



Tropentag 2012, Göttingen, Germany
September 19-21, 2012

Conference on International Research on Food Security, Natural Resource
 Management and Rural Development organised by:
 Georg-August Universität Göttingen and University of Kassel-Witzenhausen

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

Duc Le^a, Walter Lintangah^b, Jürgen Pretzsch^a, Norbert Weber^b, Huy Bao^c

a Technische Universität Dresden, Institute of International Forestry and Forest Products, Piener Str. 7, 01737 Tharandt, Germany. Email lethienduc@gmail.com.

b Technische Universität Dresden, Institute of Forest Economics and Forest Management Planning, Forest Policy and Forest Resource Economics, Piener Str. 23, 01737 Tharandt, Germany.

c Tay Nguyen University, Faculty of Agriculture & Forestry, Department of Forest Resources & Environment Management, No. 567 Le Duan Street, Buonmathuot City, Daklak Province, Vietnam.

Introduction

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 (GTZ, 2007). In the following years Sustainable Forest Management (SFM) became one of major topics of the annual meetings of the Asian Senior Officials on Forestry (ASOF) at the Association of Southeast Asian Nations (ASEAN) (SFMI, 2007; FAO, 2007). But so far, the number of certified natural forest areas in the region is still short of our expectations (Blaser at al., 2011).

This study was based on two forest management units (FMUs) in Vietnam and Malaysia to evaluate the lessons learnt during implementing SFM concepts in natural forests for timber production under state forest enterprises (SFEs). The figures below shows the status quo of SFM process achieved in Vietnam and Sabah of Malaysia. Table 1 shows the number of forest management (FM) area under natural forests and plantations that were certified. Vietnam has a total of only 41,340 ha of certified area, in which 16,328 ha are under natural forest. In contrast, Sabah has a total of 431,554 ha of certified area, with natural forest accounted for about 94% of the area. Table 2 shows number of Chain of Custody (CoC) certifications, in which Vietnam has 272 and Sabah has 174 certification.

Country	FC Scheme	No. of Certification	Total certified area (ha)	Natural forest (ha)	Plantation (ha)
Vietnam	FSC	5	41,340	16,328	25,012
Sabah, Malaysia	FSC MTCC	7 1	374,307 57,247	403,554	28,000

Source: FSC website, updated on August 2012, MTCC 2012

Table 1 Forest Management (FM) Certification

Country	FC Scheme	No. of Certification
Vietnam	FSC	272
Malaysia	FSC/PEFC/MTCC	174

Source: FSC website, updated on August 2012, MTCC 2012

Table 2 Chain of Custody (CoC) Certification

Figures in Table 1 and Table 2 show that natural forest management practices in Sabah of Malaysia is much better than Vietnam, however, Vietnam is better in term of wood processing industry.

Case Studies and Methods

Case studies

The case study involved the Deramakot Forest Reserve (Sabah, Malaysia), - the first natural tropical forest certified in 1997; and the Dak To Forestry Company (Central Highlands, Vietnam), which was the first Controlled Wood certified natural forest in Vietnam, in 2011. Both FMUs were certified under the FSC (Forest Stewardship Council) forest certification scheme for natural forests, and was received extensive technical support from German Society for International Cooperation (GIZ) during the initial phases with little involvement by local communities. Both are state forest enterprises (SFEs) and manage under natural forests for timber production.



Source: Dak To, 2009), SFD, 2005 and Map from internet

Map 1 Case studies location and land cover

Methods

A literature review was conducted in both countries. The documentation are include forest management plans (FMPs), auditing reports of the certified forest, and other published and unpublished materials. Further discussions were conducted to help understand forest management practices in the FMUs.

Results and Discussion

Two case studies with basic and technical information in comparison:

Basic information	Dak To State Forestry Company	Deramakot Forest Reserve
Type of company	State-owned Enterprise	State-owned Enterprise
Geographic location	Central Highlands, Vietnam 14°43'09"–14°53'30" N 107°43'50"–107°52'20" S	Central Sabah, Malaysia 117° 20' E –117° 42' E 5° 19' N – 5°20' N
Type of production	Manage natural forest for timber production	Manage natural forest for timber production
Total managed area (ha)	16,329.3	55,139.0
Staff and workers	17+3+ contractors	13+contractors
Beginning process of toward SFM	2005	1989

Basic information	Dak To State Forestry Company	Deramakot Forest Reserve
Certified status	FSC CW since 2011	Full FSC since 1997
Certified by	GFA	SGS
International supported by	GIZ	GIZ
Ethnic groups	4 groups (mainly Sedang) with 3,122 HHs, 15,207 people	Mainly Sungai 5, 218HH, 784 people

