FOREST MANAGEMENT CERTIFICATION IN THE TROPICS

AN EVALUATION OF ITS ECOLOGICAL, ECONOMICAL AND SOCIAL IMPACT



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THE MESSAGES



The majority of the certified area in the tropics corresponds to natural tropical forests, and not to plantations. Most of the certified natural forests are located in the Americas, mostly in Bolivia and Brazil. The main product harvested in these certified areas is timber.



The claim that most certified area is managed by large individual-owned forest management units (FMU), and that certification is not really accessible to smallholders and local communities, is true based on certified area, but not true based on the number of certificates.



Forest certification works: forest management certification improves the working standards of FMU in the tropics.

Contrary to the belief, forest management certification problems in the tropics are not only focussed on social issues. All three pillars of sustainability are included in the list of the most common criteria with problems.



Certification is likely to have a large impact on the long-term sustainability of forest management mainly because FMU are requested to improve their monitoring system and to incorporate the results of the monitoring system into their management practices.



There has been a learning process since the forest management certification movement started. This learning process is even observed in the most common problems found in the evaluation reports.

FMU that are large and have tropical forests are facing more problems than those that are small and have subtropical forests. The type of certificate holder and the forest products being harvested do not have an effect on the number of problems found.



Public summaries include a wealth of information. This information should be better used for adjusting the certification schemes, for monitoring the progress made, and for extracting lessons learned that can then be applied elsewhere.



WHY MEASURE THE IMPACT OF CERTIFICATION?

Forest certification is successful. The first forest have been certified 15 years ago, the first tropical forests 14 years ago. Anno 2009 large areas have been certified and there is a market now for certified forest products. But, what is the impact on the ground? Are forest better managed now? Does certification really promote significant changes in forest management?





FOREST STEWARDSHIP COUNCIL (FSC)

The FSC created the first forest management certification scheme in 1993. FSC was created by a group of environmental NGOs, timber traders, groups of indigenous people, forest worker organizations, and other stakeholders. Its mission is to promote "environmentally appropriate, socially beneficial, and economically viable management of the world's forests", so that these forests can be used without compromising the rights and needs of the future generations.

FSC is an independent, membershipbased organization. FSC does not carry out the certification evaluations itself; it only develops the rules and accreditation requirements. The actual evaluation of the forest management units is done by third-party certifying agencies. These certification bodies are constantly monitored by FSC, which guarantees that certification bodies perform equally.

The certification scheme used by FSC is based on a set of Principles and Criteria (P&C). The P&C or FSC standards are the result of intensive consultation with stakeholders and are open to discussion and improvement over time by means of public consultations. The standards deal with legal, social, economical, and ecological aspects related to forest management and its chain of custody. There are 10 principles, each principle having a set of criteria, and each criterion a set of indicators, which are used by the evaluators to assess the companies. Since the inception of FSC several other schemes have been developed mainly by the forest industry and forest owners. These so-called producer-backed schemes developed their own sets of P&C. The internationally most important one is the Program for the Endorsement of Forest Certification (PEFC).



LIST OF PRINCIPLES AND CRITERIA (FSC)

Criterion

List of FSC Principles and Criteria used for evaluation of companies interested in obtaining FSC certification. The content of each criterion has been summarized as much as possible to refer only to the essential.

In this study Principle 10 was not taken into account as we focused only on certified natural tropical forests.

Principle

1. Compliance with laws and **FSC** Principles

2. Tenure and use right and responsibilities

3. Indigenous peoples' right

4. Community relations & workers' right

5. Benefits from the forest

6. Environmental impact

Aspect	being	dealt	with
Aspece	Deing	ucan	WILI

- national & local laws I.I 1.2 fees, royalties & taxes international agreements 1.3 conflicts between laws and Principle and Criteria of FSC I.4 protection from illegal activities 1.5 long-term commitment to FSC 1.6 evidence for use rights to the land 2.1 local communities maintain control, under they delegate it 2.2 mechanisms to solve disputes 2.3 they maintain control, unless they delegate control 3.1 forest management is not detrimental to resources of the group 3.2 sites of special significance are respected 3.3 compensation in case of detrimental effects 3.4 communities are given employment, training, services 4.I health and safety for employees & families 4.2 right to organize and negotiate (workers) 4.3 evaluation of social impact 4.4 mechanisms to resolve grievances 4.5 economic viability (taken into account 3 aspects) 5.1 optimal use & local processing minimize waste (from harvesting) 5.3 diversify local economy (community oriented) 5.4 forest services and resources 5.5 harvesting regulations 5.6 6.1 assessment of environmental impact rare, threatened & endangered species 6.2
- 6.3 ecological functions & values
- protected areas 6.4
- reduce impact of logging operation 6.5



