Illegal timber felling accounted for at least 92 percent of total production.

Over the last decade, the Royal Government of Cambodia (RGC) has pursued its goal of modernization through trade, investment and industrialization, much of which has relied on the exploitation of the country's natural resources. Increasingly these resources are being taken over by commercial enterprises (with or without legal licenses) without any protection of the rights of traditional users, and without effective regulatory systems to ensure sustainable use. Traditional community access to forest resources has been eroded rapidly in recent years through the privatization of these resources to commercial interests.

1.6 - Regional issues

In addition to the country-specific aspects of deforestation, it is also worthwhile considering the regional issues that arise in an increasingly interlinked regional resource economy. Thailand's logging ban led to an immediate shift of interest among Thai timber traders to neighboring countries, and the pattern of exports from Burma, Lao PDR and Cambodia reflects this clearly.

[12] Associates in Rural Development (Consultancy)

The Greater Mekong Sub-regional cooperation program, promoted by the Asian Development Bank with the support of many bilateral and multilateral agencies, involves large-scale infrastructure development that has implications for regional forest cover. The accessibility afforded by the expanded regional road network can be expected to increase the rate of log extraction and, more generally, encourage settlement and clearance of land for cash-cropping in hitherto isolated parts of Lao PDR and Cambodia in particular. Hydropower projects promoted under the same program also involve forest clearance and increased access to hitherto remote forest areas. The market development promoted by the program also puts pressure on forest products previously used mainly for local subsistence purposes.

2 - SYNTHESIS OF THE PROXIMATE CAUSES OF DEFORESTATION

Based on the present research outcomes, the major proximate causes of deforestation in each country can be summarized as follows:

Thailand
Logging, Forest clearance for cash crops, Shifting cultivation, Rubber plantations, Shrimp farming, Zoning of land and expansion of protected areas;

Laos
Direct and indirect impacts of the Second Indochina War, Land clearing for rice self-sufficiency, Shifting cultivation, Hydropower development, Industrial emphasis;

Vietnam
Direct and indirect impacts of the Second Indochina War, Land clearing for rice self-sufficiency policy, In-country migration (internal colonization), Coffee plantations, Shifting cultivation, Financial resources of the military from logging;

Cambodia
Land clearing for crops, Logging under the protection of powerful people and the military.

3 - UNDERLYING CAUSES OF DEFORESTATION

It is apparent that the direct and indirect impacts of the Second Indochina War and the internal war in Cambodia had largely contributed to forest loss in the relevant countries including Vietnam, Laos and Cambodia. However, this section ignores such historical disastrous incidents but rather focuses on current factors influencing the deforestation in the Basin.

3.1 - Military-controlled logging

The implications of unsustainable logging are well known to the governments of the Basin countries. The logging bans in most of these countries were announced in recognition of the destructive impacts of a timber industry that was largely uncontrolled, hence Thailand's logging ban of 1989, Lao PDR's temporary ban in 1991, Vietnam's export ban on logs and sawn wood of 1991 and Cambodia's recent ban in 1995. In the pre-election period in Cambodia (1993), the UNTAC (United Nations Transitional Authority in Cambodia) attempted to temporarily close the Thai-Khmer border to halt the cross-border illegal logging trade. The difficulties encountered demonstrate the inherent problems in addressing such practices, which as in this case are supported by the military.

3.2 - Political instability

These bans have been largely ineffectual. Indiscriminate logging (both legal and illegal) still occurs in many areas, with little effort put into replanting. The forces encouraging such logging include agricultural expansion, population pressures, corruption, government economic planning, and war. The inability to control such logging is made worse by a factor of porous boundaries which allow the illegal export of logs. The exigencies of war have resulted in massive logging in Burma and post war insecurities are resulting in the allocation of large timber concessions in Cambodia.

3.3 - Foreign exchange

The contribution of forest products to national GDPs is difficult to ascertain accurately due to the large amount of illegal timber trade and unreported logging. For example, in Lao PDR, illegal logging is estimated to contribute approximately an additional 100-150,000 cubic meters each year on top of the official production of about 275,000 cubic meters. For both Cambodia and Lao PDR, timber presently represents the most important foreign exchange earner.

3.4 - Logging concession process

Of concern is the logging of areas designated for flooding as a result of dam construction in Lao PDR. In particular, the reservoir site at the *Nam Theun 2* Dam project has been logged for a number of years despite a final decision on the project still pending World Bank funding. In fact, the final environmental impact statement has not yet been submitted for this project. In Cambodia, the allocation of large forestry concessions to companies with poor environmental histories jeopardizes that country's forest assets.

3.5 - In-country migration policy

The Lao government has urged the hill-tribe people to migrate down to the low land for rice cropping while the Vietnamese government has encouraged the lowlanders to migrate up to the hills in the Central Highland for cultivation. Such policies incurred the conflict over the use of forest resources, which might lead to unsustainable forest management. They are related to both historical background and policies on ethnic minorities.

3.6 - Regional timber trade

Both China and Thailand are major markets for timber from Lao PDR, Cambodia and Burma. The markets that these countries represent are a major factor in the continuing rates of deforestation. For example, most of the hardwood timber supply for the Delta in Vietnam comes from other parts of Vietnam and Cambodia (NEDECO 1993). The recent granting of timber concessions to Malaysian and Indonesian companies in Cambodia will accelerate overseas exports. The flow of timber, legal and illegal to Thailand across its borders with Lao PDR and Cambodia is expected to continue as there is a strong demand and those countries are greatly in need of foreign exchange.

3.7 - Industrial emphasis

The introduction of industrial tree plantations, such as rubber or eucalyptus in the so-called "degraded forests" or shrimp farming by clearing mangrove forests, is recognized as one of major causes of deforestation in the Mekong River Basin. It is viewed critically as an industry emphasis ignoring local subsistence use of natural resources.

3.8 - Discursive contestation

Dominant discourse on the causes of deforestation by powerful people or governments has an impact on the real world. We found the tendency to lay blame for deforestation on the more vulnerable groups, notably shifting cultivators. There is now a convergence in many areas of policy between countries in the region, and a tendency to focus blame on more proximate causes and actors. Ironically, in Thailand it is the poor occupants of forest reserve land who have been identified as proximate agents in deforestation, yet their settlement on such land has its roots in the Thai state's long-standing policy to diversify away from rice production by promotion of dryland export crops.

Governments' efforts to restrict or end shifting cultivation parallel forest management policies very closely. However, the blaming of deforestation solely on shifting cultivators is a simplistic approach which does not consider the many forces causing forest degradation. Certainly one of these forces is increasing population pressure on land and conversion of forest for cultivation. The logging carried out by large timber concerns does not lead to benefits to local communities who are left with degraded land, polluted water and encroachment by settlers who now have easier access.

Not only the practice of shifting cultivation but also the very definition of "degraded forest" is also subject to contestation. Such discursive domination may allow the culprits of deforestation to get away from their responsibility for solving or avoiding the forest loss.

4. Recommendations for desirable directions

Forests have to be transformed from contested resources to resources that are used profitably for the whole nation. There is a need for a multi-disciplinary approach, whereby the solution to deforestation is achieved through community solutions in addition to forest engineering. State management of forests has failed to produce adequate results. The devolution of powers to use and manage the forests from central government to local government, and from local government to local communities is a critical step in ensuring the sustainable management of the basin's forest resources.

 # 1 Land tenure system to ensure community based forest management

Land tenure arrangements often coincide with efforts to better manage forest land and to rehabilitate deforested areas. In some cases, centralised control can lead to more forest depletion as for example in Cambodia with the approval of the huge logging concessions by the two prime ministers. On the other hand, the lack of central control have allowed provincial authorities to circumvent logging bans in Vietnam. The provision of more secure tenure to rural people allows them to plan further ahead, obtain credit by using the land as collateral, and invest more in the maintenance of the land including retainment or rehabilitation of forest areas.

 # 2 Participatory and transparent logging concession process

The improved management of timber concessions alone will not solve deforestation. Centrally-imposed concessions should be abandoned in favour of a process favouring local-level consultation and participation. Local communities need input and access to concession areas, and local alternatives to concessions should be considered. Progress should continue on community involvement in concession management. Furthermore, the logging concession in the planned reservoir of the dam projects also should be decided with the people living in the areas together with enough information about the relevant dam projects.

 # 3 Careful intervention of international donor communities into non-forest development projects

At the most general level, development assistance is targeted at developmental well-being. However, there are certain aspects of development that exacerbate forest pressures. For example, promotion of certain types of cash cropping can greatly increase pressure on currently forested land. Development programs cover issues such as land tenure, macro-economic stabilisation and poverty alleviation, all with their own positive and negative implications for forest cover. Development agencies need to ensure the compatibility of their non-forest related development programs with more specific forest-sector work.

 # 4 Learning from the experiences in Thailand

It is expected that the extent of intact forests will continue to decline rapidly even where they have been set aside as reserves by the government, most notably in Cambodia and Lao PDR. The Thai experience should serve as a vivid example of the costs of uncontrolled logging but the lessons from there are subsumed by the powerful forces which sustain the timber industry and in part, forms of upland agriculture that are more destructive. The lessons of Thailand could contribute to understanding of the impacts or results of rapid deforestation on communities and national economy.

 # 5 Regional coordination on the impacts of deforestation

In many cases, a regional approach to conserve forests is warranted because the impacts of deforestation often cross national boundaries. For example, it is claimed that the serious deforestation on the upstream of the Mekong River has exerted the surging negative impacts on fisheries in the Tonle Sap Lake in Cambodia.

 # 6 Education on forest-related issues for journalists

In order to avoid the "stereo-type" reporting on causes of deforestation, it might be effective to encourage the journalists to learn more the forest-related issues. Especially, the underlying causes are key subjects to be considered among them.

 # 7 Consumers' awareness building in Thailand and Vietnam

The important fact is that the timber trade often means either the harvested logs are exported from Cambodia and Lao PDR via ports in Thailand and Vietnam or that Thailand and Vietnam represent regional markets for the timber. It is desired to raise the awareness on the forest loss in Laos and Cambodia among the public consumers in Thailand and Vietnam.

Policy Recommendations for Participatory Forest Management[13]

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1. Introduction

1-1. Framework to elaborate policy recommendations

The IGES team working on the sub-theme of Participatory Forest Management conducted a comprehensive process that led to the preparation of policy recommendations. First of all, in the target countries (Indonesia, Thailand, the Philippines, Vietnam, and Laos) we identified the **"external constraints"** on local participation in forest management by means of clarifying the gaps and contradictions between national land/forest policies and **"customary land rights and forest/land management by the local people."** Second, we identified the **"internal constraints"** immanent in the local communities, in terms of economic, social, and cultural aspects. Third, **"possible main actors"** were clarified by means of evaluating the local realities and national forest policies. As well, we identified the lessons learned from public participation in developed countries.

We elaborated these policy recommendations by considering how to overcome the internal and external constraints, and suggested the main actors to carry out them.

1-2. General findings

1-2-1. Characteristics of Participatory Forest Management (PFM) Systems in Southeast Asian Countries

PFM in Social forestry

In the late 1970s, professional foresters in the tropics noticed that they could not manage the forest sustainably under the principles of conventional and industrial forestry, whereby the local people have been considered to be obstacles or constraints on forest management. "Social forestry" was recognized as an important norm or principle to produce successful sustainable forest management, even though industrial forestry has been dominant in practice.

Originally, social forestry and community forestry were defined similarly as any situation that intimately involves local people in forestry activity for the purpose of rural development. These days, however, it seems that the term "social forestry" involves a wider range of comprehensive participatory activities, and the term "community forestry" implies collective activities rather than individual activities such as farm forestry.

In general, social forestry consists of two major components. One of them is participatory

[13] This paper is a draft report intended only for the IGES-NOUL Workshop on forest Conservation Strategy on 2-3 August. Please refrain from citing it for any purpose.

forest management (PFM) in the forestry sector. The other includes 1) development of infrastructure such as roads, meeting places, schools, and clinics; 2) agricultural extension; and 3) generation of income sources for rural development, etc. If the latter activities prevail without the component of PFM, however, the activities are not necessarily called "social forestry" but the more general term "rural development." It is evident that the core of social forestry is PFM.

The purpose of this section is to clarify the characteristics of the PFM systems in Southeast Asian countries under certain common criteria.

Activities of forest management

We placed various activities of forest management into four categories: 1) "tree planting" or man-made forest management consisting of reforestation and afforestation; 2) "harvesting" or natural forest management for timber production; 3) "conservation" including the collection of fuelwood and non-timber forest products (NTFP) and small-scale recreation; and 4) "protection" or preservation of the forest from any kind of utilization. We can assume that the management of protection areas consists of both "protection" and "conservation."

Analytical framework

In order to compare the policies, two concepts are applied as an analytical framework or valuation basis: "legal status of land" and "main actors of forest management."

Legal status of land - Generally, possible legal possessors of land and forest are individuals, organizations, villages, outsiders, and governments such as districts, provinces, and the state. The PFM systems can be adopted regardless of the legal status of the land. Provisionally, we recognize land with differing legal status to be "individual land," "organizational land," "village land" (owned by both of formal village or indigenous people's community), "outsiders' land," and "national land" (owned by the local and national government).

