

Simplifying PEFC and FSC Chain of Custody reporting procedures

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Topic: ***Simplifying PEFC and FSC Chain of Custody reporting procedures***

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Preface and Acknowledgements

This research was carried out on behalf of PEFC Nederland between March and July 2010. The idea for this research was based on the assumption that the whole chain of custody certification process has a significant effect on the effort concerning record keeping and related reporting duties. This could be seen as a burden by companies trading with certified products. PEFC Nederland has at the moment a small national basis but gained more and more importance since a lot of companies began to obtain the PEFC Chain of Custody Certificate. For me it was a very rewarding experience to see how the certification is put into practice and how companies deal with the subsequent responsibilities.

My special thanks goes to the office of PEFC Nederland in Houten, Utrecht for providing me with all necessary information and of course for the supervision performed by Johan Vlieger the Coordinator of PEFC Nederland during the research and thesis writing. Special thanks also to all companies for the time they spent for the interview or to fill out the questionnaire. I would like to express my gratitude to the interviewed certification bodies represented by SGS Nederland B.V. and Control Union Certifications. Special thanks goes to Simon Bockstette for his help in the thesis writing stage and his function as a corrector. Furthermore I would like to thank Probos for providing me with valuable information and additional statements. Last but not least the support from Guy Geudens, my supervisor on behalf of Van Hall Larenstein during all stages of the preparation of this thesis, was greatly appreciated.

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List of abbreviations

AVIH	Algemene Vereniging Inlands Hout
B2B	Business to Business
CoC	Chain of Custody
CBS	Centraal Bureau voor de Statistiek
CB	Certification Body
CCP	Critical Control Point
CFP	Certified Forest Product
CSA	Canadian Standards Association
FM	Forest management
FSC	Forest Stewardship Council
HRM	Human Resource Management
ISO	International Organization for Standardization
NGO	Non-Governmental Organization
N.a.	Not applicable/ No answer
PEFC	Program for the Endorsement of Forest Certification Schemes
QMS	Quality management system
SFI	Sustainable Forest Initiative
STD	Standard
TPAC	Timber Procurement Assessment Committee
VVNH	Vereniging Van Nederlandse Houtondernemingen
VNP	Vereniging van Nederlandse Papier en Kartonfabrieken
VROM	Ministerie van Volkshuisvesting, Ruimtelijke ordening en Milieubeheer
VHN	Verduurzaamd Hout Nederland (Dutch wood preservers association)

Definitions

Chain of custody (FSC definition)

The chain of custody describes the path of raw materials, processed materials, finished products, and co-products from the forest to the consumer. It includes each stage of processing, transformation, manufacturing, storage and transport where progress to the next stage of the supply chain involves a change of ownership of the materials or the products.

CoC system

Is the overall system applied by a certified company consists of the following four sections:

1. **CoC process** (PEFC definition)

It refers to credit system, percentage system or transfer- and physical separation system, applicable by a company.

2. **Record keeping system**(Business Dictionary.com)

Systematic procedure, by which the records of an organization are created, maintained and disposed of. The data are timely available and ensures their preservation for evidential purposes.

3. **Documentation system**

In this case used as a substitute for record keeping system

4. **Management system** (Business Dictionary.com)

Documented and tested step-by-step method aimed at smooth functioning through standard practices. Management systems generally include detailed information on topics such as:

- (1) Organizing an enterprise,
- (2) Setting and implementing corporate policies,
- (3) Establishing accounting, monitoring, and control procedures,
- (4) Choosing and training employees,
- (5) Choosing suppliers and getting best value from them, and
- (6) Marketing and distribution.

CoC certification process

Refers mainly to changes or reorganizations of the internal record keeping- and management system used by a company (Annex 7)

Critical Control Points (BM TRADA Certification)

The first step for an organization which wants to implement chain of custody is to identify all Critical Control Points (CCP's). CCP's are the points in the process where there is the possibility for mixing of certified and uncertified material. Each of the points identified will need controls to ensure that mixing does not occur. In most cases, the CCP's would be classified as follows:

- (1) Purchase of raw materials
- (2) Goods inwards
- (3) Production control
- (4) Finished goods storage
- (5) Sales

Internal auditing (Mosers.org, Operational outlook June 2005)

The national Institute of Internal Auditors (IIA) developed the following description of internal auditing that is applicable to all organizations which adopt their standards and guidelines: Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

Eco-labeling (Global Eco-Labeling Network)

"Eco-labeling" is a voluntary method of environmental performance certification and labeling that is practiced around the world. An "eco-label" is a label which identifies overall environmental preference of a product or service within a specific product/service category based on life cycle considerations.

Abstract

More and more companies become dual certified. Slight differences between CoC standards however, could lead to an unnecessary effort which could be avoided through a harmonization process. Certified companies are also facing an increased public interest, for example due to the fact that the Dutch government as well as the VVNH has committed themselves to a sustainable procurement policy. So far no one has investigated the consequences of the CoC-certification on internal record keeping and external reporting on certified material.

This study determined the differences between PEFC and FSC with regards to record keeping requirements within the CoC standards, their effects on the implementation through the CB's and the realization at the company level. Furthermore it investigated if companies perceive the implementation of two different standards and the increased public interest as a burden. The aim was to identify needs and possibilities for harmonization of record keeping and reporting requirements between the two systems.

Based on interviews and questionnaires the extent of these related duties, as well as the type and degree of practiced harmonization at the various levels, were determined. The results indicated that a harmonization process already took place at the implementation level through an interpretation of the standards into practice- oriented checklists through the CB's. Further harmonization took place at the company level in particular by conducting internal audits for FSC and generating volume summaries for PEFC, both being requirements of the respective other standard. This was underlined by the finding that 78% of the surveyed companies conducted internal audits and 83% produced volume summaries for both certificates. In order to increase the attractiveness of double certification, a harmonization of the existing differences between both standards is recommendable. It could also be confirmed that certified companies face an increased effort due to external surveys. The biggest issue here was the different reporting intervals and the time to fill out various surveys rather than differences in the contents. The findings of the study suggest that a harmonization could be possible by applying only one annual survey and a common template for all stakeholders.

1.0 Introduction

Comprehensive third party certification schemes consist of the following three principal elements: Forest certification, Chain of Custody (CoC) and Eco labeling (*Anderson and Hansen 2003*). Forest certification schemes were originally developed in the 1990's by non-governmental and non-profit organizations to promote the responsible and sustainable production and trade of forest products. CoC-certification is an essential element of any certification scheme as it provides the link between the products sold in the market place and the certified practices in the forest (*Wingate and Mc Farlane, 2005*). CoC-certification deals with the flow of forest products at every stage of the supply chain, from the time the raw material leaves the forest until the final product reaches the end consumer (*Upton and Bass, 1996*). A CoC-certificate allows traders and manufacturers to demonstrate in a credible and traceable way that their timber comes from a responsibly managed forest. Monitoring and documentation of the flow of certified timber is the major task within such a system. Nowadays, many of the CoC-certified companies have a dual certificate of both PEFC and FSC. This development could be seen as the current trend on the market. Main reasons for double certification of companies are the ability to offer a higher availability and a wider range of certified goods to their customer. A simultaneous double certification – as now often practiced – results in a price and time benefit for the ordering company by having to carry out only one common audit. Figure 1 illustrates the relations between the various stakeholders involved in the CoC- certification. PEFC and FSC as the main representatives, provide the framework in their CoC-certification standards. The certification itself is carried out by independent, accredited CBs often by using an internal checklist to standardize the auditing process. This standardization avoids that two auditors of the same CB interpret the standards in different ways. Once a company has obtained a CoC-certificate, it will be continuously assessed through annual surveillance audits which are finalized in the form of an audit report (Annex 7 for certification process). Records on certified material are the basis for such surveillance audits. Record keeping is therefore the essential part in a CoC system. Each certificate holder has to have an adequate recording system in place to meet the requirements of the respective CoC- certification scheme. If the existing system fails to meet these requirements, adjustments have to be made.

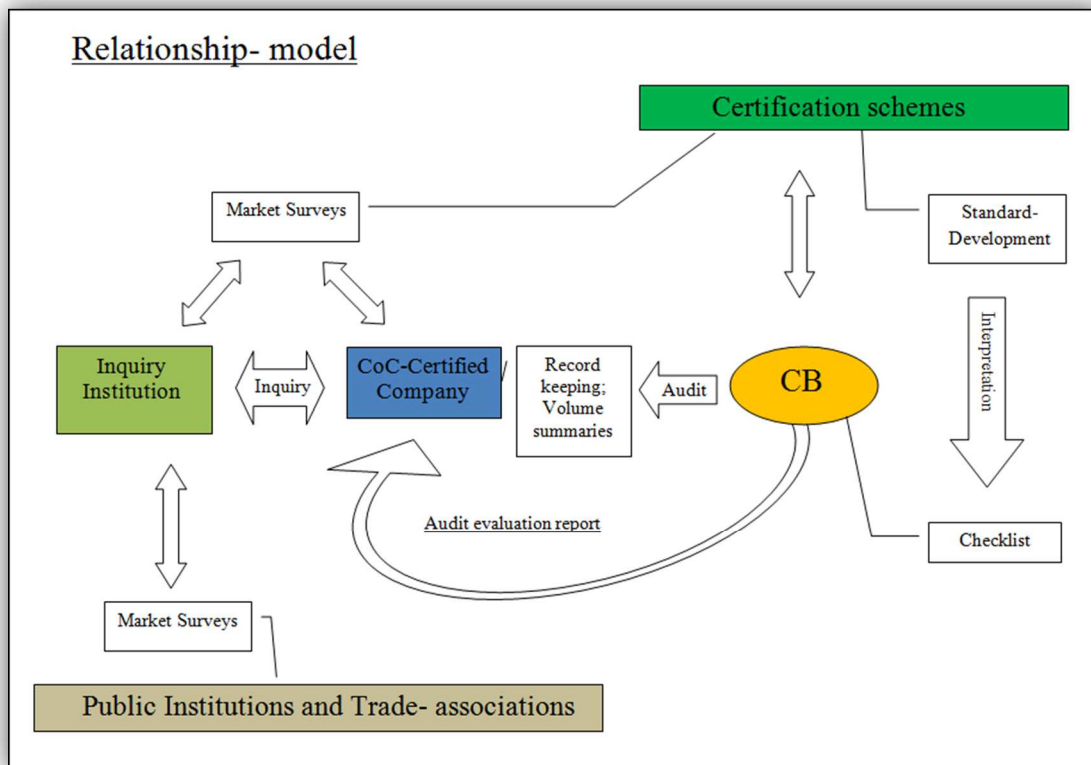


Figure 1: Stakeholders and their relation to the CoC-Certification system

Certification is also of interest to society which is why some companies face an additional effort through participation in external surveys on behalf of public institutions and trade associations. Many of these conduct their own regular surveys or have them carried out by specialized Institutions. Probos and Aidenvvironment are the main players for the Dutch timber market surveys. Their regular surveys might lead to an increase of reporting duties for a certified company. It seems that a chain of custody certificate triggers a higher public interest in a company than it would be the case without CoC certification. This seems to derive from the fact that the government and associations developed sustainable procurement policies for a more responsible trade with renewable resources.

