Forest Certification: Verifying 'Sustainable Forest Management'[1]

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1. Introduction

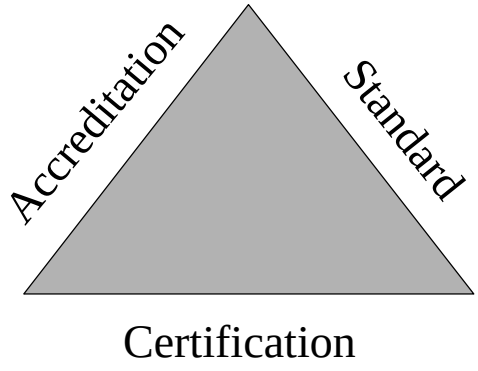
One of the major uses for forest indicators and verifiers over the next decade is likely to be certification. Forest certification is a relatively new phenomenon, having appeared in the early nineties, but is having a growing influence on forest managers as it expands throughout the world and the market for certified products increases. There are now a number of certification schemes, and much discussion about which one should be used. However, there is broad agreement about the components of a credible certification scheme. The three main components which must be present are:

- a publicly available, credible standard;
- a transparent, accredited certification process.
- credible accreditation of certification bodies

There is a further discussion of the role of each of these three elements in Box 1.

Indicators and verifiers are important components in the development of the first two of these elements: developing and implementing forest standards and the certification process. Therefore, this paper begins with a discussion of the development and use of certification standards, then moves on to the certification process, ending with a discussion of where gaps exist and more work is needed.

Box 1: The elements of a credible certification scheme



The standard: The standard must be clear, unambiguous and publicly available so there is clarity about what compliance with the standard means. It must also be 'auditable' so that certification bodies can audit against it.

Certification: All certification against the standard must be carried out by third party, independent organisations following clear, defined procedures. Certification is not usually

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carried out by the organisation which developed the standard, but rather by organisations specialising in certification called certification bodies. Certification bodies must have the systems, procedures and personnel to ensure credible, replicable certification of forest organisations against the standard. To ensure that certification bodies all meet a consistent high standard, they must in turn be 'certified' through the approval and monitoring of an accreditation programme.

Accreditation: This is the process of 'certifying the certifiers' and must be carried out by a competent, independent body capable of ensuring that all certification bodies provide a consistent interpretation of the standard through approved procedures and processes.

Accreditation bodies can be either national or international. Most countries have a national accreditation body which have traditionally been responsible for accrediting certification bodies in their country. For example, certification bodies wishing to certify against the international quality and environmental management system standards ISO 9000 and ISO 14001 must seek accreditation from national accreditation bodies.

However, with the increasing globalisation of trade there is a move towards harmonisation between national accreditation bodies and the formation of international accreditation bodies. The Forest Stewardship Council (FSC) is an example of an international accreditation body. Based in Mexico, it has accredited certification bodies in the US, Canada, UK, Netherlands, Germany, Switzerland and South Africa to certify against its international forestry standard.

Other forest standards continue to use national accreditation, either through national accreditation bodies (for example the Pan-European Forest Certification scheme (PEFC)) or through national organisations specifically set up to formulate the standard and accredit certification bodies (for example, the Indonesian Ecolabelling Foundation (LEI)).

2. Standards

Over the last decade, there has been a wide range of initiatives focusing of prescribing or describing responsible/sustainable forest management (SFM). These range from government sponsored initiatives such as the Agenda 21, the ITTO (International Tropical Timber Organisation) Guidelines and the Helsinki and Montreal Processes to non-governmental initiatives such as the Forest Stewardship Council Principles and Criteria (FSC P&C).

All these initiatives have two things in common:

- firstly, they are generic and have been designed to be broadly applicable internationally with the intention that there should be further work at a national or regional level to produce a more detailed version.
- secondly, they extend the view of SFM to incorporate not just technical requirements, but also environmental and social issues. All make it clear that forests must be valued and managed for a range of goods and services, not just timber.

However, it is also important to note that the initiatives were not all developed for the same purpose. In particular, there are two very distinct purposes which, though related, are definitely not synonymous:

- some initiatives were aimed mainly at developing an international framework for monitoring national performance on forests.
- other initiatives were aimed mainly at developing forest management unit (FMU) level requirements for day-to-day management of forests.

In some cases the requirements for both might be the same (for example, that rare species must be protected), but in other cases requirements at one level are not appropriate for the other (eg increasing the total extent of forest might be an appropriate requirement at a national level, but is nonsensical as a requirement at the FMU level).