Main actors of forest management - In order to evaluate the character of participation, it is useful to consider who are the main actors—those who have management responsibility and take initiative. In these terms, the main actors are classified as follows: 1) individuals or peasants living in the village and their households (their forest management can be called "peasant forestry" or "farm forestry"); 2) functional groups such as forest users' groups, cooperatives, schools, temples, women's unions and elder's groups ("functional group forestry"); 3) fundamental groups such as groups of relatives, natural villages, and indigenous cultural communities ("fundamental group forestry"); 4) an executive body of the formal village ("village forestry" that includes centralized community forestry); 5) outsiders and corporations ("private forestry"); and 6) local and national governments ("public forestry").

Functional group forestry, fundamental group forestry, and village forestry are included in the concept of "community forestry," since they are based on collective management. Public forestry in cooperation with the local people is called " joint forest management" (JFM) since it is based on co-management**.**

Results

The characteristics of the PFM systems in each country are listed below.

- In most of the PFM systems, the land still belongs to the state and the right to use the land is granted to the local people.
- Protected areas are mainly controlled by the government.
- Harvesting and conservation activities are mainly managed collectively.
- It is ascertained that most of the collective management by the local people is not implemented by fundamental groups but by functional groups, except for the management by indigenous cultural communities and indigenous peoples in the Philippines. Also, village forestry activities in Laos may be managed by fundamental groups.
- It is interesting that several programs assume that collective management can be suitable for planting activities consisting of reforestation and afforestation, even though individual management seems to be suitable for planting activities rather than collective

management in terms of economic incentives.

Diversification of the actors seems to be advantageous for forest management in order to achieve ecological sustainability and social justice. The government of each country should devise and improve tenure arrangements, where various types of actors can be involved in all the processes of forest management such as planning, decision-making, implementation, and profiting.

1-2-2. Lessons learned from public participation in developed countries

Study of the experiences with the policies in the United States of America, New Zealand, and Japan provided some useful lessons:

- PFM is better than an exclusive and centralized management system if the aim is success in sustainable forest management, because this approach reflects local conditions with less cost than other approaches.
- Public participation in forest management is important for avoiding disputes and reaching agreement among various stakeholders.
- Complex planning processes make it difficult for people to understand the processes and prevent effective and timely participation in the processes themselves.
- Mutual communication is essential and serious discussion should be encouraged among stakeholders and specialists in order to make better decisions and plans.
- Informal participation supplements the formal participation process, helps to promote mutual understanding, and guarantees the people substantial opportunities to share in decision-making.
- Centralized planning systems are inconsistent with participation from the local people.
- Participation should be secured in the whole process of forest management, including appraisal, planning, implementation, monitoring, evaluation, and revising of plans.

1-3. Principles to elaborate the policy recommendations

We elaborated the policy recommendations to facilitate PFM in each country based on the following principles:

Principle 1: People's participation is very important to have success in sustainable forest management with lower transaction costs, as well to avoid social conflicts over forest utilization, which themselves increase management costs.

<Supplementary explanation>

Most stakeholders recognize that the forest should be managed in such a way that economic benefits, social justice, and ecological sustainability can be achieved without excluding other stakeholders. The main problem to overcome is the distribution of economic benefits among stakeholders such as local people, cooperatives, timber companies, and governments.

Principle 2: In the tropics, the concept of "local participation" is more useful today than the concept of "public participation."

<Supplementary explanation>

People's participation consists of "public participation" that refers to the participation of the larger society, including city dwellers and citizens. "Local participation" refers to the participation a smaller subset of society or the local community.

Principle 3: Our concern is to show what is an ideal forest management *system* in terms of local participation, rather than to indicate a concrete *procedure*.

<Supplementary explanation>

This strategy should be examined from the perspective of feasibility under present social and political conditions.

Principle 4: The "participatory top-down approach" should not be included in the strategy for PFM.

<Supplementary explanation>

The term "participation" in this context does not reveal the actual level of participation because the meaning of the term varies widely. The spectrum of participation could be put into three categories (Inoue, 2000) as follows:

a) the "participatory top-down approach" is a blueprint approach where residents are considered to be wage laborers, volunteers, fund providers, etc.

b) the "professionally-guided participatory approach" is a relatively flexible blueprint approach where drafts of the plan made by professional planners are examined by the residents and citizens and modified through discussion, workshops, etc.

c) the "endogenous bottom up approach" is a learning process approach where professionals just act as facilitators.

Formal institutional arrangements can be part of the endogenous bottom up approach when a customary law is developed in the local community, because the residents can manage their resources well by themselves. On the other hand, application of the professional-guided participatory approach seems to be reasonable when the customary law has not been developed or has already lapsed.

In any case the participatory top down approach should be avoided. This approach is usually considered by local people to be nominal and fake.

Principle 5: Both collective forest management and individual-based forest management are considered to be included in PFM for the time being.

<Supplementary explanation>

It is true that collective forest management by fundamental groups, functional groups, and the executive body of the formal village is the core of PFM. It can safely be said that individual- or household-based forest management on national land, called "peasant forestry" here, is also recognized as a form of PFM. On the other hand, peasant forestry on private land may not be regarded as a form of PFM but as "private forestry." In order to promote PFM, however, it seems better that we provisionally consider it to be a form of PFM.

Principle 6: The policy recommendations should be based on a recognition—which can be in common between developed and developing countries—of the importance and validity of participation.

<Supplementary explanation>

Key issues in community involvement (Salim and Ullsten, 1999) include the following: defining the community; willingness and ability to have dialogue; presenting scientific information in a form which can be easily understood; reconciling local, national and perhaps global interests; and political will to respect and enforce the conclusions. We believe that these ideas are appropriate for civil societies worldwide, including developing countries.

Principle 7: Diversity—of land ownership and main actors—is an important aspect of PFM in order for the local people to make good choices in accordance with the local conditions.

<Supplementary explanation>

We believe it is beneficial to develop strategies for facilitating PFM on national land, village land, organizational land, and individual land; and for facilitating PFM by individuals, functional groups, fundamental groups, and executive bodies of the villages. It is desirable that the policy of each country cover every combination of the land ownership with the main actors.

Principle 8: The planting of trees is likely to be practiced mainly by individuals; conservation of the forests should be done collectively by village communities and fundamental groups; and the government is likely to bear the responsibility for the protection, sometimes entrusting the local people with the daily activities.

<Supplementary explanation>

As mentioned in "Section 1-2. General findings," forest management consists of four activities: "tree planting," "harvesting," "conservation" and "protection." In terms of an economic incentive, individuals are most likely to prefer tree planting. In terms of opportunity cost for patrolling the forest, collective management may have the advantage in conservation.

Principle 9: The policy recommendations should be elaborated by making use of the results of our own research. It is not necessary for them to be so comprehensive as to cover all the aspects of PFM.

<Supplementary explanation>

Even though some of our strategies have already been pointed out, a local-specific strategy based on field studies must be in itself valuable.

Principle 10: Our policy recommendations should be elaborated from the viewpoint of the local people.

<Supplementary explanation>

Priorities for forest conservation differ when viewed from local, national, and global perspectives. All are legitimate and should be taken into account (WRI, IUCN and UNEP, 1992). We recognize that all stakeholders have a vested interest in conserving their forest, and that the process of facilitating PFM inevitably affects all vested interests to some extent.

Principle 11: The policy recommendations are to consist of several sets of objectives and necessary actions aimed at local people, the governments, non-governmental organizations (NGOs), and international organizations.

<Supplementary explanation>

One function of the strategy is linking the local reality to the national policy. In each action proposed here, the intended actors for each action are specified clearly.

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2. Laos

2-1. Findings

<Policy evaluation using two concepts>

Based on the Land Law enacted in 1997, Laotian land is classified into eight categories, such as land for agriculture, forest, and construction. Forest land is classified, based on the Forestry Law enacted in 1996, into the following five categories: 1) protection forest to conserve watersheds, to guard against soil erosion and to protect dense forests, etc.; 2) conservation forest to conserve wild animals and plants; 3) production forest to produce wood and non-wood forest products (NWFP); 4) regeneration forest, or the young fallow to be regenerated immediately; and 5) degraded forest land or barren land. Among these types, it is only on only degraded forest land that organizations or individuals can be granted the rights of utilization. On the other hand, protection, conservation, and production forest may be under the direct management of either local or national governments.

On land for which the right of utilization has been granted, organizations and individuals have the right to possess, use, profit, transfer and inherit. However, in a legal sense, the right to utilize land in Laos differs from the land ownership in capitalist countries in that buying and selling are prohibited. Nevetheless, the system works as if land is actually purchased and sold, and the duration of the rights is not stated definitely. As a result, in Laos the right to utilize land is in fact nearly equivalent to land ownership in capitalist countries. This is an important factor when considering the legal status of land, and has been the basis of participatory forest management systems that have been implemented since the early 1990s.

Joint Forest Management (JFM): Under this program, the local government manages forest in cooperation with the local people. However, villagers are not involved in the decision-making process in planning. They play the role of subcontractors for implementation of the plans made by the government, or take part in simply as laborers. We conclude that JFM can be regarded as "public forestry," mainly for the purpose of timber production on "governmental land" covered by rich natural forest.

Village forestry: Village forestry is defined as forest utilization and management by a village community or organized villagers inside a territory of the village. All forestry activities, including conservation, protection, planting, and harvesting can be permitted. Village forestry is not connected with land allocated to individuals and other juridical entities. We conclude that village forestry can be regarded as "functional group forestry," "fundamental group forestry," and "village forestry" for all forest-related activities on "village land."

NGO-supported Community Forestry: The Community Forest Development Project (CFDP) in Khammouane province is supported by the Japan International Volunteer Center (JVC), a Japanese NGO, and is active in 18 villages. Five of the 18 villages prepared simple forest management plans after the village boundaries were delineated and land-uses were mapped through a participatory approach. The villagers also developed rules to control forest management. We conclude that these projects can be regarded as "village forestry" on "village land" mainly for the purpose of conservation.

Tree planting by villagers: People living in the villages can plant trees such as teak and fast-growing species on allocated land. This activity is considered to be "peasant forestry" on "individual land" mainly for the purpose of commercial timber production.

Buffer zone management of National Biodiversity Conservation Areas (NBCAs): It is thought that NBCAs are included in conservation forest defined in the Forestry Law. NBCAs are mainly divided into two categories: total protection zones (TPZ) or core zones and controlled use zones (CUZ) or buffer zones. Local people are permitted to use the forest products in the buffer zones within certain limits. This utilization can be considered as "peasant forestry" on "governmental land."

<Customary land rights and forest/land management by local people>

Field studies in Vang Vieng district and Sang Thong district, both in Vientiane province, and in Phalanxai district of Phou Xang Hae NBCA, Savanakhet province identified the following facts.

- In Vang Vieng, the Lao Theung (specifically the Khamu) who live at middle altitudes of the mountains classify their land into several categories: dense forest (*patae bree kut*), old fallow (*patae reng kae*), young fallow (*patae reng kha nhom*), former swidden (*patae re tu*), present swidden (*patae re*), protection forest (*patae bree haksa*), cemetery (*patae raman*), utilization forest (*pataebree kui xay*), and house lot (*patae koun*), etc. The

Lao Loum who settle in the low lands categorize their land in a similar way.
- In Vang Vieng, customary private rights are permitted on young fallow, old fallow, firmer swidden, present swidden, and house lots, etc. in the village territory.
- In Vang Vieng, protection forest, cemetery, and utilization forest are managed collectively by the village community in accordance with governmental instructions.
- In Sang Thong, customary rights to use forest resources for individuals and families have been given within village boundaries.
- In Sang Thong, the villagers have conserved a few patches of communal forests for protection of the water catchment, prevention of soil erosion and maintenance of cemeteries. Villagers stated that these communal forests are very useful to them, although no clear rules and regulations exist relating to them.
- In both of Vang Vieng and Sang Thong, many forest products collected by the local people, consisting of wood and non-wood forest products, comprise their main cash income sources.
- In Phalanxai, part of a village territory overlapped with a new NBCA, but land allocation program was able to provide paddy fields to most of the people whose swidden agriculture was prohibited in the area of the NBCA.
- Especially for the poor, forest products are important in daily life.

<External constraints on local participation>

- Decrees or implementation ordinances to enforce the Forestry Law have not yet been issued.
- When converting from an existing land classification allowing use by the local people to official land under the Land Law and Forestry Law, important points are whether the present land/forest utilization and ownership are officially approved or not.
- Application of the official land use classification to the land, such as swidden land, customary conservation forest land and dense forest land, is said to be difficult.
- The swidden land at present includes the land under cultivation, fallow, and grass land. Officially, however, the land regarded as degraded at present is classified into degraded forest land, the land regarded as young bush fallow into regeneration forest, and the land regarded as old forest fallow into village-managed protection forest, conservation forest or production forest.
- The problem concerning the land to be classified into degraded forest land is every probability of afforestation on degraded forest land, although the local people are harvesting NWFP even from grass land.
- The problem concerning the land to be classified into regeneration forest (village-managed) is every probability to neglect the fact that the local people have customary tenure rights for all swidden areas, including the fallow land.
- Classification of swidden land into degraded and regenerated forest land, has been planned on the presupposition that swidden agriculture should be abandoned, even though most of the local people make their livelihood by swidden agriculture.
- The problem arisen from classification of felling-prohibited forest land and dense forest land into protection, conservation, and production forest is every probability that customary forest utilization is not permitted, even though the local people harvest forest products from the forest land covered with every vegetation.
- Criteria for demarcating the core zone and buffer zone in NBCAs are not clearly defined. The local people do not understand the restrictions of forest utilization in core and buffer zones.
- In reality, production forests, agricultural land, and even house lots are included in the buffer zone of NBCAs. This fact is inconsistent with the purpose of NBCAs to conserve biodiversity.

