Implementing Sustainable Forest Management – Some Experiences from Malaysia

B.C.Y. Freezailah

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Presentation Outline

• Introduction
• Global Forest Situation
• Essentials of Sustainable Forest Management
• Sustainable Forest Management in Malaysia
• Malaysian Timber Certification Council (MTCC) & Implementation of Timber Certification
• Challenges
• Conclusions
2030 Agenda for Sustainable Development

- Adopted on 25 September 2015 by the UN General Assembly, it includes 17 SDGs including item 15.2 on SFM:

  “By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally”

- Focus of presentation on implementation of sustainable management of natural tropical forests based on experiences in Malaysia where about 1/3 of its Permanent Reserved Forests have been certified under the PEFC-endorsed MTCS
Extent of Global Forests

- Pre-industrial forest area: 6 billion ha
- Currently only 3.6 billion ha equally distributed between tropical and non-tropical forests
- Global deforestation:
  - 1990-2000: 16 mil ha/year
  - 2000-2010: 13 mil ha/year
- Tropical deforestation serious
- Illegal logging
ITTO Report (2011)

- Survey in 33 tropical countries with forest area totaling 1.4 billion ha
- 30.6 million ha under management
- Only 17.0 million ha under SFM and certified

Current situation: 37 million ha of tropical forest certified
Current Status of Forest Certification

GLOBAL

Total Certified Forests: 446 million ha
(10% of the world’s forests)

Total Certified Tropical Forests: 37 million ha
(8.3% of total certified forests)
Tropical Forest Crisis

- Deforestation and degradation
- Unsustainable timber harvesting
- Illegal logging
- Unsustainable conversion
- Impact on forest dependent communities
- Loss of biodiversity
- Global warming
- Negative impact on tropical timber trade
Definition of Sustainable Forest Management (SFM)

ITTO (1992)

“The process of managing forest to achieve one or more clearly specified objectives of management with regard to the production of a continuous flow of desired forest products and services without undue reduction of its inherent values and future productivity and without undue undesirable effects on the physical and social environment”


“a dynamic and evolving concept, [that] aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations”
Guidelines for the Sustainable Management of Tropical Forests

Guidelines for SFM

• Guidelines are presented in the form of Principles and possible actions covering considerations ranging from general policy to forestry operational aspects embracing forest sustainability – social, environmental and economic aspects

Criteria & Indicators for SFM

• Criterion is an aspect that is considered important by which SFM may be assessed. A Criterion is accompanied by a set of related indicators

• Indicator is a quantitative, qualitative or descriptive attribute that, when periodically measured or monitored indicates the direction of change in a criterion
ITTO Guidelines for the Sustainable Management of Natural Tropical Forests, 1990

- ITTO pioneered the development of guidelines for sustainable management of natural tropical forests
- “to be the international reference standard for the development of more specific guidelines of the national level, for sustainable management of natural tropical forests for timber production …”
- Very innovative and controversial at that time
- Development of new concepts:
  - Criteria and Indicators for SFM
  - Forest Management Certification
- Revised 2005 and 2015
Related Guidelines for the Sustainable Management of Tropical Forests


• Guidelines for the Sustainable Management of Planted Tropical Forest (1993)

• Guidelines for Conserving Biodiversity in Production Forests (1993, 2008)

• Guidelines on Fire Management (1998)


<table>
<thead>
<tr>
<th>Objective</th>
<th>Principles for managing natural tropical forests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Providing the enabling conditions for SFM</td>
<td><strong>Principle 1: Forest governance and security of tenure</strong></td>
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<tr>
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<td><strong>Necessary conditions for SFM:</strong></td>
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<tr>
<td></td>
<td>• Political commitment</td>
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<td>• Supportive national policies</td>
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<td>• Strong institutions, laws and regulations,</td>
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<td>• Appropriate governance</td>
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<td></td>
<td>• Security of forest tenure</td>
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<td></td>
<td>• Clearly defined access and use rights, including customary and traditional rights</td>
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<td><strong>Principle 2: Land-use planning, permanent forest estate and forest management planning</strong></td>
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<tr>
<td></td>
<td>• Managing tropical forests sustainably requires that land allocation and spatial planning within and outside forests maintain or enhance the economic, social and environmental values of forests at a landscape scale.</td>
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<td>• This requires the adoption of a forest planning framework at the national, subnational or landscape scale</td>
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### ITTO Guidelines for SFM (2015) – Objectives & Principles