1.1 Purpose and aim of the study

The purpose of this study was to determine the differences between PEFC and FSC, with regard to record keeping requirements within the CoC standards and their effects on the implementation through CB's and the realization at the company level. The aim was to investigate if companies with two CoC certificates face unnecessary additional effort due to fact that the standards are slightly different. Furthermore it was assessed whether companies perceive this and the increased public interest including the amount and the differences in the various inquiries as a burden which could be avoided through harmonization of the survey intervals or even by developing an universal survey template.

1.2 Research questions

The following research questions were addressed:

Main question:

- I. How can the various reporting duties be simplified to decrease bureaucracy?

Sub questions:

- II. What are the differences and similarities between PEFC and FSC Chain of Custody requirements on record keeping and reporting (of certified volume)?
- III. How are the CoC requirements put into practice by the Certification Bodies and the certified companies?
- IV. What are the differences and similarities in reporting to different inquiry organizations¹?
- V. Do certified companies see the different ways of reporting as an administrative burden?

¹Main representatives are Probos and Aidenvironment as survey institutions

1.3 Hypothesis

- A harmonization of record keeping requirements at the level of both PEFC and FSC standards is needed.
- The process of reporting on certified material to external third party institutions could be performed more efficiently.

2.0 Methodology

2.1 Scope of the study

The scope of the study was the Dutch market for forest products, in particular companies with more than one CoC certificate. The research was divided into 3 phases (Figure 2), each representing one level of the involved stakeholders. During each phase of this study a number of institutions and companies were approached by means of an interview and questionnaire. Existing literature and survey templates served as another source of information. The response is illustrated and differentiated by their market segment in Annex 6.

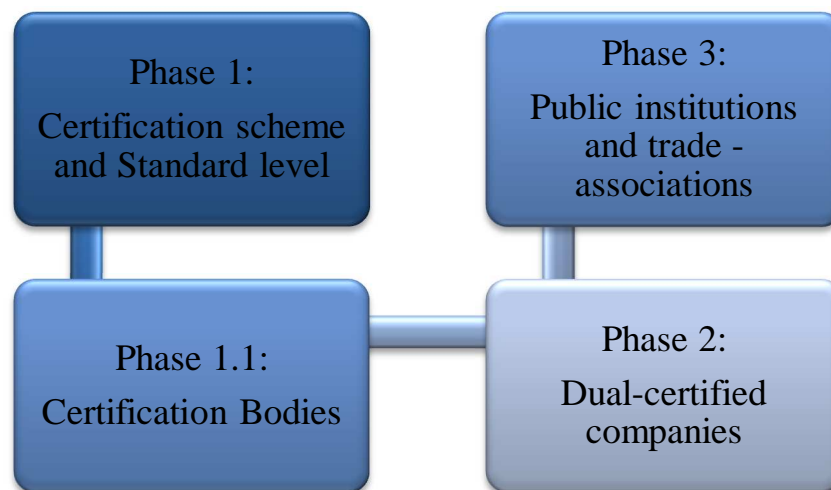


Figure 2: Research phases

2.3 Phase 1 -Standard comparisons and implementation

2.3.1 Selection of the CB's

The contacted CB's were selected according to their output of CoC-certificates. This output was defined through the highest number of issued certificates on the company list, provided by PEFC Nederland. SGS Nederland B.V. and Control Union Certifications B.V. were indicated as the main providers of those CoC-certificates. Therefore interviews were conducted with both companies.

2.3.2 Data collection and Analysis

As a first step a literature study of both - the PEFC and FSC chain of custody standards were conducted to identify differences and similarities in particular concerning record keeping and reporting of certified material (Annex 1). The respective standards were:

- 1. PEFC, Annex 4; Chain of custody of Forest Based Product-Requirements.**
- 2. FSC Standard for Chain of Custody Certification**

The main criteria (Table 1) were deducted from keywords within the record keeping paragraphs. The criteria were used to create a matrix, differentiating between PEFC and FSC. Inspection and control as an essential part of any QMS in general and record keeping as part of any accounting system represented the main sections. In order to determine how the various record keeping requirements in the standards are translated into practice, the two CB's mentioned above, were approached by means of an interview (Annex 2). The main focus was on the interpretation of the standards through the CB's, whether or not they made use of a unified checklist. A further point of interest was how possible differences between the standards affected the practical implementation.

Table 1: Criteria catalogue for the evaluation in phase 1

Scope of interest	PEFC	FSC
Internal audit		
Record keeping		
• Records of internal audits		
• Training records		
• Supplier accounts		
• Material flow (input/output)		
• Volume summaries		
• Maintenance interval of records		

2.4 Phase 2- Record keeping requirements at the company level

2.4.1 Selection of companies

The approached companies were first selected according to a list, provided by PEFC Nederland. The companies were cross checked with the help of the data base of FSC (<http://fsc-info.org>) to identify such companies with both PEFC and FSC CoC certificates. All of these companies were asked to fill in a questionnaire. Furthermore a small number of these were additionally approached through an interview (Annex 3). Criteria for this group were:

- Important and medium- sized companies from the timber and paper sector
- Importing, retail, trading , producing and printing companies

The aim of the conducted interviews was in the first place to combine questions and observations of the interviewee to approve the practicability of the in advance structured questionnaire. The email multiple-choice questionnaire approach in Dutch language (Annex 3.1), was a result of the interviews with further adjustments to eliminate earlier experienced resentments towards open questions. The selection tried to include producers of timber and paper products, retailers, timber traders and printers as well as crafting companies.

2.4.2 Data collection

Phase 2 focused on how companies deal with both, the record keeping and external reporting in practice. The developed questionnaire used during the interview contained a set of criteria (Table 2). The criteria list was divided into two main sections. The first section was the main part emphasizing the realization of CoC-record keeping requirements within the already existing accounting system and the participation in external surveys and the individual perception.

Table 2: Main evaluation criteria in phase 2

Question related keywords	Further differentiation
<i>Accounting system</i>	
Build up a new system Adjusting the previous system Separate system for PEFC/FSC Common system for PEFC/FSC	
<i>Record keeping</i>	
Internal audits	PEFC/ FSC
Volume summaries	PEFC/ FSC
<i>Participation in surveys in general</i>	
Effort related to participation in surveys	High/ Low
Own internal template External template	
<i>Inquiry institutions</i>	
	CBS Probos (VVNH, VNP, VROM) FSC (AIDenv.) AVIH VHP
<i>Effort related to the CoC-certification process</i>	
Establishing Maintenance	
<i>Previously used quality management system</i>	
ISO 9001/ 14001 Other CoC system No certified QMS	
<i>Relation between CoC-system and previous QMS</i>	
Direct relation No relation	

The second section dealt with the efforts made to establish and maintain an adequate system in compliance with all requirements of the respective standards. The effort to establish a system for a new CoC-certificate was put into relation to previously applied QMS or CoC-certification. Due to the fact that most companies had obtained the first CoC-certificate up to several years ago and due to personnel changes within companies I did not ask for precise numbers in terms of work hours, but rather for a qualified estimation as to whether the initial effort was low, medium or high. For the maintenance effort all participating companies were asked to give an estimation of how many work hours per week they spend on maintaining the record keeping system.

2.5 Phase 3 - External surveys

2.5.1 Selection of inquiry institutions

The inquiry institutions were chosen based on published reports and survey templates on certified material in the Netherlands. The respective information was provided by PEFC Nederland. Probos and Aidenvironment were in this case the main publishing institutions.

2.5.2 Data collection

The main focus in this phase was on external reporting to associations and public institutions. In most cases the actual surveys are carried out by private market research institutions. The most important published reports are “Duurzaam geproduceerd hout op de Nederlandse Markt” (2005; 2008) and “FSC hout in de Nederlandse Markt” (2007). The first one is produced by Probos which is also responsible for other surveys related to the same topic. The second one was carried out by Aidenvironment.

Besides the evaluation of these reports, an additional interview with Probos was carried out to get more detailed information on how such surveys were conducted and what kind of information was asked for (Annex 4). The perception of such surveys on part of the companies and related problems were also part of the interview. The objective of this phase was to determine:

- the frequency, regularity and consistency of such surveys
- the market coverage and participation and
- the end purpose of the collected data

In addition to that various survey templates currently used for the Dutch timber/paper market were compared:

Probos

1. Inventory template, sustainably produced timber in 2008, EPV
2. Survey template, VVNH, second half of 2009
3. Inventory template, paper and cardboard from sustainably managed forests, VNP in 2008
4. Import of paper and cardboard from sustainably managed forests in 2008

FSC (Aid environment)

5. Report: FSC on the market 2007, The usage of FSC certified paper on the Dutch market in 2007
6. Survey, Dutch importer, the usage of FSC certified timber on the Dutch market in 2007

Table 3: Main criteria for comparisons of the survey templates in phase 3

Surveyed sections	Further differentiation
Total import or used raw material	PEFC/ FSC PEFC/ FSC Other (SFI, CSA) Hardwood (tropical/temperate) Softwood Plate material Pulp Recycled paper Other paper Clearly defined
Export	
Production	
Type of CoC-certificate	
Quantities with CoC-certificate	
Sustainably produced volume without CoC-certificate	
Quantities with legality certificate	
Product categories	
Further product differentiation	
Differentiated by market segment	
Future estimation	
Measurement unit	Clearly defined

Despite small differences regarding terminology or scope of the survey templates, most of them covered the same core elements. Therefore a criteria list was created allowing the comparison of all templates on a common basis (Table 3). To get an overview of the market and its flow of certified forest products, survey templates generally ask for total imported, exported and produced volumes. Apart from that companies are also often asked for future estimations. The criteria list is not only related to the timber sector but also tries to cover the paper/cardboard sector. Volumes were differentiated between such with a CoC- or legality certificate and estimations of sustainably produced volumes traded without CoC- certificate.