- 6.7 waste (garbage)
 - 6.8 biological control agents

avoid use of chemicals

6.9 exotic species

6.6

- 6.10 forest conversion
- 7.1 management plan content
- 7.2 periodic revision
- 7.3 training of workers for implementation
- 7.4 public summary
- 8.1 frequency, intensity, replicability
- 8.2 indicator: productivity, composition changes, socioeconomic impacts, economical aspects of company
- 8.3 chain of custody
- 8.4 use & implementation of results
- 8.5 pulbic summary
- 9.1 define existence
- 9.2 consultation process
- 9.3 measures for maintenance and enhancement, public summary
- 9.4 monitoring
- 10.1 objectives clearly defined
- 10.2 plantations promote conservation of natural forests
- 10.3 diversity in composition of plantations
- 10.4 species selected adequate for management objectives
- 10.5 restoration of natural cover
- 10.6 environmental impact is reduced
- 10.7 measures to minimize pests, diseases, fire, etc
- 10.8 monitoring (ecological and social aspects are included)
- 10.9 plantations established after November 1994 are not subjected to certification

- 7. Management plan
- 8. Monitoring and assessment

9. Maintenance of high value conservation forest

10. Plantations











The majority of the certified area in the tropics corresponds to natural tropical forests, and not to plantations. Most of the certified natural forests are located in the Americas, mostly in Bolivia and Brazil. The main product harvested in these certified areas is timber.

What forests are certified?

98% of all FSC certified forest area in the tropics (10.9 million ha) is production forest.

Most of this (74%) is managed natural tropical forest (total of 119 Forest Management Units).





Where are these certified natural forests?

Most of the certified forest is in the Americas. *

number of certificates		area certified (M ha)	
Americas	99	5.8	
Asia	10	1.3	
Africa	8	I.2	
Oceania	2	0.04	

* Data until October 2008. By August 2009 there were 4,5 million ha certified in Africa.

Which countries have the most certified forest?

Bolivia and Brazil are the countries with the largest FSC certified natural tropical forest area.

Brazil and Mexico have the highest number of certificates (i.e. number of forest management units that are certified).









Does total area certified increase overtime?

Yes, this area has steadily increased over time, specially since 2003.



What products are being harvested?

The main product being harvested is timber.



NTFP harvested include

- bamboo (Gadua sp.)
- palm fruits (vegetal ivory, Phytelephas sp.)
- resins (Copaifera sp.)
- fibers (Astrocaryum vulgare)
- seeds (Bertholletia excelsa).







MESSAGE



The claim that most certified area is managed by large individualowned forest management units (FMU), and that certification is not really accessible to smallholders and local communities, is true based on certified area, but not true based on the number of certificates.

Individually-owned companies manage the largest area of certified forest, and have seen the greatest increase in certified area through time.

Accumulative certified area per certificate holder and through time





The total number of certified FMU is equal between individually- and community-owned companies. The difference between the two certificate holders is that communities tend to manage smaller areas than individual companies.









Groups: how to move forward?

Groups are opting for certification but their areas are smaller in size than areas of individual-owned FMU. This trend is likely to change as in several tropical countries local and indigenous communities have been granted legal access to the forest in the last decade. For more communities to achieve certification it would be necessary to provide them with strong support, not only on technical aspects but also on administrative, institutional, and financial aspects.

Management improves through time

Overall there are less problems identified through time (compare first to second main evaluation). Most of the problems identified in the first main evaluation are solved before the second main evaluation. There are new problems being identified during the second main evaluation.

number of times criteria are mentioned b b c first main evaluation evaluation

report

MESSAGE



Forest certification works: forest management certification improves the working standards of forest management units (FMU) in the tropics.