<Internal constraints on local participation>

- A lack of flat land suitable for sedentary agriculture and it's the land's low productivity force the local people to practice swidden agriculture on the degraded uplands.
- The non-agricultural economic sectors are not developed enough to provide adequate income sources, and the market system is also not well developed. As a result, local people are forced to depend on the forest products.
- The local people do not understand their rights and duties in managing forest in the village territory. As a result they sometimes do not enrich or regenerate the forest areas after land or forest allocation has occurred.
- Actual forest utilization by the local people does not change even after establishing NBCAs.
- Customary forest utilization cannot automatically be regarded as sustainable.

<Main actors for participatory forest management>

- Village communities or organized villagers are regarded as the main actors for Village Forestry programs, and can be considered as co-agents for Joint Forest Management.
- Village forest volunteers serve as executive bodies for patrolling the village forest for conservation and protection.
- Individuals or households are regarded as main actors for tree planting on degraded land.

2-2. Policy recommendations

<Objective 1: Secure the participation of local people>

Action 1-1: The government and NGOs should work together to establish the mechanism of a "green safety net" to secure the minimum level of forest conservation.

-->This action will provide the foundation for PFM in terms of forest conservation. A "green safety net" is the minimum level of regulation by the national government necessary to ensure sustainable forest management and forest conservation.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)d)

Action 1-2: The government should issue laws or decrees on forest classification, forest use planning, and land/forest allocation to integrate existing decrees.

-->This action will clarify the criteria for demarcation, the process of land/forest classification, and the responsibilities of national, provincial, and district authorities.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2)e)

Action 1-3: The government should ensure that forest classification is based on the actual utilization of the land where village territory overlaps with the area of "conservation forest," "production forest," and "protection forest" that are basically controlled by the government.

-->This action will reduce villager dissatisfaction and confusion that often result when new designation is made of the main forest areas controlled by the government.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(1)a,1(2)c, 1(5)d,)

Action 1-4: The government should revise policies to allow some "regeneration forest" to be allocated to villages or villagers, as is already done with "degraded land."

-->This action will resolve contradictions between the policy and the real land utilization.

The land to be designated as regeneration forest is already being utilized by villagers in the same way as land designated as "degraded land."
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(1)a,1(5)d)

Action 1-5: The government should clarify the criteria for demarcation among core zones buffer zones of the National Biodiversity Conservation Areas (NBCAs) and other village landss.

-->This action will help the local authorities to demarcate NBCAs, and to reach agreement with villagers on demarcation.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(1)c)

Action 1-6: The government should either draw official lines of demarcation between the buffer zones of NBCAs and village land, based on the actual land utilization by the local people, or draw tentative lines that should be reexamined in the near future.

-->This action will solve contradictions between existing laws/ordinances and the fact that agricultural land and house lots are already located inside buffer zones.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation1(3)d)

Action 1-7: The government should not implement PFM projects all at once in the country, but introduce pilot projects, using a step-by-step approach.

-->This action is reasonable under present conditions of human resources, budget, and organizational constraints.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)a,)

Action 1-8: International organizations and NGOs should support the government to implement the actions mentioned above.

-->This action will accelerate the process of reformation.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(3),1(5))

<Objective 2: Facilitate collective forest management>

Action 2-1: The government should legalize natural forest management by the village for the purpose of timber production, even though only local authorities are permitted to sell timber according to a 1999 prime ministerial decree.

-->This action will encourage village management of existing natural forest . However, the government should examine the management objectives, the method of promoting the ability to manage the forest, the appropriate scale of the forest management, and the use of revenues.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(3)c,1(5)d)

Action 2-2: The government should ensure local people's participation in the decision making process of the planning of natural forest management in Joint Forest Management (JFM).

-->This action will raise the people's will to participate in JFM.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local

people's participation 1(2)e)

Action 2-3: Local authorities and NGOs should help village communities to decide on regulations, to keep watch on forest utilization, and to punish offenders who violate the regulations.

-->This action will enable village communities to manage their forests, especially for the activities of conservation and protection.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2)d)

<Objective 3: Facilitate individual-based forest management>

Action 3-1: The government should not pressure villages to rush to demarcate between forest and agricultural land.

-->This action will give the local people a grace period for the transitiontoward the development of alternative land utilization and income sources. At the right time, the villages can propose tentative or formal demarcation.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation,1(3))

Action 3-2: Local authorities and NGOs should assist the people in experimentation to develop alternative land use techniques such as rotational agroforestry or array cropping systems involving trees in the uplands where demarcation lines are nominal and tentative.

-->This action will shorten the transition period from customary land use to officially-recognized land use. Clear demarcation can be completed at a later point in time.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(4)b)

Action 3-3: The government should legalize a system to support tree planting activities consisting of reforestation and afforestation by individuals or households.

-->This action will encourage local people to plant trees on allocated forest land for their own revenue. A profit sharing system (PSS) tested in trials by the Japan International Cooperation Agency (JICA) may be one useful system.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(1)a,1(5)d)

Action 3-4: The government should prepare a system to provide quality seedlings, assign roles to the public and private sectors, and improves access to degraded forest land.

-->This action will encourage the local people to plant trees on allocated forest land.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)d)

Action 3-5: The local authorities should establish good partnerships with villagers to promote a better understanding of their rights and duties in the buffer zones of NBCAs, and employ villagers to patrol the NBCAs.

-->This action will prevent the villagers from conducting illegal activities. Although the importance of this action has already been pointed out, continuous efforts are still necessary.

(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(4)d)

3. Vietnam

3-1. Findings

<Policy evaluation using two concepts>

Based on the 1993 Land Law and a 1994 decree, the government started to allocate land and forests to individuals, households, villages, organizations such as forest management committees, seed stations, enterprises, the Peoples Army, and schools. As a result, local people can now hold the right to use allocated land and forest. Alternatively, they may obtain a "red book certificate," for 20 years in annual crop production and for 50 years in perennial crop production.

The Vietnamese forests are classified into "production forest" for producing wood and non-wood forest products, "protection forest" for watershed protection, and "special-use forest" for biodiversity conservation and tourism, in accordance with the Law of Forest Resource Protection and Development enacted in 1991. PFM systems are embedded in tree planting and conservation programs in each forest category.

Protection agreement in ecological rehabilitation zone of special-use forests: The Special-use Forest Management Board (SFMB), having a red book certificate, concludes protection agreements with households, which acquire "green book certificates" are prohibiting them from intercropping but permitting them to plant trees. As for tree planting (Plantation Program), each household earns 1-2 million Vietnamese dong per hectare and have an obligation to protect the planted trees for three years on 2-4 hectares of forest land, on average. As for natural regeneration (Protection Program), each household annually earns 40,000-50,000 Vietnamese dong per hectare for the protection of 10-20 hectares of forest on average. The systems are regarded mainly as "public forestry" on "national land" for protecting the forests.

Management of buffer zone around special-use forests: In order to decrease the pressure on special-use forests, the government provides various assistance to holders of red book certificates, such as extension of agricultural and forestry technology and assistance to plant fruit trees. These systems are regarded mainly as "peasant forestry" on "national land" for protecting the forests.

Protection agreement in critical protection forests: People can conclude a protection agreement similar to that in the ecological rehabilitation zone, with the Management Board for Protection Forests (MBPF) having a red book certificate, and can acquire a green book certificate. They are permitted to introduce agroforestry systems and to collect non-wood forest products and fuelwood. The systems are regarded as "public forestry" on "national land" for protecting the forests.

Tree planting on allocated land in production forests: Individuals, households, and organizations can be allocated land and obtain red book certificates in production forests. The land area allocated to them varies from place to place. For example, each household gets 3-5 hectares of land on average in a mountainous region, while there are households getting more than 50 hectares in other regions. These activities are regarded mainly as "peasant forestry" or "functional group forestry" on "national land" for the purpose of producing timber.

<Customary land rights and forest/land management by local people>

Field studies, in "Son Duong" district, Tuyen Quang province, parts of which are designated as buffer zones in Tam Dao National Park, and "Mai Son" district in Son La province, identified the following facts:

- It seems that community forests or the forests managed in a traditional manner based on communal relationships do not exist, because local people, especially the Kinh, may have forgotten the customary forest management system.
- In Son Duong, the most important forest product is firewood and less important ones are birds, bats, squirrels, medical plants.
- In Son Duong, the poor collect firewood every day in the mountains; the middle class collect

it three or four times a week; the rich have already stopped collecting it, and substitute branches from the plantation forest or fruit trees and residues of rice or maize for firewood.

- In Son Duong, most of the people do not recognize that they live in the Buffer Zone of the National Park and they do not know the location of the park borders. Nevertheless, they understand the concept of a national park where some practices are prohibited such as tree felling, swidden agriculture, and hunting.
- In Mai Son, timber is taken from natural forests for building houses, and making beds, cupboards, tables, chairs, etc. Firewood is taken from natural and planted forests or gardens for cooking and heating. Bamboo is taken from natural and planted forests as building materials. Other forest products include bird and animal, rattan, bamboo shoots, and medical herbs.
- In Mai Son, dependence on the forest products varies by ethnic group. The Kinh depend little on natural forest products; the Muong and Thai usually collect timber and firewood; the Mong, Kho Mu, and Xinh Mun depend almost entirely on forest products.

<External constraints on local participation>

- Bureaucracy and centralized top-down decision making at the local level can be obstacles to participation of the local people.
- Existing programs for promoting participation appear to be too rigid. For example, there is no room for local people to discuss the contents of contracts for protecting the forest and promoting reforestation with the government or Park Office.
- Although forest should be classified into three categories, there is no authentic criteria and indicators for forest classification.
- The budget and human resources to implement the program of land/forest allocation are limited. As a result, the local authorities can not conduct this work effectively.
- Local authorities have not paid attention to the fact that for local people swidden agriculture has been essential during transitional periods.
- Arrangements and agreements on jurisdiction between the local authorities and national government seem to be insufficient.
- There is no effective system or program to promote PFM by fundamental groups and villages, even though villages can undertake contracts to protect natural forest in national parks.
- The national park system conflicts fundamentally with the livelihoods of local people.

<Internal constraints on local participation>

- People believe that the collection of forest products is legal even though it is illegal in ecological rehabilitation zones of special-use forests and critical protection forests.
- The custom of exchanging ideas and experiences is not mature, which makes it difficult for people to acquire new ways of thinking and doing, such as legitimate PFM.
- The linkages among households have been very loose and group of households have not worked together to accomplish common goals.

<Main actors for participatory forest management>

- The local authority at the sub-district (commune) level is the unit responsible for implementing state policy.
- Traditional village communities (*thon*) play very important roles in land use, production activities, daily life, etc.
- Collective associations such as women's unions, youth unions, peasant unions, and ex-servicemen's unions have the potential to play roles in PFM, because these associations are reliable.
- Households appear to be advantageous for development and production because the government has issued may policies to encourage households to contribute to national economic development.

3-2. Policy recommendations

<Objective 1: Ensure the participation of local people>

Action 1-1: The government and NGOs should work together to establish the mechanism of a "green safety net" to secure the minimum level of forest conservation.

-->This action will provide the foundation for PFM in terms of forest conservation. A "green safety net" is the minimum level of regulation by the national government necessary to ensure sustainable forest management and forest conservation.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)d)

Action 1-2: The government should clarify the authority and responsibilities of local authorities and national government.

-->This action will encourage collaboration for implementation of various programs between the local authorities and national government.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2)c)

Action 1-3: The government should clarify the criteria and indicators for forest classification.

-->This action will enable the local authorities to conduct forest classification properly.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2)c)

Action 1-4: The government should lead the local authorities to secure the local people's participation in land use planning at the commune level.

-->This action may overcome local bureaucracy and will transform the centralized top-down decision making process to a bottom-up one.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)d)

Action 1-5: The village community should take initiative in planting trees along roads, promote the use of improved cooking stoves, constructing waterways, etc.

-->This action will promote PFM indirectly.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation1(1)a, 1(1)d)

<Objective 2: Facilitate collective forest management>

Action 2-1: The government should issue a decree or creates a program to promote community forestry that is practiced by village communities, especially in protection forests and special-use forests.

-->This action will provide a legal basis for existing activities to harvest forest products or protect the forests by village communities.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)d)

Action 2-2: Village communities (*thon*) should settle regulations to manage the forests by themselves in accordance with the national criteria for sustainable forest management, in cooperation with

existing women's unions, youth unions, peasant unions, etc.

-->This action will enhance the autonomy of the village in terms of sustainable forest management, in ways that are not contradictory to national policy.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2)d,1(5)d,)

Action 2-3: Village communities should contract with national park offices for sustainable forest management under the local authority of the sub-district (commune).

-->This action legalizes the activities of forest management by local people.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2) e)

<Objective 3: Facilitate individual-based forest management>

Action 3-1: The government should accelerate efforts for land allocation.

-->This action will encourage local people to plant trees on the allocated land.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)d)

Action 3-2: The government should indicate the criteria for sustainable land/forest utilization.