3.0 Results

3.1 Phase 1 - Evaluation of PEFC and FSC CoC standards and their implementation

3.1.1 Record keeping requirements

Despite the importance of record keeping for the traceability of certified products within the CoC, both standards only contain small and relatively generic paragraphs about this issue. The PEFC standard explicitly mentioned internal auditing as the instrument to ensure compliance with all requirements of the standard. Such a paragraph could not be found within the FSC standard. Subsequently, only the PEFC standard has a specific paragraph on record keeping of internal audits. This paragraph is closely related to the ISO 9001:2000 QMS which is used to meet the minimum requirements for the management system defined in the standard (*PEFC Annex 4, 2005*). An appropriate training of company staff is indeed mentioned in both standards, but a further recording of such data is only required by FSC. The general recording of such data is carried out by the human resources department and does not mean an additional effort. Common to both standards were the supplier validation and the documentation of the material flows based on input, output and conversion factor. Explicit volume summaries on an annual basis are only mentioned in the FSC standard. A general maintenance interval of 5 years for the recorded data was common for both standards. Similarities and differences between both certification standards, regarding internal audits and record keeping, are presented in table 4. Differences are highlighted in grey. For a complete description of the studied paragraphs see Annex 1.

Table 4: Comparison matrix on record keeping

Scope of interest	PEFC	FSC
Internal audits	Yes (4.6)	No
Record keeping	Yes (4.4)	Yes (1.4)
• Records of internal audits	Yes (4.4.1, d)	No
• Training records	No	Yes (1.3)
• Supplier accounts	Yes (4.4; 4.4.1, a)	Yes (3.2)
• Material flow (input/output)	Yes (4.4.1, b, c)	Yes (5.2)
• Volume summaries	No	Yes (5.2.2)
• Maintenance interval of records	5 years	5 years

3.1.2 CoC system implementation

Both CoC- standards are regulatory frame works which offer room for interpretation within their set limits. Parts of the standards are kept quite generic, which caused some of the CB's to make further specifications, for example in the form of audit- checklists which should provide a better practicability. Common for all CB's was that the interpretation was made at the respective head office, to ensure one standardized auditing process. Control Union Certifications B.V. makes use of a checklist, a so called system manual, which is quite close to the original standards. They formulated pertinent questions to the respective paragraphs within the standards to confirm compliance. SGS Nederland B.V. uses the same approach but developed a more detailed checklist. Their checklists (Figure 3 and 4) are more specific with regard to record keeping and even included components of both standards in the respective checklists for PEFC and/or FSC clients. According to the interview this was done due to the fact that both standards contained unique and valuable components which could ensure best practice at the company level when combined. These unique components are in particular:

1. Performing and record keeping of internal audits and CAR's; (PEFC)
2. Records of CoC- related training; (FSC)
3. Volume summaries, according to product groups,(FSC).

1.4 Records and Reports	
Requirements and Findings	
1.4.1	Written procedures are available for maintaining records applicable for the control of the CoC System?
<input type="checkbox"/>	Purchase orders
<input type="checkbox"/>	Suppliers invoices
<input type="checkbox"/>	Suppliers' transportation documents
<input type="checkbox"/>	Receiving records
<input type="checkbox"/>	Production records
<input type="checkbox"/>	Stock records
<input type="checkbox"/>	Volume summaries of sales
<input type="checkbox"/>	Records of internal audits and car's raised
<input type="checkbox"/>	Orders received
<input type="checkbox"/>	Transportation records to purchaser
<input type="checkbox"/>	Invoices
<input type="checkbox"/>	Monthly summaries
<input type="checkbox"/>	Records for controlled wood
<input type="checkbox"/>	Records of Trademark approvals
<input type="checkbox"/>	Volume summaries of purchases
<input type="checkbox"/>	Training records

Figure 3: Extract of AD 55 Checklist for FSC, SGS Nederland B.V.

PEFC Standard 4.4 / 4.4.1 – Record keeping

The organisation shall establish and maintain records to provide evidence of conformity with the requirements and its effectiveness and efficiency. The organisation shall keep at least the following records:

- (a) records of all suppliers of forest based raw material including information which confirms that the requirements at the supplier level are met,
- (b) records of all purchased forest based raw material including information on its origin,
- (c) records of all forest based products sold and their claimed origin,
- (d) records of internal audits, non-conformities which occurred and corrective actions taken.
- ☒ (e) records of PEFC training to ensure members understand the controls required for the implementation of the PEFC system.

Figure 4: Extract of AD 56 Checklist for PEFC, SGS Nederland B.V

3.2 Phase 2 - CoC recording requirements in practice at the company level

The questionnaire addressed six core questions (see Annex 3):

1. *Did your company make any changes within your accounting system when implementing the CoC-certification?*

The implementation of an adequate CoC record keeping system often requires additional adjustments or even a complete reorganization of the previously used accounting system. Only a minority of 17, 5% of the surveyed companies had to build up a new system from scratch, whereas 35% only had to adjust their system to meet the requirements of the respective CoC standard. Nevertheless, a relatively high share of companies with 42, 5% declared to have made no changes within their accounting system, once a CoC book keeping system was implemented (Figure 5). Companies generally used one common record keeping system. However, depending on the chosen CoC system separate administrative streams within the same record keeping system became necessary. Even if both certificates are based on a credit-system a strict separation both physically and administratively is mandatory. How a company realizes the implementation of an adequate documentation system in the end is usually closely connected to its existing internal logistic management.

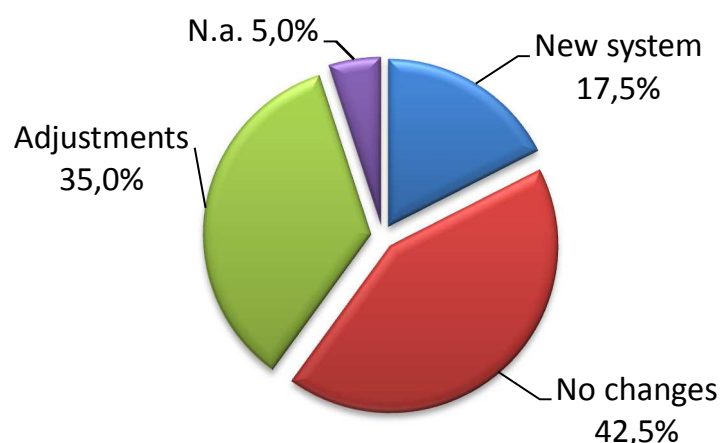


Figure 5: Changes within the current record keeping system during the implementation of a CoC- certification

2. Do you conduct internal audits, mandatory for PEFC, for FSC procedures as well?

78% of the double certified companies saw internal auditing as a usefull instrument and applied it for both certificates (Figure 6). 22% of the companies stucked closley to the standards and restricted the internal audits to PEFC procedures only.

22,5% of the interviewed companies stated to have been ISO 9001 certified before the first implementation of a CoC sytem and these companies were therfore accustomed to conducting internal audits.

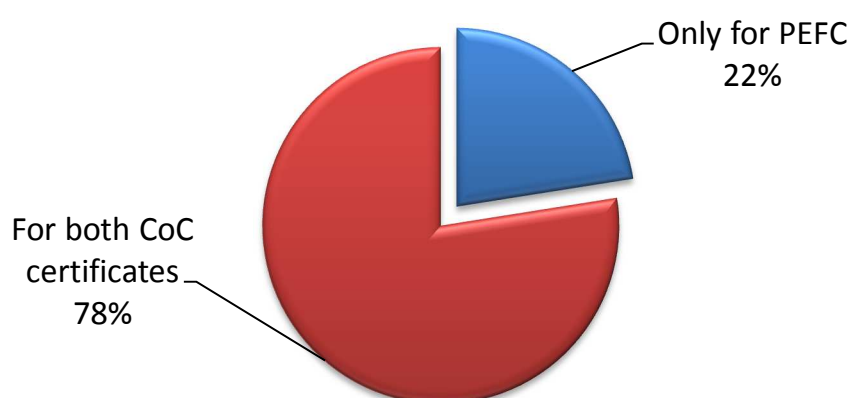


Figure 6: Conducted internal audits, mandatory for PEFC, related to CoC procedures

3. *Do you produce volume summaries, mandatory for FSC, for PEFC as well?*

83% of the double certified companies conducted volume summaries for both certificates (Figure 7). Only 17% of these companies strictly applied such summaries for FSC procedures only.

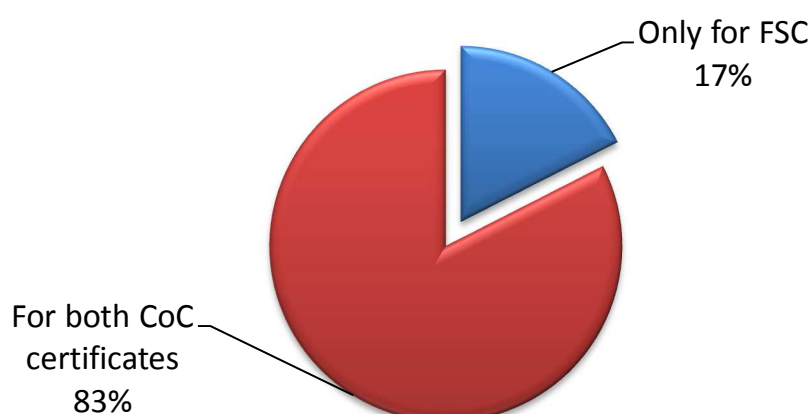


Figure 7: Conducted volume summaries related to the flow of CoC certified material within the company

4. *To which institutions does your company provide certain volume data?*

Only 40% of the approached companies stated to participate in surveys. Out of these companies 28% participated on only one survey, whereas 12% faced more than one survey (Figure 8). The main ordering parties, in descending order were: FSC Nederland with 33,3%, followed by the VVNH (28,6%), the CBS, VNP and the AVIH (9,5% each) and the VROM, VHN (4,8% each).