Changes over time

Forest management problems raised during the main evaluation are assumed to actively be solved in the period thereafter. We followed problems related to six criteria (the most common ones) to determine if forest management units had indeed solved the problems raised by the evaluation teams. We could follow 82% of the issues raised. Most of these issues were solved

solved issues

permanent issues

> unsolved issue

'Solving problems' depends on criterion

Changes over time vary depending on the criterion considered. Criteria may increase, decrease or remain equal in frequency through time. Depending on their frequency both in the first and second main reports, we were able to identify four possible patterns of change through time.

criterion type	frequency o first main report	of criterion in second main report	examples of criteria
Silent criteria	low	low	 conflicts between law and FSC criteria (1.4) rights of indigenous peoples (3.1-3.4) right of forest workers to organize and negotiate with their employers (4.3)
Criteria sequences	low	high	 the maintenance of high conservation value forests (9.1 to 9.4)
Easy to solve criteria	high	low	 opportunities for employment and training (4.1) forest services are recognized (5.5) rate of harvest is sustainable (5.6)
Difficult to solve criteria	high	high	 health & safety of workers (4.2) socioeconomic impact assessments (4.4)



The most important problems are

- health and safety of workers
- bad management plan
- non-use of reduced impact logging
- insufficient monitoring

The 10 most commonly mentioned criteria given to the forest management units (FMU) in their first evaluation. Data was extracted from 104 main reports. "Ranking" is the percentage of times a given criterion was mentioned in our total sample.

MESSAGE



Contrary to the belief, forest management certification problems in the tropics are not only focussed on social issues. All three pillars of sustainability are included in the list of the most common criteria with problems.



Criterion	Description	Ranking
4.2	Health and safety for employees and families	8.2
7.1	Management plan	6.7
6.5	Use of reduced impact logging techniques to reduce impact to the forest	5.6
8.2	Monitoring of indicators, such as productivity, forest diversity, socioeconomic impacts	4.8
5.6	Harvesting regulations to assure long-term sustainability	4.5
6.2	Rare, threatened & endangered species	4.0
8.3	Chain of custody	4.0
5.1	Economic viability	3.7
7.3	Training and supervision of forest workers to ensure implementation of the management plan	3.1
8.1	Frequency and intensity of monitoring	2.8

Is certification in the tropics focussed mostly on social aspects related to forest management?

No, not at all

Criteria were categorized into three pillars of sustainability: social, economical and ecological aspects (sometimes a criterion is in more than one).

The issues raised by evaluators are distributed relatively even:

- ecological aspects (35%) •
- economical aspects (34%) ٠
- social aspects •

(31%)

This result is also supported by the fact that none of the criteria were dominant in our sample, and that the most common problems found are related to all the pillars of sustainability.







MESSAGE



Certification is likely to have a large impact on the long-term sustainability of forest management mainly because forest management units (FMU) are requested to improve their monitoring system and to incorporate the results of the monitoring system into their management practices.

Forest monitoring

The forest monitoring system should monitor among other aspects forest productivity, impact of harvesting on forest diversity, and changes in species composition. This monitoring system represents, however, a substantial burden for the forest management units because often managers are requested to carry out a series of research activities that are costly and for which they do not have the appropriate staff and financial means. Consequently, a strong partnership between forest management units and research institutions is needed. In that way the information required to improve the harvesting regulations (such as cutting cycles, harvesting intensities) can be defined based on proper and long-term monitoring carried out by independent researchers. This type of partnership is higly needed.



Areas de p Areas de p Areas de p Corves de r



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SOLAT

Neither forest management units nor certification schemes are incorporating rapidly enough research results into their management practices or evaluation standards. For example, the application of reduced-impact logging techniques, which have been heavily promoted by the certification movement and which occupies the third position among the most commonly mentioned criteria in our study, is not enough to guarantee sustainable timber yields in most tropical forests. There are several approaches that can be taken to solve this issue. The application of silvicultural treatments is very promising.



Two factors determined the number of changes that forest management unit (FMU) were required to make during the first certification process they underwent: time since the certification movement started and area of the FMU.