Source: Dak To, 2009; Fieldwork 2011; SFD, 2005

Table 4 Basic information about case studies

Technical information	Dak To State Forestry Company	Deramakot Forest Reserve
Logging frequency	Banned 2005-2010	176,000 m ³ (2005-2014)
Cutting cycle (year)	30	40
Minimum forest volume to be planned to harvest (m ³ /ha)	270.0	40m ³ /ha
Mean annual increment (MAI) (m ³) or Rate of Growth P (%)	2.6%	7.7 m ³
Annual Allowance Cut (AAC) (m ³) (following harvesting 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)	170.0	917.0
Market	Domestic market	International and domestic

Source: Dak To, 2009; Fieldwork 2011; SFD, 2005

Table 5 Technical information about case studies

Strengths and Constraints of case studies in comparison:

Strengths	Weaknesses
<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 6 Strengths and Constraints of Dak To

Strengths	Weaknesses
<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 organizations, ▪ 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

Table 7 Strengths and Constraints of Deramakot

Performance assessment to main elements of SFM:

No.	Elements	Dak To		Deramakot	
		Planning	Performance	Planning	Performance
1	A legal and policy framework				
	Compliance with legislation and regulations	Yes	Satisfactory	Yes	Satisfactory
	Tenure and use rights	Yes	Unsatisfactory	Yes	Satisfactory
	Commitment and policy of FMU	Yes	Unsatisfactory	Yes	Highly satisfactory
2	Sustained and optimal production of forest products				
	Management planning	Yes	Satisfactory	Yes	Highly satisfactory
	Sustainable yield of forest products			Yes	Highly satisfactory
	Monitoring the effects of management	Yes	Unsatisfactory	Yes	Highly satisfactory
	Protection of the forest from illegal activities	Yes	Unsatisfactory	Yes	Satisfactory
	Economic viability and optimizing benefits from the forest	Yes	Satisfactory	Yes	Highly satisfactory
3	Protecting the environment				
	Environmental impact assessment	Yes	Satisfactory	Yes	Highly satisfactory
	Conservation of biodiversity	Yes	Satisfactory	Yes	Highly satisfactory
	Ecological sustainability	Yes	Satisfactory	Yes	Highly satisfactory
	Use of chemicals	N/A	N/A	No	No
	Waste management	Yes	Satisfactory	Yes	Satisfactory
4	Wellbeing of people				

No.	Elements	Dak To		Deramakot	
		Planning	Performance	Planning	Performance
	Consultation and participation processes	Yes	Unsatisfactory	Yes	Highly satisfactory
	Social impact assessment	No	N/A	Yes	Satisfactory
	Recognition of rights and culture	Yes	Satisfactory	Yes	Satisfactory
	Relation with employees	Yes	Satisfactory	Yes	Satisfactory
	Contribution to development	Yes	Satisfactory	Yes	Satisfactory

Source: Using SFM elements of Higman et al., 2006

Conclusions and Outlook

Study findings indicate that both forest management model of the case study 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.

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.

References

- Blaser, J., Sarre, A., Poore, D., & Johnson, S. (2011). *Status of tropical forest management 2011. ITTO Technical Series No 38. ITTO*. Yokohama, Japan.
- Dak To. (2009). Sustainable forest management plan: Dak To SFE, period 2009-2028 (in Vietnamese).
- FAO. (2007). State of the World’s Forests 2007- The global view. *FAO* (pp. 64–71).
- GFA. (2011). *Public summary controlled wood audit report- Dak To plantation single member limited liability company (Daktoplenco)*.
- GTZ. (2007). *Best Practices for Sustainable Forest Management in Southeast Asia. GTZ*. Retrieved from http://www.eco-consult.com/engl/2_resources/b_publications/2007/refop_best_practices_sfm.pdf
- Higman, S., James, M., Bass, S., Judd, N., & Nussbaum, R. (2006). *The Sustainable Forestry Handbook- A practical guide for tropical forest managers on implementing new standards. Earthscan* (Second Edi., p. 332). Earthscan, London.
- Malaysian Timber Certification Council, 2012. News. Vol 6.
- Manan et. al. (2002). *The Sabah Forestry Department experience from Deramakot Forest Reserve: Five years of practical experience in certified Sustainable Forest Management*. 20-22 August 2002.
- Sabah Forestry Department. (2005). *Forest Management Plan 2, 1st January 2005 – 31st December 2014*. Deramakot Forest Reserve, Forest Management Unit No. 19.
- Sabah Forestry Department. (2011). *Forever Green: A sustainable Future With Deramakot*.
- SFMI. (2007). Vietnam national standard for sustainable forest management. *SFMI*, 27.
- SGS. 2010. *Forest Management Certification Report*. Section A Public Summary.