

## SCOPE OF THE RESEARCH ON STRUCTURAL ANALYSIS OF THE REGIONAL FOREST DESTRUCTION

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### TARGET

The main target of the sub-team on the “Structural Analysis (ST) of Forest Loss (or Destruction)” is to develop strategies to overcome the underlying causes of deforestation in the Asia and Pacific region. The ST sub-team also provides information to other sub-teams as a basis for the integration of overall research activities of the IGES Forest Conservation project.

### BACKGROUND

#### 1. Forest Loss in the Region and the Efforts to Address It

The forest area in the Asia and Pacific region<sup>2</sup> accounts for a quarter of the world's forests (Table 1). In the region there are various types of forests ranging from tropical and temperate to boreal forests, which include rich forest resources and biodiversity.

The forests in the region are facing a serious forest crisis with accelerated forest loss after the war, and consequently the region has lost almost 95 percent of its frontier forests. The amount of forest loss in the region during the 1980s was smaller than that in Africa and Latin America. However, the region lost almost million hectares during the 1980s and had the highest rate of annual changes of forest and other wooded land (-0.6%/year), a rate similar to that of Latin America (-0.5%/year)(Table 2). As for boreal forests in the region, deforestation and forest degradation has rapidly become worse.

During the last decade, especially after the Earth Summit in 1992, forest loss in many regions has received strong attention and has prompted many initiatives by governments and intergovernmental agencies. However the most of efforts have failed to achieve effective results. Many people have analyzed the possible explanations of reasons why these recent activities have failed to develop the significant progress needed. There seems to be broad agreement that these initiatives have focused far too much attention on the proximate causes of deforestation/forest degradation (and factors within the forest sector), and have largely ignored the underlying (root) causes of these problems.

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<sup>2</sup> In this paper, the Asia and Pacific region means the area including South Asia, continental SE Asia, North Asia, SE Asian island countries, Oceania-South Pacific and Far East Russia.

Table 1 . State of Forest Resource by Target Region

region (a)		Land area ( 1000 ha)	Forest area in 1993	%	Volume (mil. Cum.)	Volume of Per ha
All region		13,081,900	4,179,808	32	440,479	105
South Asia		412,267	100,165	24	3,427	34
Cotinental SE Asia		190,167	123,401	65	9,133	74
North Asia		1,147,608	214,149	19	13,702	64
target region (b)	Insular SE Asia	244,417	181,458	74	24,923	137
	Oceania-S.Pasific	835,218	200,971	24	10,056	50
	Far East Russia	621,590	273,730	44	20,449	75
	Asian Pasific	3,451,267	1,093,874	32	81,690	75
(b)/(a) %		26	26		19	

Source: FAO [Production Yearbook 1994], FAO [Forest Resources Assessment 1990 Global Synthesis]. Documents of Russian Federal Forest Service.

Table 2. Annual changes of forests and other wooded land, by region, 1980-1990

Region	Annual Change 1980-1990 (1000 ha)	Percentage of total cover
Africa	-2828.0	-0.30
Asia and the Pacific	-999.0	-0.60
Latin and the Caribbean	-6047.0	-0.50
Europe	190.8	0.13
Former USSR	51.3	0.01
(Asian Russia)* 1	-127.7	0.00
North America	316.5	-0.11
Develop Asia/Oceania	-4.2	0.00
Total	-9952.6	-0.20

Source: FAO [Forest resources assessment 1990: a global synthesis, FAO Forestry Paper, No. 124 (Rome, 1995)]

\*1; West Siberia + East Siberia + Far East, from 1978 to 1988 (Shivedenko and Nilsson, 1996)

## 2. New Initiative: IFF-UC/NGO Process<sup>3</sup>

Non-Governmental Organizations (NGOs) and Indigenous Peoples' Organizations (IPOs) in cooperation with governments and intergovernmental agencies took initiative (the Intergovernmental Forum on Forests – Underlying Causes (IFF-UC)/NGO Process) to contribute on one of the most pressing agendas – the

<sup>3</sup> Verolme, Hans J.H., Moussa, Juliette (1999) Addressing the Underlying Causes of Deforestation and Forest Degradation - Case Studies, Analysis and Policy Recommendations. Biodiversity Action Network, Washington, DC, USA. x + 141 pp.

Underlying Causes of Deforestation and Forest Degradation -- and started their research project after the Special Session of the United Nations General Assembly (UNGASS, held June 1997). IFF organized a global workshop on this matter in January 1999, in addition to case studies, which were conducted by some governments, and work by international NGO research teams.