This paper focuses on the latter category (FMU level requirements) since these form the basis for certification standards.

As outlined above, a number of international initiatives have been developed which are designed to form the basis for the development of national or regional level standards for forest management at the FMU level. The most widely used of these to date is the Forest Stewardship Council Principles and Criteria, other examples being the FMU-level criteria developed from the Helsinki Process for European forests and the ITTO requirements.

In each case, it has proved relatively easy to get broad agreement on what should be included in the generic international requirements and there is significant overlap between all schemes. However, the requirements produced are designed applicable to a range of forest types and so have to be general. However, general requirements cannot be consistently implemented and assessed against, so there is a need for each country (or sub-region for countries with a range of forest types) to further develop the international standard to produce a local interpretation. This process has two stages:

- Firstly, to develop a set of local requirements which adequately interprets the more general international requirements for local use.
- Secondly, to develop indicators and verifiers which can be used by forest managers and certification bodies to ascertain whether a particular requirement is being met.

Developing local requirements

The first stage in developing a national standard is to decide how each international (and therefore quite general) requirement should be interpreted locally. The interpretation made must be specific enough to be consistently understood and implemented by forest managers, and audited by certification bodies.

At this stage of the process it is common for more serious difficulties to arise in the process. There are two main reasons for this:

a. Firstly, for many forest types there is still a lack on information on which to base detailed requirements for management. For example, though there is general agreement to the international requirement to ‘protect biodiversity’ it is by no means clear how this should be done in many forest types.

b. Secondly, it is not possible to maximise the technical, economic, ecological and social benefits sought by international standards in all forests at all times. In international initiatives, this does not cause serious problems since each requirement is treated separately. However, the process of producing a more detailed local interpretation forces this issue to be addressed.

   The resulting local standard produced therefore has to be based on a series of compromises between the competing demands. For example, the demand from local people for traditional hunting rights (a social requirement) versus the need to conserve rare animals (an environmental requirement).

From this it is clear that a local standard must be based on a combination of two things:

- scientific knowledge and data to act as a basis for what it needed together with agreement on what to do when adequate data is lacking;
- the requirements of society to provide guidance on resolving conflicting claims including on dealing with inadequate data.

Combining incomplete knowledge with local social requirements can lead to a further problem with local standards. Since the process of interpreting an international standard for use nationally is usually carried out by people and groups within that country, cultural and socio-economic influences, and even local opinions on interpretation of scientific data, will be important in the interpretation made. As a result, two countries with very similar forests may develop different local standards even though both are based on the same international standard.

Developing appropriate indicators and verifiers

Difficult as it is, the process of agreeing local requirements is not, on its own, enough. In addition to the requirements there is a need to agree what indicators or verifiers should be used by forest managers and certification bodies to ascertain whether the requirement has been met.

It is very important that the indicators developed are the right ones. In particular:

a. If the indicator is met, the requirement is also met.

   This is an absolutely critical issue. Indicators must be chosen so that if the indicator is met, the requirement will also be met, or, to use mathematical jargon: indicators should be chosen which are not just *necessary* but also *sufficient* to ensure compliance with a requirement.

   For example, if a local requirement is that all rare species must be protected then it is insufficient to have an indicator which measures the number of a particular bird species, unless it has been shown that the bird in question is an adequate indicator for ALL rare species, both plant and animal.

   Use of appropriate indicators is fundamental to credible interpretation of a standard.

b. How much of the picture does the data provide, how much is inferred?

   Some indicators provide direct information while others are used because they can form the basis for inferring what is happening. For example, if there is a requirement that safety precautions minimise injury, then indicators based on the number of accidents or lost work days provide direct information.

   However, if there is a requirement to minimise erosion and the indicator is based on sediment levels in the river draining the logged catchment, a significant amount is being inferred about erosion prior to sediment reaching the river.

   It is important to be clear whether an indicator is direct or not, and where there is an inference to be sure that the information being provided is sufficient and any inference is reasonable and robust.

c. How accurate is the data? How easily and reliably can the information be collected? How much does it cost?

   These three questions are related. Collecting information and data is expensive and does not contribute directly to day-to-day forest management. Therefore, it is important to ensure that information is collected as cheaply and easily as possible. But at the same time, it is essential that it is still reliable and accurate enough to be useful.