-->This action will reduce unsustainable land/forest utilization.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2)c)

Action 3-3: The government should reinforce agricultural and forestry extension activities.

-->This action will allow the criteria mentioned in Action 3-2 to take root at the household level. Although the importance of this action has already been pointed out, continuous efforts are still necessary.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(2)c)

Action 3-4: The government should encourage local authorities and collective associations such as women's unions and youth unions to take part in activities producing tree seedlings.

-->This action will allow local people obtain seedlings more easily.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 2d)

Action 3-5: The government should develop appropriate land use techniques for sloping land such as alley cropping systems in combination with trees.

-->This action will help local people to improve their livelihood as well as conserve critical land without giving up the swidden agriculture, especially in the remote and upland areas. Although the importance of this action have been pointed out for more than a decade, continuous efforts are still necessary.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(4)b)

Action 3-6: The government should allocate larger budgets for tree planting in critical and very critical protection forests.

-->This action will give more incentive to local people to take part in protection activities.
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(5)d, 1(2)c)

Action 3-7: The government should officially permit local people to collect fuelwood and NTFP in return for concluding protection agreements such as "protection agreements in ecological rehabilitation zones of special-use forests" and "protection agreements in critical protection forests."

-->This action will provide more incentives to the local people. In this case, the activities by the local people can be regarded as "conservation," something which is preferred by them, rather than "protection."
(Refer to Legal and Administrative measures sub-theme's appendix/ guidelines for ensuring for local people's participation 1(1)d, 1(3)c)

Legal & Administrative Supporting Measures Sub-theme[14]

Draft Principles on Local People's Participation

Drafted By
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1. - Findings

(1) Attitudes toward establishing a new convention on forest conservation

Many international instruments relevant to forest conservation already exist, but consensus has not yet been reached on adopting a "Forestry Convention." Discussions continue internationally.

- Several countries have taken the position that already enough international instruments exist and that their effective implementation should be the main agenda of international society. This position emphasizes compliance with existing instruments already adopted by many countries instead of establishing a new convention on forest conservation.
- Other countries emphasize the necessity of establishing a new international legal instrument to cope mainly with issues of forest conservation. Proponents of this approach point out that differences in the purposes of the existing international instruments can cause conflicts among the agreements.

(2) Characteristics of measures that deal with nature conservation issues

As mentioned, many instruments that in some way relate to forests already exist—their common characteristic is some reference to nature conservation. Almost all of them require contracting parties to take account of the environmental values in the decision-making, implementation and evaluation process relating to governmental policies.

- The various types of eco-systems are too diverse to develop an objective indicator to evaluate whether a forest is managed in a sustainable manner or not at the present. Hence, the processes of nature conservation should make use of the "Precautionary Principle" in order to avoid irreversible changes to ecosystems.
- In using the "Precautionary Principle," the environmental, economic and social aspects should be considered.
- In order to consider these three aspects within the forest management process, an environmental impact assessment system is required. Moreover, several requirements for sustainable forest management under the "Precautionary Principle" have been pointed out, for example, institutional coordination, international cooperation, research, capacity-building and information disclosure.
- Public participation, especially the participation of local people, is recognized as an important principle. In the case of forest conservation, the same process is required in order to manage forests in a sustainable manner.

(3) Measures of public participation in international treaties

There is recognition of the necessity of ensuring public participation in international society through legal and administrative measures. As mentioned in Agenda 21, the Rio Declaration and other international instruments, public participation should be secured and respected to ensure the efficiency of the system of environmental protection and to protect basic human rights. There are several

[14] This paper is a draft report intended only for the IGES-NOUL Workshop on Forest Conservation Strategy on 2-3 August. Please refrain from citing it for any purpose.

elements to be dealt with in the process of participation. In particular, two major elements should be considered.

- First, the composition of participants can be an important element. The term "public" includes four categories: the general public, the public affected or concerned, the local community or local people, and indigenous people. Particularly, the role of local people and indigenous people is recognized as crucial in nature conservation. Some international conventions have tried to clarify guidelines to ensure the local people's participation. The Ramsar Convention on wetlands includes many experiences in studying local people's participation.

  The reason why local people and indigenous people play such an important role can be justified out on several grounds. Concerning environmental aspects, the difference in ecosystems between areas leads to the necessity of management systems suited to each ecosystem. In order to develop such a management systems, decentralization of management systems is required. In a decentralized management system, local people play an important role in order to ensure the effectiveness of regulations concerning forest conservation. Regarding the economic aspect, local people and indigenous people receive benefits directly from the forest, and they are often the first to bear the cost of forest conservation. They often have knowledge about the most effective and sustainable utilization of forest resources that could aid in yielding the maximum economic benefits. Moreover, this leads to issues of human rights, in particular, for local and indigenous people who depend on forest resources for their livelihood. In this case, deforestation or forest degradation threatens their lives and culture - a violation of human rights. These are the social aspects of forest management. Clearly, local and indigenous people's participation should be respected and ensured.
- The second element is the level of participation. There are several steps to participation in the process of forest management, including access to information, participation in decision-making, involvement in implementation and access to means of redress. In Europe, the Arhus Convention (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters) was adopted as a regional treaty in order to guarantee these important steps. An environmental impact assessment system can also play an important role in measures for ensuring participation in several international treaties.
- Other elements to address later include the accountability of local and indigenous communities, the demarcation of rights and responsibilities of local and indigenous communities and people, the costs and benefits of public participation, and stable funding for public participation.

(4) Experiences in target countries

Experiences in China, Indonesia, Malaysia, Papua New Guinea, Thailand and Vietnam revealed the following lessons:

- Importance of a meaningful consultation process with local people and ensuring benefits for them - When a forest development project starts, project proponents should consult with local people from the early stages. In order to ensure it, advice from experts and the right to consult secured by law should be provided. Moreover, small-scale logging industries managed by local people should be encouraged and concessions should be agreed on under equal relationships between a company and the local people in order to ensure their economic benefit. For the purpose of ensuring equality, advice from experts is indispensable. In case of the government permitting concessions, it is necessary to involve local people in the decision-making process in order to consider their benefit.
- Importance of cooperation among the central government, local government and local people - Some countries adopted a centralized political system. In these counties, the central governments have begun to enact policies to ensure local people's participation, but implementation is weak due to the lack of a general system supporting and ensuring participation. Besides, local governments sometimes interpret policies different from the central government to protect forests

in order to deal with special problems, such as poverty, in each area. Moreover, local people have inadequate information and forest conservation awareness is sometimes very low. This also causes the ineffectiveness of forest conservation policies. Therefore, it is necessary to disclose information to people at least relevant to forest conservation and management systems in order to create awareness. The central government should seek building cooperation with local governments and local people in order to implement their policies effectively by ensuring their participation. According to experiences in a country with a decentralized political system, the central government should support the local government in order to ensure local and indigenous people's participation.

- Importance of recognizing the rights of local people and a dispute settlement mechanism - Many conflicts have arisen at the site level due to multiple systems within a government. Among government organizations concerned with forests, there are many differences of ideas on forest management, hence coordination and cooperation among these organizations is necessary. These organizations can often ignore the current situation and problems at the local level and it becomes another source of conflict. Therefore, in order to ensure their participation in the forest management process, it is necessary for governments to recognize local people's needs and problems, and also to recognize the rights of local people, including tenure rights, to earn a living. An environmental impact assessment system can help to minimize conflicts. It is necessary, not only to avoid disputes, but also to build a dispute settlement mechanism in a fair and equitable manner.

2. - Recommendations

(1) Compliance with existing international instruments

There are many existing international legal instruments relevant to forest conservation, yet there is still not consensus for establishing a new international convention on forest conservation. Therefore, it is necessary to consider measures on forest conservation at the international level while referring to three points:

- It is important to enhance compliance mechanisms on existing instruments.
- Coordination among these instruments and dispute settlements will be important in existing compliance mechanisms.
- When developing new compliance mechanisms it is important to keep in mind the differences in the characteristics of instruments that exist for nature conservation compared with instruments concerned with other issues.

(2) Ensuring local people's participation

Pubic participation is indispensable for the sustainable use or management of natural resources. It is clear that it has become one of the legal principles in some international instruments, but the specific contents of the principle depends on the characteristics of the natural resources in question. Research has revealed several important principles of public participation as follows:

- The participation of local people and indigenous people should be respected and ensured.
- Forest management systems should adopt the "Subsidiary Principle," a general principle of governance that means making and implementing decisions at the lowest effective level of government or organization. Not only central governments but also international treaties and organizations should support local people and indigenous people's participation. The former should act in a subsidiary role and as a safety net when problems cannot be solved by local and indigenous people themselves.
- In the case of considering local people's participation in forest management, guidelines which in Resolution VIII.8 adopted at COP 7 of the Ramsar Convention on wetlands are useful here. Key principles on local people's participation are as follows (detailed guidelines are described in the appendix):
    1) Incentives are essential for local and indigenous people's involvement and sustainable management. Everyone must benefit in the long term.
    2) Trust among stakeholders is essential and must be developed.

3) Flexibility is required.
4) Knowledge exchange and capacity-building are fundamental.
5) Continuity of resources and efforts is important.
6) When involving local and indigenous people in the participatory process, those who facilitate or coordinate such efforts should consider each local community's situation.
7) The process of local people's participation should be evaluated when complete.

- Based on learned experience, several actions are necessary to ensuring local people's participation:
  1) Ensure their economic benefit.
  2) Provide advice from experts and the right to consult with the concession company should be secured by law.
  3) Disclosure of information to people at least relevant to forest conservation and management systems in order to create public awareness.
  4) Support from the central government for the local government in order to ensure local and indigenous people's participation.
  5) Coordination and cooperation among these organizations.
  6) Recognition of the rights of local people, including tenure rights, to earn a living relevant to their culture.
  7) Not only avoid disputes but also build dispute settlement mechanisms in line with a fair and equitable manner.

(3) Necessity of dispute settlement mechanisms

Concerning dispute settlement, the following components should be considered to design a mechanism for solving conflicts over forest management:

- In order to prevent conflicts, it is important to clarify and guarantee basic rights of indigenous people by law, give tenure status over land to the local community, and provide opportunities to participate in decision-making processes at various stages, in particular at the early stage. This process should also be transparent. The introduction of a system of environmental impact assessments will be a useful method to improve the participation of local people.
- Once conflicts occur, a neutral and independent mediator with no vested interest in the case or the parties should be involved in the conflict solution mechanism. The rights of people should be clearly defined and reliable in court.
- Most of the these elements have been mentioned and discussed widely at international forums, although at national or sub-regional levels, the importance of these elements has been recognized, few concrete measures have been taken to realize these concepts.

Appendix

Guidelines for ensuring local people's participation

(This draft is made based on guidelines developed by Ramsar Convention. Almost all of them are same with the guidelines and it should revised based on discussion of this workshop)

1.Principles

(1) Incentives for local and indigenous people's involvement and sustainable management are essential; everyone must benefit in the long term.

a. Local and indigenous people benefit from participatory management arrangements through the maintenance of sustainable livelihoods.

(See Recommendation of Participatory Forest Management

-→ Action1-3, Action1-4, Action3-3(Laos)

-→ Action1-5(Vietnam))

b.Other benefits of participatory management for local and indigenous people include:

i. maintaining spiritual and cultural values associated with a forest,

ii. more equitable access to forest resources;

iii. increased local capacity and empowerment;

iv. reduced conflicts among stakeholders; and

v. maintaining ecosystem functions.

c. Government agencies benefit from participatory management arrangements through:

i. improved ecosystem viability;

ii. reduced management costs;

iii. assistance with monitoring and surveillance;

iv. fewer infringements; and

v. enhanced social sustainability and quality of life for communities dependent on forests.

d. Incentives such as tax concessions, subsidies, conservation easements, special arrangements for licenses, increased market access, financial compensation schemes, increased infrastructure, and development activities can, if appropriately structured, further sustainable management objectives when directed to local and indigenous stakeholders.

(See Recommendation of Participatory Forest Management

-→ Action 1-5, Action3-1, Action 3-7(Vietnam)

(2) Trust among stakeholders is essential and must be developed.

a. Development of trust among stakeholders takes time, effort and attention. Elements that contribute to building trust include:

i. a willingness to seek joint objectives cooperatively;

ii. mutual effort;

iii. mutual respect;

iv. open and ongoing communication;

v. clear and realistic expectations about process outcomes;

vi. satisfactory and timely completion of agreed tasks;

vii. follow-through on commitments; and

viii. participation of all sectors of the community.

b. Participatory management works best when stakeholders' interests are openly stated.

c. Clearly stated terms of reference and objectives assist in the establishment of management partnerships.

(See Recommendation of Participatory Forest Management

-→ Action1-5, Action3-5 (Laos)

-→ Action1-2,Action1-3, , Action 3-2, Action3-3 (Vietnam))

d. Participatory management processes require strong facilitation that builds trust among stakeholders. Independent brokers with strong leadership skills are most effective. (Often this is a role for NGOs).

(See Recommendation of Participatory Forest Management
-→ Action2-3(Laos)
-→ Action2-2, (Vietnam))

e. Appropriate legal or policy frameworks (such as the right to organize, legal recognition of NGOs, conservation easements, etc.) assist in the establishment of participatory management arrangements.