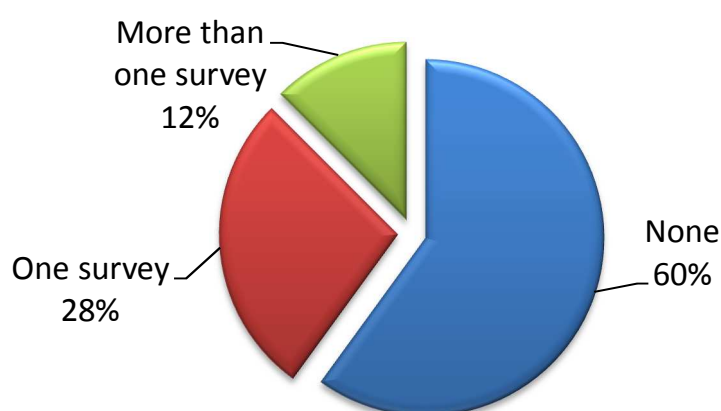


Figure 8: Share of companies, participating in one or more surveys

5. *How will the recorded data be translated into a report or inquiry template?*

Out of the 16 companies who participated in surveys, 88% declared to use the delivered template to fill in the asked information. Only 22% of the companies stated to use their own standard form. Besides the market surveys, a company often has to deliver additional reports on request to their customers. The general effort to transfer the recorded data into a template or report could be described as 80% system related and 20% manual work, as mentioned by one interviewed responsible manager.

6. *Did you experience it as a burden to participate on surveys?*

56% of the interviewed companies declared that participating in surveys is a burden. The main reasons were that each questionnaire demands time and preparation, which usually does not create any value to their business and that there is a lack of regularity in the surveys. In contrast to that 31% of the companies stated to have no problems with such surveys (Figure 9). One interviewed responsible stated to simply copy the total volumes out of the record keeping system and past them into the template.

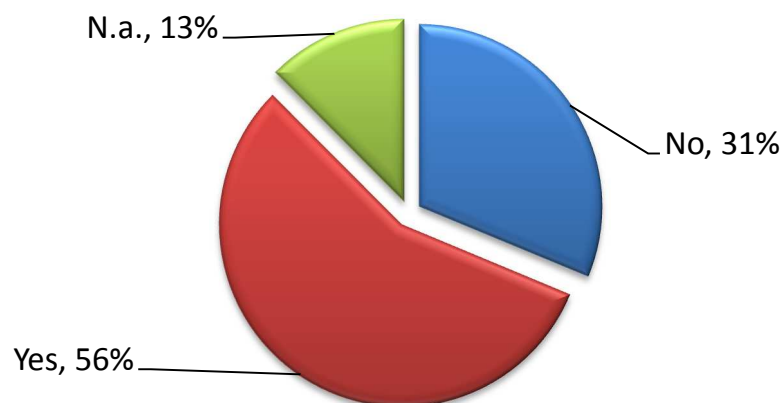


Figure 9: Personal perception concerning effort of participation in surveys

3.3 Phase3- External surveys on certified material

3.3.1 Association Bodies, Public- and Inquiry Institutions

Certified companies are often members of various associations to which they have to report on regular basis. Some associations conduct their own surveys while others often make use of third party institutions. For example all members of the VVNH have to participate in surveys at least twice a year. The surveys themselves are carried out by Probos in this case. Different associations may have different reporting periods ranging between six months and up to three years. Companies are often members in more than one association which drastically increases their reporting duties. The most commonly mentioned associations during this research were:

- VVNH
- VNP
- AVIH
- VHN

Besides these associations there are two main governmental institutions. The first one is the Dutch Ministry of Housing, Spatial Planning and the Environment (VROM) and the second one is the Central Bureau of Statistics (CBS). The ministry of VROM uses a third party survey institution whereas the CBS conducts its surveys on its own. The scope of the ministry of VROM is to cover all certified companies while the CBS only approaches companies who mainly act in the intra-industry-trade according to a specified set of criteria.

3.3.2 Scope, interval and consistency of external market surveys

The scope and the monitoring interval of the individual surveys depend on the ordering party. However, the scope and the intervals of the respective surveys remain relatively stable over the years. Depending on the nature of the individual surveys they can comprise CoC certified companies only or also important non certified companies trading quantities from verifiable sustainable managed sources, mainly from Scandinavian and other European countries. So far the survey intervals range between six months and three years which results in strong fluctuations in a company's annual reporting duties. Figure 10 illustrates how the reporting duties may vary over the years, regarding different survey intervals. This scenario is based on the assumption that this particular company is a member of the VVNH and receives an annual survey from the CBS as well, besides the three year interval of VROM surveys. The consistency within the content of the individual surveys is generally high over the years. Companies do not face complete changes in layout or content. Adjustments are only undertaken to simplify the procedure.

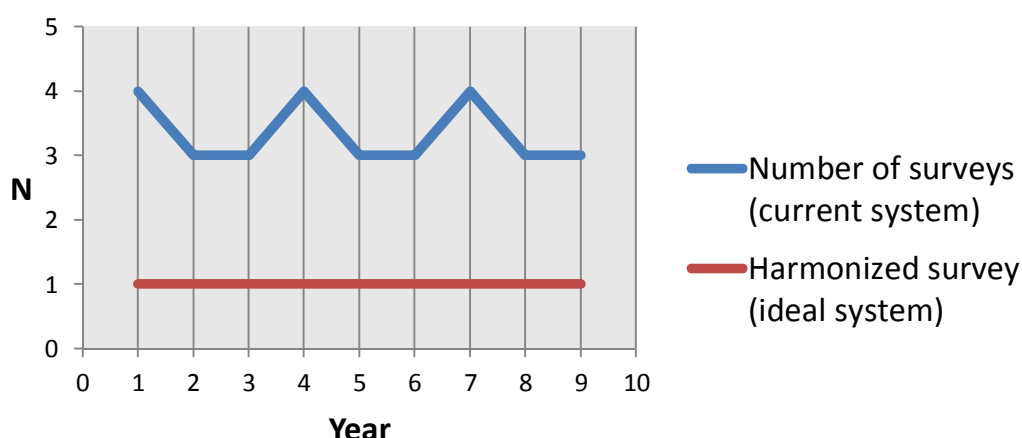


Figure 10: Number of annual surveys, faced by certified companies in a current and in a hypothetical harmonized system

3.3.3 Participation in external surveys from the view of inquiry institutions

In some associations, participation in surveys is mandatory for all members. The VVNH for example, has developed a behavioral code through which its members are obliged to maintain an “Adequate communication” with the association body (VVNH gedragscode 2010). Failures are sanctioned with fines or even exclusion. The participation in the voluntary surveys is generally high (*Probos 2008*), but according to the interviewed inquiry institution, it can take several additional calls to obtain all desired data. Data on certified and especially of non-certified volumes are often perceived by the companies as sensitive data and they can be rather reluctant to share them.

3.3.4 Comparison of the external surveys

The scope of this paragraph was on similarities and differences between the individual surveys, covering both the timber and paper market (*Table 5*). The differences between the pulp/paper and timber oriented surveys result from the different natures of these sectors. Identical for all studied surveys was that they covered the following sections:

- Import or used raw material/ Export
- FSC certificate
- FSC- CoC certified quantities
- Future estimation

Concerning the section on product categories, all survey templates for timber approached the same four main product categories:

- Tropical/ temperate hardwood/ Softwood
- Plate material

Apart from the exception of survey 4, all surveys, related to the paper sector, covered the following product categories:

- Pulp/ Recycled paper/ Other paper products
- Further product differentiation

Survey 4 is an exception within the paper oriented surveys, as it only asks for import of finished paper products, only focusing on PEFC or FSC. Sections on production were limited to surveys covering certified paper and cardboard products, originating from sustainably managed forests (Table 5; Survey4, 5, 6). Survey 3 and 6 differed in many sections from most of the other surveys due to the fact that they were conducted only on behalf of FSC, which automatically led to a different scope, mainly concerning the type of the CoC-certificate, quantities and differentiations between market segments. Surveys, carried out by Aidenvironment did not define a certain measurement unit (m^3 , m^2 , m, kg, tons or pieces), whereas such surveys, carried out by Probos explicitly defined the measurement unit (m^3 for timber or tons for paper). This leads to a higher variety of measurements units in surveys by Aidenvironment than in surveys by Probos. Quantities from sustainably managed sources without a CoC-certificate, as well as quantities with a legality certificate were issues typically addressed in surveys, carried out by Probos.

Table 5: Evaluation matrix for survey templates of inquiry institutions

Surveyed sections	Further differentiation	Probos 2009	Probos 2008a	Aidenviroment 2007a	Probos 2008b	Probos 2008c	Aidenviroment 2007b
Import or used raw material		Yes	Yes	Yes	Yes	Yes	Yes
Export		Yes	Yes	Yes	Yes	Yes	Yes
Production		No	No	No	Yes	Yes	Yes
Type of CoC-certificate	PEFC	Yes	Yes	No	Yes	Yes	No
	FSC	Yes	Yes	Yes	Yes	Yes	Yes
Quantities with CoC-certificate	PEFC	Yes	Yes	No	Yes	Yes	No
	FSC	Yes	Yes	Yes	Yes	Yes	Yes
	Other (SFI, CSA)	Yes	Yes	No	Yes	No	No
Sustainably produced volumes without CoC		Yes	Yes	No	Yes	No	No
Quantities with legality certificate		Yes	Yes	No	Yes	No	No
Product categories	Hardwood tropical	Yes	Yes	Yes	No	No	No
	Hardwood temperate	Yes	Yes	Yes	No	No	No
	Softwood	Yes	Yes	Yes	No	No	No
	Plate material	Yes	Yes	Yes	No	No	No
	Pulp	No	No	No	Yes	No	Yes
	Recycled paper	No	No	No	Yes	No	Yes
	Other paper	No	No	No	Yes	Yes	Yes
Further product differentiation		No	No	Yes	Yes	Yes	Yes
Differentiated by market segment		No	No	Yes	No	No	No
Future estimation		Yes	Yes	Yes	Yes	Yes	Yes
Measurement units	Clear defined	Yes	Yes	No	Yes	Yes	N.a
Legend	<div><div></div><div>Timber</div><div></div><div>Pulp/Paper</div><div></div></div>						
Obvious differences highlighted in red							

4.0 Discussion

4.1 The main differences and their consequences in practice

The key element of a chain of custody certification is the tracking and tracing of certified goods from the point of harvesting to the final product. Every company represents a link within this chain and has to ensure that every product is traced from the moment it enters a company until it is sold again. Precise documentation along the whole chain of custody, including invoices, supplier accounts and record keeping are crucial to guarantee the traceability of all certified goods. Another basic requirement to achieve the full functionality of a CoC-certification is the awareness of all participants. These requirements apply to any CoC-certification scheme. Despite the facts that PEFC and FSC represent two unique and distinctive schemes for forest management certification, their CoC- standards are remarkably similar. According to an intersection analysis, carried out by PEFC Germany (2006), they are almost identical. In particular the record keeping requirements overlap. The differences between the PEFC and FSC standard were training records, volume summaries and internal audits. The main difference was found in the absence of internal auditing in the FSC-CoC-standard.