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Principle</strong></td>
<td><strong>Observations</strong></td>
</tr>
<tr>
<td>2. Ensuring forest ecosystem health and vitality</td>
<td><strong>Principle 3:</strong> Ecological resilience, ecosystem health and climate-change adaptation</td>
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<tr>
<td></td>
<td>• Resilience is a key tenet of SFM in natural tropical forests; it is essential to maintain or enhance it to reduce risks to sustainability</td>
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<td>• Climate change is likely to affect tropical forests and the people who depend on them</td>
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<td>• It is essential to identify, prevent, monitor and manage threats to forests and to protect them from destructive agents and stresses</td>
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<td>Principles for managing natural tropical forests</td>
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</tbody>
</table>
| 3. Maintaining the multiple functions of forests to deliver products and environmental services | Principle 4: Multipurpose forest management  
Principle 5: Silvicultural management | • The role of natural tropical forests as providers of multiple goods and environmental services should be safeguarded by the application of sound planning and management practices that maintain ecosystem functions and the potential of the forest to yield the full range of benefits to society  
• In timber production forests, it is essential to have an approved management plan with clearly stated objectives and the silvicultural measures to help meet those objectives |
### 4. Integrating social, cultural and economic aspects to implement SFM

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<td><strong>Observations</strong></td>
</tr>
<tr>
<td>Principle 6: Social values, community involvement and forest-worker safety and health</td>
<td>• SFM needs to accommodate forest-based production (particularly of timber), environmental protection and local development concerns</td>
</tr>
<tr>
<td>Principle 7: Investment in natural forest management and economic Instruments</td>
<td>• Natural tropical forests perform a wide range of socioeconomic and cultural functions, which must be recognized and maintained</td>
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Timber Legality & Sustainability

• Sustainable timber product of SFM (social, environmental & economic factors required by law and forest management principles)
• Sustainable timber assured through both international and national certification schemes
• SFM/certification long-term goal
• Legal timber milestone on journey to attain SFM/sustainable timber
• Legal timber embraces social, environmental & economic aspects required by law and thus with lesser number of criteria and indicators
Timber Legality & Sustainability

- Verification of legal timber through Timber Legality Assurance System (TLAS)
- Certification voluntary
- TLAS under the EU Forest Law Enforcement, Governance and Trade Voluntary Partnership Agreement (FLEGT VPA) legally binding through bi-lateral agreements between EU & partner countries
**Actions by Consumer Countries to Combat Illegal Logging & Trade in Illegal Timber**

- G-8 initiatives, (2005)
- US Lacey Amendment Act, May 2008
- EU Timber Regulation, March 2013
  - FLEGT VPA
  - Due Diligence
- Australian Illegal Logging Prohibition Act, November 2014
- Public Procurement Policy
- Other consumer countries expected to take similar measures
Some Elements of Forest Management Plan (FMP)

- Forest Management Plan (FMP) fundamental to SFM at the FMU level
- Contents of FMP includes among others the following elements:
  - Objectives of management
  - Resources assessment
  - Incorporation of elements related to the 3 pillars of sustainability – social, environmental and economic considerations which define SFM
  - Biodiversity conservation
  - Analyses of issues
  - Growth & yield
  - Annual coupe
  - Harvesting Plans
  - Silviculture system
  - Post-Felling assessment on regeneration status and follow-up treatment
  - Monitoring
History of Forest Management in Peninsular Malaysia

- First Forest Officer appointed in 1901
- Gazettement of permanent forests comprising of Totally Protected Areas (TPAs) for biodiversity conservation & forest reserves sustainably managed for timber production and other goods & services since 1906 which now total about 50% of Malaysia’s land mass
- First Forest Ordinance enacted in 1907
- Matang mangroves managed since 1904
Selective Management System (SMS)

- Conservation of the forest resources
- Sustainability of the productive resource base
- Minimize reinvestment for forest rehabilitation work
- Ensure environmental stability and quality
- Reduce damage to the advanced growth
## Sequence of Operations of SMS

