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Introduction

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1. Different tendencies in the change of forest areas

Though the forests in developing countries are still deteriorating and decreasing as a whole, the result of the Global Forest Resources Assessment (FRA) 2000 revealed different tendencies by countries. China has the largest area of tree plantations in the world, which has consequently expanded the total forest area. India and Bangladesh seem to have succeeded to stabilize the forest area despite the ever increasing population. By contrast, forest degradation still continues in all parts of humid Africa and Southeast Asia except Viet Nam. However, no obvious correlation can be found in the change of forest resources and other quantitative socio-economic indicators (FAO, 2001a).

Such a situation can also be found in the comparison of selected countries (Table 1.1). We can infer the background of the success in the forestry sector of China from the recent economic prosperities, but Thailand and Indonesia also realized a high level of economic growth before the monetary crisis in 1997. Nevertheless it seems no particular effective measures against deforestation were taken during that period. On the other hand, India introduced community based forest management even preceding the recent economic growth. FAO (2001b) emphasized that the mechanisms behind deforestation are complicated and context-based studies are required, but here we can foresee the importance of institutional aspects and forest governance.

Table 1.1. Forest areas and other indicators of China, India, and some Southeast Asian countries

Country	Land area 000 ha	Forest area 2000		Forest cover change 1990-2000		Population 2003		GDP per capita 2002 PPP US\$	GDP per capita annual growth rate		HDI rank of 177 countries 2004
		Total 000 ha	% of land areas	Annual change 000 ha	Annual % of change	Total 000	Density Persons/km ²		1975-2002	1990-2002	
China	932,743	163,480	17.5	1,806	1.2	1,304,196	139.8	4,580	8.2	8.6	94
India	297,319	64,113	21.6	38	0.1	1,065,462	358.4	2,670	3.3	4.0	127
Thailand	51,089	14,762	19.4	-112	-0.7	62,833	123.0	7,010	5.2	2.9	76
Philippines	29,817	5,789	28.9	-89	-1.4	79,999	268.3	4,170	0.2	1.1	83
Indonesia	181,157	104,986	58.0	-1312	-1.2	219,883	121.4	3,230	4.2	2.1	111

Source: FAO (2005), State of the World's Forests 2005, Rome: FAO.

UNDP (2004), Human Development Report 2004, New York: UNDP.

2. Overview of the historical background of tropical forestry

From an overview of the historical process, a remarkable turning point for tropical forests can be found in the middle of the 19th century. It was introduction of German forestry to the management of teak forests. Ironically the management system was not transferred to German colonies, as Germany itself was a late

comer in the history of segmentation of the world by the great powers. Since Britain and the Netherlands did not develop forestry in their own land, they had to invite German specialists to establish forest administration and management system in their colonies. Dietrich Brandis, a German botanist and the progenitor of Indian Forest Service, is still considered as the Father of Tropical Forestry in India and Myanmar (Jha, 1994).

The motivation was derived from the valuable teak forests, which had an importance in shipbuilding until the late 19th century (Trotter, 1929). Even though the material was replaced with steel, the demand on teak rather increased than decreased due to the start of railway construction. Thus the progress in establishment of forest management system during the 19th century was limited to the distribution area of dry monsoon forests and the area under the direct rule of Britain and the Netherlands.

The management area was not expanded to rainforests, as the areas were inaccessible and formed political vacuum at that time. It was not until the 1960's that exploitation of rainforests took place on a large scale in Southeast Asia. Thailand was an exception in the transfer process of German forestry, even though teak was also naturally distributed in the northern part. Since Thailand had formed a buffer zone between the British and French powers, domestic affairs were less influenced by the suzerains. As a result, forests were left under the condition of almost open access, not only for logging but also for farming, and the situation could not be improved even after the war.

The Indian Forest Act 1927, which is still operative, shares 25 articles of totally 86 articles for the procedure of forestland demarcation. It starts from the notification of the proposed area for a reserve on the gazette, arbitrament of claims, and final notification on the decision (Figure 1.1). The technical characteristics are forestland demarcation, transfer of the ownership to the State, eviction of the people from the land demarcated, establishment of working plan with an orientation toward artificial regeneration (Figure 1.2 and 1.3). This administration and management system developed during the colonial period was called 'scientific forestry' and later became to be condemned by activists and researchers as a repressive device for the social weak like tribal people.