4.1.1 Internal auditing

Since every certified company will be audited by an external expert on an annual basis, internal audits are not obligatory to fulfill the general requirements of a CoC- certification. Internal audits as a requirement in the PEFC standard imply that a company's own administrative enforcement could be somewhat undermined by such regulations, because companies might perceive such an audit as an intrusion into their management responsibilities. Some companies might view the associated costs and the delegation of labor force during the internal audit as a negative aspect. Although internal audits follow prescribed procedures there is always the risk of a lack of independence (*Coram et al. 2007*). This risk however, is compensated through the external audits which should be more objective by nature. Despite the disadvantages, internal auditing is an excellent tool for performance review and allows the early detection of non-conformities at all critical control points (CCP's) in advance to the external audit. It is more effective in detecting and reporting such non-conformities than a completely outsourced surveillance.

The inside knowledge of the internal auditors ensures this high effectiveness. The continuous self-assessment and-improvement achieved through these internal audits could also be seen as added value for the company (*Coram et al. 2007*). Furthermore, companies often already have a running quality management system like an ISO 9001/14001 in place and are used to conducting internal audits at planned intervals.

4.1.2 Training records

If the system is to work effectively, all personnel must be adequately trained and should understand their specific responsibilities, in order to fulfill their assigned tasks in the controlling of the Chain of Custody. A lack of adequate training is the most common cause of non-conformities at CCP's (*BM TRADA Certification Ltd. 2008*).

Training records as required only by FSC, are therefore essential as proof for adequate training in case non-conformities were detected, and also to make them verifiable to the external auditor. In general, all companies try to work out efficient procedures to keep labor costs at a minimum and raise productivity, meaning that every man- hour will be recorded for internal controlling purposes. Subsequently, every hour of internal or external on-the- job- training will be recorded as well. This is of course only complete in combination with a summarized training manual, indicating the taught core competences. Implementing training records for both certificates should not generate any problems for double certified companies as it is required for FSC procedures anyway.

4.1.3 Volume summaries

Besides training records, certified companies have to record all quantities of certified material running through their business process. The collected data about certified volumes have to be extracted from the general record keeping system in advance, as a preparation for the annual surveillance audits. In order to keep the time spent on the preparation at a minimum and because the company should do the preliminary work, volume summaries are crucial for an effective audit. These data should be easily extractable from the system which is currently used by a company. Every audit is based on summarized data on certified volumes.

Usually, the external auditor then picks a sample out of these summaries for closer inspection. Volume summaries are also part of the production of quarterly, half yearly or annual reports to the administration which demand clear statements and figures. It should be mentioned that small companies may not proceed in that way and internal reports are of minor interest, but even those companies need summaries for example in order to calculate their turnover for tax reviews and calculations. This assumption was made due to the fact that a certain number of total volumes bought and sold are closely related to the total turnover. For any price calculations a company always calculates in costs per unit (€/m³; €/m²). For such a calculation the total cost and the total volume are inevitably associated with each other. Negative aspects could hardly be found since all companies use computerized systems and manual work is kept to a minimum.

4.1.4 Implementation through the CB

The implementation of the respective standards is done by the CB's, mainly by using checklists or system manuals for the audits. Such checklists, developed by the HQ's themselves, are interpretations within the set framework of the respective standards. FSC itself recommends using checklists, but with the restriction that replace the certification reports (*FSC guidelines for certification bodies, 2005*). Such standardized forms, often combined with internal audits and so-called toolbox meetings, function as a controlling instrument. CB's apply these methods in order to prevent different interpretations during the audits (*SGS, Auditor*). This example shows that a harmonization already takes place at the CB level. It underlines the importance of a continuous development towards clear procedures in order to be able to make clear statements to the customers. The findings of this study show that intermixtures of requirements taken from both standards are possible and practiced. These intermixtures could derive from the fact that previous procedures for example an ISO 9001/14001 can be used to meet the minimum requirements of the respective standard (*PEFC 2005*). The development of practice-oriented procedures shows that beside the ongoing discussion about differences between both schemes, the CB's and the companies already saw the individual advantages of both standards.

However, systems designed to be conform to the FSC standard will lack unique requirements of the PEFC standard, such as a system for internal audits. It should be mentioned that in case of a common standard, careful note should be taken of the specific and separate trademark and logo use criteria (*SGS U.S., no date*). While forests mostly were certified either by PEFC or FSC, the chain of custody often has to deal with both certificates. It seems that both PEFC and FSC did not recognize the necessity of a synchronization of their CoC-standards in order to make a double certification more convenient for companies.

4.1.5 Implementation at the company level

The implementation of a CoC-certification at the company level involves various steps including minor and major changes within a company's management system. The gravity of such changes depends on the existing management system and the degree to which it is conform to the CoC requirements. This study's findings underline the fact that modern management systems already work on a high level. The reason why the majority of the interviewed companies had no changes within their system could result from the fact that 50% of these companies were already FSC-CoC certified or had an adequate record keeping system in place when they got PEFC certified. Another reason could be a misunderstanding on part of the companies which assumed that the particular question only referred to the PEFC CoC-system implementation instead of their first CoC certification. The major task could thus be seen in the development of a "company manual", describing the processes and responsibilities in dealing with certified goods. The company has to develop such document in advance and as a guide for the initial audit. The manager responsible for the CoC certification needs to analyze his company with regard to separation of certified and uncertified goods, product identification and documentation throughout the entire production process, as well as the detection of weaknesses at CCP's and possibilities for improvement (*GFA, 2010*). Most of the effort associated with the certification process is correlated to this initial activity. As mentioned above, the gravity of changes and adjustments in the record keeping system depends on the level of the previous system and procedures already implemented.

The reason why the vast majority of the approached companies faced only small changes could be that most of them already had an adequate tracking system in place before they decided to become CoC certified (Annex 5). These changes mostly consist of adding sections like the origin, CoC number, the applied certificate and system to the input mask of the record keeping system, in order to document all important information of each certified product. The fact that a double certified company has to deal with two different standards within one common record keeping system might end up in more work than necessary. The fact that the majority of the approached companies applied both, internal audits (73%) and volume summaries (83%) for both certificates, strongly shows that a harmonization is deemed necessary and the respective processes already take place at the user level. It seems that these companies already found a way to minimize the certification related effort by streamlining such processes in-house. The question why some of the approached companies stuck closely to the standards, despite the fact that they already have a certain effort to conduct internal audits for PEFC procedures and to produce volume summaries for FSC quantities, could not be answered at all. One reason could be that some responsible managers stick very strictly to the regulations of each standard while others practice a more flexible management style.

The participating companies were additionally asked to give a qualitative estimation about the initial-and maintenance effort, based on their individual perception. This perception is of course always influenced by various factors like the personal attitude towards certification, as well as their motivation to become certified. The effort was minimal if a company already had an ISO 9001:2000 or even a FSC certificate. This made the CoC- implementation process much easier due to the fact that all processes within a company have to be described for the ISO- certification (van Dinther, 2010).

The maintenance of such a system and the given estimations which varied between 0,5 and 14 hours per week. The general effort to maintain the CoC- certification system depends on the one hand on the certified product quantity but on the other hand also on the customer base who demands these products and therefore determines how many products are sold. For further detail about the effort see Annex 5.

However, most of the companies within the interviewed group were not able to give adequate data about their amount of certified products. Furthermore, getting a detailed insight in a company's record keeping system was beyond the scope of this study and needs further investigated.

The additional effort to participate in external surveys could be described more elaborate, based on given comments, describing the effort to fill out survey templates in more detail. Most of the companies participating in external surveys used the delivered survey template, while some of them developed an additional report template, mainly for maintenance of business relationships with clients. The fact that such tasks are not always related to the daily business and do not necessarily generate any value for the company, could have contributed to the general perception that the related effort was high.

4.2 External surveys

Certification is of particular interest for public representatives, such as the ministry of VROM or the VVNH and others. The Dutch government as well as the VVNH has committed themselves to sustainable procurement (*TPAC, 2010; VVNH 2010*). The flow of certified forest products within the Dutch market is therefore of distinct importance to them. In order to gain an insight in the flow of certified material, only CoC certified companies can deliver first-hand information. Non certified companies will be approached too, since they trade volumes from sustainably managed sources without CoC-label as well. But is it right to say that certified companies face more surveys than before they decide to obtain a CoC-certificate? In my opinion that can be true, but only in a limited number of cases. The CBS for example does not necessarily ask for certified material in particular. Furthermore not every single company will be addressed by surveys. However, there seems to be a shift in the scope, by means of a change from the illustration of the general flow of products or shares on the market to an illustration of certified material and the development of its share. The common reporting culture dates back from before the first companies had been certified or sustainable procurement policies or statements were introduced. It is therefore not directly related to CoC-certification.

Participating in surveys, compulsory or voluntary, undoubtedly generates a certain effort which may fluctuate from year to year due to different intervals. In some years a company will face more surveys than in others, while in fact it answers the same questions over and over again. It is of course up to the associations and other parties to choose their monitoring interval as it is strongly connected to the statutes, a member has agreed upon. But a harmonization of these intervals could drastically reduce the annual reporting effort (Figure 10). As shown, this would be the ideal solution. But not all companies receive surveys from every public institution such as the CBS. Additionally; associations like the VVNH have their own point of view on how to monitor the flow of certified timber and the participation of their members. Consequently, it will be difficult to find a common base. Reducing the huge time interval of three years between the VROM surveys, would take out the peaks. At the same time it would not reduce the effort for the companies. The general attitude of the interviewed companies towards external surveys was rather different and at least it will be a big challenge to find one way to satisfy all. In contrast to the government's surveys, the association's own surveys have significance. Surveys conducted by the government have no direct purpose for a company. But a company being a member of an association enjoys certain benefits like insider information and information exchange in B2B relations with other members and the delegation of its interests becomes more effective. The association can use the data for public relations by publishing reports on websites as well as for market analysis. The main purpose seems to be underpinning their sustainable procurement policies. Of course, these benefits are always of a theoretical nature and each company/institution might perceive them in a different way.

