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論文題目 : Cross-Scale Analysis of Institutional Linkages between People and Forests in the Social Transition Process: A Case Study of Teak Forest Management in Java, Indonesia  
(社会体制の移行過程における人間と森林との制度的な関係のクロススケール分析 : インドネシア・ジャワ島におけるチーク林業の事例)

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## 論 文 内 容 の 要 旨

Forest ecosystem services make important contributions not only to human well-being but also to the existence of all species in the world. Of the global forest area, 80% was publicly owned in 2005; however, the forest area managed and owned by individuals and communities has been expanding. As in other countries, decentralization and devolution of forest management has been progressing in Indonesia. Since the fall of the Suharto regime, there has been political and economic reformation (*Reformasi*). Agrarian reform, which attempts to fairly redistribute land, has also been revitalized after 32 years suspension during the Suharto regime.

Current trends indicate that the area of forest owned and managed by local people and communities will increase in Indonesia. The Privately Owned Forests (POFs) (*Hutan Rakyat*), which are considered as final form of ownership transfer to people, also form part of ecosystem of watershed with State Forests (SFs) in an integrated fashion. When usufruct and ownership of forests are transferred from the central government to people, thus, it is important to understand how people can sustainably manage their forests. However, before this is possible, it is necessary to understand the association between people and forests during the social transition process and consider this in forest policy. Cross-Scale Institutional Linkages (CSIL), which comprise vertical linkages (across organization levels) and horizontal linkages (across geographic space or same level of organization), must be considered to analyze optimal resource management because many cases of resource and environmental management are cross scales in the increasingly globalized world. Accordingly, this study focused on teak (*Tectona grandis*) which is the most demanded tropical hardwood distributed from the local to the global markets as the vertical linkages, and SF and POF managements which are different land tenure as the horizontal linkages, in Java where teak timber production has been among the top three producers in the world and the forest management models has been imitated throughout Indonesia.

After the literature review in Chapter I, this dissertation is structured as follows. In Chapter II, I describe three important aspects of forest management in Java: 1) teak and tropical hardwood crisis of recent years, 2) SF, and 3) POF. In Chapter III and IV, I present case studies of SF and POF based on field research in Indonesia. In Chapter III, I analyze the changes in the local social economy and forest management arising from collaborative forest management (CFM) in SF. This analysis showed that while CFM has the high potential to ensure a stable wood supply and local economic prosperity, there were still challenges to obtaining the satisfaction of farmers and equitable benefit/cost sharing. In Chapter IV, I focus on a small-scale POF, which has been increasingly considered as a major wood supplier. To accommodate wood demand and ensure sustainable forest management, it was found that POF owners must negotiate both economic challenges, such as urgent money needs resulting in immature logging, and social challenges, such

as forest shrinkage caused by traditional inheritance and recent migration of people to urban areas, for long periods. In Chapter V, I discuss the findings of SF and POF comprehensively from the standpoint of CSIL and show the typology of issues on forest management by people in the transition process. In Chapter VI, I summarize the association between people and forests during the transition process, and conclude that forest policy taking fully into account the transforming people's livelihood modes (e.g. migration of rural population) and impact of globalization on local forest management (e.g. timber legality verification for export) simultaneously is crucially important in order to accommodate market demand and manage forest sustainably.