<table>
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<tr>
<th>Year</th>
<th>Operation</th>
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<tbody>
<tr>
<td><strong>n-2 to n-1</strong></td>
<td>Pre-felling forest inventory of 10% sampling intensity using systematic-line-plots to determine appropriate cutting limits (regimes); minimum cutting limit 50 cm dbh for dipterocarp species and 45 cm for non-dipterocarp species</td>
</tr>
<tr>
<td><strong>n-1 to n</strong></td>
<td>Tree marking incorporating directional felling</td>
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<tr>
<td></td>
<td>▪ Marking of trees to be felled (some 7-12 trees harvested per ha)</td>
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<td></td>
<td>▪ Marking for mother trees (4 trees per ha)</td>
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<tr>
<td></td>
<td>▪ Marking of protection and protected trees</td>
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<tr>
<td></td>
<td>▪ Demarcating boundaries of buffer zone for watercourses</td>
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<tr>
<td><strong>n</strong></td>
<td>Felling of trees</td>
</tr>
<tr>
<td><strong>n¹/₄ to n¹/₂</strong></td>
<td>Forest survey to determine damage to residuals and royalty on short logs and tops</td>
</tr>
<tr>
<td><strong>n+2 to n+5</strong></td>
<td>Post-felling forest inventory of 10% sampling intensity using systematic-line-plots to determine residual stocking and appropriate silvicultural treatments</td>
</tr>
<tr>
<td><strong>n+10</strong></td>
<td>Forest inventory to determine regeneration status of the forest</td>
</tr>
</tbody>
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Annual Allowable Coupe (AAC) under 10th Malaysia Plan (2011-2015)

**Peninsular Malaysia**
- Kedah: 2,850 ha
- Perak: 6,990 ha
- Selangor: 690 ha
- Negeri Sembilan: 2,251 ha
- Melaka: 40 ha
- Johor: 2,490 ha
- Pahang: 13,610 ha
- Kelantan: 5,910 ha
- Terengganu: 5,053 ha

**Sabah**
- 60,000 ha

**Sarawak**
- 155,000 ha

**Total**
- 255,334 ha
Forest Certification

• Forest certification gives assurance of SFM in a credible and transparent manner through independent third party auditing

• Forest certification and Chain of Custody (CoC) assures the sustainability of timber products to consumers

• 2 international schemes:

  ![PEFC](pefc.png)  ![FSC](fsc.png)

• National certification schemes include:

  ![CFCC](cfcc.png)  ![NCCF](nccf.png)  ![IFCC](ifcc.png)  ![LEI](lei.png)  ![mtcc](mtcc.png)

  - China
  - India
  - Indonesia
  - Lembaga Ekolabel Indonesia
  - Malaysia

• Endorsed by PEFC: MTCC (1 May 2009), CFCC (5 Feb 2014), IFCC (1 Oct 2014)
Establishment of MTCC

- MTCC was established in January 1999
- Independent & non-profit organisation
- To develop & operate a voluntary & independent national certification scheme - Malaysian Timber Certification Scheme (MTCS)
- Governed by an 11-member Board of Trustees (BOT) comprising representatives from:
  - timber industry
  - academic & research institutions
  - non-governmental organisations (social, environmental & workers’ groups)
  - governmental agencies
- Funded by Endowment Fund
- 16 person secretariat
Development of MTCS

The development of the Malaysian Timber Certification Scheme (MTCS) is both a country- and market-driven initiative.

**Country-driven:**
- Malaysia 1 of 12 countries with mega-biodiversity
- Rich resources should be sustainably managed to ensure environmental & socio-economic benefits
- Increasing awareness and concern among local stakeholder groups

**Market-driven:**
- Export requirements in major timber markets:
  - Demand for sustainable/legal timber & timber products
  - Procurement policies in key importing countries
  - Possible price premium & better market access
  - Legislation requiring legal timber & timber products
Operation of MTCS

• MTCS started operations in October 2001
• Provides independent assessment of forest management practices, to ensure the sustainable management of Malaysia’s natural forest and forest plantations to meet the demand for certified timber products
• Comprises two components:
  - Forest Management Certification (FMC)
  - Chain of Custody (CoC) Certification
Operation of MTCS

• Certification covers only Permanent Reserved Forests (PRFs) and community owned or managed forests and established forest plantation in the country

• Endorsed by the Programme for the Endorsement of Forest Certification (PEFC) since May 2009.
  – Re-endorsed in July 2014 for another 5 years