4.2.1 Survey template comparisons

The compared survey templates, exhibit great similarities. The surveys on behalf of FSC have a clearly different scope than most of the other surveys. The only remaining question was why the majority of the surveys ask for quantities from sustainably managed forests without CoC-certificate. The information is highly influenced by uncertainties and unreliable assumptions.

It is also certain that a lot of companies import volumes from sustainably managed forests even though they are not CoC-certified. And yes, companies are able to give information about such quantities, as the claim is on the invoice and easy to extract. A part of this research addressed problems with surveys and showed that some companies often do not know what measurement unit is asked for. However, during the review analysis of the templates, these comments could only be confirmed if there were several units to choose from. Most surveys were clear on the intended unit.

4.2.2 Potential burdens a company might face

The effort for a company participation in surveys is generally high and it generates no direct return. Filling out templates can be seen as an administrative burden. The number of surveys can be even higher than in this study for individual companies, because other institutions such as Keurhout conduct surveys as well. How much time a company's responsible needs to fill out templates might be connected to the degree to which he is involved in the record keeping system, to this system's effectiveness as well as motivation and capability (training). If a company uses volume summaries, which is mostly the case, it should not be any problem to extract data for surveys. Unlike the effort for surveys, establishing and later on maintaining the CoC-certification within a company should not be seen as an administrative burden. Naturally, companies face a certain effort but there is a direct return. An ISO 9001 certification or any other QMS implies a certain effort too. The main theoretical reward could be a possible premium, depending on the customer's willingness to pay a higher price for certified products (van Dinther, 2010). This topic is always very sensitive because the availability of certified products is increasing while it is still necessary to keep a certain stock to ensure permanent supply. Because of the frozen assets, the reward seems to be minimized. Furthermore, competitive advantage is dissolving because an increasing number of companies already got certified. Nevertheless certification should increase a company's green image and thus enhance its credibility to the customers (*Kaputa and Palus, 2006*). This study focused on how a company precedes with the differences of both, the PEFC and FSC standard and possible additional duties, due to participation in external surveys. Further investigations regarding the sold quantities and the effort to update the record keeping system are necessary to illustrate the maintenance effort with quantitative data.

5.0 Conclusion and Recommendation

– A harmonization of record keeping requirements at the level of both PEFC and FSC standards is needed–

Changes in the standards are not obligatory due to the fact that both, the CB's and the companies already found a way to combine two different standards in practice. However, it is my general recommendation that both certification schemes should review their CoC-standards. An ideal solution would be one common CoC-standard without giving up the individual label.

5.1 Internal auditing

It is strongly recommended to oblige internal audits for FSC procedures as well.

5.2 Record keeping on training

Training is very important and training records are essential evidence that appropriate on-the-job training has taken place. This is especially important in case of non-conformities. The needed data are easy to extract out of the company's financial book-keeping system. Training records should therefore adopted by PEFC.

5.3 Volume summaries

Such summaries seem to be business as usual for the preparation of the surveillance audits and rather ease the work than generate more effort. Additionally such summaries are very useful as they also provide numbers on total volumes. This can be timesaving when filling out surveys. Therefore including such a paragraph in the PEFC standard would support the auditor and saves time and money.

5.4 External surveys

– The process of reporting on certified material to external third party institutions could be performed more efficiently –

The abundance of different surveys, each with different intervals, could only be changed if all stakeholders cooperate closer together and coordinate their monitoring. Theoretically, this should be in the interest of both companies and third party institutions as they want to inform the public about the progress of the introduced procurement policies, while increasing the attractiveness of CoC-certification for companies.

– How can the various reporting duties be simplified to decrease bureaucracy?–

Certified companies already found a way to harmonize related procedures on their own and the administrative burden is mainly related to the external surveys. To decrease uncertainties about what kind of numbers are needed and to minimize the effort for a company, it is recommendable to develop one common survey template. The main content of such surveys should only concentrate on certified material rather than including non-certified material as well. Further product differentiations would be wise in some cases, depending on the ordering institution. The consequence would be that an independent institution provides the generic survey template and conduct the market survey itself. This institution would be additionally responsible for the data- distribution to all stakeholders. All stakeholders would have to participate on a roundtable to develop such a template. Recommendable guidelines are the already used survey templates, developed by Probos and also the criteria list within Table 5 in this research.

List of References

- Aidenvironment** 2007a FSC hout in de Nederlandse Markt 2007Report, Publication number. 1765 A, p. 7, 1.1 Bronbenadering
- Aidenvironment** 2007b. Onderzoek beschikbaarheid van FSC-hout op de Nederlandse Markt in 2007; Enquêteformulier- Nederlandse Importeurs
- Leslie A.D.** 2004. The impacts and mechanics of certification, International Forestry Review 6(1)
- Dinther van B.** 2010. Sustainable Certified Oak flooring: A research about the possibilities for Hout Industrie Schijndel of sustainable certifying their oak flooring, Bachelor thesis, Van Hall Larenstein University and HIS, p. 23- 27
- Dykstra P. D, Kuru G., Taylor R., Nussbaum R., Magrath W., Story J.** 2002. Technologies for wood tracking: Verifying and Monitoring the Chain of Custody and Legal Compliance in the Timber Industry
- Dutch Timber Procurement Policy** 2010. Framework for Evaluating Evidence of Compliance with Timber Procurement Requirements. Available: <http://www.tpac.smk.nl/nl/s517/TPAC-home/c413-Documents>
- Dutch Procurement Criteria for Timber.** 2008. Principles and criteria For sustainable forest management (SFM), Chain of Custody (CoC) and Logo use, Development, Application and Management of certification systems (DAM), Procedures on Endorsement of Certification systems by a Meta-system (PEM)
Available: <http://www.tpac.smk.nl/nl/s517/TPAC-home/c413-Documents> (16.04.2010)
- FSC International** 2005 FSC-STD-20-008(2005) FSC Guidelines for Certification Bodies, Part 4; Forest certification reports, Subject 4.1: Use of checklists with certification reports; updated: March 2005
- FSC International** 2005 FSC-STD-20-001, Version 3.0: General requirements for FSC accredited certification bodies – application of ISO/IEC Guide 65:1996
- FSC international** 2004 FSC-STD-40-004, Version 2-0 EN: FSC Standard for Chain of Custody Certification
- FSC Germany.** Arbeitsgruppe FSC Deutschland e.V. 2010. FSC im Vergleich: 10 gute Gründe für die FSC Zertifizierung, Available: www.fsc-deutschland.de/infocenter/instand.htm (16.04.2010)
- Gereffi, G.** 2001 Beyond the producer-driven/buyer-driven dichotomy: the evolution of global value chains in the internet era. IDS Bulletin, 32: 30–40

- Hirschberger T.**, WWF Austria. 2005. The Effects of PEFC- Certification: An analysis of Audit reports of PEFC Germany
- Kaputa V., Paluš H.** 2006. Intercathedra, Annual Bulletin Of Plant- Economic Department of the European wood technology: Attitudes towards certification of chain of custody of wood in the Slovak Republic, University studies No. 22
- PEFC International.** 2005 Annex 4; Chain of custody of Forest Based Product- Requirements
- PEFC International.** 2007 Annex 6; Certification and Accreditation procedures
- PEFC Germany e.V.** 2006. Schnittmengenanalyse PEFC und FSC in Deutschland. Available: www.pefc.de/images/download/Schnittmengen_PEFC+FSC_0906.pdf (16.04.2010)
- Oldenburger J and Leek N.** 2006. Duurzaam geproduceerd hout op de Nederlandse markt in 2005. Report, p. 37
- Oldenburger J, Winterink A, Leek N.** 2010. Duurzaam geproduceerd hout op de Nederlandse markt in 2008. Report
- Probos.** 2008a Inventarisatieformulier Duurzaam geproduceerd hout in 2008 EPV
- Probos.** 2008b Inventarisatieformulier Papier en karton uit duurzaam beheerd bos in 2008 VNP
- Probos.** 2008c "Import van papier en karton uit duurzaam beheerd bos" in 2008
- Probos.** 2009 Rapportageformulier_vvnh_tweede_helft_2009_probos
- Rijksoverheid**, Publication. 2008. Long-term strategy: Langetermijnstrategie: Naar een agenda voor duurzame productiviteitsgroei. 04-08-2008 EZ. Available: [http://www.rijksoverheid.nl/documenten-en-publicaties?form-department=&form-information-type=&page=3&form-period-from=&keyword=Naar+een+agenda+++voor+duurzame++productiviteit+sgroei&form-period-to=\(01.08.2010\)](http://www.rijksoverheid.nl/documenten-en-publicaties?form-department=&form-information-type=&page=3&form-period-from=&keyword=Naar+een+agenda+++voor+duurzame++productiviteit+sgroei&form-period-to=(01.08.2010))
- Sprang P.** 2001. Aspects of quality assurance under the certification schemes FSC and PEFC. Diploma thesis, University of Freiburg
- Sparx Systems.** 2004. Sparx Systems UML Tutorials. The business process model
- Stringer C.** 2006. Forest certification and changing global commodity chains. Journal of Economic Geography 6 (2006) pp. 701–722.
- Upton C., Bass S.** 1996. The Forest Certification Handbook St. Lucie Press Delray Beach, FL.
- Wingate K.G. and Farlane P.N. Mc.** 2005 International Forestry Review Vol.7 (4)

Appendices

Annex 1- Standard literature

PEFC, Annex 4; Chain of custody of Forest Based Product- Requirements.