The number of issues being raised by the evaluation team through time has decreased, so that FMU being evaluated nowadays have fewer issues raised than FMU evaluated in the past. This result suggests that there has been a learning process since the forest management certification movement started, and that FMU have now higher working standards than in the past. Consequently, it seems that certification is having a positive impact on FMU even before they are certified.

The number of issues being raised by the evaluation team increases with area of the FMU, indicating that larger FMU are faced with more challenges for obtaining certification than smaller FMU. MESSAGE



There has been a learning process since the forest management certification movement started. This learning process is even observed in the most common problems found in the evaluation reports.



The learning process that FMU have undergone through time since the start of the certification movement is also clearly observed when the most commonly mentioned criteria are considered. Five of the six criteria analyzed have been mentioned less often in the main reports as time has passed, indicating that FMU are improving their standards also in the most problematic aspects of forest management in the tropics. Interestingly enough we did not observe such a pattern for the most commonly mentioned criteria: health and safety of employees and their families.

issue	year of certification
Health and safety for employees & families	no effect
Economic viability	decrease
Harvesting regulations	decrease
Reduce impact of logging operation	decrease
Management plan	decrease
Monitoring of various aspects	decrease



MESSAGE



Large (>100,000 ha) forest management units (FMU) have more problems than medium (10,000 -100,000 ha) and small (<10,000 ha) FMU.



FMU size class

Forest management units (FMU) that are large and have tropical forests are facing more problems than those that are small and have subtropical forests. The type of certificate holder and the forest products being harvested do not have an effect on the number of problems found.

Forest biomes influenced the number of problems identified during the evaluation process. FMU comprising tropical forests have more problems than FMU with subtropical forests probably because tropical forests are more complex in terms of structure and have higher diversity than subtropical forests.



Forest biome

* Temperate forests are found at high altitude levels (mostly Mexico).



Given that individual-owned FMU in the tropics tend to have more economic means to meet the certification standards than group-owned FMU, we expected that the number of problems identified during the evaluation process would vary with certificate holder (i.e. individual or group). We found, however, that certificate holder does not have an effect on the number of problems found.





The extraction of NTFP is in general less deleterious to the environment than timber extraction, and it is considered to provide more social benefits. Consequently, we were expecting that the number of problems identified during the evaluation process would vary with product extracted. We found, however, that the forest product being harvested does not influence the number of problems found.

MESSAGE



Public summaries their use as a monitoring tool

The public summaries of certified companies provided a wealth of information. The most relevant information presented is probably the list of problems identified by the evaluation team during the evaluation process. The list of problems is known as the list of Corrective Action Request (CAR) because the forest management unit (FMU) needs to resolve the CAR given either before getting certified or in the course of a time period given by the evaluator (between 6 months and 3 years).

For this study we reviewed 138 reports (104 first main reports and 34 second main reports), produced by 9 different certification bodies. These reports represent evaluation processes carried out in 22 different countries from 1995 to 2008. The reports showed large variability in format used, but differences are decreasing. In the last years the quality of the reports have also improved as CAR are listed in a more organized way and are clearly related to one or more criteria. Public summaries include a wealth of information. This information should be better used for adjusting the certification schemes, for monitoring the progress made, and for extracting lessons learned that can then be applied elsewhere. Reports generally contain the same type of information:

- basic characteristics of the FMU
- socioeconomic and ecological context of the FMU
- information about the evaluation team
- list of activities carried out during the evaluation process
- results of the evaluation process
- final decision regarding the certification of the company
- the list of CAR given to the FMU.

Important information, but difficult to find in the reports:

- year of first certification
- total area certified
- forest type being managed
 - the status of the product being harvested by local people inside a FMU







Recommendations to certification bodies:

- each CAR should keep its own number (year, number) throughout the years
- each CAR should be connected to specific FSC criteria
- the closure of a given CAR should be specifically mentioned and a short description on how the issues were solved should be given
- certification bodies should keep access to all public summaries, even when FMU have undergone a second or third evaluation process or have lost their certificate (maybe FSC should keep record or a database of all the reports produced by the certification bodies).