The main goal of this initiative is to support and build upon the effective implementation of the earlier Proposals for Action of the Intergovernmental Panel on Forests (IPF) that address underlying causes of deforestation and forest degradation and the ongoing work of the IFF. More specific objectives of this project are:

- to contribute to further analysis of the major underlying causes of forest destruction at different levels ( national, regional and global levels) on the basis of new and existing case-studies, other in-depth studies, a global workshop and various participatory dialogue/consultation processes;
- to raise the level of awareness and facilitate a heightened dialogue about these underlying causes among a broad range of governmental and non-governmental actors, both within and outside the forest sector; and
- to stimulate partnerships among stakeholders around solution-oriented approaches to these issues, including needed policy reforms and other actions.

### 3. Causes of Forest Loss<sup>4</sup>

#### Direct Causes

The direct causes for forest destruction are mainly the clearing of land for other land uses, such as agriculture, settlement, mineral resource mining and others. Natural disasters such as flooding, landslides and fires are direct causes of forest loss as well. Forests can also be replaced by non-forests if forest modification is carried to such drastically changes that forest regeneration becomes impossible.

There are many direct causes of modification that can be accurately described as forest degradation, such as:

- Harvesting of timber, fuel wood or game above the capacity of the forest ecosystem to replace the quantities extracted;
- Overgrazing;
- Air pollution;
- Pollution of forest watercourses;
- Soil erosion within the forest;
- Anthropogenic fires;
- Depletion of biodiversity;
- Introduced disease or pest species.
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A combination of the frequency and intensity of human intervention determines the degree of impacts on forest destruction. Sustained forest use such as repeated low-level harvesting of resources may lead to significant harm. Thus we should consider how to use forest resources in a sustainable way to prevent serious forest loss.

#### Underlying Causes

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

As a guiding principle of the research, the following examples of underlying causes were classified into several categories in the "Report of the Secretary-General to the Second Session" of CSD/Ad Hoc Intergovernmental Panel on Forests (E/CN.17/IPF/1996/2);

- **Land / forest use and management**  
National policies; Failure of policy or planning; Insecurity of tenure; Absence of alternative sources of forest goods and services or substitutes for them; Failure of regulation or control; Land speculation; The

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<sup>4</sup> CSD/Ad Hoc Intergovernmental Panel on Forests. Report of the Secretary-General to the second session. 13 February 1996. Programme Element I.2.(E/CN.17/IPF/1996/2)

temptation of a profitable market; Absence of employment; Land hunger; Displacement of populations; Farming failure; Improved accessibility; Displacement of populations by other land uses; Burning for cultivation or improved grazing; Development pressures; Greed and corruption; Availability of new technologies; Unwise intensification of land use; Poor plant quarantine ; Lack of information, or ignorance.

- **Population pressure**  
Consumption patterns in the richer countries; Expansion or intensification of agriculture; Deliberate reforestation; Settlement;
- **Economic: market and intervention distortions**  
Conventional economic approaches; Local market failure; Global appropriation failure; Intervention failure
- **Macroeconomic policies: debt and structural adjustment**
- **Poverty**
- **Timber trade and the industrial use of wood**
- **Civil unrest**

### **Leading Causes and their Mutual Relationship**

Addressing direct/underlying causes of forest loss and their mutual relationship in the target countries/regions is essential to find solutions. However, natural characteristics of forests differ among different places. Even for forests with the same natural characteristics, desirable management methods vary place by place, because local people have different perceptions for forests and different ways of using them. In addition, some countries place national importance on the production and export of timber. Thus we try to identify leading direct/underlying causes in each country and to produce effective countermeasures to overcome forest loss.

The study of direct/underlying causes within each target country/region is also useful to find common elements relevant to forest loss among the target countries/regions. The findings also can suggest what kind of changes would be necessary in the relevant societies and produce a number of policy recommendations towards the on-going IFF processes, in particular, regarding the discussions on the " Underlying Causes of Deforestation and Degradation of Forests".

### **ITEMS TO BE INVESTIGATED**

The following research items were selected in order to identify the structure of forest loss in the target countries/regions.

- (1) Status of forest resource use and management at local/national levels
- (2) Historical perspective of forest resource use and management at local/national levels
- (3) Current status of forest loss at local/national levels
  - International linkages of forest resource use
  - Production and consumption patterns
  - Trade and investment
- (4) Local/national forest policy from the perspective of sustainable forest resource use
- (5) Constraints on sustainable forest resource use: gaps between the real state of forest use/management and local/national forest policy
- (6) Feasible action proposals to overcome forest loss

### **RESEARCH PLAN**

#### **1. Target Places**

Studies to identify economic and social structure in terms of the underlying causes of deforestation, or UC studies, will be conducted at local/national levels and regional/global levels. At local/national levels, SE Asian island countries (Indonesia and the Philippine), Mekong region (Thailand, Lao P.D.R., Vietnam), East and Northeast Asia (Japan, China and the Russian Far East) will be investigated. On regional/global levels, the linkages among trade, investment, and financial flows will be examined. In the year 1998, our team participated

in a series of meetings of the IFF/NGO-UC processes for the purpose of commitment to international forest policy formation.