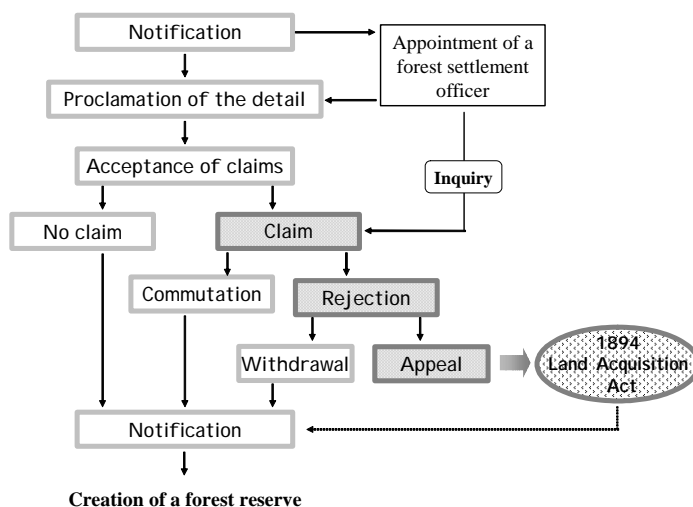


Figure 1.1. Procedure to settle a forest reserve in the 1927 Indian Forest Act

By contrast, French colonies were affected by the natural regeneration oriented forestry in the suzerain, and it seems Spain and Portugal did not take any particular measures to control and protect forests. It can be

conjectured that the location of the Netherlands in between France and Germany gave rise to a debate over the teak forest management, whether to apply natural regeneration or artificial regeneration, from the end of 19th to the beginning of the 20th century (Kerbert, 1902). Finally artificial regeneration gained wider support with a success in taungya reforestation system, which was called agroforestry (*bosakkerbouwcultuur*) during the colonial period and *tumpangsari* after the independence, but the procedure to settle the boundary was not so systematically described in the Java and Madura Forest Ordinance as in the Indian Forest Act.



Figure 1.2. Conoly's Plot in Kerala state: the oldest teak plantation started in the 1840's (March 2002)



Figure 1.3. Teak logyard in Nylambur, Kerala (March 2002)

3. Characteristics of forest administration and management in developing countries

Such a difference in the historical background has distinguished the type of forest administration and management of developing countries (Table 1.2). In India and Java, forest personnel and infrastructure had been expanded in accordance with forestland demarcation. The framework provided in 1927 Indian Forest Act was transferred to Anglophone Africa with British foresters and modified to the conditions of each region. By contrast, development of forest administration systems in rainforests of Southeast Asia was rushed by the growing pressure of plywood market so that the State control over the natural resources preceded the preparation of infrastructure necessary for the management. The 1967 Basic Forest Law in Indonesia is a typical case, where state control over existing natural forests became to be authorized only by a short declaration in an article.

Table 1.2. Types of forest administration and management

Type	Administration		Management			Examples
	Demarcation	State ownership	System	Body	Regeneration	
German	*	*	Direct	Forest service	Artificial	India and Java
French	*	*	Direct	Forest service	Natural	Francophone Africa
Rainforest	-	*	Concession	Private company	Natural	Indonesia exc. Java

In addition to these German, French and rainforest types, Papua New Guinea has developed a unique system. Due to the history that the island had been secluded from the outer world until the World War II, and perhaps

due to the intervention of Australia after the independence, around 90 % of the forests are owned by each clan. In other words, the priority is given to the customary rights and national forests cannot be created unless the government purchases the land from the people.

4. Different dimensions of the study on decentralization

Beyond the above-mentioned difference in forest administration and management systems, decentralization and devolution in forestry sector has been *a priori* positively accepted in the international arena of environmental issues. In the reality, however, existing institutions to deal with the decentralization vary from firm basis like in India to loose structure like in Indonesia except Java. The range of devolution also varies from the legislative power with own sources of revenue to just the limited discretion in budget allocation under an already fixed framework. It is easy to say that an ideal form of decentralization and devolution is a partnership among the central government, local governments, communities, individuals, and intermediaries like NGOs, but without discussions on how devolution should be and without the efforts to specify the priority and do screening of the different interests and interested parties in forestry sector, it may end in an empty argument under the situation of high demand on limited resources.

In China, it seems that the decision has been made under a strong leadership of the central government. Then how the commands from the top can penetrate into the bottom of the society? What kind of measures and conditions make the policies transformed into quantitative achievement? What is the expense of the top-down decision making and mass mobilization toward the target?

By contrast, India has tackled over social and political segmentation, but still incurs the problems of poverty and discrimination. It is even amongst the 61 countries and economic regions categorized to the low income group by the economic threshold (WB, 2005). Nevertheless, already matured experiences in Social Forestry and Joint Forest Management (JFM) allow acute discussions on the performance of the government, such as the attitudes of foresters in acceptance of JFM (Kumar & Kant, 2005). Then how the paradigm shift in the forest policy could be realized and what sorts of conditions have supported those programs?

In Indonesia, forest degradation was accelerated behind the enthusiasm and expectations to devolution process after the reformation. Foregoing studies pointed out the necessity to strengthen the devolution and take adequate measures to support the process (CIFOR, 2001-2003). Beside such discussions, it seems also necessary to examine the direction of devolution itself. Though it is obvious that facile transfer from a place to another cannot take root and persist, it is expected the cases of China and India assist the better understanding of the situation in Indonesia.

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