   Therefore, for each requirement it is essential to consider what level of detail, reliability and accuracy is really needed, and to chose indicators accordingly. For some requirements it is adequate to have quite rough data, while for other requirements accuracy is essential. In addition, it is very important when considering indicators to also consider what type of person is likely to be collecting the data. It may be better in many situations to go for a simple

technique, even if it provides less accurate information than a more complex technique, because the complex technique will be so unreliably implemented.

d. How quickly will it provide guidance or answers?

Another very important issue for indicators and verifiers is how quickly they will provide information which can guide the forest manager trying to implement requirements, and provide certification bodies with clear information on whether standards are being met. In general, two types of information are needed:

- short-term data on which to base immediate management decisions and certification
- long-term data to establish if the strategies being implemented are working

As the process of developing local standards continues, it will be increasingly important that indicators are chosen which are adequate, appropriate and provide the information needed.

3. Certification

The full certification process varies slightly between standards, but includes the same basic elements. Box 2 describes the process required by the FSC. The main purpose of any certification process is to collect ***objective evidence*** to verify whether or not the organisation being assessed is meeting the requirements of the standard.

Objective evidence is obtained through a combination of:

i. Document review – plans such as management and conservation plans, reports such as EIAs or social impact appraisals, monitoring reports and data collected for baseline studies or monitoring purposes are examined and analysed by the audit team.

ii. Field visits – a variety of operations and other locations are visited to examine how plans are implemented in reality.

iii. Interviews with people – the team will talk to a wide range of people including staff, contractors and stakeholders to collect information. They will be particularly interested in verifying that people have the training and knowledge required to do their job adequately.

However, assessors do NOT collect primary data. This is the responsibility of the applicant. Where primary data (eg inventory results, wildlife surveys, social impact data) is required in order to see if management is adequate, the assessment team will expect it to be have been collected by the applicant. The assessment team will then examine the data to verify that it has been properly collected, analysed and used.

For example:

- Requirement: adequate safety, Indicator: number of accidents.

  Assessors would examine statistics kept about accidents. To verify that these were accurate they would interview a range of staff and contractors, seek input from stakeholders and look at working practices.

- Requirement: Protection of the three local endangered species. Indicator: number of each of the three species observed

  Assessors would review the information collected, check the method used to collect and to analyse the data, speak to those involved and possibly field check some parts of the data.

Therefore, indicators do NOT have to be developed to allow for rapid assessment by auditors during a brief field visit. Indeed, such an approach is likely to lead to the collection of unreliable or even inaccurate data. Where an audit team find that data they need to review has not been

collected, they should require the applicant to collect the data and provide it to the team for analysis prior to any certification decision being made.

Box 2: The FSC Certification Process

The process described below is that required by the Forest Stewardship Council (FSC). The FSC certification process follows a very similar course to that followed by, for example, ISO 14001 with one major difference: there is a very strong focus in the FSC process on transparency. As a result, the assessment includes proactive consultation with stakeholders by the certification body, peer review of the certification report, and the production of a publicly available summary of the certification report which summarises the findings against each FSC requirement.

- Pre-assessment or Scoping

The certification body makes a preliminary visit to the applicant with three main purposes:

a. To allow the CB to gain some idea of the applicant's operation and thereby plan for the main assessment.

b. To give the applicant the opportunity to discuss the certification process and understand it better.

c. To identify any gaps between the current performance of the applicant, and the requirements of the standard.

- Close gaps

Following the pre-assessment/scoping visit the applicant needs to address any gaps identified between current management and performance and that required by the standard. Once this process is complete, the applicant confirms to the certification body that they wish to proceed with the main assessment.

It should be noted that in many cases the process of closing gaps takes a considerable time, varying between a few months and several years.

- Stakeholder consultation

As soon as there is confirmation that the applicant wishes to proceed to a main assessment, the certification body begins a process of public consultation to collect input from interested parties on the performance of the applicant.

This part of the process is often a matter of some concern for applicants, but in practice is usually a very useful and constructive experience. All comments received are followed up by the certification body which must ascertain whether the issue raised:

i. falls within the requirements of the standard: sometimes issues are raised which, while they may be important in themselves, are not required by the standard;

ii. is backed up by objective evidence: just like the rest of the audit, issues raised by stakeholders must be verified by objective evidence. This is sometimes provided by the stakeholder, if not then it must be sought by the certification team. If no objective evidence is found then the issue will not result in a non-compliance.