(See Recommendation of Participatory Forest Management
-→ Action1-2, Action2-2, (Laos)
-→ Action2-3 (Vietnam))

f. Forums, study groups, and workshops can be useful means to increase shared understanding of principles of sustainable forest management and the value of resources being conserved or sustainably used.

(3) Flexibility is required.

(See Recommendation of Participatory Forest Management
-→ Action1-8, Action 3-1(Laos))

a. There is no single level of local and indigenous people's involvement that fits all contexts.

b. There is no one approach or recipe that will make the process work in all contexts.

c. For participatory management regimes to be successful, it may be necessary to meet basic development needs in the process of pursuing sustainable management objectives.

(See Recommendation of Participatory Forest Management
-→ , Action3-7 (Vietnam))

d. The "learning-by-doing" approach (i.e., ongoing assessment of process and outcomes) allows for re-orientation as needed.

(See Recommendation of Participatory Forest Management
-→ Action1-6 (Laos))

(4) Knowledge exchange and capacity-building are fundamental.

a. Government agencies often require capacity-building in participatory management approaches, such as those specified below for stakeholders.

b. Stakeholders often require capacity-building in:

i. establishing and maintaining appropriate organizations;
ii. effective relations with government agencies;
iii. negotiating and contributing to decision-making;
iv. technical aspects of sustainable forest management;

(See Recommendation of Participatory Forest Management
-→Action3-2 (Laos)
-→ Action3-5 (Vietnam))

v. monitoring of forest ecology and identifying changes in ecological character;
vi. evaluation of participatory processes; and
vii. elaboration and design of project proposals to obtain funding.

c. Local environmental knowledge can make a significant contribution to forest conservation strategies, especially when blended with the best available science.

(See Recommendation of Participatory Forest Management
-→ Action2-1 (Laos))

d. Engaging local stakeholders in site monitoring and process evaluation makes a valuable and substantive contribution to achieving participatory conservation objectives.

(See Recommendation of Participatory Forest Management

-→ Action 3-5 (Laos))

e. A multidisciplinary approach utilizing biological and social science expertise is vital for establishing participatory management regimes.

f. Site monitoring can take advantage of a "marginal cost" approach - technical experts may be engaged, and established facilities (such as university laboratories) may be used at minimal cost.

g. Networking mechanisms such as regular meetings, newsletters, and radio programmes fulfil information exchange and educational purposes.

h. Basic concepts of sustainable forest management, stewardship principles and ecological values can be conveyed through the educational curriculum of local schools. Centres for conveying information on ecological value to local people can:

i. catalyze active and informed participation of local and indigenous people;

ii. serve as demonstration sites for sustainable forest management;

iii. support formal, informal and non-formal educational programs that involve a wide range of stakeholders;

iv. help to bring local and indigenous people's concerns to the attention of decision-makers; and

v. provide information and advice on forests and their management.

(5) Continuity of resources and effort is important.

(See Recommendation of Participatory Forest Management
-→ Action1-8(Laos))

a. Establishing participatory management takes time.

(See Recommendation of Participatory Forest Management
-→ Action1-7(Laos))

b. As with any management regime, participatory management may never be fully self-financing.

c.Financing through donor and/or government channels is important for sustainability.

(See Recommendation of Participatory Forest Management
-→ Action3-6 (Vietnam))

d. Appropriate legal and policy frameworks at national and local levels contribute to continuity.

(See Recommendation of Participatory Forest Management
-→ Action1-3, Action1-4, Action2-1, Action 3-3, Action 3-4(Laos)
-→ Action1-4, Action2-1, Action2-2 (Vietnam))

e. High-level political support, ideally from a number of the appropriate Ministries, is important for maintaining government commitment to participatory management regimes.

2.When involving local and indigenous people in the participatory process, those who facilitate or coordinate such efforts are required to:

a. Ensure that all stakeholders understand the role of the facilitators/coordinators.

b. Regularly verify that all stakeholders agree upon the basic objectives of the initiative.

c. Raise awareness of forest conservation and sustainability issues. Involve local and indigenous people in preparing and running awareness-raising activities.

d. Ensure the involvement of influential individuals in the community and all sectors of the population, and especially the women and youth of the community.

-→ Action 3-4 (Vietnam)

e. Encourage stakeholder ownership of the process and participatory management arrangements, ensuring that no key participants are excluded.

f. Involve and strengthen local organizations and traditional structures that represent different stakeholders among local and indigenous people. Assist in the establishment of such organizations if they do not already exist.
g. Develop local capacity, including organizational and negotiating skills, keeping of records and financial accounts, and conflict management, and provide (as necessary) the meeting place, telephone access, basic equipment, and transportation.
h. Ensure that persons acting as facilitators and coordinators are properly trained in participatory assessment and planning techniques and possess the necessary facilitation skills.
i. Work with public-sector stakeholders to build capacity for developing and administering participatory management processes.
j. Ensure that key parties have a clear understanding of each other's needs, responsibilities and limitations.
k. Ensure that local and indigenous people learn participatory assessment and planning techniques so that they can be applied to other community concerns.
l. Ensure that all commitments are met.
m. Develop a site monitoring and process testing programme using local resources to check progress.
n. Ensure that tasks taken up by various stakeholders are within their capabilities.
o. Keep funding agencies aware of issues and progress of participatory management approaches.
p. Establish networks among communities involved in forest management and encourage regular contact and sharing of experiences.
q. Support the application of traditional knowledge to forest management including, where possible, the establishment of centres to conserve indigenous and traditional knowledge systems.

3.The following list is a brief, non-exhaustive checklist of indicators that can assist to measure the extent of local and indigenous people's involvement.

(1) Incentives

a. Local and indigenous people have achieved an economic stake or other interest in the sustainable management of forest resources.
b. The government agency has stated policies supporting participatory management.
c. Appropriate legal and financial incentives for participatory management are in place.
d. A more equitable sharing of benefits among stakeholders has resulted from the participatory management process.
e. Stakeholders have expressed satisfaction with their involvement in the process.

(2) Trust

a. There is a clearly stated and widely known policy or legal document that makes a commitment to involving local and indigenous people.
b.All key stakeholders (particularly government) acknowledge participatory management as legitimate and desirable.
c. Local and indigenous people are now involved in making substantive decisions affecting the forest resource use and management.
d. Local organizations to advance participatory management are respected within the community.
e. Representatives of the local and indigenous people are truly representative and accountable to them.
f. There are resource use and participation rules which are appropriate to the local situation.

g. A management agreement exists between stakeholders (oral or written, formal or informal).
h. The management agreement has clearly defined boundaries and membership.
i. The management agreement specifically defines stakeholders' functions, rights and responsibilities.
j. The management agreement has been approved by at least the resource-using stakeholders and key decision-making groups.
k. Parties to the agreement meet their commitments.
l. Non-compliance with approaches, rules, rights, and responsibilities outlined in the management agreement is deemed to be at an acceptable level.
m. Any system of graduated sanctions for infringement of rules has been agreed upon by all key parties.
n. There is evidence that resource management controls are being implemented.

(3) Flexibility

a. There is the potential for collective modification of the rules relating to resource use by those affected.
b. There are "nested" management units (different bodies at different levels).
c. There is evidence that the local and indigenous people can influence the speed and direction of change in relation to the resources with which they are concerned.
d. Facilitators/coordinators practice "learning by doing" and adaptive management.

(4) Knowledge exchange and capacity-building

a. There is an awareness among stakeholders of new management approaches, rules, rights, and responsibilities.
b. There is a two-way flow of information and communication between local and indigenous people and relevant government agencies.
c. Information reaches local and indigenous people in a timely and accurate manner, and in a form which is readily understandable.
d. Local and indigenous people participate in site monitoring and in evaluation of the participatory process.
e. There is evidence of respect by key government agencies for local human systems and local ecological knowledge.
f. Stakeholders are demonstrating necessary skills and empowerment (e.g., capacity to make decisions, monitoring skills, etc.).
g. Measurement methods, established by the stakeholders, demonstrate and quantify the degree to which local participation was intended, and actually has improved or conserved the recognized "functions and values" of the forest and its sustainable management.

(5) Continuity

a. There are one or more organizational structures that facilitate local and indigenous people's involvement (e.g., a council, management body, women's group, etc.).
b. A random sample of local and indigenous people are able to identify the community's role in forest management, and the individuals who are directly involved can accurately describe the objective of their involvement.
c.The government agency and its staff have a demonstrated commitment to participatory management, and can accurately describe the objective of local and indigenous people's involvement.
d.There is an appropriately long-term source of funding for ongoing participation and resource management.
e. Local and indigenous people have provided in-kind support (time, labour, traditional knowledge and expertise) to implement the participatory management agreement.
f. Conflict management mechanisms exist, and there is an appeals process in case of conflicts within the management partnership.

g. There is integration between local forest management and management of the entire catchment.

A Summary of Deforestation in Cambodia
(A Focus on Ratanakiri Province, Northeast Cambodia)

Drafted by Mr. Bun Hom Oun Many

Introduction

Forest in Cambodia tend to be located more in the highlands and border areas rather the in the lowlands where paddy rice cultivation is the main land use. The 1992 Earth Summit report described Cambodia as the potential " Green Lung " for SE Asia. However the alarming rate of deforestation since 1992 has challenged this view. The World Bank has estimated that if current rates of deforestation continue, the forests in Cambodia will be commercially logged out in 2003.

An Overview of Ratanakiri Province

- Ratanakiri borders Laos and Vietnam, therefore of importance for trans-boundery biodiversity conservation. But this also makes the province vulnerable to the exploitation of the forest by the neighboring countries.
- The forest in the province remains relatively high although this is rapidly diminishing.
- The province is an important watershed area (Sesan and Sire Pork rivers).
- Low population density. Total population 90.000. 75% of the total number is made up from eight ethnic minority groups. The groups are marginalised from the dominant decision making processes of Cambodia in terms of ethnicity, language, livelihood practices and geographic position.

Root Causes of Deforestation

Reasons related to poverty

- Population growth at 3% the population will be double in 25 years. The demand for arable land will place great pressure on the forest.
- Demand for fuelwood and charcoal to supply the urban population.

Other Reasons

- **Civil War**- the forests were exploited to fund both sides in prolonged civil war between government force and the Khmer Rouge (Global Witness estimated that the trade between Khmer Rouge and the timber companies of neighboring countries generated between US$ 10 million - US$ 20 million per month). In June 1994 the Government decide to give a monopoly on timber export to the Ministry of National Defense as part of strategy to use timber revenues to finance the civil war.
- **Political Rivalries-** 1993 and 1998 election was largely funded through logging. Local military and political elite also used timber to fund their power base.
- **Corruption-** Corrupt individuals at every level of society earn a lot of money from the timber trade.
- **Military Control-** Cambodian Military Armed Forces have been left in control of much of forest. Revenues from the military logging usually by pass the national budgets therefore do not contribute to national reconstruction.
- **Investment**- As a result of the above factors, genuine and long-term sustainable investment has lost confidence. Unethical investors looking for short-term profits have become prevalent.
- **Regional Dynamics-** Thailand and Vietnam have played a large part in deforestation process. They both suffered high rates of deforestation between 1970's and 1980's and turned to Cambodia to satisfy their demand for timber.
- **Over Allocation of Land-** The RGC has allocated over 63% of forest lands as forest concessions to international investors but there are few producers ensuring that such allocation is being done

in a rationale manner, incorporating social, economic, environmental or cultural considerations with consultation with local villagers.

- **Limited Institutional Capacity-** Limited capacity of central institutions to plan, manage, monitor and enforce the laws in the forest sector are severely handicapped by interventions of powerful people and the predominance of the military in illegal harvesting, transportation, processing and exporting of forest products. In addition the legal policy and regulatory frameworks are complex and the institutional structures are still bureaucratic and top-down with low number of trained personnel and scarce funds are all a serious constraint to the forest and land management.
- **Inadequate Development and Administration Funds-** the RGC has inadequate budgetary funds for rural development to maintain military security or to pay salaries at sufficient levels.

Deforestation in Ratanakiri

- **Between 1980-1993-** The State of Cambodia exploited the forest to finance reconstruction and basic infrastructure, therefore the forest in Ratanakiri began diminishing.
- **Political Revelries-** 1993 and 1998 elections were largely funded through logging.
- **After 1993 elections-** economic liberalization policies led to a dramatic increase in anarchic and illegal logging and as a result of exponential increase in deforestation.
- **In 1995-** The RGC granted a 50-year concession for 1.4 million hectares to an Indonesian logging company, Macro Penin. However the concession failed to begin operations due to continued insecurity in Cambodia, leaving open swathes of forest for those wishing the advantage of it.
- Logging operations controlled by local police and military and exported illegally from Ratanakiri to neighboring countries during 1997-98.
- Illegal loggers and rattan collectors into Vireakchey National Park, many encroaching directly from neighboring countries.
- The forests were exploited outside coupes of without considering management plan by HERO TAIWAN Company 60.000 hectares awarded in 1998 and also Pheapimex-Fuchan awarded 350,000 hectares in 1998.
- Agriculture land concessions for oil palm and coffee plantation and small scale speculators also reduces forest area and encroaches on customary lands, forcing local people to push into new forests with their swidden fields.
- Promotion of individual land titles and cash crop has resulted in rapid deforestation especially along the roadsides since early 2000.
- The swidden cultivators in Ratanakiri take the blame for the problems of deforestation in the province. Researchers believe that the swidden system has been largely sustainable due to the relatively low population density, abundant lands and forests, and richness of volcanic soil. The evidence indicates that its impact is small. However, from day to day the balance of village swidden systems and forests is beginning to change rapidly due to current political and economic conditions.