Section 4: Minimum management system requirements, Page 12

4.4 Record keeping, Page 13

4.4.1 The organization shall establish and maintain records to provide evidence of conformity with the requirements and its effectiveness and efficiency. The organization shall keep at least the following records:

- (a) Records of all suppliers of forest based raw material including information which confirms that the requirements at the supplier level are met,
- (b) Records of all purchased forest based raw material including information on its origin,
- (c) Records of all forest based products sold and their claimed origin,
- (d) Records of internal audits, non-conformities which occurred and corrective actions taken.

4.4.2 The organization shall maintain the records for a minimum period of five years.

4.5.1 Human resources / personnel, Page 13

The organization shall ensure that all personnel performing work affecting the implementation and maintenance of the chain of custody shall be competent on the basis of appropriate training, education, skills and experience.

4.6 Inspection and control, Page 13

4.6.1 The organization shall conduct internal audits at intervals of at least one year covering all requirements of this standard and establish corrective and preventive measures if required.

4.6.2 The report from the internal audit shall be reviewed by the organization's top management at least annually.

PART I: Universal Requirements, Page 13

1 Quality management

1.3 Training

1.3.1 The *organization* shall establish and implement a training plan according to the qualifications and/or training measures defined for each *procedure*.

1.3.2 The *organization* shall keep records of the training provided to staff in relation to implementation of this standard.

1.4 Records

1.4.1 The *organization* shall maintain complete and up-to-date records covering all applicable requirements of this standard.

1.4.2 Retention time for all records and reports, including purchase and sales documents, training records, production records, volume summaries, and trademark approvals, shall be specified by the organization and shall be at least five (5) years.

3 Material sourcing, Page15

3.2 Supplier validation

3.2.1 The *organization* shall establish and maintain an up-to-date record of all *suppliers* who are supplying material used for FSC *product groups* including:

- a) The supplied *product type*;
- b) The supplied *material category*;
- c) The *supplier's* FSC Chain of Custody or FSC Controlled Wood code, if applicable.

5.2 Material balances

5.2.1 For each *product group* the *organization* shall establish a material accounting record to ensure that at all times the quantities produced and/or sold with *FSC claims* are compatible with the quantities of *inputs* from different *material categories*, their associated *percentage* or *credit claims*, and the *product group conversion factor(s)*. The accounting record shall include at least the following information:

For *inputs* and *outputs*:

- a) Invoice references;
- b) Quantities (by volume or weight) 17;

For *inputs*:

- c) *Material category* and, if applicable, *percentage claim* or *credit claim*;

For *outputs*:

- d) *FSC claim*;
- e) Information to identify the product item in invoices;
- f) Applicable *claim period* or job order.

Annex 2 - Interview template, phase 1, certification bodies

1. Out of your experiences with both schemes, are there really big differences between PEFC and FSC on record keeping and documentary reports?
2. Is it possible to say FSC has a more centralized and PEFC a more decentralized way of forwarding information like those in reports?
3. Do you follow an in advance defined guideline when you ask for a report from a certificate holder?
4. Is there space for any interpretation?
5. Are there other written/set rules for record keeping?
6. Is there any existing template used by your company?
7. I have read in the FSC guidelines for certification bodies that there is a possibility to use a checklist, does your company work with such checklists regarding to reporting in general?
8. Do the companies approve such a checklist?
9. Are there check lists for both PEFC and FSC?
10. How often a company has to deliver a report to you?
11. How can a company know what is required and what not?
12. If a company has both certificates from PEFC as well FSC managed by your body, what are the major differences between those reports?
13. In spite of the FSC standard do you recommend to implement such volume summaries in case of a double certification also for the PEFC certified material?

Annex 3 – Interview template, phase 2, dual certified companies

Core questions:

1. Did your company make any changes within the accounting system when implementing the CoC-certification?
2. Do you conduct internal audits mandatory with PEFC, for FSC procedures as well?
3. Do you produce volume summaries, mandatory with FSC for PEFC as well?
4. To which institutions and intervals does your company provide certain volume data?
5. How will the recorded data be translated into a report or inquiry template?
6. Did you experience it as a burden to participate on more than one survey?

Additional questions, asked during the interview:

7. Did you have any quality management- or CoC-system before when you decide to obtain the PEFC-CoC-system?
8. How much effort did you face for establishing a CoC-certification system in general?
9. Would you agree that after the first implementation of any ISO or even CoC system every additional implementation of a CoC system generates less work in comparison to the first time?
10. How many hours per week or (fulltime equivalents) did you spend to maintain the system
11. Was your decision to obtain the CoC-certificate driven by:
 - Financial reasons
 - Image cultivation
 - Social responsibility
 - Other reasons:

12. What were the main criteria when choosing a certification body?
- Financial decision
 - Reputation/image
 - Differences in strictness, requirements, other...
 - Other reasons:

Annex 3.1 - Email multiple-choice questionnaire, phase 2

Vragenlijst 'Administratie en rapportage Chain of Custody certificering.

1. Heeft u veranderingen moeten aanbrengen in uw management/accounting systeem voor de invoering van de CoC-certificering?
☐ ja, compleet nieuw systeem
☐ ja, bestaand systeem aangepast
☐ nee, nagenoeg niets veranderd
2. Heeft u voor FSC en PEFC verschillende management systemen opgezet?
☐ ja ☐ nee, één systeem voor beide certificeringen
3. Voert u de interne audit, verplicht bij PEFC, ook uit voor uw FSC procedures?
☐ ja ☐ nee
4. Maakt u de 'volume summaries', die verplicht zijn bij FSC, ook voor PEFC gecertificeerde hoeveelheden die zijn verhandeld?
☐ ja ☐ nee
5. Diverse organisaties en onderzoeksbureaus zijn geïnteresseerd in de hoeveelheden gecertificeerde producten die door gecertificeerde bedrijven worden verhandeld. Aan welke onderzoeken heeft u gegevens verstrekt? (meerdere antwoorden mogelijk)

☐ Probos (zo ja, welk onderzoek: ☐ VVNH ☐ VNP ☐ VROM)
☐ FSC
☐ CBS
☐ andere onderzoeken:
☐ geen

6. U heeft in de eerder verstuurde enquête onder vraag 2 aangegeven dat u aan FSC onderzoeken data heeft geleverd.
Wanneer heeft u hier voor het laatst aan meegewerkt?
☐ onlangs
☐ één jaar geleden
☐ meer dan een jaar geleden
7. Op welke manier heeft u uw cijfers aan de onderzoekers verstrekt?
☐ enquêteformulier van de onderzoeker ingevuld
☐ eigen formulier aan de onderzoeker gestuurd
8. Hoe heeft het ervaren om aan meerdere onderzoeken gegevens te verstrekken?
☐ lastig, want:
☐ eenvoudig, want:

Additional asked questions:

9. Hoe lang is uw bedrijf reeds Chain of Custody (CoC) gecertificeerd (PEFC en/of FSC)?
jaar
10. Was u reeds in het bezit van andere certificering voor kwaliteits/milieumanagement voordat u het PEFC certificaat aanvroeg?
☐ ISO 9001/14001 ☐ FSC ☐ geen ☐ FSC en PEFC samen behaald
11. Bent u het ermee eens, dat na de invoering van een ISO certificering of een CoC certificering (in de meeste gevallen FSC) elke aanvullende CoC certificering minder moeite kost dan de eerdere certificeringen
☐ ja
☐ nee, kost de tweede keer eigenlijk net zo veel moeite als de eerste certificering

12. Hoe heeft u de inspanning ervaren die nodig was om het CoC-certificaat te behalen?
[] lage inspanning [] gemiddelde inspanning
[] hoge inspanning
13. Welke inspanning levert u (in uren/Fulltime Equivalenten) om de CoC te onderhouden?
..... uren/FTE per week (please highlight the related scale)
14. Heeft u nog opmerkingen?

Annex 4 - Interview template, phase 3, inquiry Institution

1. How do you carry out surveys in general?
2. Do you randomly approach companies or related to a list handed over by the Initiator?
3. Do you face any problems to obtain the required information?
4. Can you see any differences between companies with and without a CoC- certificate in regarding to the response behavior in general?
5. Which questions are answered most reluctantly/unwillingly?
6. How many surveys you usually carry out in regarding to volumes from sustainable managed sources?
7. You are working with templates! Are those templates consistent?
8. Do you think it is possible to develop one common template to cover the flow of certified timber?
9. The inventory form for paper and cardboard is mainly related to the production, why?
10. You ask for quantities from sustainable managed sources without a CoC- certificate. How can you be sure that the delivered data by a company are reliable?

Annex 5- Effort related to establishment and maintenance of CoC record keeping system

1. *Did you have any quality management- or CoC-system before when you decide to obtain the PEFC-CoC-system?*

The majority (40%) of the approached companies were FSC certified before implementing the PEFC system. Companies with a certified QMS like ISO 9001 as well as companies with no certified QMS represented 12% each. A minority of 10% had both ISO and FSC as a QMS in place, when they decide to implement PEFC as well. 13% of the surveyed companies implemented PEFC and FSC simultaneously (Figure 11).

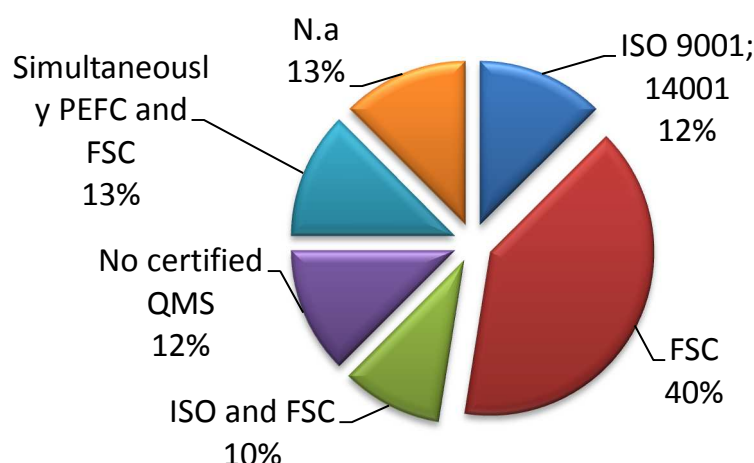


Figure 11: Distribution of previously used QMS before implementing a new CoC system

2. *Would you agree that after the first implementation of any ISO or even CoC system every additional implementation of a CoC system generates less work in comparison to the first time?*

25 companies had already a previous QMS (see also Figure 11) in place. The total amount of 17 out of these 25 companies responded to the question above. 37, 5% stated to see a direct relation, whereas only 5% saw no relation and faced the same effort. Figure 12 illustrates the effort in relation to the previous used QMS.