## **2. Steps of Study**

**In the first fiscal year**, the sub-team collected and analyzed existing information through available literature and workshops as well as by carrying out field studies in targeted places. The first international workshop of the IGES Forest Conservation Project was a good opportunity to reconfirm commitment to the IFF-NGO Process. We also contributed the Asian Regional Process meeting at West Java in Indonesia and Global Workshop at San Jose in Costa Rica.

**In the second fiscal year**, the sub-team will carry out case studies countries in order to assess data and information on items to be investigated in each target place.

**In the third fiscal year**, underlying causes of forest loss and some elements for sustainable forest management will be identified first. Then national/regional strategies will be proposed by means of policy dialogue with the main stakeholders in Asian countries.

## **PROGRESS IN FY 1998**

The ST sub-team co-organized several meetings on the IFF/NGO Asian Process and carried out case studies for Japan, the Russian Far East, the Mekong region (Lao P.D.R.) and Indonesia.

### **1. Country/Regional Studies**

#### **Japan**

An in-depth study on the role of development and resource politics in post-War Japan was conducted. The results were presented at the IFF/UC-NGO Asia regional meeting and global workshop as well.

#### **Far East Russia**

A preliminary survey in the Khabarovsk territories, Far East Russia, was carried out in August to develop a research plan in the region.

Based on its findings, two research consultancies were arranged for the Far East region. One was aimed at grasping the underlying causes of forest destruction in the Russian Far East. In the work an in-depth study on the large-scale forest fires of 1998 in the Khabarovsk area was also conducted. Another work was focused on the forest resource use by inhabitants (or indigenous people) to grasp the sustainable forest use/management at the local level. We have three reports on the topics. First report is about the history of indigenous people in the Russian Far East with special reference to the influence of the Russian's activities. Second and third report focus on the livelihood strategies of the indigenous people.

The results of the first year were reported at the first Seminar for the Russian Far East Forest Conservation Strategies on 2 March 1999.

#### **Mekong Region (Lao P.D.R.)**

One consultancy was arranged for Lao P.D.R. The work included the state of forest resources and an overview of causes of deforestation in the country. An in-depth study of the underlying causes of natural forest destruction was conducted with a special focus on Lao cypress forests, cypress being the most valuable and profitable timber species in Laos.

#### **Indonesia**

One consultancy was arranged for Indonesia. The work included two in-depth studies; one report focused on an analysis addressing the causes of 1997/98 large scale forest fires in East-Kalimantan, another report was aimed at bring together the available information on the linkages of the international timber trade between Indonesia and Japan.

## 2. The IFF/NGO UC Process

Parties involved in the IFF/NGO Asian Process organized a series of meetings on the occasions of large conferences. Some examples were COP4 of the Convention on Biological Diversity in May, the World Industrial Plantation Conference in June, the First IGES Forest Conservation Project Workshop in July, the IFF-2 Meeting in August, the IFF/NGO Regional Workshop in December, and a Global Forum in January. Through these meetings, various causes of forest loss were identified and categorized. The FC Project co-organized several meetings of the Asia regional process and Mr. Yoichi Kuroda, as an Asian region focal point, collaborated with Ms. Mia Siscawati, of Indonesia. Mr. Kuroda made a presentation on Underlying Causes (UC) in Japan at the Asian regional meeting in West Java and the Global Workshop in Costa Rica. Part of the results of this discussion was reported at IFF-3 in Geneva in August.

The results of these activities were collected and published in the following three reports ;

- IGES (1998) Proceedings of the IGES International Workshop on Forest Conservation Strategies for the Asia and Pacific Region, IGES, p178, Hayama.
- Bio Forum (1999) A Synthesis Report of Asia Regional Process, "Addressing the Underlying Causes of Deforestation and Forest Degradation in Asia", Bio Forum, p51, Bogor.
- Verolme, Hans J.H., Moussa, Juliette (1999) Addressing the Underlying Causes of Deforestation and Forest Degradation - Case Studies, Analysis and Policy Recommendations. Biodiversity Action Network, Washington, DC, USA. x + 141 pp.