  Therefore the swidden becomes a less sustainable system when the forest resources become scarce or when people are relocated from their own customary land.

Recommendations for Royal Government Responsibilities

- The Royal Government of Cambodia (RGC) should continue to show political will to regulate and monitor the forestry situation with strong measures, allowing the balance of state interests, business interests and local community interests with a master plan appropriate, sustainable and equitable development.
- The RGC should allow for transparency and consultation with decisions regarding the forestry sector, and provide for participatory processes that actively engage in a wide range of stakeholders especially with local communities.
- The RGC should ensure that it takes into account all social, environmental and economic costs

when considering the benefits of any land for forest development.

- The RGC should ensure compatibility of land use allocation with the local communities who use of needs access to the same land or resources on that land.
- The RGC should call and immediate halt to operations within concessions on indigenous lands.
- The RGC should recognize that provinces need to be involved in land use planning, as a mutual land use planning cannot be done at national level alone.
- The RGC should recognize the rights and ability of local communities to take on management responsibilities of land and forest and to work towards institutional and policy reform of cover and safeguard these community rights.
- The RGC should continue to work towards the prevention of illegal and unsustainable logging activities, through for example the maintenance of log export ban and the terminations of concessions operating illegally of in contravention to their management plans.

The RGC in corporation with IOs/NGOs and UN organizations should continue and provide more support to local communities on appropriate techniques for more and productive sustainable swidden agriculture.

Participation of Farmers in Agro-forestry Systems for Improving Landuse and Sustainable Development in the Training and Model Forest (TMF) at Santhong District, Vientiane Municipality

Drafted by Bounthene Phasiboriboun

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I. Introduction

1. Background of the study area

In 1994 the government of Laos allocated an area in Sangthong District to the Department of Forestry of the Faculty of Agriculture and Forestry (FAF) of the National University of Laos. In this area the degraded forest will be rehabilitated and a field-training program will be implemented. The area is called Training and Model Forest (TMF) and is about 20,000 ha in size.

An intervention area of 4,800 ha, included four villages has been defined and a management plan will be elaborated. Within the close cooperation of the Dong Dok Forestry Department, the District Authority, the villages and the DTZ/Kfw a series of field activities will be carried out.

The forest in Santhong District has decreased during the two last decades due to the operations of a logging company and also because of shifting cultivation. The four villages in the study area depend on the forest in different ways and the socio-economic condition is very low due to poor accessibility, limited area of paddy field, lack of irrigation, clean water supply, low education, and lack of village hospital and electricity.

The development of the TMF area as a model for sustainable forest management is expected to raise the living standards of people in the area awareness biodiversity, and at the same time prevent the degradation of existing natural resources. It shall also serve as an experimental, demonstration and teaching laboratory for the students in Forestry Department, Faculty of Agriculture and Forestry (FAF).

Successful development of the area as a model for sustainable forest and watershed management, however, requires the cooperation and involvement of people living in the area. To achieve this cooperation and support, the project has adopted a policy encouraging research in agro-forestry to look for effective means of managing the Santhong area in a sustainable way.

2. Objectives

The objectives of the study to get the socio-economic information within the TMF area by applying the proper methodology in order to be able:

- To increase profitability and income stability of individual household farms
- Transform existing patterns of local land and resources use to conserve, develop and utilize natural resources by facilitating farmer adoption of new and improved agroforestry assist women, and youth to secure expanded economic opportunities
- Improve local marketing to increase farmer revenue
- Influence future agro-forestry program development by educating government personnel involved in agroforestry activities
- Develop and establish mechanisms for the sustainability and spread of PROFEP benefits after phase out.

3. Participants of the Agroforestry study

Dr. Juergen Hess	GTZ	Supervisor
Mr. Dietma Braeutigam	GTZ Field Advisor	Supervisor
Mr. Bounthene Phasiboriboun	Agr. Team leader	Data Analysis and Report writing
Mr. Khamkhong Phengchanthamaly	Teacher	Field survey
Mr. Bounthanom Vannouvong	Teacher	Field survey

4. Location of the study

The study area was carried out within the TMF area in four villages: Ban Nongboua, Ban Kouay, Ban Napo and Ban Houaytom. It was uncontinuously executed from September 1998 until January 1999. The first two weeks was the field visits, the second two weeks was the field study and field survey and one month for data analysis and report writing. The intervention area covers the whole village of Ban Napo, and parts of the other three villages, but in term of the agro-forestry study, the area is covers all four villages. For the socio-economic studied of these four villages please see annex 1.

5. Description of Applied Methodology

The work was divided into three steps such as field visit (we selected the model farmers in the project area where they practiced the agroforestry systems in their own farms), field study (we measured the diameter of the tree DBH, we studied the agroforestry farms and its stories) and final report.

6. Agroforestry analysis

Agro-forestry analysis was emphasized in four villages above, but we considered some model farmers in the project area outside the four villages, and on famous model farmer in Vientiane for discussions and learn their experiences in term of technology or marketing, etc. The analysis was the followings:

6.1 The agro-forestry practiced in the four villages:

6.1.1 Ban Nongboua:

From the field survey and the discussion with some villagers for example with Mr. Vieng. Very few farmers practiced the agroforestry systems in the village, mostly they planted mango (*Mangifera indica*) with the size 8 x 8 m + pineapple + banana. It seemed due to the land properties because in this area the soil was dried, rocked and laterite land, the other farmers practiced taunya systems it means they planted the teak(*Tectona grandis*) with the rice for example the plot of three villagers as Mr. La, Mr. Boonpheng and Mr. Chandom, they practiced the taunya system in the area of one hectare, they started to plant the teak with the size of 1.5 x 1.5 m since September 1996. Recently,

height of the teak got 6 meters in maximum and 1.5 meter in minimum with the maximum DBH of 5 centimeters and minimum DBH of 1 centimeter. The average death percentage was 70 percent. From the estimation the death percentage was 95 percent by stumps and 50 percent by seedlings. From the field studied and the discussion the high death percentage were due to (1) the teak plantation was late or in the end of rainy season (2) some teak were destroyed by the ants (3) lack of plantation technical knowledge (4) lack of extension workers to supervise and monitoring during the 1 to 3 years plantation.

6.1.2 Ban Kouay

In Ban Kouay, very few farmers practiced the agroforestry (AF) systems, some of them planted mango (*Mangifera indica*)+pineapple, another planted mixed fruit trees, coconut, tamarind (*Tamarindus indica*), jujube, orange, etc. with banana. When we discussed with the villagers for sharing the experiences in terms of the improvement of existing AF and the new technology should be learned [for example the plantation of rubber (*Bevia brasiliensis*) with the pineapple] they seemed very interested. Some few farmers for example Mr. Lab planted the teak (*Tectona grandis*) with the area of 1.5 hectares since June 1996(size 2-x 3 m). Recently, the average height was 5 meters, the average DBH was 4 centimeters with the death percentage of 33 percent, some of the teak deaths were from the damage of the ants.

From the dis cussion the villagers preferred practices the silvo-aquaculture it means the trees + crop + livestock (e.g. fish raising combined with poultry raising, etc.)

In Ban Kouay the plantation of banana faced the same problems like in Ban Nongboua, during the dry season the leaves of the banana changed the color from green to yellow and the banana trees will death in some time.

6.1.3 Ban Houaytom

Very few farmers practiced the taunya system [teak (*Tectona grandis*) + rice] for example Pho Le, he planted the teak since May 1998. The heights of the teak were from 1 to 3 meters, and the average DBH was 2 centimeters. Very few farmers planted fruit trees [Mango (*Mangifera indica*), coconut, longan, tamarind (*Tamarindus indica*), etc.] with pineapple. During the discussion with the farmers on the improvement of existing agroforestry and the new technology applying in the area, the same with Ban Kouay and Ban Nongboua (rubber + pineapple), they were very interested to apply these technology.

6.1.4 Ban Napo

In Ban Napo, some farmers practiced tauya system for example Mr. Boonhay planted the teak since June 1995 with rice in the area of 2 rai (3200 square meters). The average height of the teak was 7 meters with the average DBH of 10 centimeters. The first model farmer (Tu sone) has two farm plots with the area of approximately 2 ha, he planted the indigenous trees with banana and pineapple (see fig.1). At present, he needs the loan from the project to improve the existing agroforestry farm and he wants to establish the rubber (*Hevia brasiliensis*) with pineapple farm.

Once the people are convinced that agroforestry can provide satisfaction benefit returns and that their productivity can be sustained then it would take little effort to get them ad-opt it. To help them establish their own farms, it would be necessary assist them also to obtain credit from some banks. Some serious thought should be given to this. The Promotion of Forestry Education Project (PROFEP) should help develop a mechanism to make credit available to the farmers.

Sihachack agroforestry model farm in Vientiane seemed to be very successful in term of egg chickens raising above the fish pond, because the rests of chickens [bot. bush (*Cipadessa baccifera*)] can feed the fish in the fish pond it means the low cost of fish investment. So, the farmers in the study area can applied these technology for generate the high income to the family. From the discussion with PROFEP experts and due to limited of fund which is emphasis on the Silviculture (e.g. provided fund for seedlings and some necessary equipment for agro-forestry practices). So, it is necessary to request some fund from International Project or NGOs for the

livestock trial or investment.

III. Agroforestry Marketing

The markets for agroforestry products are still undeveloped. To increase return from agro-forestry products (e.g. banana, fruit trees, fish, etc.), market must pre-exit. The new market can be promoted through increased supply of existing agroforestry products or processing some agro-forestry products (e.g. pineapple yam, dried banana, etc.) to meet increased demand or through developing demand for new products (rubber liquid, rubber wood, etc.) The market information systems are necessary t o push the villagers efforts to change their own traditional way subsistence. The agro-forestry products (e.g. fruits, wood, etc.) or the processing of agroforestry products (e.g. pineapple yam, dried banana, etc.) must linked with the international market.

IV. Proposal

4.1 The Promotion of Forestry Education Project (PROFEP) will provide the loan to the four Model farmers in Ban Napo (in the four villages of the study area) as: Tu sone, Mr. Sy, Mr. Thongchanh and Mr. Xiangphouy (detail costs estimated see annex 2) to make the experimental in their own land for agroforestry production as well as the research and experimental area for the instructors or the students of the Faculty of agriculture & Forestry, Department of Forestry.

4.2 The lessons learned from Sihachack agroforestry farm seemed to be very successful in term of livestock (e.g. egg chicken farm above the fish pond systems), due to the PROFEP's policy which emphasized on the silviculture. So, for improving the income of the farmers (included the Youth and women) and for sustainable development in the rural areas, training/workshop activities for farmers and district authorities in the study areas are to be considered.

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4.3 The outputs of agroforestry products processing (e.g. the banana processing enterprise of Mr. Thong in Ban Nahoipang) in the project area seemed to be very successful in term of the business. So, small enterprise for processing should be considered for other agroforestry products for example the pineapple yam, mango yam, etc.

Annex 1

MICRO PROJECT PLAN 2000

AGROFORESTRY EXTENSION FOR IMPROVING LAND USE AND SUSTAINABLE DEVELOPMENT IN THE TRAINING AND MODEL FOREST OF THE DDFD/NUOL. in SANGTHONG DISTRICT

1. Rationale

The Faculty of Agriculture and Forestry (FAF), Department of Forestry has been given an area of approximately 20,800 hectares in the Sangthong District, Vientiane Municipality, to be used as a training and education and research area for practical training of Bsc students.

A management plan was elaborated for an area of 4.500 ha. including 4 villages between 1995 and 1997.

The forest cover in Sangthong District has decreased during the last two decades due to the operations of a logging company and also because of shifting cultivation activities.

The socio-economic of the villages involved is characterized by subsistence economy. The villagers in the study area depend on the forest in different ways and the living standard is still very low due to limited market accessibility, limited area for paddy fields, lack of irrigation, clean water supply, low education and lack of village hospital and electricity.

The development of Training and Model Forest of the Dong Dok Forestry Department

(DDFD)/Faculty of Agriculture and Forestry (FAF) as a model for sustainable forest management will have positive effect of living standard of the people in the concerned area, will create awareness concerning biodiversity protection and at the same time prevent the degradation of existing natural resources. It shall also serve as an experimental demonstration and teaching area for the B.Sc. students of the DDFD/FAF.

Based on and analysis of existing agroforestry systems in the Training and Model Forest (TMF), four agroforestry demonstration areas have been established on private land of farmers in 1999 in the Napo village and extension services have been provided.

Because of a high interest concerning agroforestry in concerned villages, the establishment of agroforestry demonstration areas and the provision of agroforestry related extension services would be continued in the year 2000.

2. Objectives of the Micro Project

The objectives of the micro project agroforestry are as followings:

1. To set up demonstration areas with various agroforestry systems on the land of farmers to improve existing upland farm practices and to promote ecological sound and sustainable land use within the TMF of the DDFD.
2. To inform and to advise farmers concerning income generation possibilities based on agroforestry systems, which will contribute to the improvement of the living standard of the farmers within the TMF of the DDFD.
3. To transfer technical knowledge concerning agroforestry systems to farmers and staffs of DAFO/Sangthong District.
4. To transfer practice oriented knowledge concerning agroforestry and extension to B.Sc. students of the DDFD.
5. To gain experiences with practical training concerning agroforestry/extension as a base for the development of a training module.