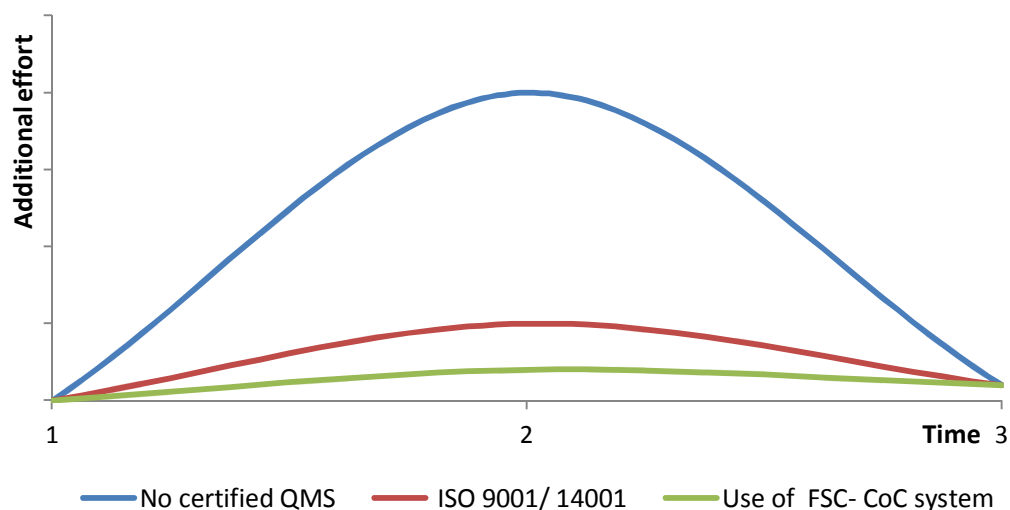


Figure 12: Relation between the made effort to implement a new CoC system and the previously used QMS

Table 6: Turnover category definition, PEFC Nederland

Turnover category	Turnover interval in million €
1	0 - 1
2	>1 - 10
3	> 10 - 50
4	> 50 - 100
5	> 100 - 500

3. *How many hours per week or (fulltime equivalents) did you spend to maintain the system?*

Table 7: Time distribution per turnover category

Turnover category	Time interval	Number of companies
1	1 – 2 hours/week	2 companies
2	0,5 – 14 hours/week	18 companies
3	1 – 9 hours/week	9 companies
4	1 – 2 hours/week	6 companies
5	0,5 – 5 hours/week	5 companies

Table 8: Time distribution related to the market segment

Organization		
Company	Branch of trade	System related effort in h/week
Company 01	Paper trade	4
Company 02	Paper trade	2
Company 03	Paper production	0,5
Company 04	Retail	2,5
Company 05	Timber trade	2,5
Company 06	Paper trade	2
Company 07	Paper trade	5
Company 08	Lumber production	14
Company 09	Retail	6
Company 10	Printer	2
Company 11	Timber trade	1
Company 12	Retail	5
Company 13	Printer	0,5
Company 14	Timber trade	2
Company 15	Timber trade	8
Company 16	Timber trade	9
Company 17	Timber trade	5
Company 18	Lumber production	2
Company 19	Printer	
Company 20	Lumber production	0,5
Company 21	Lumber production	2
Company 22	Lumber production	2
Company 23	Printer	1
Company 24	Lumber production	3
Company 25	Printer	4
Company 26	Lumber production	2
Company 27	Construction works	2,5
Company 28	Lumber production	0
Company 29	Timber trade	2
Company 30	Printer	1
Company 31	Printer	3
Company 32	Printer	1
Company 33	Timber trade	2
Company 34	Retail	3
Company 35	Lumber production	1
Company 36	Timber trade	1
Company 37	Retail	
Company 38	Timber trade	0,5
Company 39	Timber trade	2
Company 40	Printer	1

Table 9: Average maintenance effort related to the branch of trade

Branch of trade	Average maintenance effort
Construction works	2,5 hours/week
Lumber production	2,5 hours/week
Paper production	0,5 hours/week
Paper trade	3,3 hours/week
Printer	1,6 hours/week

Annex 6 - Company information and response

Detailed information about the participating companies, in particular their branch of trade, turnover category and certification are shown in Table 10. The response differentiated between the market-segments including the number of the participating companies is illustrated in table 11.

Table 10: Characteristics of the Surveyed companies

Organization			Certification		
Company	Branch of trade	Turnover category	PEFC	FSC	Certified in years
Company 27	Construction works	3	x	x	10
Company 18	Lumber production	3	x	x	0,5
Company 20	Lumber production	2	x	x	2
Company 21	Lumber production	2	x	x	1
Company 22	Lumber production	4	x	x	2
Company 24	Lumber production	2	x	x	1
Company 26	Lumber production	4	x	x	11
Company 28	Lumber production	2	x	x	8
Company 35	Lumber production	2	x	x	0,5
Company 8	Lumber production	2	x	x	N.a.
Company 3	Paper production	5	x	x	N.a.
Company 1	Paper trade	5	x	x	N.a.
Company 2	Paper trade	4	x	x	N.a.
Company 6	Paper trade	5	x	x	N.a.
Company 7	Paper trade	5	x	x	N.a.
Company 10	Printer	2	x	x	5
Company 13	Printer	2	x	x	1
Company 19	Printer	4	x	x	3
Company 23	Printer	2	x	x	3
Company 25	Printer	2	x	x	2
Company 30	Printer	2	x	x	3
Company 31	Printer	3	x	x	5
Company 32	Printer	3	x	x	3
Company 40	Printer	2	x	x	5
Company 12	Retail	3	x	x	2
Company 34	Retail	3	x	x	1
Company 37	Retail	2	x	x	0,5
Company 4	Retail	5	x	x	N.a.
Company 9	Retail	4	x	x	N.a.
Company 11	Timber trade	1	x	x	6
Company 14	Timber trade	2	x	x	3
Company 15	Timber trade	3	x	x	N.a.
Company 16	Timber trade	3	x	x	8
Company 17	Timber trade	3	x	x	2
Company 29	Timber trade	1	x	x	7
Company 33	Timber trade	2	x	x	6
Company 36	Timber trade	4	x	x	7
Company 38	Timber trade	2	x	x	3
Company 39	Timber trade	2	x	x	10
Company 5	Timber trade	2	x	x	N.a.

During the research, 84 dual certified companies were addressed. 48% of the companies responded.

Table 11: Response differentiated between their market segments

Market segment	Number of participating companies
Construction works	1
Lumber production	9
Paper production	1
Paper trade	4
Printer	9
Timber trade	11

Annex 7 - CoC certification process(GFA Consulting Group)

The Chain of Custody certification procedure

(1) Declaration of interest and offer

(2) Certification contract and agreement on dates

(3) Execution of the company inspection (Audit)

The company draws up a "company manual" that describes the processes and responsibilities involved in dealing with certified goods within its operations. The manual serves as a guide for the audit. The main emphases of the audit are:

- separation of certified and uncertified goods,
- product identification and documentation throughout the entire production process
- Weaknesses and possibilities for improvement are identified and discussed

(4) Written closing report (audit report)

(5) Award of the certificate

A certificate is awarded to the company along with an individual certification number. The certificate is valid for a period of five years.

Monitoring audits

The certified company is inspected on an annual basis. Every inspection audit is documented in a report. Other than the regular inspection audit, spot check audits can take place in suspicious cases.

Duration of the entire certification process

The certification process takes approx. 3-8 weeks, all depending on plant size, number of sites and product range.

Costs

The service costs of the certification are based primarily on the amount of designated expert days that are required for the course of certification. Travelling expenses and an additional cost flat rate are added. As an orientation, budgeted costs can amount to approx. EUR 1,000 to EUR 3,000 per site per annum.

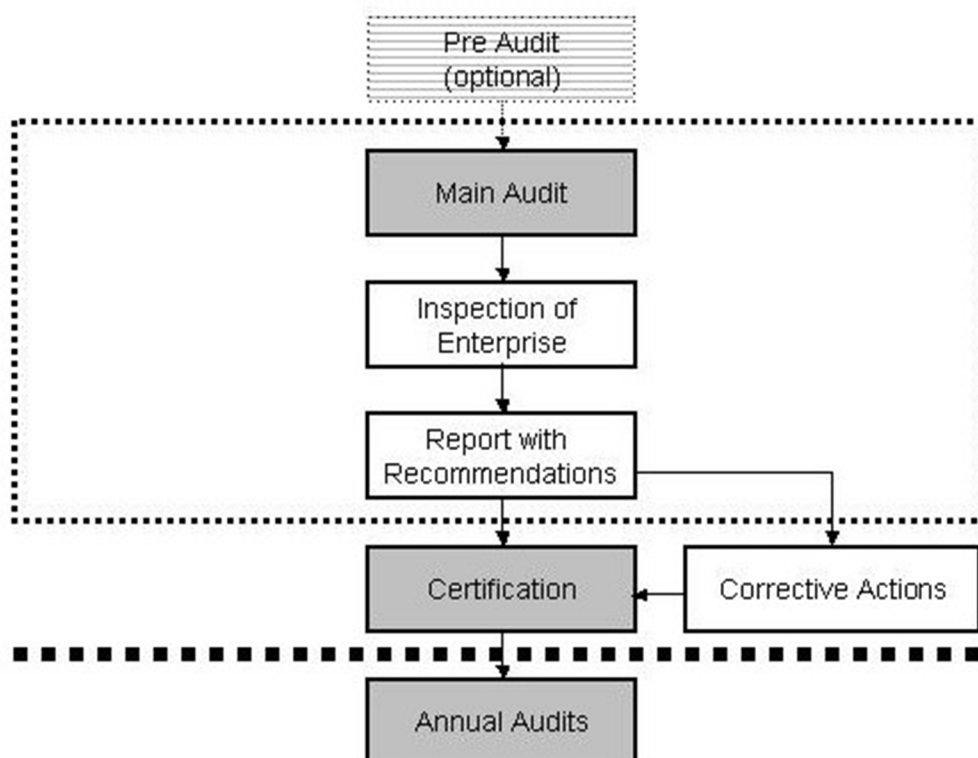


Figure 13: Certification process, source GFA