• Success of the MTCC is attributed to the cooperation of all stakeholders and the professionalism of the forest managers. Also technical assistance from Netherlands & City of Hamburg
Institutional Arrangements of MTCS

**MTCC**
National Governing Body (NGB)

**STANDARDS MALAYSIA**
National Accreditation Body (AB)

**Malaysian Timber Certification Scheme (MTCS)**

**Accredited Certification Bodies (CBs)**

**Accreditation**
CBs are required to be accredited to STANDARDS MALAYSIA, the national AB

**Notification**
Accredited CBs have to apply to MTCC to become PEFC-notified CBs to enable them to issue accredited certificates recognised by MTCC/PEFC

CBs conduct audits and make decisions to award MTCS Certificate for Forest Management or Certificate for Chain of Custody (CoC)

CBs receive and process applications for certification

Applicants for Forest Management Certification
Applicants for Chain of Custody Certification
Development of Forest Certification Standards – Standard Setting Process

- **Stakeholder Mapping**
- **Announcement of the standard-setting process and invitation of stakeholders**
- **Creation of the working group/committee**
- **Working group/committee – development of a draft document**
- **Public consultation and pilot testing**
- **Consensus-building on the final draft**
- **Formal approval of the standard**
- **Publication of the standard**

Periodic revision of the standard
Both standards embrace environmental, social and economic aspects of forest management
As of December 2015, 10 FMUs and 2 FPMUs hold valid PEFC Certificate for Forest Management covering 4.66 million ha of forests.

As of December 2015, 13 FMUs hold valid FSC Forest Management Certification covering 680,821 ha of PRFs.
Recognition of MTCS

• As a PEFC endorsed scheme, MTCS is recognised by various national timber procurement policies:

• Green Building systems:

• Other policies:
Impact of Forest Certification on SFM in Malaysia

1. Better documentation

2. Increase in consultation and involvement of stakeholder groups
Impact of Forest Certification on SFM in Malaysia

3. Enhances implementation & enforcement

4. Environmental Protection
5. Biodiversity Conservation

6. Identification of gaps for research & development
Challenges

- Complexity of the tropical forest ecosystem
- Land use and tenure policies
- Need to conserve biodiversity, social and environmental values apart from economic viability – the pillars of sustainability
- Low commercial timber productivity of natural tropical forests
- Proliferation of timber legality requirements by consumer countries
- Stringency of certification standards
Challenges

• SFM & certification of natural tropical forests most demanding requiring:
  – Political commitment
  – Enabling legal infrastructure
  – Manpower with necessary skills
  – Cooperation & better understanding between stakeholders & schemes
  – Strong institutions
  – Adequate financial resources most crucial
Conclusions

• Enormous challenge to implement SFM and certification of tropical forests

• Sound land use policy and security of tenure of gazetted permanent forests to implement SFM

• Legality verification is synergistic with and can catalyse achievement of SFM and certification - the EU FLEGT has enormous potential

• Role of international tropical timber trade to influence policies and practices on promoting implementation of SFM & certification

• Certification for SFM & verification for legality are important tools to achieve SDG on SFM, but if standards are too stringent/inflexible – unintended & negative impact on tropical timber trade & forests
Conclusions

• Coordination amongst consumer countries on procurement policies & standards for legality & sustainability urgently needed

• Understanding & cooperation to implement both verification for legality and certification for sustainability using an internationally negotiated phased approach with clear time-bound targets within the framework of SDG 15

• Assistance to tropical countries as stated in Item 15.5 of the SDG:

  “Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation”
Conclusions

• Item 15.b of the SDG, has to be thoroughly discussed to determine the extent and sources of such resources that could be mobilised to assist tropical countries and the criteria for their disbursement based on specific achievement goals.

• Formulate market incentives to contribute to the implementation of SFM to produce certified timber products – studies on economics & cost of implementing SFM required to provide the basis and justification for incentives.

• Progress in promoting the implementation of SFM of tropical forests depend on enhanced level of understanding and cooperation by the international community and organisations, and relevant non-governmental organisations based on short-term, medium-term and long-term goals.
Conclusions

• As evident from the tropical forest crisis, there is a serious disconnect between the capacity of tropical countries to achieve SFM and certification to fully comply with the stringent standards for timber legality & sustainability which the world demands.

• The way forward is for all parties to agree on implementation by stages with time-bound targets within the framework of SDG 15 of the 2030 Agenda for Sustainable Development.