3. Activities and responsibilities for the implementation

Mr. Bounthene PHASIBORIBOUN, Head of agroforestry unit of TMF, is responsible for planning, implementation and evaluation of the Micro Project management of agroforestry trial and extension.

His support team comprise:

Mr. Bounthanom VANNOUVONG	- Teacher for Social forestry
Mr. Khamkhong PHENGCHANTHAMALY	- Teacher for Agroforestry

The responsibilities and involvement for the different activities operation are indicated in the schedule for implementation (Annex 1).

3.1 Schedule of implementation

In general, the planning was carried out from December to mid June, the implementation will start from last January until September 2000 and evaluation takes place in September 2000. The schedule is attached as Annex 1.

3.2 Farmers contracts

Farmers contracts or agreement will be implemented after the approval of the final micro project in the three villages on the end of January as followings:

Nasa village:	Mr. Thong Deng and Mr. Suphap
Napo village:	Mr. Thith Lo
Nongboua village:	Mr. Khammy, Mr. Vanhxay SISOMBATH, Mr. Thith Kao and Mr. Khamphou

The farmers agreements will be made in two identical (English and Lao) copies and Each having equal substance and effect (see annex 2 & 3)

3.3 Seedling purchase

The seedlings purchase will be implemented from February to March for the quality seedlings. So, some varieties will be purchased from Vientiane and some varieties maybe bought from Thailand.

3.4 Seedlings transport

The small amount of seedlings will be transported by project cars and the big amount will be transported by private cars.

3.5 Fencing

The establishment of farm fences will be done by themselves. But, some fencing equipment will be provided by the authority (ies) of agroforestry team.

3.6 Ponds establishment

Ponds establishment or weirs construction will be done by engineering machine(s) based on the agreement between DDFD/PROFEP and model farmer. For the extra mechanic hours will be paid by the private (farmers).

3.7 Description of Technical details concerning their establishment of agroforestry demonstration areas

3.7.1 Selected agroforestry systems

The different agroforestry systems were selected are based on the field survey as well as an analysis of existing agroforestry practices in Sangthong District, lessons learned from the four model farmers in Ban Napo and the participation of the target model farmers in three villages. So, we selected the agroforestry systems as the agrosilvo (i.e. crop with fruit trees and fish ponds).

3.7.2 Method for the establishment of agroforestry demonstration areas

Agreements with the farmers

Agreement between the DDFD and concerned farmers have been elaborated for the establishment of agroforestry demonstration areas on the land of farmers.

The DDFD will support interested farmers with technical advice, ensurement of high quality seedling and provide loan 70% of the investment costs out of Kfw funds.

The money is provided as a loan to the interested farmers, repayable after 5 years into the village development fund of the concerned villages. The village head and the village committee will be responsible for the collection of the money.

The involved farmers guarantee unhinged access for teachers and students of the DDFD in the future. They also agree not to change the design of agroforestry demonstration areas two years after their establishment. After this period the improvement and development of those areas will be discussed between the farmers and the DDFD.

A complete agreement is attached as annex 2 and 3

3.8 Training for farmers and representatives of DAFO/Sangthong District

Participants of the training on integrated farm management are from more 7 model farmers in the three villages (Nasa, Napo and Nongboua), 2 representatives from the District Agriculture and Forestry Office (DAFO) and three from the Agroforestry Unit/DDFD. The additional four model farmers in Ban Napo (Tusone, Mr. My, Mr. Thongchanh and Xiangphoouy) and two representatives from Ban Kouay and Houaytom.

The training will focus on integrated farm management including farming systems,

agroforestry and applied biotechnology (bio fertilizer, bio pesticide). The training will conducted in the farm sihachack (Ban Dongnasock), Sikot District, Vientiane municipality for 4 days.

A more detailed program concerning the training will be elaborated separate

3.9 Excursion for farmers and representatives of the DAFO/Sangthong District

When the training course will be completed, the next two days will be organized for excursion.

The main subjects of the excursion are:

- Different agroforestry systems (agrisilvicultural, agrosilvipastoral, agrosilvofishery)
- Supplementary income generation possibilities like banana processing

First day (in Vientiane): The participants will visit Sengsavang Phanhpa farm (Ban Nongnieng), Vanis farm (Ban Thangone) and stay overnight in Vientiane city.

Second day (in Sangthong): The way back to Sangthong, the participants will visit the banana processing (Mr. Thong: Ban Nahoipang) and Tu Sone agroforestry farm (Ban Napo).

4. Practical Training of B. Sc. students of the DDFD

4.1 Learning Objectives

The learning objectives concerning the extension of agroforestry demonstration plot, trees measuring for the B.Sc. students of the DDFD are as followings:

- students will be informed on the existing agroforestry practices in the TMF
- students will be informed on the extension services provided by DDFD concerning agroforestry and on the establishment of agroforestry demonstration areas in the TMF.
- students should know the principles of the selection, design and establishment of agroforestry systems.
- students should be able to carry out monitoring of existing agroforestry systems.

Annex 1: Schedule for Practical Training and Operation - Responsibilities														
Operation/Activities	**Year**	**1999**	**2000**											
	Month	**D**	**J**	**F**	**M**	**A**	**Ma**	**J**	**Ju**	**A**	**S**	**O**	**N**	**D**
	Responsibilities													
Planning	BT													
Farmer contracts	BT/BTN													
Seedlings purchase	BT/BTN													
Seedlings transport														
Technical supervise														
Land preparation	BT/BTN													
Trees spacing	BT/BTN/KK													
Dig hole	BT/BTN													
Planting	BT/BTN/KK													
Maintenance(st. pract.)	BT/BTN													
Fencing	BT/BTN													
Weir construction	BT/BTN													
B.E. Training	BT/KK/BTN													
Excursion	BT/KK/BTN													
Evaluation	BT													

Practical Training of B.Sc. students :

BT : Bounthene
KK : Khamkhong
BTN : Bounthanom

Forest Management System and Participatory Forest Management in Vietnam

Drafted by Do Dinh Sam and Le Quang Trung
Forest Science Institute of Vietnam

I. The forest resource in summary

Vietnam has abundant and diverse forest resources with many valuable kinds of timber and forest products the forest has long been close with the life of tens of millions of people. At the some time been playing an important role in the cause of national construction and defense As planning and a capital of 19.3 million hectare of land is used for forest development and according to the aims in use. Forest and forestland divided in to three categories.

- Special use forestland: Land, which is planned for forest establishment and development for the purposes of natural conservation. Constituting models for environmental protection. Serving as agene bank for forest flora and fauna and as a site for research. Protecting historical vestiges. Cultural and same places. And providing services for tourism. It includes national parks. Natural reverse and cultural-historical-environmental forests.

- Protection forest and land: land, which is planned for forest establishment and development mainly for the purposes of protecting water sources and the soil. Preventing erosion. Limiting effects of natural disasters. Regulating the climate and protecting the environment in general. It includes Watershed protection forest divided into very critical. Critical and less critical protection forest areas. Win breaks and belts protecting against blowing sand: forest protecting dukes along ricers and the sea: Environment protection forest.

- Production forestland: land, which mainly is dedicated to production of logs. Other wood products. Non-wood forest products. Animal products but also makes a contribution to environmental protection.

Recent data reported by the Ministry of Agriculture and rural development (MARD) shows that up to the end of 1999 Vietnam has 10.885 million ha. Of forest. Of which the area of natural forests is 9.495 million ha. And man-made forest 1.39 million ha. General forest cover in the whole country is 33.3 %:

In comparison with the data in 1943. Forest resources in Vietnam are reduced seriously both in area and quality. Most natural forests in Vietnam have been heavily exploited and produce less wood. Only about half a million hectare of the forest are classified as “rich”. With more than 100 m^3 of stem wood per hectare. Another 1.7 million hectare has “medium” stocking. While some 2.8 million are “ poor”. With stem wood volumes below 50 m^3 per hectare. 50 % of the man-made forest is young plantation or newly planted ones (less than 10 year old). However if the data on the present forest resources are compared with those in 1990 or 1995 one can see great effort made by the Vietnam Government and the Vietnamese people in the cause of forest protection and development. This can be proved in part through the data in the following table 1.

Data in the above table show that in only 5 years (from 1995 to 1999) the area of forest in Vietnam increased 1.583 million hectare or 16 % (mean increase in forest area is 0.312 million hectares/year). And the forest cover increased from 28.2 % to 33.3 % (an increase of 5.1 %)

II. Project to plant 5 million hectares of forest in 1998-2010 period:

Facing demands of the country’s industrialization as well as modernization as well as economic development on the basis of a sustainable development. The forestry sector has heavier

tasks. An urgent requirement for the sector in the present stage is to better manage and protect the existing forests. Strive to limit and finally stop forest loss. Ensure a safe ecological environment for the country and agricultural production development while meeting increasing needs of timber and forest products. At its second session. The tenth national assembly of the Socialist Republic of Vietnam adopted a resolution "on Reforestation of 5 Million Hectare Project in 1998-2000 periods". On July 29 1998. The Prime Minister signed Decision 661/QD/TTg on the target tasks. Policies and implementation organization of the project to carry out the National Assembly's resolution.

1.Tagets:

- To plant 5 million ha of forest together with protecting the existing forests to in crease the forest coverage to 43 %.
- Effective of bare land and denuded hills.
-To supply wood for the production of paper. Wood based panels. To safety the demand of timber. Firewood and other wood and non-wood forest products.

2. Contents:

- To effectively protect the existing forests. Fist of all the natural protection and special use forests in every important and important area. Including protection forests planted under Programme 327. And production forests of high and medium reverses. To carry out right in the fist phase the allocation of land and forests to organizations. Households and individuals in combination with efforts to help nomadic people settle down. Climates hunger and reduce poverty so as to protect and care for forests in combination with planting.

- To plant 2 million ha of protection and special use forests tending and restoring in combination with planting more trees on 1 million ha. Planting 1 million ha of new forests.

- To plant 3 million ha of production forests. Of which to plant about 2 million ha of materials forests for the paper industry. Artificial board production and mining specially and precious timber forests. 1 million ha of long term industrial plants and fruit trees.

III. Forest management system and forest ownership:

The renovation period in Vietnam was started with the resolution of the Communist party of Vietnam's 6th. National Congress and forestry policies also changed in conformity with the renewal thinking. In implementing the multi-sectoral economic mechanism. The forestry sector has allocated land contracted out forests to households, individuals and collectives to be use in forestry production and business. Each forest has its owner, and the centralized State-owned forestry has been transferred into a muti-sectoral social forestry or a people's forestry. Up to now there are in Vietnam the following types of forest ownership:

1. State forest Enterprise: This is a kind of state run business enterprise in production and business in forest sector. The number of state of Forest Enterprises at present is 412 and 4.7 million ha of forests and forestland is under their management.

2. Protection forest/special use forest managing board (SMB): they State units being assigned the responsibility for forest capital management. Protection and development according to approved objectives planning and plans.

- Special use forest management board system: It includes 11 national park management boards. 61 nature reserve management boards and 32 management boards of cultural and historical relies values.
- System of protection forest management boards consists of 39 management boards

3. Households and individuals: they are the households and individuals that have received forest land

allocated or rented by the state.

4. Agricultural and forest co-operatives that receive forest land from allocation or for rent.

5. Community: Village/hamlets as a unit that receive the forestland from allocation.

In legal framework. The allocation of land to community is not yet mentioned by the state. In reality however in some places and some project pilot allocation and allocation on contract of forestland to community is being proceeded. Presently Forest Science Institute of Vietnam is one of the units that are carrying out research to help the state early to formulate policies on community forestry.

6. Company: The company that is registered to carry out business and production activities in forestry sector in Vietnam.

7. Group of other forest masters: army units. Mass organization etc.

IV. Role and participatory of the people in forest management and protection.

1. Role and participatory of the people.

Great experience drawn from the success of forest production and development programmes in the passing year are:

- Forestry policies have to consider households as a motive force of the project: At present in Vietnam households are identified as self-mastering economic units and are considered as important as other economic enterprise. The State has been carrying out the allocation and allocation on contract of forest land and forest to the households and individuals for use aiming at forestry development.

- Mechanism. Policies have to treat well the relationship between the benefits of the state and the rights and obligation of the people: incorporating forest protection and development programmes into local socio-economic development programmes: step by step stabilizing and raising the material and spiritual life of the people living in forest areas.

In particularly, local people are participating in all activities in the production process from designing to organizing and especially directly implementing various work items in forest planting, tending, managing and protection. It is can be said that people's participation is best way for forest protection and ensuring effectives use of forest land in Vietnam now.

2. Benefit of the households/individuals in their participation:

2.1 Benefit of the households/individuals as regulated by the current policies:

2.1.1 benefit of the households/individuals that receive forests and forest land by contract.

- Are allowed to receive the budget for investment in forest planting from the state at the rates Mean 2.5 million VND/ha for planning of new forest. 1 million VND/ha for tending forest regrowth and supplementary planting
- Are allowed to receive fee for forest protection on contract (50.000 VND/ha/year)
- Are allowed to enjoy all thinning products: agroforestry products and minor forest products under the forest canopy.
- Are protected by the state when the fruits of labour is violated and are compensated for losses due to the land being returned.