- Main assessment

The main objective of the main assessment is to collect objective evidence that verifies whether each requirement of the standard is being met. To do this requires an audit team which between them combine expertise in:

i. auditing techniques and the requirements of the standard

ii. legal, technical, economic, environmental and social requirements of good forest

management.

This team spends anything from a day to several weeks with the applicant depending on the size and complexity of the forest being assessed. During this time they will collect the objective evidence needed to establish whether or not the standard is being met.

If, as a result of the assessment process, the team collect objective evidence to show that a requirement of the standard is NOT being met, this is called a non-compliance. Whenever a non-compliance is identified, a corrective action request (CAR) is raised which must be addressed by the applicant either prior to certification (Major CARs) or after certification within an agreed timeframe (Minor CARs).

- Report and Peer Review

The results of the assessment, including the actions taken in response to CARs, are set out in a report which, for FSC certification, must include a public summary of all results. This report is sent to a number of independent specialists in the field for a peer review.

- Certification

Once all non-conformances have been adequately addressed, and the report has been successfully peer reviewed, a decision can be made to certify the applicant. The certificate is valid for five years subject to successful annual surveillance visits.

- Surveillance or Maintenance

Surveillance or maintenance visits are carried out annually by the certification body to ensure that the level of performance required by the standard is being maintained. Where non-conformances are found, CARs are raised and must be addressed within an agreed timeframe, otherwise the certificate is suspended and withdrawn.

4. Areas causing difficulties

There are a number of areas where there are still many problems with finding adequate indicators. Some examples of these are:

- Conservation of biodiversity – there is an urgent need for indicators based on data which is simple and straight-forward enough to be easily and consistently collected, but at the same time accurate enough to indicate whether biodiversity is being adequately preserved.

  However, human understanding of biodiversity remains very limited, and as a result it is difficult to provide definitive indicators which meet the specifications above. In the interim (which may be many years) there is an urgent need for some ‘best guesses’ to provide a temporary solution. Yet this seems to be an area where the specialists are particularly reluctant to engage in this way, with the result that in many cases indicators for conservation of biodiversity are poor or non-existent.

- Protection of water – a key difficulty is that it is now known that data based on sampling streams or rivers needs to be relatively sophisticated to be useful. For example, since most sediment is carried out of a catchment in the hours immediately succeeding a rainfall event, information provided by collecting a sample daily at a fixed time and measuring sediment load will provide totally inaccurate results if used to estimate total sediment carried.

  Therefore, cost effective and simple alternatives are required which can be easily and reliably implemented by forest management staff together with model projects and research networks which can provide more sophisticated data for the forest type.

- Welfare of local communities

The job description of forest managers has not traditionally included consultation with external stakeholders, nor promoting the welfare of local communities. However, increasingly they are expected to be involved in such activities. Most forest managers do not have the techniques for measuring their degree of success. There is an urgent need to interpret existing techniques in a way which is appropriate for forest managers and forest certification.

- Rights of indigenous people

  The rights of indigenous people, particularly customary and traditional rights in forests, have not received much attention until very recently. Consequently this is another area where there is a lack of good indicators for measuring success.

- Scale - what should small forest owners be doing

  Finally, a major issue which needs to be addressed throughout the forest certification movement is finding both requirements and indicators which are appropriate to small forest enterprises. Most of those developed to date are focused more on large enterprises or well-organised groups of small forest enterprises.

Finally, when developing indicators it is not enough simply to measure and report data. It is essential that the data is analysed and limits are imposed around compliance.

For example,

- If the number of new jobs created is data being collected, there should be a target defined as to how many are required to meet the standard.
- If the area covered by skid trails is being measured, it should be clear what is the maximum (and where appropriate, minimum) area allowed.

Conclusions

There are a number of key points which should be considered by those working on forest level indicators. In particular:

1. Do not confuse requirements for national level monitoring with those for forest certification, but do look for overlap and synergy when developing indicators.
2. Make sure that indicators are adequate so that if the indicator is met, the requirement is fulfilled.
3. Data required for indicators needs to be as cheap, easy and quick to collect as is appropriate. However, it is essential that the data for each indicator is reviewed to ensure that it is sufficiently accurate and replicable.
4. Both short term and longer term indicators are needed.
5. Where data is unavailable or sketchy, interim indicators are needed to base current management decisions on, even if such indicators are not totally accurate.
6. Indicators appropriate for different sizes of enterprise are needed.
7. Indicators must be linked to a definition of what is required as a maximum or minimum.