

Implementation of sustainable forest management in two different forest management unit models in Vietnam and Malaysia

Duc Le^{1*}, Walter Lintangah², Jürgen Pretzsch¹, Norbert Weber², Huy Bao³

¹Technische Universität Dresden, Institute of International Forestry and Forest Products, Tropical Forestry

²Technische Universität Dresden, Institute of Forest Economics and Forest Management Planning, Forest Policy and Forest Resource Economics

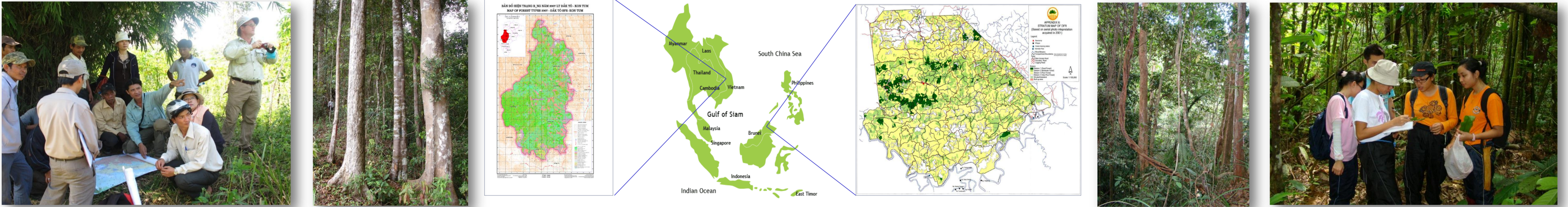
³Tay Nguyen University, Faculty of Agriculture & Forestry, Department of Forest Resources & Environment Management

Introduction and Objectives

By the 1990s tropical forests in Southeast Asia had been exhaustively logged, mainly for economic growth and development of the countries. Over harvesting and poor forest management had led to the decline and degradation of natural forest areas. Sustainable Forest Management (SFM) became one of major concerns in Southeast Asian countries. But so far, the number of certified natural forest areas in the region is still short of expectations. This study was based on two forest management units (FMUs) in Vietnam and Malaysia to evaluate the lessons learnt while implementing SFM concepts.

Study Locations

The case study involved the Dak To Forestry Company (Central Highlands, Vietnam; 14°43'09"-14°53'30" N, 107°43'50"-107°52'20" S) and the Deramakot Forest Reserve (Central Sabah, Malaysia; 117° 20' -117° 42' E, 5° 19' - 5°20' N). Both are state forest enterprises (SFEs) and manage natural forests for timber production.



Methodology

A literature review was conducted in both countries. The review includes the documentation of forest management plans (FMPs), auditing results by the auditors for forest certification, and other published and unpublished materials. Further discussions were conducted to help understand forest management practices in the FMUs.

Results and Lessons Learnt

Table 1. Basic information about case studies

Basic information	Dak To State Forestry Company	Deramakot Forest Reserve
Total managed area (ha)	16,329.3	55,139.0
Staff and workers	17+3	13
Beginning process of SFM	2005	1989
Certified status	FSC Controlled Wood since 2011	Full FSC since 1997
Certified by	GFA	SGS
Internationally supported by	GIZ	GIZ
Ethnic groups	4 groups (mainly Sedang); 3,122 HHs; 15,207 people	5 villages (mainly Sungai); 218 HHs; 784 people

Source: SFM Plan of Dak To, 2009; Fieldwork 2011; SFD, 2005

Table 2. Technical information about case studies

Technical information	Dak To State Forestry Company	Deramakot Forest Reserve
Logging frequency	Banned 2005-2010	Annual
Cutting cycle (year)	30	40
Mean annual increment (MAI) (m ³) or Rate of Growth P (%)	2.6%	7.7m ³
Annual Allowance Cut (AAC) (m ³) (following logging quota) in 2010	2,651	17,600
Annual Sustainable Cut (ASC) (m ³) based on FMP	8,040	41,265
Intensity of cut	12 trees/ha	15 trees/ha (40 m ³ /ha)
Annual harvestable area (ha/year)	170	917
Market	Domestic	International and

Source: SFM Plan of Dak To, 2009; Fieldwork, 2011; SFD, 2005

Table 3. Strengths and Constraints of Dak To

	Strengths	Constraints
Dak To State Forestry Company	<ul style="list-style-type: none"> Documentation and implementation of quality management system, Good knowledge about FSC requirements, Strong assistance and cooperation from international agency (GIZ), Detail maps are available, Newly set up and detail forest management plan (FMP), Knowledge about High Conservation Value Forest (HCVF), Surveys of the fauna and flora biodiversity were done by experts. 	<ul style="list-style-type: none"> Stakeholder consultations is not fully integrated, local people are weakly engaged, Some cases of land tenure conflict with local people, Environmental Impact Assessment (EIA) is not done yet, Difficulty in controlling of illegal logging, Erosion in high slope logging area Boundary is not clear to local people, Lack of measures and actions to maintain and manage HCVFs.

Source: GFA, 2011; Discussion results, 2011

Table 4. Strengths and Constraints of Deramakot

	Strengths	Constraints
Deramakot Forest Reserve	<ul style="list-style-type: none"> Three main evaluation experiences of being certified under FSC certification (1997, 2002, 2007), Support and commitment from both Federal and State Governments, Assistance from international cooperation during the initial planning and implementation (GIZ), Continuous support and collaboration of local and international organisations, Central forest management through well planned forest management Plan (FMP), Annual work plan (AWP) and comprehensive harvest plan (CHP), Close monitoring and working together with contractors in all forest operation, Continuous engagement with local and global community. 	<ul style="list-style-type: none"> Some non-technical and non-forestry matters during the initial phase of implementation: <ul style="list-style-type: none"> high turnover of staff, lack of managerial skills in running an enterprise and entrepreneurial vigor, rules and regulations bound management of civil service. Management constraints for the implementation of FMP are stipulated as: <ul style="list-style-type: none"> Hollow trees, and heterogeneous stand conditions, Low fertility and high erosion, Risks of forest fire from oil palm development adjacent to DFR, Financial expenses.

Source: SFD, 2011; SGS, 2010; Discussion results, 2012

Study findings indicate that forest management of the two case study models is very different in social contexts, management models, and approaches. The Deramakot Forest Reserve model is very successful, with a high capability of duplication, whereas the Dak To Forestry Company model is still facing challenges from such issues as illegal logging, conflict over forest and land uses, and support from the relevant stakeholders in the SFM process.

Recommendations

The management aspects of these two models are explained by "top-down" management, with the involvement of international technical support agencies and the Central level. It is recommended that greater involvement from private sectors and other stakeholders, especially local people in forest management and protection, can expedite better performance of forest management practice at the FMU level.

The work is kindly supported by DAAD, Institute of International Forestry and Forest Products, and Institute of Forest Economics and Forest Management Planning