2.1.2 Benefit of the households that receive forests and forest land through allocation

- To be granted land tenure certificates
- Are allowed to enjoy all products of their labour and investment yield on their allocated land.
- Are allowed to transfer the land use right in accordance with the law.
- Are allowed to enjoy the benefit brought about by public project on land protection and improvement.

To enjoy privilege. Support policies of the state on forest protection and development.

- To be protected by the state when their legitimate land use right are violated and to receive compensation for losses when their land is recovered by the state.
- Are allowed to contribute their land to protection and business cooperation in accordance with the law and purpose of land allocation.

2.2 Actual benefits received by the households:

Up to the end 1999 alone in 39 provinces and cities that have areas of forest land. Nearly 8.8 million ha of forest land have been allocated to various targets (representing 50 % of forest land). Of which 2.61 million ha of forest land (representing 29.7 % of the area allocated) have been allocated to over 450.000 households. Benefit there are about 50.000 households that have received contract over 1.86 million ha of forest and forest land from such organizations as State forest enterprises. protection forest and special use forest management boards. Foreign companies or joint venture companies etc.

After the allocation of forest land almost in all localities in the country there arises a cooperative relation in forest production. Many household took the initiative to invest capital. Labor to organize the production such as forest planting. Protecting and tending, agro-forestry practicing. Due to national cropping systems and sustainable structure of planted crops, ten of households have changes bare land and denuded hill area into wealthy and luxuriant farms. Upgraded the land after slash-and-burn cultivation for the establish of the forest gardens. Forest farm with forest trees species. Agricultural crops a fruits trees of high economic value. These are really models of sustainable cultivation worth being studies and multiplied allow us to mention some evidence for what was described above.

- In Yen Bai province up to now these established 9.500 farms of combined forest and agriculture with 11.9 % the total farmer households in the province. Mean land area of a household is 5-10 ha there have appeared forest farms engaging in forest product. Production on large scale such as owned by Mr. Do Thap This man has invested in planting 30.4 ha of forest. 20.000 *cinnamomum cassava* trees and agreed by contract on forest protection and tending forest regrowth in hundreds of hectare.

- In Lao Cai province there are 1.500 farms. Every farm has on the average 3 hectare of fruit trees or industrial crops with annual revenue of 15-20 million VND/farm.

- In Thanh Hoa provice there are over 13.000 households engaging in forest garden and forest farm production. The area of each farm is about 5-10 ha with income 5-20 million VND/farm/year.

Many households with their allocated land being bare land . Denuded hill or depleted natural forest could only preliminarily be self-sufficient in fire wood and timber for domestic uses. Practicing agroforestry production but they have contributed and important part in ecological environment protection. Soil improvement and raising crops productivity.

V. Difficulties and remaining problems affecting the peoples participation:

1. It can be said that over the past several decades Vietnam's forestry policies have undergone major changes. Creating favorable factors to the country's forestry development. However on an overall look the system of policies on encouraging the people's participation still shows the following limitation:

- Rights and interests given to forest owners by these policies are still limited. Vietnam's current policies have taken the people's interest as their stating point and worked on the basis of bringing into play the people's potentials. But in rarity the forest sector's activities in the past time were sluggish. The main reason behind this is an irrational benefit system. In Vietnam, forest are classified into tree kinds production forest, Protective forest and specialized forests. Dozens of million of people are living in those forests. But there is not a clear policy on their right and benefits. Opinions still vary in policy implementation process.

- Benefit obtained by the people from management and protection forest is too small so that it those not create an economic motive force to attract local people participated in forest programmes.

2. Planning work is not good: sustainable forest management is still lacking.

- There are many contradictions in forestry development planning. Target of forestry progrmmes and management mechanism are usually adjusted and changed.

- As regulated by law: forests and forest land is divided into 3 categories but till now there is not yet any system of authentic classifying standards. Therefore the delineation is only made on map.

- Plans of the projects have been elaborated from top downward and were aimed only at concrete and immediate objectives while flexible and sustainable development is required.

3. The implementation of policies on allocation and allocation on contract of forest land and forest by the localities has not been done strictly with the provisions and in the spirits of the policies promulgated by the state. The allocation activities were late. The allocated land area is fragmented. Greatly ill-effects the production organization by the people. 45 % of forest land has not yes real masters. State forest Enterprises presently own a rather large area of land (26 % of the forest land) but the economic efficiency is still a trouble some problem. Mean whole the land area allocated or allocated on contract to the people represents only 25.1 % total forestland.

4. The majority of the people living in the forest area all is at low economic conditions with limited knowledge and education standard: of 20 million of people that are presently living in forest areas. Up to 30 % is living at poverty and hunger level with income below 15 kg of rice/person/month. Thus the majority of the households pay more attention to immediate benefit: they invest money and labour in production activities that quickly bring about return. This explains why the people do nor yet pay attention to investing in forest production and the households put just only 30 % of the allocated forest land into use.

5. Traditional uses of forest products are very wasteful: substitutes for forest products are not available activities in timber exploitation and wood processing of the people in the forested area are still of a handicraft nature. The ratio of wood in use in only about 40 % of the exploited volume and then concerning only the volume of wood used for house construction by the local people, the wood annually left for decay in the forest in the exploitation is estimated at up to tens of thousand cubic meters.

6. Conditions of production are difficult and depend much on natural condition although the forest land area of Vietnam is large but it lies stretching along regions of complex conditions with poor soil and steep slopes poor infrastructure. In addition to the above facts, consequences of the illegal and serious cutting of forest in the passing years have resulted in the suffering of the people from natural

calamities such as degradation and erosion seriously deteriorated environment. These conditions have made the production of the people more difficult, delayed improvement of the living standard. In many places due to excessive anxiety for quick improvement of the living standard the forests were seriously destroyed for exploitation of forest products for sale or for agricultural production.

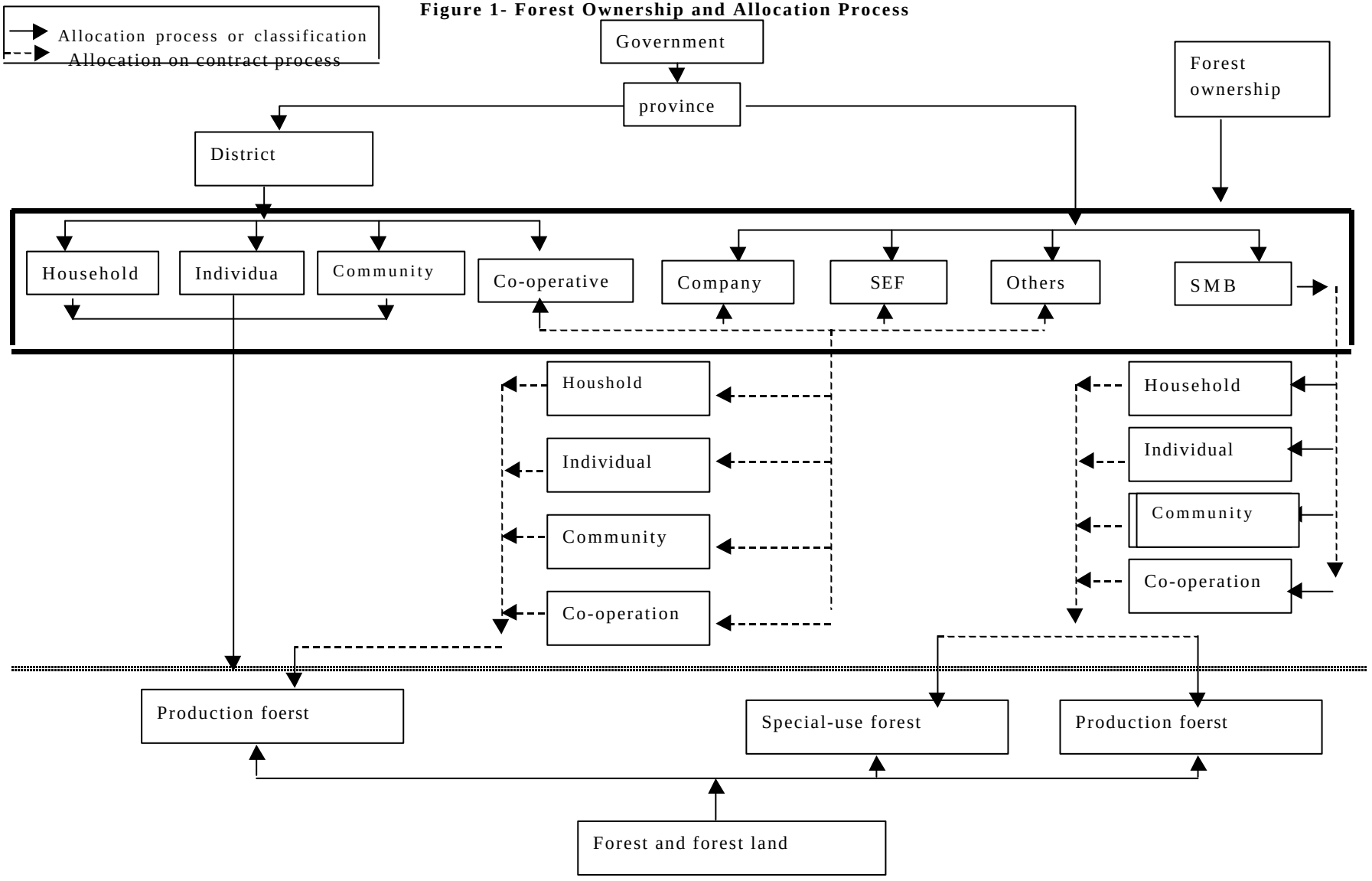
Table o1-changes in forest area

(Unit 1.000 ha)

Year	Natural forest	Planted forest	Total area	Coverage (%)
1943	14.000	0	14.000	43.0
1976	11.077	92	11.169	33.8
1980	10.486	422	10.608	32.1
1985	9.308	584	9.892	30.0
1990	8.430	745	9.175	27.8
1995	8.252	1.050	9.302	28.2
1999	9.495	1.390	10.885	33.3

(Source: Ministry of Agriculture and Rural Development)

Figure 1- Forest Ownership and Allocation Process



APPENDICSES

WORKSHOP PROGRAMS

Day 1: Wednesday, August 2, 2000
9:10-17:00 Workshop

9:10- 9:30 Opening Session
Chair: **Mr. Khamvieng Xayabouth** (NUOL)
Opening Remarks: **Dr. Saymang Vongsak** (Vice Rector of NUOL)
Remarks from IGES: **Prof. Hiroji Isozaki** (Iwate University /IGES)
Introduction on workshop process: **Mr. HYAKUMURA Kimihiko** (IGES)

Session 1: Presentation of IGES's Research Findings
Moderator and Reporter: **Mr. Boumy Phonesavanh** (NUOL)
9:30- 11:00 Findings on IGES Research
Presentations:
Dr. Masanobu Yamane (IGES)
"Cause of Forest loss in Asian and Pacific Region"
Prof. Philip Hirsch (Sydney University) and **Satoru Matsumoto** (Mekong Watch, Japan/ IGES)
"Underlying causes deforestation in Mekong River Basin"
Prof. Makoto Inoue (The University of Tokyo/ IGES)
"Policy Recommendation for Participatory Forest Management in Lao P.D.R. and Vietnam"
Prof. Hiroji Isozaki (Iwate University/ IGES)
"Legal and administrative Measures: Principles on Local People's Participation"
11:00-11:15 Coffee Break
11:15-12:15 Presentation from each country experience
Mr. Song Pholrit (UNDP/CARERE)
"Presentation of Cambodian Experience"
Mr. Bounthene Phasiboriboun (NOUL)
"Presentation of Lao Experience: Participatory of Farmers in Agroforestry systems"
Prof. Do Dinh Sam, **Mr. Le Quang Trung** (FSIV)
"Presentation of Vietnam Experience: Forest Management System and Participatory Forest management in Vietnam"
12:15-13:15 Lunch (at Campus of NUOL)

13:15- 17:00 Session 2: Discussion on Country Experience and Direction of Forest Conservation (Parallel session)
15:00-15:15 Coffee Break
Group Discussion for Lao PDR (Room A)
Moderator and Reporter: **Mr. Boumy Phonesavanh** (NUOL)
Group Discussion for Vietnam (Room B)
Moderator: **Prof. Do Dinh Sam** (FSIV)

Reception: Dinner (at Mekong Restaurant)

Day 2: Thursday, August 3, 2000
9:00-12:30 Workshop

Session 3: Plenary Discussion
Moderator and Reporter: **Mr. Boumy Phonesavanh** (NUOL)
9:00-11:00 Presentation of Group Discussion
Mr. Boumy Phonesavanh (NUOL)

"Presentation and Discussion on Group A (Lao P.D.R.)"

Prof. Do Dinh Sam (FSIV)

"Presentation and Discussion on Group B (Vietnam)"

11:00-11:15 Coffee Break

11:15-12:00 Conclusive Discussion on Forest Conservation in Asia and Pacific Region

12:00-12:30 Closing Session

Chair: Mr. Khamvieng Xayabouth (NUOL)

Closing Remarks: Prof. Hiroji Isozaki (Iwate University/ IGES)

Lunch